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Kudła, Dominik. 2023. Introduction. In: L10N Journal. 2(1), pp. 4–8.

Introduction

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Since the fall of the Iron Curtain, video game industries in the broadly understood region of Central and Eastern Europe have been rapidly growing. The new economic reality opened up new possibilities not only for game developers from that area but also for Western distributors who all accessed broader audiences than before. This has been visible especially in Poland where over the thirty years several globally-recognized gaming companies such as *CD Projekt RED, Techland, 11 Bit Studios, Bloober Team* or *People Can Fly* have emerged providing the global audience with generally acclaimed titles, such as *The Witcher, Dying Light, Frostpunk, Shadow Warrior, Cyberpunk 2077, Call of Juarez, Car Mechanic Simulator* series; and standalone titles, e.g. *This War of Mine, Painkiller, The Vanishing of Ethan Carter,* or more recently *The Invincible*. This success would not have been possible without the localization efforts of countless professionals rendering those games accessible for global audiences, as well as producing custom-fit local versions of internationally anticipated titles for the Polish gamers. Those endeavors have been so successful that more and more frequently Polish is perceived as one of the top languages to localize any game into (Mirkovic 2021).

The research on video game localization in Poland, although still in its early stage, is constantly developing. Due to the growing interest in video game localization among translation studies scholars around the world, there are more and more scientific publications by Polish researchers revolving around this topic. The first one is most probably the article by E.J. Kuipers (2010) which describes the factors distinguishing this area of translations. He classified it as a type of "written translations" ("tłumaczenia pisemne"). Maybe this was caused by the fact that in the 2000s and the early 2010s localizers often had access exclusively to the video game text. A year later, he discussed the challenges posed by training translators for localization of video games, especially in centres of higher education (E.J. Kuipers 2011). Further characterisation of this new (in that case independent) type of translation activities as well as the translation strategies most commonly used in it was undertaken by D. Czech (2013). He also mentions the approach of various Polish gamer groups to full or partial localization. M. Sajna (2013) compares the translation strategies utilized in video game localization with the ones utilized in AVT (mainly of films). The article by K. Inglot

(2013) concentrates on proper names in video games translated into Polish and German. E. Drab (2014a) classifies video game localization as AVT and enumerates its most important characteristics. In another article, she juxtaposes game localization with film translation and using three examples of *Heavy Rain, Infamous* and *Dishonored,* she points out the challenges localization poses for translators (E. Drab 2014b). The utilization of CAT tools in localization was the focus of the article by M. Sajna (2015), while strategies utilized by students translating computer game texts involving variables were discussed in a paper by D. Guttfeld (2015) included in the same monograph.

The first monograph devoted to video game localization by a Polish researcher – *Video Game Translation and Cognitive Semantics* – was published in 2016 by Mateusz Sajna. It analyses video games translated into Polish using the framework of Conceptual Blending Theory, designed by Gilles Fauconnier and developed by Mark Turner, where meaning construction in translation may involve blending several mental spaces which were associated with the source text to render the translation of metaphor, analogy and counterfactuals successful (Fauconnier G. & Turner M., 2002 *The Way We Think: Conceptual Blanding and the Mind's Hidden Complexities*. New York: Basic Books).

In an academic essay, Chojnowski (2016) discussed the main technical and language-related challenges encountered in video game localization into Polish. E. B. Nawrocka (2016) describes those challenges using the example of a single title – *Grey's Anatomy* (Ubisoft: 2009, based on the famous ABC series). One video game title and its localization is also the focus of the article by Piotr Maziarz and Debora Onik (2019) who investigate cultural references in *The Witcher III Wild Hunt*. D. Kudła (2018) also discussed one game – the pirate Russian localization of a point-and-click game *Książę i Tchórz* (Metropolis: 1998). The topic of pirate video game localizers in the USSR and Russia was further developed in the article Głosów użyczyli profesjonalni programiści (Kudła 2019).

The recent years have witnessed considerable growth in the number of scientific publications concerning video game localization and the narrowing of their scope. E. B. Nawrocka (2019a & 2019b) focused on the issues of coping with multitextuality as well as translating variables and gender in video games. Z. Włodowska (2020) describes the translation of toponyms in *TES Skyrim* into Russian. A survey conducted in 2018 (and described in D. Kudła 2021) collected the opinions of Polish dedicated video gamers regarding their preferences in the scope and type of localization, as well as the most commonly noticed errors in video games localized into Polish.

The video-game-localization-related literature in Polish was further extended in the early 2020s. Nawrocka (2020) focused on strategies utilized in the translation of the narrative in *Pillars of Eternity*. The first monograph devoted fully to video game localization (D. Kudła 2020) provided some overview of various theoretical aspects of this process, as well as compared the visual perception of partial and full localization of *Shadow of the Tomb Raider* (Square Enix: 2018) with its original English version using

eye-tracking methodology. A year later the first Polish video game localization handbook was published (Mrzigod 2021), where a more practical approach to the fundamentals, challenges and errors in localization was adopted. Nawrocka (2021a) discussed the Polish localization of *Diablo III* with regard to translation strategies, approaches and techniques, while in (2021b) she described the usefulness of translating game related Wiki pages to prepare students for video game localization tasks. In their monograph, M. Deckert & K. Hejduk (2022c) analysed and classified 'on-screen language' (OSL) from the point of view of translation. The material was chosen on the basis of the Polish localisations of *Tom Clancy's The Division 2* and *Shadow Warrior 2*, from which over 1000 cases of unique and meaningful OSL were extracted, almost exclusively in languages other than Polish.

Deckert, M. & Hejduk, K. (2022a) found that deficient spelling has no traceable effect on player cognitive load, enjoyment or comprehension on the basis of a manipulated Polish unofficial localization of *Distraint: Deluxe Edition*. Using the data from the same study (Deckert, M. & Hejduk, K. 2022b) they found a statistically significant negative impact of spelling errors in Polish localization on the gamer's assessment of the game *Usability/ Playability* and *Personal Gratification* and some [insignificant] impact on the gamer Satisfaction (the three factors taken from *Game User Experience Satisfaction Scale* or *GUESS-18*).

D. Kudła (2022a) briefly described the most important abilities and knowledge comprising the translator competence in video game localization. The challenges stemming from the lack or insufficient contextual details in game localization were the focus of D. Kudła (2022b). The history of video game localization practices in Poland from the 1980s to the present time was briefly outlined by D. Kudła (2022c).

Obviously, video game localization or the translation of video game content has become a popular theme for BA and MA theses at linguistic university faculties around Poland with hundreds of dissertations on that matter defended to date.

This special issue comes to further enhance the body of Polish video game localization discourse with four new contributions. The special issue was originally titled *Video Game Localization in Central and Eastern Europe – Chances and Challenges,* however, it has been decided to rename it as all of the successfully peer-reviewed contributions were written by four Polish video game localizers, two of whom are also academic researchers and one apart from practicing localization teaches at university.

The author's structure of the issue shows that the communication between the industry and the academia is not absent while both sectors try to find a platform for communication. Two of the texts provide rather practice-oriented considerations about this type of translation activity and have been gathered in a dedicated section called *Practitioners' Insight*. The text by Janusz Mrzigod offers a wide range of solutions for the issue of grammatical-gender-related variative forms of nouns, adjectives and verb forms. Overcoming this issue is important not only for Polish but also for other Slavic languages, as it renders using sentences utilizing variables and concatenation-

based sentences difficult or leading to ungrammatical constructions. Ewa Holik focuses on proper name translation in *Horizon Forbidden West* and the perception of literal translation by gamers.

The issue opens with two academic research papers. The first one by Ewa B. Nawrocka focuses on the variety of cultural and linguistic references present in *The Witcher III: Wild Hunt* and various manners of their rendering in the global English language version of the game. The second article in the first section by myself summarises the eye tracking study into the reception of a fragment of *The Shadow of the Tomb Raider* in three language versions (full English, partial Polish and full Polish).

The issue closes with *Final Variable,* a section recommending recent publications related to video game localization.

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Articles

Nawrocka, Ewa B. 2023. Slavic colour in *The Witcher III: Wild Hunt* localization. In: L10N Journal 2(1), pp. 10–33.

Slavic local color in The Witcher III: Wild Hunt localization

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Abstract

Games localization presents itself as a primarily target-oriented activity, wherein the game developers anticipate a fluent translation that will cater for the needs and expectations of the target players. And yet, when we are dealing with games with a prominent local colour such as *The Witcher III: Wild Hunt* it seems that the translation can follow one of two possible paths: domestication or foreignization. The present article investigates the Slavic local colour found in *The Witcher III: Wild Hunt* to determine which of those paths were chosen by its translator and whether this has any ramifications for game localization practice. To this end the concept of game localization and its goals is confronted with well-known concepts of translation studies; *The Witcher III: Wild Hunt* game and its protagonist are described and the elements of the Slavic local colour present in the title are outlined. Finally, analyses of the characters' idiolect and the Slavic rite of Forefather's Eve are provided and followed by conclusions.

Keywords: game localization, Slavic culture, Slavic local color, Slavic rites, idiolect

Introduction

The Witcher III: Wild Hunt is a Polish action role-playing game produced by CD Projekt Red, which has won unprecedented popularity on a global scale. The game is based on fantasy short stories and novels by Andrzej Sapkowski, and most notably their protagonist – the Witcher Geralt of Rivia, a mutated monster slayer. Apart from satisfying gameplay and an immersive plot, the game features a depiction of Slavic local colour which contributes to its appeal. Slavic country landscapes, Slavic monsters and Slavic atmospheric soundtrack performed by Polish folk bands make *The Witcher III: Wild Hunt* a truly unique title. The world of the game, similarly to Sapkowski's books, is rich in cultural overtones, including allusions to Slavic beliefs, folk tales and classical Polish literature. The local quality is also depicted in the speech of the characters, which features stylization characteristic of Sapkowski's pen. The present article focuses on two facets of local colour – the characters' idiolect and Slavic rituals – with an aim to

explore whether they have been domesticated or rather foreignized and what implications this bears for localization practices.

1 The goals of games localization versus domestication and foreignization

The goals of games localization stem from localization in broad terms viewed as a process which "involves taking a product and making it linguistically and culturally appropriate to the target locale (country/region and language) where it will be used and sold" (LISA, 2003: 13). Moreover, localization is intertwined with other processes referred to collectively as GILT. The acronym GILT stands for globalization, internationalization, localization and translation. The first of the processes, globalization is „the transformation of business and processes to support customers around the world, in whatever language, country, or culture they require (LISA, 2007:1). The next process is internationalization, which "primarily consists of abstracting the functionality of a product away from any particular language so that language support can be added back in simply, without worry that language-specific features will pose a problem when the product is localized (LISA, 2004: 14). Within the GILT model the localization stage covers preparing, managing, engineering and quality testing the localized product (Jiménez-Crespo, 2013). Translation in turn is a separate step in the localization process, which consists in "the actual transfer of textual material" (Jiménez-Crespo, 2013) into another language.

It is in this context, sketched by the industry, that game localization enters the stage, introducing its own goals and idiosyncrasies: "The brief of the localiser is to produce a version that will allow the players to experience the game as if it were originally developed in their own language and to provide enjoyment equivalent to that felt by the players of the original version" (Mangiron and O'Hagan, 2006: 14). This definition features two aspects that can be seen as coinciding with certain concepts well known to Translation Studies.

The first of these is the goal of game localization to create the illusion of a new original: "to produce a target version that keeps the 'look and feel' of the original, yet passing itself off as the original" (Mangiron and O'Hagan, 2006: 20). This direction is known in Translation Studies as covert translation (House, 1997) or instrumental translation (Nord, 2005). Covert translation "is a translation which enjoys the status of an original source text in the target culture" (House, 1997: 69). Instrumental translation "serves as an independent message transmitting instrument in a new communicative action in the target culture" (Nord 2005: 81), which means that the receivers of the target text read it as if it were a source text written in their language (Munday, 2016). The second aspect – the goal to provide the target players with equivalent entertainment – mirrors the age-old TS concept of dynamic equivalence focused on the principle of inducing an

"equivalent effect" (Nida, 1964). In dynamic equivalence, the message is tailored to the linguistic needs and cultural expectations of receivers and aims at complete naturalness, while the principle of "equivalent effect" boils down to producing a similar response in the target audience (Munday, 2016). Respectively, game localization presents itself as a primarily target-oriented activity at its very onset since it favours fluency over accuracy to pass on as a new original and produce a comparable entertainment effect.

Be that as it may, there are also two other concepts which originated in translation studies that are of great relevance to game localization and especially its cultural dimension: domestication and foreignization (Venuti, 1995). According to Venuti domestication is "an ethnocentric reduction of the foreign text to receiving cultural values" (1995: 20). This philosophy boils down to translating in a transparent, fluent and invisible style to minimize the foreignness of the text (Munday 2016). The reverse approach, foreignization, means "developing a translation method along lines which are excluded by dominant cultural values in the target language" (Venuti 1995: 242). The goal of foreignization is "making the receiving culture aware of the linguistic and cultural difference inherent in the foreign text" (Munday 2016: 226).

Even though domestication seems to be the dominant and preferred approach in game localization, an opposite strategy, namely foreignization, is not excluded and is tightly linked to the cultural impact of localization. According to Sajna when faced with cultural items the translator can "either domesticate the game or incline towards foreignization" (2018: 179). In this light, the considerations of whether *The Witcher III: Wild Hunt* has undergone domestication or foreignization are especially material since we are dealing with a translation from a minor language, which is Polish, into a global one, which is English. That being so, it is worth exploring if the English version overshadows the Polish one completely or makes an effort to represent its quality in the translation.

2 The Witcher III: Wild Hunt game and its protagonist

The saga of Geralt of Rivia also known as The Witcher dates back to 1986 with the first short story by Andrzej Sapkowski, "The Witcher", which won a competition in a Polish literary magazine *Fantastyka* (Sapkowski, 1986). The Witcher's main adventures commence with two short story collections: *Sword of Destiny* (1992/2015)[1] and *The Last Wis*h (1993/2008). Subsequently, they are continued on the pages of the so-called Witcher saga: *Blood of Elves* (1994/2008), *Time of Contempt* (1995/2013), *Baptism of Fire* (1996/2014), *The Tower of the Swallow* (1997/2016), *The Lady of The Lake* (1999/2017) and *Season of Storms* (2013/2018).

[1] The first date is the date of the publication of the Polish version and the second date of the English translation.

The Witcher III: Wild Hunt game, developed by a Polish studio CD Projekt Red, was released worldwide on 19 May 2015. The game was preceded by two other games in The Witcher series: *The Witcher* (2007) and *The Witcher II: Assassins of Kings* (2011). In March 2016, after achieving the 250th game of the year title *The Witcher III: Wild Hunt* became the most rewarded game in history (Gładkowski, 2016). The average review rating of the game did not fall below 90%. As of April 2022, the game has sold over 40 million copies. According to Eurogamer *The Witcher III: Wild Hunt* is one of the best games ever created as it "captivates with its artistic vision, mesmerises with its vast world and absorbs with its story" (Jankowski, 2015). Arkadikuss from IGN Polska, who gave the game a 10/10 rating, wrote: "The Witcher is a game thought through from A to Z. Everything is on the highest level – the gameplay, the plot, graphics and sound" (Arkadikuss, 2015).

As opposed to the two previous instalments the game features an open world, which means that it is a huge area which is explored freely by the player who can decide on what activity or quest they undertake at a particular moment. The player controls the witcher Geralt and occasionally Ciri, the princess of the conquered Cintra whom he initially seeks. Geralt uses two swords to fight his opponents – one of them silver to kill monsters and one made of steel to fight human opponents. He also boosts his abilities with alchemical potions and uses magical signs. The game consists of the main plot, which leads to several different endings, as well as side quests. Apart from questing the player is free to explore various monster lairs and treasure sites marked on the world map. To explore the immense world, Geralt rides his inseparable mare, Roach, which is itself a treat for players.

The most important character in Geralt's story is Cirilla, the granddaughter of Queen Calanthe of Cintra and the daughter of the Emperor of Nilfgaard bent on world domination. Ciri possesses an immense magical power and is the legendary Surprise Child, who is strongly connected to Geralt's destiny and whom he treats as a daughter. Other prominent characters are the witcher Vesemir, the bard Jaskier, the dwarf Zoltan Chivay, the sorceress Yennefer (with whom Geralt has a complicated relationship) and the sorceress Triss Merigold. The action takes place shortly after the events of the second instalment. Nilfgaard has conquered Temeria and is about to attack the remaining lands of the North. Geralt and Vesemir scour the field of a recent battle, coming across traces of the sorceress Yennefer. The witchers head to the nearby village of White Orchard to find out more. Geralt learns that Ciri has appeared in the nearby Velen. Geralt must find her, but the young woman is also followed by ghostly horsemen called the Wild Hunt. The axis of the main plot is the search for Ciri and her tracks lead from Velen, through Novigrad, to frigid Skellige islands (Jankowski, 2015). It is the player's decisions throughout the main plot that determine the final ending of the whole story with Ciri's destiny following different paths.

Before the games were created the adventures of the Witcher were already popular in Poland and abroad thanks to translations of Sapkowski's prose into English and other European languages. The comic books by Parowski and Polch released originally in 1993–1995 (Parowski, Polch, Sapkowski, 2015) preceded the games and gained a certain amount of popularity in Poland despite a slightly controversial depiction of the Witcher. However, the Polish feature film of 2001 (Brodzki, 2001a), heavily criticized not only for the most horrible dragon in cinematography, placed third in the poll for the worst Polish film of all time. The Polish TV series containing 13 episodes (Brodzki, 2001b) shot simultaneously was received somewhat better. Despite such publicity of the production the actors Michał Żebrowski (Geralt) and Zbigniew Zamachowski (Jaskier) evoked much warmer feelings.

Nonetheless, it can be surmised that it was CD Projekt RED's games that forged the Witcher into a genuine world-famous pop-culture icon, whose full-size image adorned shops with games. If that weren't enough, the recent TV series by Netflix with Henry Cavill, comprising so far three seasons released in 2019, 2020 and 2023, gained him even more renown as the most popular TV show in the history of the streaming platform (Flamma, 2020). As a result, Geralt of Rivia can be placed next to such prominent fictional figures as Darth Vader, Han Solo or Indiana Jones (Flamma, 2020). Today he is a transmedial hero found in books, comic books, video games (PC, console, mobile, card), tabletop role playing-game, fan-fiction, TV shows, radio drama, a musical and even a rock opera (Smuggler, 2023a) (Smuggler, 2023b) (Flamma, 2020). The Witcher's popularity is also the subject of academic study, for example: *Polski fenomen popkultury* (Dudziński and Płoszaj, 2016) or "Monstrum albo Wiedźmina opisanie. Geralt z Rivii, bohater czy antybohater?" (Nakonieczna, 2017). There was also a conference entitled "The Witcher – hero of mass imagination" (Smuggler, 2023a). On the cover of the book *Wiedźmin. Historia fenomenu* (Flamma, 2020), the author describes the Witcher as "the hero from Poland who conquered the world".

Consequently, the Witcher can be seen in terms of a franchise in itself and his popularity as "the Witcher effect" (Flamma, 2020). The success of Netflix's TV show boosted further the sales of the games and of Sapkowski's prose, whose worldwide renown can only be compared to that of Stanisław Lem's (Bartosik, 2007). Moreover, the success of CD Projekt's titles commenced a boom for Polish-made video games. Nowadays, Geralt of Rivia is one of the most recognizable figures of Polish origin.

The Witcher is so immensely popular in Poland because despite being a fantastic highly skilled mutated monster slayer, he is also familiar and local (Bartosik, 2007). On the other hand, to the worldwide public, he seems unique, fresh and exotic (Flamma, 2019b). Moreover, just like Sapkowski's prose, he is not black and white (Bartosik, 2007). He does not shy away from killing but at the same time, he is deeply aware of the moral repercussions of various tough choices he must make. He notices wickedness and tries to openly oppose it, however, at times he seems hopelessly entangled in it. As a

witcher, he is supposed to have no feelings and is often treated as such, but the opposite is true. He deeply cares for Ciri, who is a daughter figure to him. He has profound feelings for the sorceress Yennefer and the game allows the two to finally reunite depending on the player's choices. Nakonieczna (2017) calls him a "heroic antihero" and points to the fact that in Sapkowski's puckish universe, it is the excluded (monsters, witchers, elves, dwarfs) as opposed to ordinary humans that become the defenders and embodiment of humanitarianism.

3 Slavic local colour in The Witcher III: Wild Hunt

Sapkowski's prose is rich in cultural and literary references of various origins as well as evident intertextuality (Kuster, 2015). His books contain a whole mixture of allusions, which is one of the features that define them. Mottos of particular parts of the saga contain excerpts from world literature next to quotes from fictional works. Even more so, he plays with known motifs and conventions, achieving a new literary quality for which he is so appreciated by his readers.

> "Sapkowski is not only a master of dialogues and descriptions of battles, but […] also a postmodern play with literary conventions. He bends them and transforms them to his own needs, playing with the reader. He chops them up, twists them, revamps them, call it what you will – the important thing is that the effect is truly electrifying[2]" (Bartosik 2007: 61).

The first source of his inspiration is classic tales by Andersen and the Grimm brothers or for example the French tale *The Beauty and The Beast*. The other sources are Celtic (elves), Germanic (dwarfs), Scandinavian (Skellige) and even Arabic (the djinns) (Bartosik, 2018). Sapkowski himself openly admits that he is greatly impressed by the Arthurian myth (Sapkowski, 2001). Interestingly, "Sapkowski's remixed tales are much deeper than their original versions" (Bartosik 2007: 57) since they are imbued with additional undertones and a characteristic puckishness.

Despite these rich international cultural overtones, the books also contain a depiction of Slavic culture and folk tales. The Witcher as a protagonist can be viewed in terms of the Slavic spirit – he possesses a sense of inner justice and performs his duties though not without grumbling (Flamma, 2019a). The very name of his profession is also a reference to Slavic beliefs, and more pertinently, to the Ruthenian tales of "wiedźmak", who is a male witch, knowledgeable in sorcery, the powers of nature and the supernatural and who also often fights wraiths and monsters (Muszyński, 2017). The Witcher's universe is itself folksy and Sapkowski's language is sui generis since he consistently applies archaization (Dziwisz, 2015). Especially characteristic is the speech of the simple folk but also the use of swearwords.

[2] The translation of quotes from Polish sources has been conducted by the Author of the present article.

Slavic folk tales and legends are an important source of inspiration for Sapkowski both in terms of the plot (the dragon of the Wawel castle) and bestiary (Leshy, rusalka, striga). The books also contain references to Slavic mythology (Zaborowski, 2015). First of all, there is the cult of nature with dryads and druids worshipping sacred groves and trees. Ergo, the religion depicted by Sapkowski can be considered in terms of pantheism (Ibid.). There is no specific personified god worshipped except for Żywia, the mother nature (Ibid.). Another important aspect related to Slavic mythology in Sapkowski's universe is the realm of the dead (Ibid.). It is inhabited by souls of the dead and all kinds of spirits and undead creatures, some harmless but most vicious. In Sapkowski's vision, it is a realm that permeates the ordinary world and plays a crucial role, especially from the perspective of the simple folk.

It is this local colour that has been emphasized and enhanced by CD Projekt Red in the games. The reason behind this approach must have been the desire to stand out in the global gaming market (Bartosik, 2018) and create a title which will be fresh, unique and even exotic to an international player (Flamma, 2019b). Such a strategy is visible in the first game of the series, *The Witcher* (2007), and most prominently in *The Witcher III: Wild Hunt* (2015). Consequently, the games, and especially the last instalment, are intrinsically more Slavic than the books. This phenomenon is an example of what happens when a certain fictional figure starts to live their own life – one that might not have been predicted by its original creator. This is also the reason why the Polish public (at least those who haven't read the books and just played the game) sometimes adheres to the misconception that the Witcher's world is inherently and decisively Slavic in nature (Bartosik, 2018). This may be true but only concerning the aforementioned games and also not entirely since other inspirations of Sapkowski (such as medieval European knighthood) are well present in the games.

Be that as it may, CD Projekt Red reinforced the Slavic spirit – which was nonetheless present in the books – in a very conscious manner. *The Witcher III: Wild Hunt*, which is the focus of the present article, contains Slavic overtones on several different levels. First of all, there is the Slavic setting of White Orchard and Velen: vast green glades, lush forests, dark marshes, deep caverns and, of course, idyllic villages (see Screenshot 1) and sometimes desolate, ruined hamlets infested with monsters.

Screenshot 1 – ***The Witcher III: Wild Hunt. CD Projekt RED***

The decorated thatched huts are based on a real-world village Zalipie in Poland[3]. Apart from paintings on hut walls, there are also traditional colourful hanging decorations called "pajączki" (Widomska, 2021) (see Screenshot 2).

Screenshot 2 – ***The Witcher III: Wild Hunt. CD Projekt RED***

Besides the Slavic countryside, there is the city of Novigrad, taking its inspiration from Gdańsk with its iconic crane and characteristic architecture (Ibid) (see Screenshot 3).

[3] https://compassrose.pl/zalipie/

Screenshot 3 – ***The Witcher III: Wild Hunt. CD Projekt RED***

There is also a depiction of the legendary Mice Tower related to the legend of Popiel who was eaten alive by rats, which is the cursed tower of Fyke Island. In the game, it is the daughter of a selfish nobleman who is eaten alive (Ibid.). Another renowned Polish landmark that found its way to the game is the Bald Mountain. It was a famous place of pagan cult in Poland, where rites such as Dziady (Forefather's Eve) and Kupala Night (summer solstice) were celebrated. Secondly, there is the mesmerizing music composed and performed by Percival Schuttenbach[4], a Polish folk-metal band utilizing rare historical instruments and unforgettable female voices.

Another Slavic element of the game's universe is the simple folk and, interestingly, elderly people, rarely if ever featured in games. Their speech is consistent with Sapkowski's unique style of dialogue. The next prominent Slavic element is the belief in the supernatural, including the worship of nature, as well as herbalism and witchcraft. Some of those supernatural beings, such as Rusalka, Striga or Leshy, found their way to the game's bestiary, which is exceptionally rich and significant since fighting monsters is a core feature of gameplay and a vital aspect of the game's universe.

[4] The name of the band is a reference in itself as Percival Schuttenbach is the character of a gnome appearing in Sapkowski's books.

The Slavic spirit is also present in folk rituals such as Dziady, a celebration dedicated to the dead, coinciding with Halloween, as well as country weddings, such as the one attended to by The Witcher in the Bronovitz[5] village in *The Hearts of Stone* expansion to the game. These rites are at the same time allusions to classical Polish literature, which was the first to depict them: Dziady by Adam Mickiewicz (1822) and *The Wedding* by Stanisław Wyspiański (1901).

The Hearts of Stone expansion contains even more allusions to Polish literature: Olgierd von Everec can be associated with Kmicic, the protagonist of *The Deluge* by Henryk Sienkiewicz (1886). His duel with Geralt is inspired by the cinematic adaptation of the classic trilogy (Hoffman, 1974). Moreover, the plot of the expansion alludes to *Pani Twardowska* by Adam Mickiewicz (1822). In the *Blood and Wine* expansion, in turn, we can undertake a quest to withdraw money from the Bank of Vivaldi. This scene is a hilarious allusion to the reality of The Polish People's Republic (PRL) as the Witcher is redirected from one bank post to another and neglected by the box ladies to the point of annoyance.

4 Slavic local colour in the localization of The Witcher III: Wild Hunt

When contemplating the localization of Slavic local colour in *The Witcher III: Wild Hunt* one cannot overlook the translation of Sapkowski's unique language into English. The reason is that it is a mixture of contemporary Polish literary language and colloquial expressions (including vulgarisms) with dialect and archaisms. "The effect of such a combination is a contemporary text containing stylization elements in the form of archaisms, vulgarisms and dialectisms" (Dziwisz, 2015: 197). The developers of *The Witcher III: Wild Hunt* took great care to recreate Sapkowski's linguistic idiosyncrasy in their game. Another characteristic element of Slavic local colour in the game is Slavic rites such as The Forefather's Eve, which is simultaneously a direct reference to the classical Polish poetic drama *Dziady Part II* by Adam Mickiewicz (1822).

The English translation of the game that is subject to analysis has been carried out by Travis Currit (*The Witcher III: Wild Hunt*, 2015). The texts for the qualitative analysis have been extracted from screenshots made in the game. In the analysis, Baker's types of meaning (1992) have been considered as well as types of archaisms (Piela, 2016). Various dictionaries have been utilised in the study of particular archaisms, dialectisms, colloquialisms and vulgarisms. The chosen fragments are to serve as examples of wider phenomena such as the general strategy – domestication or foreignization – and the quality of the translation.

[5] *Bronovitz is a clear reference to the real world Bronowice village, where Wyspiański attended a real wedding that turned out to be an inspiration for his drama.*

4.1 Characters' idiolect

The speech of the characters in the game features archaisms, dialect, colloquial expressions and vulgarisms just like was the case with Sapkowski's language in the book series. These traits play an important role in creating a characteristic old-timey and often folksy local colour and constitute a vital feature of the author's idiolect (Dziwisz, 2015) that has been recreated in the game. Stylization efforts are particularly visible in the speech of the simple folk. At the beginning of the game the witcher Geralt and his mentor, Vesemir, visit the inn in a village called White Orchard and talk to the innkeeper, Elsa. The dialogue fragments below have been chosen since they represent one of the first encounters with simple folk by the protagonist of the game.

*Elza: **Mości** wiedźmini… **Jadło i napitek** na mój rachunek. Co podać? / Your majesties witchers… Food and drink on my bill. What to serve?*

Elsa: Master witchers… food and drink on the house. What can I get you?

This utterance is the first example of archaism usage applied in the simple folk's idiolect. "Mości" is a polite expression, a lexical archaism (Piela, 2016), used in combination with a title such as prince or in this case – witchers. It was used when addressing a person directly and constitutes a short form of archaic "wasza miłość" similarly to the English expression "your majesty" (Doroszewski 1958-1969). It has been translated using the expression "Master" as there seems to be no literal equivalent for it in the English language, which constitutes a change in propositional meaning[6]. The other lexical archaisms are "jadło i napitek" ("food and drink"). They have been neutralized in the translation, which uses contemporary unmarked expressions. Consequently, the translation features a loss in evoked meaning[7] since neither "Master", nor "food and drink" evoke the same archaic register.

*Elza: Czego **wam** jeszcze trzeba? / What else would you like?*[8]

*Geralt: **Macie** coś ciekawego pod **szynkwasem**? / Do you have anything under the counter?*

*Elza: A zależy, czego **szukacie**. **Rzućcie** okiem. / It depends on what you are looking for. Have a look.*

*Elsa: **Somethin'** else you'll be **needin'**?*

[6] Propositional meaning is related to the literal sense of the expression and can be judged as true or false (Baker, 1992).

[7] Evoked meaning stems from the usage of dialects and registers, and more broadly, culture.

[8] The Polish version is supplemented with backtranslations after the slash in order to illustrate the differences between the Polish and English texts.

Geralt: Got anything interesting under the counter?

Elsa: Depends what you're after. Have a look.

The next example contains a phenomenon called *pluralis maiestaticus* (Wiśniakowska, 2020). It was originally used to emphasize the dignity of the ruler speaking about himself or herself or by other people in addressing the ruler. In the analysed example, it is used as a form of polite address by the innkeeper Elsa toward Geralt ("wam", "szukacie", "rzućcie") and by Geralt to Elsa ("macie"). This feature has been completely lost in translation.

The example also contains a lexical archaism: "szynkwas" (Doroszewski, 1958-1969) translated literally as "the counter". Here once again a marked form has been neutralized through the application of a contemporary, standard term, which constitutes a discrepancy in evoked meaning despite retaining propositional meaning. The English version, however, marks the simple folk speech by using shortened forms: "*Somethin'*" and "*needin'*". Such contractions are characteristic of some dialects and are called "g-dropping", where the word-final "g" is dropped both in speech and writing and replaced with an apostrophe (Karve, 2023). This translation strategy can be seen in terms of compensation for the loss of markedness elsewhere.

Elza: Cały naród w drodze. Ten krewnych ***szuka****, inny z dala od frontu* ***bieży****... A* ***każden*** *zjeść* ***musi****, wypić, noc w cieple* ***spędzić****. / The whole nation on the road. This one is looking for relatives, another is running away from the front... And everyone has to eat, drink, spend the night in warmth.*

Elsa: ***Nation's*** *on the move. Some search for kin, others just want to get out of the way of the armies. They all need food, drink, and a night's rest in warmth.*

The next example contains more archaisms. The verb "bieżeć" means "run" or "hurry" (Doroszewski 1958-1969). It was translated as "get out of the way". Another marked expression is the archaic "każden", which means "everyone" (Doroszewski, 1958-1969). The translation uses the form "They all". Another marked feature of the simple folk's idiolect is the placement of verbs at the end of the clause: "szuka", "bieży", "musi", "spędzić". This syntactic archaism (Piela, 2016) has not been transferred into English since it is a language with a static word order as opposed to Polish. The English version again marks the simple folk speech by using a shortened form: "Nation's", which is a contraction with a noun characteristic for speech (Karve, 2023). Still, most of the translation is unmarked which creates a disparity in the evoked meaning.

Elza: ***Ludzie tu nerwowe****. Nie dość, że dopiero co wojska* ***przeszły****, to jeszcze gryf nam się* ***zalągł****. / People here are nervous. Not only have the troops just passed through, but we've had a griffin nest itself.*

*Elsa: **Folk're** jumpy **'round** here. Armies just passed through, now a **griffin's prowlin'** about...*

The next fragment contains dialect: "Ludzie tu nerwowe" ("Folk're jumpy"). The source form is marked since it is an example of the simple folk's unsophisticated, ungrammatical speech. Once again, there is also a marked word order with two verbs placed at the end of the clauses: "przeszły" ("passed through") and "zalągł" ("prowlin' about"). As far as the translation is concerned, it again uses contractions to mark the character's speech. "Folk're" and "griffin's" are contractions of the verb "be" with nouns. The contracted "prowlin'" is another example of g-dropping. The contraction "'round" in turn is an example of aphaeresis, which consists in dropping the first unstressed syllable and replacing it with an apostrophe (Karve, 2023) This time the loss of evoked meaning in some places is successfully compensated in others, while the propositional meaning remains relatively close.

*Chłop: **Ostaw** nas. **Gadać** z tobą nie **będziem**! / Leave us. We won't talk to you!*

*Chłop: Ja... Ja dość już chyba wypiłem. We **łbie** mi szumi... / I... I've probably drunk enough. My head is humming.*

*Chłop: To nie od **siwuchy**, tylko od **guseł**! / It's not from the guzzle, but from the witchcraft!*

*Peasant: **Begone**. We'll not talk to you.*

*Peasant: I, uh... Oh, I've drunk enough. **Me head's spinnin'**!*

*Peasant: **Tain't the hooch! 'Tis wizardry!***

The next fragment constitutes the speech of peasants addressing the Witcher in the White Orchard Inn. There are some archaisms and some colloquial expressions to be found here. The first archaism is the verb "Ostaw" meaning "leave" (Wielki słownik języka polskiego, n.d.). It has been translated as "Begone", which is an interjection that activates an archaic and literary register (The Britannica Dictionary, n.d.). Another marked form is the peripheral inflectional archaism "będziem" ("will be") (Dubisz, 2008). The English translation uses standard language at this point. The verb "gadać" ("talk") in turn is a colloquial expression (Słownik języka polskiego PWN, n.d.) just like "łeb" ("head") (Słownik języka polskiego sjp, n.d.) and "siwucha" ("vodka") (Doroszewski, 1958-1969). Unlike the last expression translated as "hooch", which comes from US slang (The Britannica Dictionary, n.d.), the other translations display standard language: "talk" and "head". The term "gusła" is quite rare in contemporary Polish and even if not explicitly archaic, it features a literary register (Wielki słownik

języka polskiego, n.d.). On the other hand, the English equivalent of "wizardry" belongs to the standard language.

The expression "Me head's spinnin'!" is marked. "Me" used instead of "my" constitutes non-standard language/dialect (Oxford Languages, n.d.), while "head's" and "spinnin'" contain contractions characteristic of the speech of the simple folk in the English translation. Non-standard contractions can also be found in the last line: "Tain't the hooch! 'Tis wizardry!". "Tain't" is the non-standard short form of "it ain't" (The Free Dictionary), while "'Tis" is the archaic contraction of "it is" (Cambridge Dictionaries, n.d.) often used in poetic contexts (Karve, 2023). Once more the technique employed in the translation is the compensation of the lost evoked meaning elsewhere. The propositional meaning remains otherwise close.

Another character, whose speech is interesting from a linguistic point of view – since he uses a lot of vulgarisms – is the Bloody Baron of Velen. When a peasant brings Ciri and Małgosia to him, he is furious that none of them is his lost daughter.

Baron: No i kogoście tu przyprowadzili? Przecież to nie jest moja córka! / Well, and who did you bring here? After all, this is not my daughter!

Chłop: A ta druga? / And the other one?

*Baron: Żadna, **kurwa**! Chyba potrafię rozpoznać własną córkę! / None, fuck! I think I can recognize my own daughter!*

*Baron: Just who do you think you've brought me, man? That's not **me** daughter!*

Peasant: And the little one?

*Baron: Neither, **dammit**! I think I'd know my own child.*

In this exchange, Baron uses the swearword "kurwa" ("bitch"), which is one of the strongest vulgarisms in Polish. The English version, however, uses "dammit", which, in comparison, is of lesser strength. The result is not only a change in propositional meaning but also a change in expressive meaning[9]. There is also once more a non-standard form "me" instead of regular "my".

[9] Expressive meaning is the meaning associated with the emotional load of an expression or an attitude of the speaker (Baker, 1992).

Chłop: Ale... ta starsza może i nie wasza, ale całkiem podobna... nie? To jak? Panie, nagroda będzie? / But... the older one may not be yours, but quite similar... no? Then how? Master, will there be a reward?

Baron: Ja ci, ***kurwa****, dam nagrodę!* ***Wypierdalaj*** *mi stąd, zanim psem poszczuję! / I'll fucking give you a reward! Get the fuck out of here before I sic the dog on you!*

Peasant: Well, er... mi-might not be yours, the older one, you've ***gotsta*** *admit the likeness. It's downright* ***strikin'****! So any chance for that reward?*

Baron: You'll not see one ***fucking*** *copper!* ***Get out*** *before I set my hounds on you.*

In the following exchange, Baron again uses the swearword "kurwa" ("bitch"). This time the English version employs a swearword of similar strength: "fucking". Hence despite a change in propositional meaning the swearword carries a similar expressive meaning. The next swearword, though, has been completely neutralized: "Wypierdalaj" has been translated as simply "Get out". Other than that, the peasant's speech displays stylization in the form of a slang contraction "gotsta" meaning "got to" (The Online Slang Dictionary, n.d.) and g-dropped "strikin'".

In another conversation with the Witcher, Baron talks about the simple folk believing in all kinds of magic and monsters.

Baron: Wieśniacy wszędzie widzą czary, wiedźmy, diaboły i ***chuj*** *wie co tam jeszcze. / Villagers everywhere see sorcery, witches, devils and dick knows what else.*

Baron: Common folk see witches, wizardry, devils and who knows what the ***fuck*** *else every which way they turn.*

This time the Baron uses the swearword "chuj" ("dick"), which belongs to the strongest Polish swearwords. Here the translator uses a similarly strong vulgarism, which is "fuck". Even though the propositional meaning is different, the expressive meaning has been maintained.

To sum up, the speech of the simple folk is often neutralized in places, where it was marked in the source text. As a result, many of the archaisms and dialectisms of the Polish version get lost in translation. *Pluralis maiestaticus*, which has been observed in the Polish version, also does not apply to the English translation since the latter uses the pronoun "you" in both formal and informal address. Similarly, the syntactic stylization, which consisted of placing verbs at the end of the clause, could not have been transferred into the English text since it is a language with a mostly fixed word

order. These forms of stylization in the source text are sometimes compensated elsewhere in the translation, mainly in the form of contractions and some non-standard expressions. Subsequently, the evoked meaning of the analysed utterances has been partially lost and partially retained even if the propositional meaning was relatively close.

As far as vulgarisms are concerned, we have observed three different strategies: using a swearword of similar strength, using a swearword of lesser strength or complete neutralization. Some swear words differed in propositional meaning but managed to carry similar expressive meanings related to their emotional load. Nonetheless, from what we have seen vulgarisms in the game are sometimes softened in the translation into English and this is not prompted by the PEGI[10] rating of the game, which is 18, i.e. highest possible (which means vulgar language and violence are allowed). The reason for this may be the fact that Polish vulgarisms are richer and more varied than the ones found in English. The English translator may have aimed at achieving a similar degree of diversity by softening some of the swear words.

4.2 Folk rituals

The Witcher III: Wild Hunt features an important Slavic rite of the Forefather's Eve, which is a direct reference to *Dziady Part II* by Adam Mickiewicz (1822), one of the most influential poets of Polish Romanticism. This is also the reason why this rite has been chosen for the analysis. The folk rite pictured in the drama by Mickiewicz consists in summoning the dead on the eve of All Soul's Day to help them get to heaven by offering them food and listening to their sorrows. The dead in turn tell their stories, which take on the form of cautionary tales explaining why they experience problems getting to heaven.

The poetic drama by Mickiewicz is referred to in the game on many levels. The first is the very name of the rite, Dziady, translated into Forefather's Eve. Secondly, the rite itself resembles the classic drama: it similarly features rhymes and is divided into lines spoken by the Pellar and by the Mob. The latter is the counterpart of the chorus in Mickiewicz's piece.

Guślarz: Czym jest życie? Sami wiecie. / What is life? You know yourselves.

Tłum: Krótką męką na tym świecie. / Short ordeal in this world.

Guślarz: To, co po nim następuje, / What comes next,

Tłum: Każdy z nas sam decyduje. / Every one of us decides for themselves.

[10] PEGI stands for Pan-European Game Information and is a rating of the content of video games. There are 5 general ratings related to age appropriateness (3, 7, 12, 16, 18).

*Pellar: What is this life? Well **ye** know…*

*Mob: Fleeting torment **ere** we go.*

Pellar: What comes next, once life subsides…

Mob: Man his own fate decides.

The first part of The Forefather's Eve has been translated quite closely in terms of propositional meaning while maintaining the rhymes and similar rhythm. This time the Polish version features standard language while the English counterpart contains stylization, which points to a change in evoked meaning. The first such linguistic element is the pronoun "ye", which is the plural form of "thou" (you) and constitutes an archaism sometimes used in poetic and religious contexts (Collins English Dictionary, n.d.). Another archaism which is also used in literary context is visible in the form "ere" meaning "before" (Collins English Dictionary, n.d.).

Guślarz: Zaraz zjawią się przodkowie, / Soon the ancestors will appear.

Tłum: Co ich dręczy, każdy powie. / What ails them, everyone will say.

*Guślarz: **Czy gotowiście na swady**?/ Are you ready for conversations?*

Tłum: Przybywajcie! Już czekamy! / Come! We are already waiting!

*Guślarz: Zaczynamy **tedy** Dziady! / Let us start Forefather's Eve!*

*Pellar: Soon will rise **thy** dead, **thy** buried…*

Mob: Each will say what they're harried.

*Pellar: Will **ye** grant these souls reprieve?*

Mob: We're prepared to end their grief!

Pellar: Let's begin Forefather's Eve!

The next fragment features a looser translation: "Czy gotowiście na swady?" (Are you ready for talks?) has been rendered as "Will ye grant these souls reprieve?" and "*Przybywajcie! Już czekamy!*" *(Come! We are already waiting!)* as *"We're prepared to end their grief!"*. As far as stylization is concerned, "Gotowiście" is a word-formative archaism (Piela, 2016) meaning "Are you ready". "Swada" in turn is a lexical archaism

meaning fluent speech or eagerness (Doroszewski, 1958-1959). "Swady" (plural) could then be understood as conversations with the dead. There is also the conjunction "tedy" meaning "hence" or "then" (Doroszewski, 1958-1959), which is another lexical archaism. Stylization efforts can also be observed in the translation in the form of archaic "thy" meaning "your" and "ye" meaning "you", both of which can be found in poetic and religious contexts (Collins English Dictionary, n.d.). Despite a divergence in propositional meaning, the evoked meaning in this fragment seems to have been maintained.

Guślarz: ***Kto z was wietrznym błądzi szlakiem,*** */ Who among you wanders down the windy trail,*

Guślarz: Nie opuścił tego świata, / Has not left this world,

Guślarz: ***Tego lekkim, jasnym znakiem,*** */ The one with a light, bright sign,*

Guślarz: ***Przyzywamy, zaklinamy.*** */ We summon, we enchant.*

Tłum: ***Przyzywamy! Zaklinamy!*** */ We summon! We enchant!*

Guślarz: Czy się mylę? Dobrze słyszę?/ Am I wrong? Do I hear well?

Tłum: Duch przerywa nocy ciszę! / A ghost breaks the night's silence!

Pellar: ***Ye*** *who wonder on the gale,*

Pellar: Ever caught in this world's thrall,

Pellar: See this sign, gentle, pale,

Pellar: ***Ye*** *we summon!* ***Ye*** *we call!*

Mob: ***Ye*** *we summon!* ***Ye*** *we call!*

Pellar: ***Hark****! A sound I hear! '****Tis*** *right?*

Mob: A spirit breaks the still of night!

The next fragment of the rite contains direct quotations from the Polish drama: *"Kto z was wietrznym błądzi szlakiem" ("Ye who wonder on the gale"); "Tego lekkim, jasnym znakiem", ("See this sign, gentle, pale"); "Przyzywamy, zaklinamy" ("Ye we summon! Ye we call!")*. Since there is no existing English translation of *Dziady Part II*, the one contained in the game is original. The translation can be deemed quite faithful in terms of

propositional meaning. From the point of view of stylization and evoked meaning this time again the source text uses standard language while the translation features archaization in the form of "ye" repeated as much as five times in the quoted fragment. Lastly, there is the archaic "'Tis" meaning "it is" and "Hark!" meaning "listen" (Collins English Dictionary, n.d.).

With the lines above the introduction to the Dziady rite is concluded and the game presents the main part of the rite.

Niechaj kądziel płonie w żarze. Niechaj duch się nam ukaże! / Let the distaff burn in the embers. Let the spirit appear to us!

Niechaj duch zabierze głos. Wnet poznamy ducha los! / Let the spirit speak. Soon we will know the spirit's fate!

Przyzywamy, zaklinamy. *Duszę każdą przebadamy. / We summon, we enchant. We'll examine every soul.*

Ciemno wszędzie, głucho wszędzie. Co to będzie, co to będzie? */ Darkness everywhere, deafness everywhere. What will it be, what will it be?*

Cosik szemrze, cosik piska. Ktoś się zbliża do ogniska. / Something murmurs, something squeaks. Someone approaches the campfire.

Ciemno wszędzie, głucho wszędzie. Co to będzie, co to będzie? */ / Darkness everywhere, deafness everywhere. What will it be, what will it be?*

Burn the incense ever higher! Spirit, join us ***'round*** *the fire!*

Spirit – speak! This time is yours! Tell us of your ghostly woes!

Ye *we summon,* ***ye*** *we call. Enter, souls, we'll judge* ***ye*** *all.*

All is quiet, all is gloom. What beings in the darkness loom?

Something whispers, something peeps. Someone near our fire creeps.

All is quiet, all is gloom. What beings in the darkness loom?

In the main fragment of the ritual, there is no information on the speaker, but some parts are similarly spoken by the Pellar and some by the mob. Moreover, the lines are twice as long and hence feature internal rhymes. This part also contains direct quotes from Mickiewicz: *"Przyzywamy, zaklinamy" ("Ye we summon, ye we call"); "Ciemno wszędzie, głucho wszędzie. Co to będzie, co to będzie?" ("All is quiet, all is gloom. What beings*

in the darkness loom?"). Especially the latter one is very famous and recognizable by the Poles. As there was no preexisting translation of *Dziady Part II*, this reference will not generally be noticed by the players of the English version, except for perceptive Poles who might play the game in English.

From the standpoint of propositional meaning, the translation of the main part of the rite is fairly close to the Polish source text. In the first line of the Polish version, the incense is burned in the cinder while in the English version, it is burned "ever higher". Similarly, the plea to the spirit to show itself becomes a plea to the spirit to join the mob "'round the fire". There are two further examples of added information that was non-existent in the source: "This time is yours!" and "Enter, souls". As far as stylization and evoked meaning are concerned, the Polish version contains a nonstandard noun "cosik" (meaning "something"), which is an example of archaism/dialect (Glosbe, n.d.). The English version again uses the archaic "ye" (three times) and a contracted nonstandard form: "'round" (aphaeresis).

What follows in the game is the appearance of a ghost, which is characteristic of this medium, and the Witcher Geralt is forced to fight evil spirits and protect the pellar and the mob.

All in all, what is characteristic of the rite of the Forefather's Eve in *The Witcher III: Wild Hunt* is the dramatic form with its intrinsic features such as rhyme and rhythm modelled on the original poetic drama by Mickiewicz. The result is occasionally loose translation and the addition of some elements probably motivated by the fact that English has shorter words, especially ones of Germanic origin. The Polish rite even features direct quotes from the famous work of the national bard, which have been translated quite adequately together with the remaining lines written specifically for the game. What is more, there is also stylization in both the Polish and the English rites but, interestingly, it is even more pronounced in the latter. The reason may be that the rite of Dziady in Polish portrays not as much Sapkowski's language (as was the case with the characters' idiolect) as the literary language of Mickiewicz. Last but not least, even though the translation seems to do justice to the original from the point of view of the dramatic form as well as propositional and evoked meaning, it will most probably fail in eliciting the same recognition and allusion to classical Polish literature of the Romantic age in its receivers.

Conclusion

Video game localization aims to provide the target players with a new original and comparable entertainment and usually does this through a target-oriented, fluent translation. In the case of *The Witcher III Wild Hunt*, however, what we have observed are efforts directed at foreignization rather than domestication. This is evident in the very effort to render the game's local colour in the translation. The striving to recreate

Sapkowski's idiolect, which is visible in the localized version of the speech of the game's characters, is just one such area. Another is the domain of Slavic rites exemplified by the Forefather's Eve, where the translator not only took great care to render its dramatic quality and propositional meaning but also provided a translation of the quotes from Mickiewicz's *Dziady Part II*, presenting the target players with a direct reference to classical Polish literature instead of replacing it for example with quotes from Shakespeare.

The Slavic local colour portrayed in the speech of the characters seems to have been transferred relatively well though partially into the localized version. The English version strives to do justice to the original through the usage of stylization – more pertinently archaisms, dialectisms and vulgarisms, which constitute characteristic features of Sapkowski's language that have been recreated in the game, though at times neutralization has been observed. Still, in both the Polish and the English versions of the game the characters generally speak in idiolect which adds to their credibility and enhances the local impression.

As far as Slavic rites are concerned, the ritual of the Forefather's Eve has been depicted adequately in the English translation. The English text is relatively close in terms of propositional meaning to the Polish rite, except for a few lines translated rather loosely. Still, more important than propositional meaning was the dramatic form of the ritual. In this respect, the translation is undoubtedly on par with the source text through the employment of rhyme and similar rhythm. Furthermore, the translator also provided a translation of the direct quotes from Mickiewicz's drama. Even though the English-speaking players may not recognize the reference, they are given a chance to get acquainted with fragments of classical Polish literature and are not treated as naïve receivers who will only respond to references well-known to them. Some players even excel at finding various allusions called "easter eggs" in games and are fully capable of appreciating them. In this light, it would be interesting to explore other references to classical Polish literature present in the game, such as *The Wedding* or the *Deluge* trilogy, both of which are available in English translations.

That being said, the very fact of translating the game from a local language to a global lingua franca stresses the globalization aspect that localization is tied to by making the game accessible to a global audience. At the same time, this creates a danger of diluting the locality, which was visible in a certain amount of neutralization that has been observed. On the other hand, some degree of neutralization does not have to be viewed in negative terms since it aims to increase the accessibility of the text. And yet it is the local quality of the game – the Slavic local colour – that makes it fresh and exotic in the eyes of the global player, which is partially due to the localization. All this leads to the conclusion that moderate foreignization seems to be a viable alternative to domestication whenever we are dealing with a prominent local colour in a particular title. Moreover, foreignization which is not pushed to the extreme does not necessarily

have to compromise fluency. Subsequently, in the case of *The Witcher III: Wild Hunt* and games with similarly pronounced local quality, depicting the local culture becomes part of the obligations imposed on localization. Moderate foreignization makes sure that this culture is depicted as fully as it is feasible without making it feel obscure.

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What do gamers look at in a localized game? Eye-tracking analysis of three language versions of Shadow of the Tomb Raider

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Abstract

Both the process of creating new language versions of video games and eye-tracking methodology became a part of international translation studies discourse at the turn of the 21st century. The present paper discusses an experiment which utilized eye tracking to juxtapose the perception of the original English version of an action-adventure game *Shadow of the Tomb Raider* (Eidos-Montréal: 2018) with the perception of its partial and full localization into Polish. The study involved 39 BA and MA students of applied linguistics, Polish native speakers, with vast and very vast experience with video games, who differed from one another in the levels of translation experience and formal university translation training. The eye-tracking analysis found no considerable difference in the character of gaze patterns for the subtitles used in the three language versions, although the highest values of eye-tracking parameters were observed for the full English language version. While playing, the participants devoted much more visual attention to the imagery of the game than to dialogue subtitles, overlays or auxiliary screens. In all versions, the dialogue subtitles were read more intensively for cutscenes than for in-game conversations and active gameplay. For BA program and between the BA and MA programs, some positive connection was noticed between the grade of university training and the levels of eye tracing parameters.

Keywords: video game localization, video game translation, eye tracking, video game subtitles, translation errors

Introduction [1]

For a particular video game to be positively received by all users in a particular market, regardless of their command of English, its local language version needs

[1] This paper presents an eye-tracking experiment that the author conducted while completing their PhD dissertation and published in a revised version in Polish in 2020 (Kudła, 2020). This monograph planned to be translated into English and published, however, due to personal reasons and procedural issues such translation

to be prepared with considerable care. Every title conducts a dynamic dialogue with its user because of the level of interactivity unparalleled by that provided in other media (cf. Giddings & Kennedy 2006, 142–143). The gamer not only watches the plot passively but also participates in unfolding it and (if the game allows that) creating their own version of the story. In numerous games, the mechanics constantly require an instant reaction from the users, which is followed by an immediate response from the game algorithms. Such a situation forms an emotional bond between the player and the result of the game (cf. Juul 2005, 34). Consequently, one of the primary functions of all the elements of a video game is to provide the user with a coherent and believable in-game world with which the user is supposed to identify. Creating such a feeling of submerging the user in the game events, known as "immersion" (e.g., Celleja 2007, 85; Adams 2010, 641) is also important for all the language versions of a particular game. The process of providing the target market users with a version meticulously tailored to meet their needs may involve all the components of a video game: linguistic, cultural, legal, game-mechanics-related and promotional ones is referred to as "localization" by many members of both the industry and academia (for a detailed juxtaposition of various names used to refer to that process cf. O'Hagan & Mangiron 2013, 87–99; Bernal-Merino 2015, 85–92; Pettini 2022, 12–19).

There is a variety of views on classifying this type of translation activity. Some authors perceive it as a separate type of translation (e.g., O'Hagan & Mangiron 2013; Bernal-Merino 2015), some as a variety of audiovisual translation (e.g., Sajna 2013, Drab 2014; Tarquini 2014; Mejías-Climent 2017; Sarıgül & Ross 2020), while others assign it to the written translation category (Kuipers 2010). In the present paper, the first approach is adopted, as apart from sharing multiple similarities with literary translation, AVT, specialized translation and software as well as online localization video game localization combines them in one translation project (O'Hagan & Mangiron 2013, 39; Bernal-Merino 2015, 84).

Apart from being one of the distinctive characteristics of video game localization, the primary nature of player's immersion in the translated material is also the rationale not only for the scope of the modifications allowed in video game localization but also for their depth. While, with the target market in mind, characters may have their looks and social roles changed, some elements of the plot might be censored or removed from a title, and humor or cultural references might be created anew, the notion of linguistic fidelity suggested by Chesterman (1995) as one of the elements of translation ethics is no longer the primary

had never been completed. Nevertheless, the author presented the results of the study at three Polish and four international conferences where both researchers and localization practitioners expressed interest in having access to a thorough analysis of the experiment also in English. Consequently, this paper constitutes a revised translation and summary of the major fragments of the monograph extended with some more recent contributions to the state of the art in translation studies after the dissertation and monograph were published.

indicator for the localized game quality (O'Hagan & Mangiron 2013, 150; Bernal-Merino 2015, 86).

Also, the classic notions of source text and target text become blurred in video game localization as their content belongs to the class of "new media" proposed by Manovich (2001, 36). Such types of media can be improved, modified and extended ad infinitum and be distributed in multifarious forms (due to patches, expansions or different platform builds). This has also implications for the localization process that has not only become one of the integral elements of the game development process but might also last long after the game release date.

Video games constitute multisensory, highly immersive multimedia experiences utilizing numerous communication channels to create their message (cf. Bernal-Merino 2015, 47). Apart from the visual verbal (subtitles, GUI text), visual non-verbal (image), auditory verbal (speech) and auditory non-verbal (sound effects, soundtrack) channels, which are important in audiovisual texts (Kruger et al. 2015, 11), the message is co-created by the user who through interactivity participates in the game plot and shapes the game events. As a consequence, various stimuli compete for the visual attention of the player. Their efficient processing is important for successful gameplay. Throughout the last two decades, eye tracking has become one of the tools utilized to analyze the character of this process. It provides the researcher with a precise and unbiased insight into the gamer navigation through the graphic user interface (GUI) and various elements of the game screen (Zammitto & Steiner 2014, 291).

One of the main assumptions concerning eye movements and cognition is the "eye-mind hypothesis", formulated by Marcel A. Just and Patricia A. Carpenter (1980), that the timespan of processing a particular object is directly correlated, or at least similar, to the timespan of the eyes being focused on it. In the late 19th century, it was discovered that visual perception consists of two basic types of movements, fixations and saccades (Wade 2007). Fixations are motions stabilising an object of interest in the fovea to clarify its image (Duchowski 2017, 44). This is when a stimulus can be consciously processed and transmitted to the brain. Saccades constitute rapid movements of the eyeball to move from one point of attention to another (Jadanowski et al. 2010). Various parameters can point to different characteristics of visual perception.

Zammitto & Steiner (2014, 295) divide the graphic elements of a video game into low-input, medium-input, and high-input depending on the type of interaction they require from a user. Cutscenes belong to the first of the categories as they are just watched by a player. The user interface, which consists of menus and overlays (auxiliary elements displayed against the background of the game world, informing the user of the most important in-game indicators or possible interactions), implies medium input as usually they do not require instantaneous

interactions. Other elements of the main game screen are associated with the highest levels of input as they constitute the core of the gameplay.

As there are numerous game genres and their manners of presenting information differ notably from one another, in the analysis of eye-tracking studies, it is rarely possible to attempt to generalize and formulate conclusions about video games as such. For this reason, studies have most of the time focused on conclusions about a specific game or a specific game genre. The results of most studies conducted by game developers are not publicised due to the ever-increasing competition between different companies. However, numerous academics have also analyzed video games using eye tracking, e.g., Alkan (2006), Kallinen et al. (2007), Jennett et al. 2008, Caroux et al. (2011), Almeida et al. (2016), and Moreira & Okimoto (2019).

There are numerous studies focusing on the quality of subtitles in video games (e.g. Deryagin 2017, Costal 2018, Sciberras 2021, Deckert & Hejduk 2022). To the best of the author's knowledge, there were two eye-tracking analyses of localized video games, described by academia. In 2010, Minako O'Hagan and Marian Flanagan conducted a study using an eye tracker, heart rate measurement, facial expression recording and GSR equipment (described in O'Hagan & Mangiron 2013 and O'Hagan 2016). This was a pilot study to test the capabilities of the measurement equipment used in studying the reception of game localization. Seven native English speakers, eight native German speakers and six native Japanese speakers took part. Each of them played a localized version of *Plants vs. Zombies* (PopCap Games: 2009) for 40 minutes. However, the researchers were unable to read the results of the eye tracking measurement because "the particular type of eye tracker used was not optimized for use with multimedia content containing constantly moving high-resolution graphics" (O'Hagan & Mangiron 2013, 317).

Mangiron (2016) is most probably the only academic eye-tracking study devoted exclusively to video game subtitles. It focused on the reception of various types of subtitles modified in a ten-minute adventure game, *Casa Encantada* ("Haunted House", cf. Mangiron 2016, 77) created for this purpose. This was not a translation of the game, but subtitles are an extremely important part of localization, especially if it is a partial localization (in which case it is the only piece of game software in the target language). Based on a survey and eye-tracking experiment conducted on 25 participants (12 hearing and 13 deaf), Mangiron (2016, 87) found that hearing users preferred more imaginative forms of captions (e.g., comic-like balloons or artistic frames), while deaf users preferred dialogue captions without any additional graphic elements. Most users in her study preferred centred subtitles located in the lower half of the screen. An analysis of the eye-tracking data obtained in the experiment showed that regardless of the type of captions,

deaf people took longer to read them than hearing people. No other eye-tracking studies into localized video games were found in a literature review in 2023.

Materials and methods

The study sample originally involved 45 participants, all Polish native speakers, registered in the applied linguistics program (both BA and MA) at the Institute of Specialized and Intercultural Communication (Faculty of Applied Linguistics, University of Warsaw). All the participants were recruited after volunteering as a response to a brief description of the study that was distributed among all students of this program. For most participants, their language of study was English, combined with German, Italian or Russian (there were only two participants who studied Italian and Russian but declared proficient command of English, both played the full localization involving only elements in Polish). All of the participants reported having vast and very vast video gaming experience. This parameter was determined not only by their declaration but also their stated favorite video game genres and the number of titles they provided in response to a question in the pre-study questionnaire.

Due to the methodological limitations of the eye-tracking recordings, the results from 6 participants were excluded from the analysis. To ensure the reliability of the analyzed eye tracking data, the accepted user calibration error was up to 0.5°, while the minimal tracking ratio was 80% (indicating the portion of recording time over which the eye tracker recognized the participant's eyes). Consequently, the final analysis included 39 participants (17 women and 22 men), representing various academic levels: 5 in the first BA year (B2+ CEFR English proficiency level), 7 in the second year (B2+ level), 15 in the third year (close to C1 level), 6 in the first MA year (C1 level), 6 in the second year (close to C2 level). The participants were also asked about their translation experience, which was determined on the basis of not only the declarative question but also questions addressing the scope and types of translation/interpreting activities they engaged in outside of university classes). There were 4 participants without any translation experience, 16 with minimal experience, 13 with moderate translation experience and 6 with extensive experience in this area (cf. Kudła 2020, 274–275 for a detailed description of the study sample).

As for the materials, a fragment of an action-adventure game *Shadow of the Tomb Raider* (Eidos-Montréal: 2018), the 21st instalment of a globally popular series telling the story of a British archaeologist, Lara Croft, was chosen for the study. It features one of the initial scenes of the game taking place in the town of Cozumel during *Día de los Muertos*, a very vivid Mexican festival devoted to the deceased. This scene was utilized for the study as it presents one whole task of the main quest

(with all the accompanying graphic elements from its emergence to its completion) and is spatially limited. The fragment is framed by two cutscenes (lasting 2 min. 39 sec. and 59 sec. respectively) and takes place at a crowded square. This enabled the participants to move freely around the area while simultaneously providing experimental data which would be comparable for all the participants (the playthroughs did not differ significantly from one another even though they were unique for each subject). To further unify the participant gameplays, apart from completing the main task of the game sequence (finding Doctor Dominguez), they were asked to conduct at least three conversations with non-player characters (NPCs; there were five such conversations possible, which was also one of the reasons for choosing it) and explore the setting as long as they wished. Completing the fragment might take from slightly more than 4 minutes to around 15 minutes as it also involves an obligatory cutscene lasting 16 seconds and finding Dr Dominguez using the shortest path takes around 20 seconds, while roaming freely through the town square finding all the collectables and reading all their descriptions takes approximately 10 minutes. The title was released nine months before conducting the experiment, which means that it was a relatively recent title presenting the state of the art in game development. The game is designed for more dedicated players (it is visually exquisite and is focused on storytelling, exploration and survival). One of the characteristics of the graphic user interface is that by default, it features a "clean UI", so only the game world is visible, while other elements (e.g., the quest marker) are displayed only if they are necessary or after customization by the user. The game world is shown from a third-person perspective, while the user can rotate the view around the avatar. Such in-game camera angle change is also possible during some conversations initiated by the user (including two of the conversations in the examined fragment, while the three others are displayed as cutscenes).

Fig. 1. ***"Clean UI" function and various overlays displayed in Shadow of the Tomb Raider (Square Enix: 2018).***

In order to present how localization is perceived visually, three language versions of the fragment were chosen: the full localization into Polish (with both subtitles and voice acting in Polish), partial localization into Polish (English voice acting

and Polish subtitles) and the original language version (fully in English). To render this comparison complete, full subtitles were chosen. As the participants had no hearing impairment, the subtitles of the deaf and hard of hearing were disabled. To check whether the participants would notice that fact, one accessibility functionality was enabled: using separate colors to distinguish between the characters. In fact, the examined game was one of the first titles to introduce this element as a customisable function and a few participants mentioned it as a positive feature of the game. The language versions of the analyzed game fragment were distributed evenly: 13 participants played the original version, 13 played the partial localization and 13 played the full localization.

The fragment comprised 113 dialogue subtitles in the Polish version and 116 in the English one (they are all thoroughly shown in Kudła 2020, 399). Not all of them were displayed by all the participants, as it was not obligatory to complete all the possible conversations and walk around the whole location (some comments were uttered by Lara Croft or her friend Jonah Maiava only while passing by some objects of the game world). Importantly, the background conversations between NPCs (e.g. people sitting in a café talking to one another) were not subtitled in either of the language versions. The five possible dialogues included three cutscenes: with a boy selling sparklers, a man selling grilled snacks and a souvenir stallholder; and two active gameplay dialogues: with an elderly lady and the mother of a drunken boy near the fountain. There were also 18 background conversations between Lara and Jonah: 7 activated in specific places and 11 appearing occasionally to enliven the scene. Additionally, there were seven textual overlays providing information about the current location, quest updates, tutorials into game mechanics, and game journal updates. They are often accompanied by prompts on what key could be pressed to display more details regarding a particular quest or journal entry.

The game also includes multiple auxiliary screens, e.g., world map, an artefact menu and a survival guide. The participants were not instructed on how to use them but instructions on how to access them were provided in some overlays.

The subtitles included some minor issues which did not affect the gamer experience considerably (this stems from the results of the post-game survey, which due to length limitations of the text were not discussed here). There were some discrepancies between voice acting and subtitles. Usually, those involved a different wording of a message which had the same meaning. However, in the full Polish localization there was one more severe issue, as in three utterances the voice acting includes misinformation. Whereas in English the characters were talking about a constellation which points to the *West* or *South West* in the Polish voice acting the words *wschód* and *południowy wschód* were used (which in fact mean *East* and *South East*). However, the Polish subtitles included the right translation, namely *zachód*

and *południowy zachód*. Most probably, the error (potentially caused by the fact that the Polish and English words start with the same letter) was noticed after the Polish dialogue recordings were finished and before the game release, it was changed only in subtitles (which are the same in Polish regardless of the sound language), as re-recordings are expensive and not viable shortly after the error detection. Notably, this error in the Polish voice acting was corrected into the correct Polish translation in one of the patches to the game after the experiment was conducted. There were also 4 other such issues in the full Polish localization (in total 5), 2 in partial localization and 3 in the English language version.

For the partial localization, some semantic shifts were noted in 6 Polish subtitles: in 3 instances these were omissions of clauses or phrases with minor influence on understanding the overall sense of the fragment, once it is connected with better synchronising the recording with the lip movements, while in 2 instances the overall sense of the English fragment was changed slightly in the Polish translation.

The subtitles also involved technical issues: wrong segmentation (involving conjunctions, prepositions and multi-word proper names) – 17 instances in the Polish version and 15 in the English version; subtitle changing its position when a background conversation started automatically while the user has already started one of the NPC conversations (1 instance in all versions). In the English subtitles, there are 8 instances of a typographic issue (instead of a dash "–" two hyphens "--" are used).

Equipment-wise, an SMI RED 500 table-top eye tracker with a 22-inch computer screen was used for the study. The maximum 500Hz sampling rate was utilized. Due to the license provisions and to reduce the possibility of any of the programs stopping functioning, a two-computer setup was adopted with one computer utilizing the *iViewX* software to control the eye tracker and another to operate the game and the *Experiment Center* and *BeGaze* software (both developed by SMI) for conducting the eye-tracking procedure and analysing the eye-tracking data.

The experiment juxtaposed eye-tracking data with questionnaire answers. Firstly, the participants completed a six-question questionnaire related to their translation- and gaming-related experience (shown in Kudła 2020, 411). Secondly, they read a description of the game controls (Kudła 2020, 412). Thirdly, a five-point calibration of the eye tracker was conducted. The next slide of the experiment involved a short introduction into the plot of the fragment as well as the in-game task description (Kudła 2020, 413). When the participant declared their readiness, a gaze-recording sequence of the fragment gameplay followed. After completing the in-game task, the participants completed a follow-up questionnaire. The Game User Experience Satisfaction Scale (GUESS) designed by Phan et al. (2016, 1243) was considered for that purpose. However, a shorter set of

questions was utilized for the post-experiment survey due to the fact that the GUESS scale questionnaire consists of 55 questions. Answering such a number of questions was considered excessively burdensome for the participants after completing the cognitively demanding eye-tracking task. Using a questionnaire conducted immediately after performing the experimental task is perceived as providing the experimenter with more reliable answers, which are based on immediate experience. In similar experiments (e.g., the one described in Grucza et al 2019) the authors reported that participants are not as willing to complete questionnaires hours or days after finishing the experimental task. Consequently, the questionnaire was designed not to discourage the participants from filling in with its excessive length. It involved 15 questions. The first 4 questions related to the plot details (Kudła 2020, 414) with points of various relevance that were included in the cutscenes and gameplay fragments obligatory for every walkthrough. The following 11 questions concerned the game overall and its language version quality assessment with six Likert-scale closed questions (overall impression, willingness to play further, declarative level of immersion, quality of the language version, voice acting and subtitles) and five open questions (asking participants to specify the aspects that positively or negatively influenced their opinion about a specific aspect of the game or its localization; all the questions are listed in Kudła 2020, 415–416 and translated in the Appendices 1–5).

The data analysis involved a thorough examination of each participant's recording to find any possible patterns in their gameplay and walkthrough behavior. It was followed by setting areas of interest (AOIs) for elements important for localization: dialogue subtitles, overlays and auxiliary screens. Most types of AOIs were distinguished for subtitles, as they involve the most linguistic meaning available visually. As each screen recording was perceived by the analysis software as a separate stimulus, all the AOIs needed to be determined separately for each participant even in the sequences of the game which were exactly the same for all the walkthroughs. Due to the time-consuming character of manually setting and analysing the AOIs for each dialogue subtitle separately (there were more than 100 subtitles per language version and 39 participants and the analysis was performed by the author alone), it was decided to distinguish separate categories of subtitles, which were later juxtaposed. One of the criteria was the presence of localization issues in a subtitle: 2 types of subtitles including no errors (single- and double-line subtitles were established to distinguish the latter ones from the ones involving errors) and 5 types of errors. Not all of the errors were present in every language version (and some of them were present in only one of the three versions of the fragment). As some patterns were noticed in the initial visual analysis, the subtitles were also divided according to the game sequence into 5 classes: intro cutscene, outro cutscene, all the other cutscenes of the fragment, active gameplay

and conversations with the free game mode. Consequently, the full localization involved 12 AOI types for subtitles, partial localization included 19 types, while the full English version also had 19 (but those were not the same classes). There were also 7 AOIs denoting overlays (quest-related, experience points, game saving and four referring to different parts of the game journal) and 4 AOIs for various auxiliary screens.

Four eye-tracking parameters were chosen for the analysis. *Dwell Time* was used in order to assess the overall time devoted to a particular element juxtaposed with other elements. *Fixation Count* and *Average Fixation Duration* as various authors (e.g., Płużyczka 2015, 190; Duchowski 2017, 186) associate it with possible difficulties in reading or more intense processing. To check how many participants decided to revisit the AOIs, *Glances Count* was utilized, as *Revisit Count* is not reliable for AOIs that appear more than once. These parameters were later compared with respect to the independent variables (study grade, translation experience, language version). All the statistical computations were conducted using *IBM SPSS Statistics 25* software. Since the described analysis involved variables divided into more than two categories (three language versions, five studies grades, four translation experience levels, five game sequences), the participants' properties are not distributed normally throughout the research sample, while the variables are nominal, Kruskal-Wallis test was used to verify the eye-tracking data statistically.

As the literature review has shown, no successful attempts to conduct an eye-tracking analysis of the perception of translated video game subtitles have been documented prior to this experiment (May 2019) or before submitting this paper for review (October 2023). Consequently, the study was exploratory in nature.

The first research question formulated on the basis of the designed experiment concerned the differences in visual perception depending on the language version of the video game fragment. Since, in partial localization the message reaching the recipient through the verbal visual and verbal auditory communication channels are in different languages, this version may cause a greater cognitive load. Since the number of fixations is frequently indicated as a determinant of cognitive load, it was assumed that the eye tracking parameters, especially Fixation Count, would take the highest values for the version with Polish subtitles and English voice acting.

The second research question referred to whether the participants would be attentive to errors in the subtitles and how this might manifest through eye tracking measures. Depending on their level of engagement with the game, subjects may pay more or less attention to the subtitles as such. Undoubtedly, participants looking at the subtitles are more likely to identify errors. Noticing an error may cause them to focus on a passage for longer or revisit it with their eyes

to verify the passage in question. It was then assumed that higher Fixation Count and Average Fixation Duration values could indicate the identification of errors in subtitles and their translation.

The third research question addressed the fluctuating visual attention throughout a game session mentioned by Zammitto & Steiner (2014, 295). It was presumed that the Glances Count, Dwell Time and Average Fixation Duration for the subtitle area would be higher for the cutscenes than for other game sequences.

The fourth research question focused on the influence of translation experience on visual perception. It has been assumed that, participants with greater translation experience (especially in audiovisual translation or game localization) will record higher values of Dwell Time in the subtitle area than those with less translation experience.

Results

The mean in-game task completion time of the 39 participants amounted to 7:37.32 (SD = 1:05.85). The lowest time was recorded for one of the participants playing partial localization (5:37.20) and the highest time for a participant playing full localization (11:14.66). The mean times for the three language versions of the experiment were 7:29.07 for the partial localization; 7:35.48 for the original English version; and 8:16.28 for full localization. No significant difference was found for the mean completion time and the study grade and translation experience, $\chi^2(4) = 0.531$, $p = 0.873$). This has shown that for a group with similar gaming experience the language version, years of formal training, or type of translation experience do not affect the task completion time (various possible reasons for longer or shorter completion times were specified in Kudła 2020, 292–295). The average total Dwell Time for all the AOIs amounted to 10.90% of the overall in-game time (with 11.79% for the original English version, 10.49% for the full localization and 10.27% for the partial localization) showing that other graphic elements of the game attracted the vast majority of the participants' visual attention.

The first research question revolved around the influence of the fragment language version on the character of the gaze behavior of the participants. The first step of a Kruskal-Wallis test is verifying a null hypothesis that there is no significant difference between the values of a particular measure (completion time, study grade, translation experience) between the analysed groups (three language versions). For the four chosen eye tracking indicators divided into the three language versions, the null hypothesis was not rejected: the mean values of Dwell Time, Average Fixation Duration, Fixation Count and Glances Count the values are similar (cf. Table 1).

Table 1. ***Eye tracking parameters for all AOIs depending on the language version***

Eye Tracking Parameter	Language version	M	SD	Range
Dwell Time [ms]	Polish	50935.242	4599.968	65034.500
	partial	44980.954	3034.430	23017.200
	English	53656.969	3457.943	21132.600
	experiment	49857.722	3812.808	65034.500
Average Fixation Duration [ms]	Polish	86.346	86.388	405.000
	partial	78.557	105.863	1438.700
	English	81.237	91.052	707.300
	experiment	81.138	95.105	1438.700
Fixation Count	Polish	9.801	20.687	252.000
	partial	8.200	16.239	109.000
	English	8.900	17.172	128.000
	experiment	8.822	18.265	252.000
Glances Count	Polish	3.880	6.194	32.000
	partial	3.005	5.567	31.000
	English	3.333	5.821	46.000
	experiment	3.335	5.815	46.000

Interestingly, across all the discussed eye tracking parameters, the highest mean values were achieved for the full Polish localization and the lowest for partial localization. However, these differences are small and, moreover, none of the results is statistically significant (for all four parameters, the statistical significance is greater than 0.05: for the Fixation Count $p = 0.114$; for Dwell Time $p = 0.087$; for Glances Count $p = 0.073$; for Average Fixation Duration $p = 0.108$).

However, it should be underlined that those values were calculated for all the AOIs within a particular language version: subtitles, overlays and auxiliary screens. The value distribution is different for a single subtitle (cf. Table 2). To show such values, three of the parameters – Dwell Time, Fixation Count and Glances Count – were also divided by their number in a particular language version (113 for both Polish and 116 for English, a similar procedure was also conducted for the 19 overlays and 4 additional screens that were viewed by the participants). The average total Dwell Time for all the subtitles amounted to 8.52% of the overall in-game time (with 10.73% for the original English version, 8.01% for the full localization and 6.89% for the partial localization), showing that among the AOIs dialogue subtitles attracted the greatest attention.

Table 2. ***Comparison of eye tracking parameters for single subtitle and overlay depending on the language version***

Eye Tracking Parameter	Language version	M subtitle	SD	Range	M overlay	SD	Range
Dwell Time [ms]	Polish	337.544	353.844	5002.654	46.205	503.916	7226.056
	partial	265.013	233.418	1770.554	35.060	382.523	3859.756
	English	421.117	216.121	1320.788	35.803	336.476	2348.067
	experiment	336.030	353.844	5002.654	39.023	503.916	7226.056
Average Fixation Duration [ms]	Polish	133.842	86.388	405.000	93.366	56.998	270.000
	partial	116.169	105.863	1438.700	79.242	70.576	959.133
	English	139.069	91.052	707.300	63.148	58.981	471.533
	experiment	129.693	105.863	1438.700	78.586	130.056	959.133
Fixation Count	Polish	0.188	1.591	19.385	0.167	2.270	28.000
	partial	0.178	1.249	8.385	0.128	1.922	15.222
	English	0.231	1.073	8.000	0.086	0.631	5.111
	experiment	0.199	1.591	19.385	0.127	0.429	2.333
Glances Count	Polish	0.098	0.476	2.462	0.076	0.665	3.556
	partial	0.082	0.428	2.385	0.059	0.596	3.444
	English	0.099	0.364	2.875	0.040	0.631	5.111
	experiment	0.093	0.476	2.875	0.059	0.193	1.000

The analysis showed that contrary to one of the hypotheses the highest values of the eye-tracking for all the subtitles together and the mean value for a single subtitle are the highest for the original language version of the experiment (even though in total there were three more subtitles for this version than in the other two), and not for the language version involving both English and Polish. As expected, the values of Dwell Time and Average Fixation Duration for overlays (playing an auxiliary role) were noticeably lower than the ones for subtitles. Fixation Count and Glances Count were much more similar for both AOI categories. Interestingly, the highest values of all the eye-tracking parameters for overlays were recorded for the full Polish localization. However, the difference for all of them was marginal. The values for auxiliary screens were not analyzed in detail as most participants (27 out of 39) did not use this class of AOIs while playing.

The highest values of eye-tracking parameters for the English version of the game (which was a foreign language for all the participants), noticeable especially for Glances Count and Average Fixation Duration, might indicate a slightly different processing manner of subtitles in different languages for a relatively homogeneous group. This might have been caused by a slight difference in reading

proficiency between a native language and a foreign language. In fact, a much more probable reason was underlined by the participants themselves in the questionnaires and conversations after finishing the in-game task. Six participants playing the English version claimed that regardless of their general low attention devoted to subtitles they purposefully looked at the subtitles for clarification in the case of atypical words (e.g., Spanish *abuela* or *ofrenda*). Some participants also pointed to an abundance of sound effects and peculiarities of non-native English pronunciations of some voice actors.

Another focus of the study was various types of errors present in the analysed subtitles which are shown in Table 3.

Kudła, Dominik. 2023. What do gamers look at in a localized game? Eye-tracking analysis of three language versions of *Shadow of the Tomb Raider*. In: L10N Journal 2(1), pp. 34–65.

Table 3 ***Eye tracking parameters for subtitle errors and the language version***

Eye Tracking Measure	Subtitle	Experiment M	SD	Range	Polish M	SD	Range	partial M	SD	Range	English M	SD	Range
Dwell Time [ms]	no errors	324.828	3885.684	21132.600	311.306	2947.604	11252.700	279.227	3339.287	12658.200	383.951	4898.258	21132.600
	segmentation	804.218	4726.143	23017.200	669.727	4632.164	21804.900	685.514	5080.107	23017.200	1057.413	4310.733	16614.900
	moving up	1304.662	769.949	2985.200	1072.777	665.846	2566.800	1426.792	826.826	2985.200	1414.415	804.608	2815.000
	typographic										890.740	4409.275	16614.900
	dub. /sub.	629.818	1675.488	8139.400	583.850	2368.821	8139.400	1193.465	1131.179	4416.300	112.138	414.967	1490.000
	meaning shift							385.476	804.275	3010.100			
Average Fixation Duration [ms]	no errors	129.693	44.614	239.000	133.842	44.632	239.000	116.169	41.930	181.600	139.069	43.967	231.800
	segmentation	98.485	73.140	280.000	80.737	75.689	234.100	73.921	71.519	224.100	140.798	53.999	280.000
	moving up	57.829	77.227	231.900	63.749	78.037	231.900	54.574	76.903	226.800	55.164	76.390	230.800
	typographic										96.015	82.095	280.000
	dub. / sub.	88.754	74.870	246.100	72.292	79.777	196.400	111.600	76.299	246.100	82.369	58.051	162.600
	meaning shift							83.677	84.954	252.100			
Fixation Count	no errors	1.810	19.591	128.000	1.764	14.766	59.000	1.640	17.958	68.000	2.026	24.182	128.000
	segmentation	4.207	24.094	111.000	3.579	24.286	111.000	3.774	26.802	109.000	5.269	20.331	88.000
	moving up	6.718	3.770	12.000	5.538	3.286	10.000	7.462	4.100	12.000	7.154	3.862	12.000
	typographic										4.404	20.785	88.000
	dub. / sub.	3.340	8.335	38.000	2.955	11.716	38.000	6.346	5.767	21.000	0.718	2.381	8.000
	meaning shift							2.013	3.763	13.000			
Glances Count	no errors	0.808	7.376	46.000	0.894	6.335	29.000	0.684	7.228	28.000	0.847	8.241	46.000
	segmentation	1.401	6.865	32.000	1.294	7.754	32.000	1.265	7.499	31.000	1.643	4.890	24.000
	moving up	2.077	1.228	6.000	1.769	0.973	3.000	2.154	1.381	6.000	2.308	1.292	4.000
	typographic										1.158	5.492	24.000
	dub. / sub.	0.998	2.493	11.000	0.981	3.704	11.000	1.654	1.215	4.000	0.359	1.071	4.000
	meaning shift							0.876	1.838	8.000			

A certain trend can be observed regarding the types of subtitles that could be noticed for Fixation Count, Glances Count and Dwell Time regardless of the language version of the game fragment. The relatively lowest mean values were recorded for subtitles containing no errors. Values almost twice as high were recorded for subtitles that were incorrectly segmented. This difference is most likely because the incorrectly segmented subtitles always appeared longer on the screen than the former ones (only isolated two-line subtitles were divided correctly, so the vast majority of this category were single-line subtitles, displayed for a shorter time). Some effects of the error appearing in such subtitles on the higher eye-tracking values cannot be ruled out, but the adopted method of analyzing the collected data provides insufficient insight into this issue.

Even higher values were found for subtitles moving instantaneously upwards or downwards relative to their previous position on the screen. This is presumably due to the nature of such subtitles, which are a dynamic element, even within dialogue subtitles, which are themselves described as an element that potentially draws visual attention to itself by its mere appearance (cf. comments by d'Ydewalle & De Bruycker 2007; Bisson et al. 2014; Kruger et al. 2015). Any movement of an element of the visual scene triggers an almost reflex response to direct the gaze towards it.

The most considerable discrepancy between these parameters was found for AOIs where subtitling did not match the voice acting. In the case of these parameters, the highest mean values were recorded for the version with the original sound and Polish subtitles (for all three indicators, the value oscillates between those recorded for incorrectly segmented AOIs). A lower value was found for the full Polish version of the game (in this case, the values belong to the range determined by the values for AOIs at flawless and wrongly segmented subtitles). The lowest value was found for the full English version. Such significant discrepancies in the values for AOI for the same error are probably not due to differences in the perception of the subtitles in the language versions (in which case similar differences would also appear for other classes of dialogue subtitles). This is presumably because in the English excerpt of the game, all subtitles unmatched with the actor recordings are within the active gameplay, whereas in the full and partial localisation, all of them appear in the introductory cinematic sequence, and in the subtitled version, additionally, one of them belongs to a cutscene ending the gameplay. Moreover, the reception of this category of subtitles was also influenced by the sequence of the game in which they appeared. The only parameter that noted lower values for this category of errors was the Glances Count. This was probably due to the fact that although such subtitles are more likely to attract attention, they are not processed in detail by most players.

The values recorded for subtitles containing typographical errors (full English version only) are similar to those for incorrectly segmented subtitles. In contrast,

the means for subtitles containing semantic errors (partial game localization version only) are comparable to those recorded for subtitles containing no errors. It is also noticeable that for all three parameters (as well as for average Fixation Duration) for wrongly segmented subtitles, the highest means were found in the full English version. This may be due to the aforementioned issues highlighted for this audio version of the game by the respondents themselves.

Some trends have been discovered in the perception of specific types of defects encountered in the localization of games. However, the differences between the various types of dialogue subtitles and the language versions studied are insignificant in the vast majority of cases.

A further question to be scrutinized by the study described was the distribution of attention to subtitles within a single game and the possible factors influencing it. In relation to this question, the areas of interest for the dialogue subtitles were categorized not only by the presence or absence of technical and translation mistakes in the subtitles, but also by the input intensity that a particular fragment requires from the player. The most noticeable distinction is the one into active gameplay and cutscenes suggested by Zammitto & Steiner (2014, 295). Due to the differences in the length of the cutscenes, this category was divided into the opening cutscene, the closing one and all others (which were similar in length).

Table 4 ***Eye tracking parameters for each game sequence***

Eye Tracking Measure	Language version / Game sequence	Experi-ment M	SD	Range	Polish	SD	Range	partial	SD	Range	English	SD	Range
Dwell Time [ms]	intro	980.416	5518.527	23017.200	928.943	5236.317	21804.900	909.015	5505.341	23017.200	1092.995	5686.604	21132.600
	active play	106.648	2012.770	13279.400	111.919	1815.962	10153.100	51.036	1379.556	8188.600	144.403	2641.765	13279.400
	cutscenes	125.162	2466.744	10696.300	107.429	1709.956	6070.800	123.430	2488.604	9529.400	164.092	3019.211	10440.200
	active convers.	706.020	1860.379	9724.800	694.686	1245.133	4904.200	612.888	1641.759	5532.100	810.487	2401.211	9724.800
	outro	882.499	2901.849	13548.100	744.940	2934.072	11182.500	905.760	2392.820	12219.700	943.191	3229.447	13548.100
Average Fixation Duration [ms]	intro	140.647	55.386	252.100	143.331	53.450	231.900	135.986	57.147	252.100	143.162	54.810	250.300
	active play	54.365	65.900	234.100	53.372	69.162	234.100	37.463	53.712	178.100	72.258	68.734	190.400
	cutscenes	85.451	69.485	204.800	66.531	65.820	173.000	74.719	69.804	181.500	144.754	35.607	119.400
	active convers.	121.997	52.788	232.100	129.865	51.838	232.100	100.081	45.595	156.400	136.046	53.422	229.000
	outro	106.580	68.595	280.000	116.812	60.991	239.000	111.369	64.198	241.600	96.675	74.889	280.000
Fixation Count	intro	5.050	28.312	128.000	4.815	27.229	111.000	4.859	29.076	109.000	5.429	28.196	128.000
	active play	0.624	11.072	63.000	0.615	10.699	55.000	0.359	8.426	49.000	0.829	13.491	63.000
	cutscenes	0.726	13.509	52.000	0.646	10.341	38.000	0.717	13.852	48.000	0.904	15.274	49.000
	active convers.	3.913	9.268	39.000	3.933	7.002	27.000	3.663	9.316	32.000	4.142	10.835	39.000
	outro	4.602	14.523	61.000	3.950	14.361	49.000	4.782	12.901	58.000	4.798	15.525	61.000
Glances Count	intro	1.648	9.103	46.000	1.653	9.149	32.000	1.626	9.251	31.000	1.666	8.766	46.000
	active play	0.306	5.264	29.000	0.311	6.201	29.000	0.224	4.215	22.000	0.365	5.207	20.000
	cutscenes	0.373	5.818	20.000	0.328	5.333	20.000	0.379	5.911	20.000	0.454	4.906	15.000
	active convers.	1.510	2.961	14.000	1.740	3.238	14.000	1.250	2.172	8.000	1.538	3.023	11.000
	outro	1.439	5.796	29.000	1.496	5.930	21.000	1.444	4.621	19.000	1.393	6.306	29.000

The hypothesis formulated for the third research question stated that the Glances Count, Average Fixation Duration and Dwell Time values would be higher for cutscenes than for active gameplay. The results suggest that this can be partially assumed to be correct. This is because it transpired that two manners of reading subtitles can be distinguished for cutscenes and active gameplay in the analyzed action-adventure game. While longer and shorter cutscenes were processed differently, in the regular active gameplay, much less visual attention was devoted to the subtitles than to the player-initiated conversations with a free camera mode. The values of eye-tracking parameters were noticeably lower for shorter cutscenes than for the opening and closing video sequences, yet they were only slightly higher than those for active gameplay. In conversations where the player has full control of the camera, the eye tracking parameters recorded significantly higher values than in active gameplay and noticeably higher than within the short cutscenes. They are, however, lower compared to those noted for long cutscenes. Therefore, the hypothesis was confirmed only for core gameplay and long cutscenes. The values for the active conversations could potentially be influenced by the wording of the in-game task formulated (apart from the quest task, talking to at least three encountered characters was required).

Since no clear correlations were found between the values of any of the analyzed eye tracking indicators and the translation experience of the subjects (cf. Kudła 2020, 329–331), it was decided to test whether the different length of formal translation preparation (i.e., their study grade) impacts the manner of visual perception of the game. Accordingly, the mean values of the four analysed parameters were calculated for the five study grades. A summary of these results for the entire experiment and the individual language versions is shown in Table 5.

Table 5 ***Eye tracking parameters for study grade and the language version***

Eye Tracking Measure	Study grade	M	SD	Range	Polish	SD	Range	partial	SD	Range	English	SD	Range
Dwell Time [ms]	1 BA (n=5)	1326.315	2566.711	18963.900	1257.514	1988.111	9936.400	1700.498	3307.092	18963.900	715.553	908.629	3813.500
	2 BA (n=7)	2293.314	3805.413	17744.900	2535.847	3156.243	11857.200	251.984	374.393	1137.500	2731.225	4692.616	17744.900
	3 BA (n=15)	2510.884	3608.944	21804.900	2884.127	4015.441	21804.900	1801.215	3417.062	16976.600	2853.446	3434.023	17437.500
	1 MA (n=6)	3874.957	5245.695	23017.200	2468.533	4185.347	19777.400	3683.255	5177.397	23017.200	5473.086	5727.392	21132.600
	2 MA (n=6)	2249.746	3168.030	14913.300	3285.944	3973.899	14913.300	1827.954	2751.821	12052.200	1442.724	2241.352	8549.800
Average Fixation Duration [ms]	1 BA (n=5)	84.636	66.444	224.100	75.342	67.755	222.900	100.735	70.768	224.100	71.029	43.392	129.500
	2 BA (n=7)	96.961	80.587	280.000	107.373	81.970	239.000	31.200	37.018	94.000	108.469	79.824	280.000
	3 BA (n=15)	100.293	69.605	246.100	106.544	66.813	231.900	75.626	68.321	246.100	116.674	66.176	220.300
	1 MA (n=6)	108.147	72.523	233.400	97.767	78.198	232.100	103.897	69.879	218.100	122.756	67.802	233.400
	2 MA (n=6)	98.451	71.519	252.100	87.883	62.905	206.400	106.261	74.260	252.100	96.153	73.597	195.600
Fixation Count	1 BA (n=5)	0.188	13.722	100.000	0.366	11.046	54.000	0.084	17.366	100.000	0.047	6.298	26.000
	2 BA (n=7)	0.097	16.727	70.000	0.114	15.642	59.000	0.014	2.454	9.000	0.107	19.364	70.000
	3 BA (n=15)	0.149	18.771	111.000	0.143	21.062	111.000	0.092	18.573	90.000	0.199	17.055	86.000
	1 MA (n=6)	0.183	27.932	128.000	0.119	22.272	102.000	0.175	27.057	109.000	0.254	31.014	128.000
	2 MA (n=6)	0.111	17.116	82.000	0.163	20.787	82.000	0.092	15.494	69.000	0.067	11.310	43.000
Glances Count	1 BA (n=5)	0.037	5.750	28.000	0.040	6.687	28.000	0.037	5.658	23.000	0.031	3.788	14.000
	2 BA (n=7)	0.037	5.578	29.000	0.050	7.034	29.000	0.009	1.538	5.000	0.034	4.482	19.000
	3 BA (n=15)	0.049	6.823	32.000	0.065	7.850	32.000	0.031	5.856	31.000	0.052	6.579	32.000
	1 MA (n=6)	0.057	8.696	46.000	0.042	6.340	20.000	0.053	8.059	28.000	0.076	10.513	46.000
	2 MA (n=6)	0.050	7.179	29.000	0.065	7.503	25.000	0.048	7.455	29.000	0.031	4.511	14.000

Although a slight upward trend can be observed for the Fixation Count between 2nd and 3rd grades BA, and 1st grade MA for the partial localization version and the original language version, it is not noticeable for the full Polish language version. The positive association between the year of study and the mean Fixation Count is also disturbed by the fact that in the case of the full Polish version for the 1st grade BA, one participant (P53) was found to have a Fixation Count on a single subtitle several times higher than the means noted for all other subjects. This result significantly increases the mean for the full localization and, consequently, also for the entire 1st grade BA. Consequently, only a partial association between these variables has been found.

A slightly more noticeable upward trend can be found between the 1st, 2nd and 3rd grades BA for the other three parameters (Dwell Time, Glances Count, Average Fixation Duration). It is also visible for the full localization and the original language version. However, it has not been found for the partial localization, where the values for 2nd grade BA are several times lower than the others. This was caused by the fact that for this language version, the mean is at the same time the result of a single person (P32) who paid almost no attention to the subtitles (in the interview she admitted that she did not read the subtitles at all). Also, the results of 1st grade BA students for the mean Glances Count and mean Dwell Time for a single subtitle are higher for partial localization than those for 3rd grade BA students. As can be seen in Table 5, for all three parameters, the upward trend is continued among 1st grade MA students for partial localization and the original language version. Such an increase was not found for Fixation Count in full language localization.

An increase in the mean values was also not found for MA degree program, since for all parameters and regardless of language versions, the mean values for the final year of study are lower than those recorded for the previous year. Therefore, no such trend can be found for the entire course of study. It is worth mentioning at this point that, at MA program involved, students who have completed their bachelor's degree at this faculty are joined by those who have studied at other universities or in other related fields of study (primarily philology or studies of a specific language area). Accordingly, those studying at 1st or 2nd grades MA may or may not have experienced more years of formal translation preparation than those in their 3rd grade BA. This was the reason why no research hypothesis was formulated within this characteristic of the subjects. Therefore, some trends noted when juxtaposing the students at 1st and 3rd grades BA are even more interesting.

Discussion

The literature review presented in the introductory sections proved that the described study was the only one conducted and publicized by a member of the academia and

comparing the visual perception of dialogue subtitles in a video game developed in the L2 language of the users and localized partially or fully into their L1 language.

The only one similar eye tracking analysis known to the author at the moment of publication concerned various forms of presenting video game subtitles in games played and designed in the L1 by hearing and deaf users.

Some studies (e.g. Bisson et al. 2014, Perego et al. 2016, Baños & Díaz-Cintas 2017, Muñoz 2017, Nikolić 2018, Perego et al. 2018, Szarkowska & Bogucka 2019, Liao et al. 2021, Szarkowska et al. 2021, Lång 2023) have focused on dubbed and subtitled versions of the same translated audiovisual material (usually a film or a fragment of a TV show). Their results are, however, not fully comparable with the present study, as video games differ noticeably from watched audiovisual material where the interaction and influence on the on-screen activities is considerably limited in comparison to playing a video game. The visual perception in video games is also related to making and planning gameplay decisions, e.g., where to go or what route to take to avoid obstacles.

In order to be able to form statistically significant conclusions, a more numerous research sample should have been compiled. This would help balance the subgroups of different study grades and levels of translation experience.

However, even with the sample being insufficiently representative of all the study variables, the analysis of the study's fragment reached such a depth that its scale is highly labor-intensive. The analysis was performed by one person (the author). Consequently, it took a considerable amount of time to complete. Accordingly, to efficiently perform the analyses of such datasets, a larger team of analysts is necessary or some automation algorithms, potentially using AI solutions that are currently developing rather rapidly, should be used.

Another limitation of the study conclusions is the fact that it focused on one video game only. Consequently, studies into video games representing other genres might potentially provide a valuable comparison with the study findings.

Conclusion

As the analysis proved, in computer action-adventure games, the visual attention of the subjects was focused less on separate dialogue subtitles as well as overlays, and much more on other elements of the game screen, e.g. characters and surroundings (approx. 90% of task completion time).

Moreover, the language version of the game fragment (original, partial or full localization) seems to have no considerable influence on the character of dialogue subtitle perception in the case of computer action adventure games by people for whose target market the game has been localized. In fact, generally, the highest values of eye-tracking parameters were recorded for the original language version, which refuted the first hypothesis. The questionnaires and conversations with the participants pointed to

the willingness to clarify their understanding of the voice acting (especially for non-standard English pronunciation). The differences between the separate variants of the experiment were not significant enough to conclude that, irrespective of the number of subjects, the distribution of eye-tracking parameter values would be the same. Another reason for replicating the study with a slight change of the setup is that it is highly probable that this tendency would also be noted for other languages foreign to the recipient.

Subtitles changing their position attracted the most visual attention of all the analyzed faults in video game localization fragment (others were incongruence with voice-acting, incorrect segmentation, typographic issues, sense shifts). Irrespective of the language version of the video game fragment, the highest mean Fixation Counts, Glances Counts and Dwell Times were noted for subtitles that moved up or down in relation to their original displaying position. Only for Average Fixation Duration were the highest values recorded for subtitles containing no errors. A potential explanation might be that a player is already processing such subtitles, they are more focused on the content than in the case of subtitles that only attract their attention by changing their position. For both the total mean encompassing all types of subtitles and for most of the subtitle error categories of this study, the highest values were recorded for the full English language version.

Dialogue subtitles in the computer action-adventure game were read most intensely for longer cutscenes, slightly less intensely during conversations (especially those displayed in free camera mode), and least intensely for active gameplay when the conversation is not initiated by the players. Those game sequences, distinguished using the input required from the player, exhibited noticeable differences in the values of the analyzed eye-tracking parameters on dialogue subtitles. The highest values for these AOIs were found for longer cutscenes (of one minute and longer), slightly lower on conversations conducted during active gameplay, much lower on conversations presented in the form of cutscenes shorter than 30 seconds, and the lowest for active gameplay. The differences observed within the traditional classes of active gameplay and cutscenes may have been caused by the task the respondents had to perform (conversation with at least three NPCs).

No considerable difference was found for the values of the eye-tracking parameters depending on the participants' greater or lesser translation experience (regardless of its subject area). However, formal translator training potentially influences the intensity of processing subtitles in video games and the frequency of errors in the language versions. For the number of fixations, a slight increase was recognized between 2nd and 3rd grades BA and 1st grade MA for both versions using English (partial localization and original). An increase in eye-tracking parameter values between 1st and 3rd year BA can be found for the Glances Count and the Average Fixation Duration. This was not fully confirmed for MA programs, but in this case, it may also be influenced by the fact that

some of the MA programme students may have had less formal translation preparation than those completing the BA programme. An increase in values between 1st and 3rd grades BA for the Glances Count and the Average Fixation Duration was observed.

The evaluation of the quality of the language version had a minor impact on the overall evaluation of the entire action-adventure game analysed. It should be noted that in the case of all the three versions, localization did not raise any objections from the participants. The present study focused on a localization involving a limited number of errors that were not noticed often by the participants (only 8 among 39, Kudła 2020, 328). Accordingly, the quality of localization was not mentioned often among factors influencing their overall evaluation of the analyzed game fragment. Perception results for this type of localization could in future research be juxtaposed with the one for a game in which localization involves a greater number of fallacies that are easily noticed by the participants.

As suggested before, the examination of localization reception in games representing other genres and quality with poor localizations would provide further insights to a fuller understanding of reading the dialogue and other textual elements in localized and foreign-language versions of video games. Studies in the future may also focus on localized games on other platforms, e.g. home consoles, handheld consoles, virtual reality and mobile devices, as the eye tracking studies to date focused on PC games.

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Appendix 1 Pre-experiment Survey (in Polish)

How do you asses your video gaming experience?

I have a very vast video gaming experience.
I have a vast video gaming experience.
I have some video gaming experience.
I have little video gaming experience.
I have no video gaming experience.

What game genres do you choose most frequently? [in alphabetical order in Polish]

action
educational
puzzle
MMORPG
MOBA
music
adventure
RPG
strategy (RTS/ tactics)
shooter (FPS/ TPS/ battle royale)
simulation
text
racing
arcade

Please name the game titles that you played over the last year.

Do you have any translation experience (apart from the university classes)?

I have a very vast translation experience.
I have a vast translation experience.
I have some translation experience.
I have little translation experience.
I have no translation experience.

If you have any translation experience, what type of translation was it?

What language version do you choose to play video games that were developed in languages other than Polish?

original language version (e.g. English, Geman, Spanish) without subtitles
original language version with subtitles in the foreign language
version with Polish subtitles
version with Polish voice acting (dubbing) without subtitles
version with Polish voice acting (dubbing) with Polish subtitles

Kudła, Dominik. 2023. What do gamers look at in a localized game? Eye-tracking analysis of three language versions of *Shadow of the Tomb Raider*. In: L10N Journal 2(1), pp. 34–65.

Appendix 2 Controls description in Polish and English

PL

Sterowanie w grze *Shadow of the Tomb Raider*

Do kierowania postacią służą przyciski „**W**" (↑), „**S**" (↓), „**A**" (←), „**D**" (→).
W interakcję z innymi postaciami wchodzi się **prawym przyciskiem myszy**.
Możliwe jest to tylko jeśli nad daną postacią pojawi się „dymek".
Interakcję z otoczeniem (podniesienie przedmiotu/ otwarcie drzwi, itp.) umożliwia **lewy przycisk myszy**.
Kamerę w grze można obracać za pomocą **ruchu myszy**.

EN

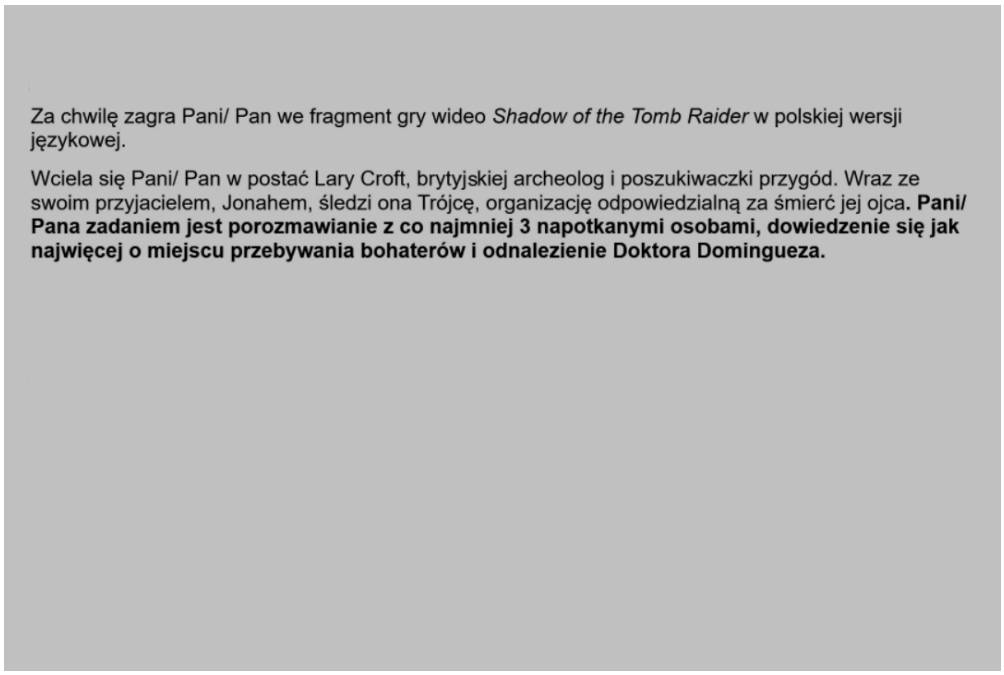
Controls in *Shadow of the Tomb Raider*

To move your character use the following keys: "**W**" (↑), "**S**" (↓), "**A**" (←), "**D**" (→).
To start a conversation with another character use **the right mouse button**.
It is possible only if there is a "bubble" above a particular character.
To interact with the surroundings (pick up an object/ open a door, etc.) use **the left mouse button**.
It is possible to rotate the in-game camera **by moving the mouse**.

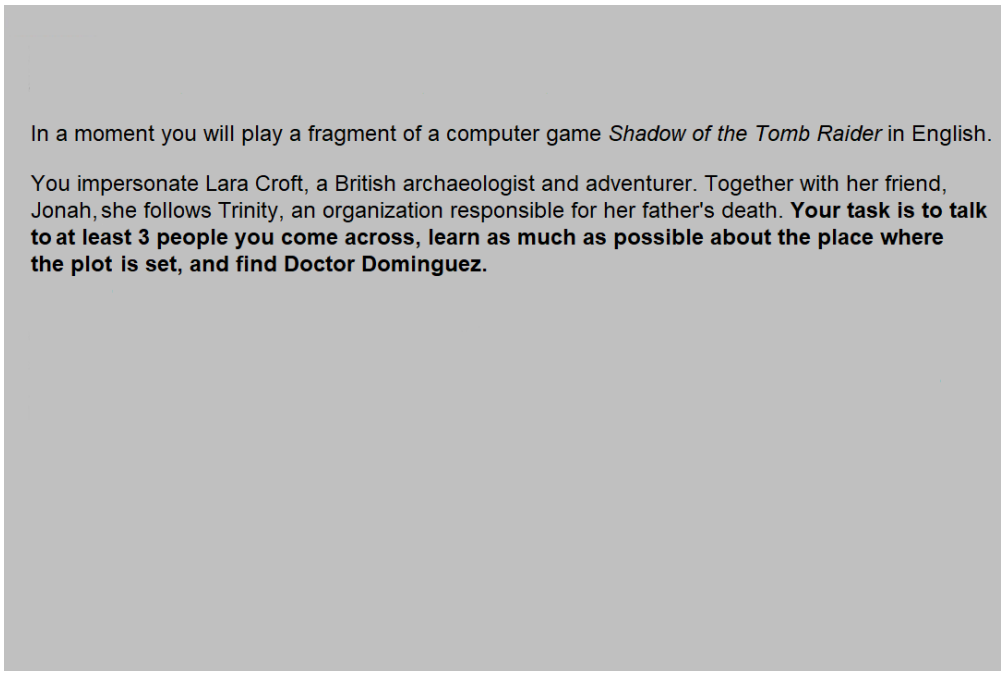
Kudła, Dominik. 2023. What do gamers look at in a localized game? Eye-tracking analysis of three language versions of *Shadow of the Tomb Raider*. In: L10N Journal 2(1), pp. 34–65.

Appendix 3 Task description in Polish and English

PL



EN



Kudła, Dominik. 2023. What do gamers look at in a localized game? Eye-tracking analysis of three language versions of *Shadow of the Tomb Raider*. In: L10N Journal 2(1), pp. 34–65.

Appendix 4 Post-experiment survey questions regarding the fragment plot

(in Polish for localized versions or in English if the game was played full in English)

According to Lara Croft, which direction should they take from the Amazon river to look further?

What is wrong with Lara?

Who is Doctor Dominguez?

Do you remember any other details regarding the plot or the characters?

Appendix 5 Post-experiment questions on the game fragment reception (in Polish)

Did you like this fragment of the game ***Shadow of the Tomb Raider***?

5 (definitely yes)
4
3
2
1 (definitely no)

What aspects influenced your overall impression regarding this game?

Would you like to play this game further?

5 (definitely yes)
4
3
2
1 (definitely no)

How do you assess the overall quality of the Polish language version of this game fragment?

The participants playing the full English language version were asked about the overall quality of the English language version.

5 (very positively)
4
3
2
1 (very negatively)

How do you assess your level of immersion in this game?

5 (strong)
4
3
2
1 (weak)

How do you assess the quality of the voice acting (dubbing) present in this fragment?

5 (very positively)
4
3
2
1 (very negatively)

What aspects influenced your assessment of the voice acting?

How do you assess the quality of the voice subtitles present in this fragment?

5 (very positively)
4
3
2
1 (very negatively)

What aspects of the subtitles you liked (didn't like) the most?

Have you noticed any errors in the Polish [English] language version? If yes, please name them.

Would you like to play a different language version of this game? Why? If yes, what language version would that be?

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Insights

Mrzigod, Janusz. 2023. “Gender Wars” in English to Polish Videogame Translations. In: L10N Journal 2(1), pp. 67–87.

“Gender Wars” in English to Polish Videogame Translations

Janusz Mrzigod

video game translator since 1993

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Abstract

The paper discusses numerous problems with grammatical genders encountered in-game translations and resulting from the rich and complex structure of gender forms in Polish and most other Slavic languages. The main issues are described precisely and some translator tricks which allow for circumventing them are proposed. Also, some solutions for game developers, enabling the implementation of some gender-dependent functions into localized game versions are recalled from the Author’s practice or suggested anew.

Keywords: videogames, translation, localization, grammatical gender, gender neutrality

Introduction

Differences between languages have a fundamental impact on the process of software localization, especially in the case of video games. While translating a game, translators know much less context than during translation of, for instance, film dialogues. Functioning as modern Latin, English has its complexities, but it is simple when it comes to grammatical genders. The only part of speech where gender is important in English is pronouns (Leech 2001). The problem of choosing a pronoun when the gender of the person in question is for some reason unknown or undefined was solved in English long ago by introducing the singular ***they*** form. For example, there is a well-known song by Sting from 1985, *If You Love Somebody Set Them Free*, where this form was already used in the title (it also appears in the chorus).

However, in this regard, English is rather an exception among European languages, which are much more complicated in terms of grammatical gender. For example, most of them contain gendered articles, a type of article absent in English. In such languages, the form of a gendered article is matched with the grammatical gender of the noun to which the article refers. Gendered articles are used in European languages such as French, Spanish, Catalan, German, Portuguese, Romanian, Italian, and Scandinavian

languages. However, they do not occur in Balto-Slavic languages (e.g. Polish, Czech, Russian, Slovenian) and Finno-Ugric languages (e.g. Estonian, Finnish, Hungarian). The exceptions among the Slavic languages are Bulgarian and Macedonian (a modern language used primarily in North Macedonia). Apart from them, however, the Balto-Slavic languages do not have articles at all, but they have many elements of gender inflection and many structures in which grammatical gender is important (Bednarczuk 1986).

The Polish language is “genderized” very strongly. In this regard, it is very similar to other Slavic languages (constituting a subfamily of Balto-Slavic languages), particularly to the languages used in Central and Eastern European countries. Therefore, the considerations presented here regarding problems with grammatical gender in translation into Polish can also be applied to other Slavic languages, and the proposed solutions for the Polish language can be transposed to other Slavic languages with a slight effort.

The specificity of Slavic languages includes, among others, the fact that they assign grammatical gender not only to persons and animals but also to inanimate objects. Therefore, on the one hand, nouns and some pronouns have a grammatical gender, and on the other hand – adjectives and verbs (in the past tense and in the conditional) are inflected by gender. It always happens, regardless of whether they designate a personal or impersonal noun denoting an animate object or an inanimate object. The situation of numerals is even more complicated: some of their types (e.g. cardinal and fractional numerals) function like nouns and have genders, and others (e.g. ordinal and multiplicative numerals) function like adjectives and are inflected by gender (Grzegorczykowa *et al.* 1998).

The parts of speech inflected by gender in Slavic languages also include pronouns, of which demonstrative pronouns can play the same role in these languages as articles do in German, Romance, and Scandinavian languages.

In the simplest terms, there are five grammatical genders in Polish: three for the singular and two for the plural (see Table 1.; also, please note the Polish pronouns in cursive).

Table 1: ***Grammatical genders of nouns and pronouns in Polish***

Gender name	(animate) personal nouns	(animate) impersonal nouns	inanimate nouns
męski (l. poj.) masculine (singular)	*ten* chłopiec this boy	*ten* kot this tomcat	*ten* stół this table
żeński (l. poj.) feminine (singular)	*ta* dziewczyna this girl	*ta* kotka this (she-)cat	*ta* szafa this wardrobe
nijaki (l. poj.) neutral (singular)	*to* dziecko this child	*to* kocię this kitten	*to* krzesło this chair

męskoosobowy (l. mn.) masculine personal (plural)	*ci* chłopcy these boys	–	–
niemęskoosobowy (l. mn.) non-masculine personal (plural)	*te* dziewczyny these girls	*te* koty, *te* kotki, *te* kocięta these tomcats, cats, kittens	*te* stoły, *te* szafy, *te* krzesła these tables, wardrobes, chairs

As may be seen in Table 1., the demonstrative pronoun is inflected also by gender in Polish, not only by number as in English.

Table 2: ***Gender forms of adjectives in Polish***

Gender name	Gender form of example adjective
męski (l. poj.) masculine (singular)	zielony green
żeński (l. poj.) feminine (singular)	zielona green
nijaki (l. poj.) neutral (singular)	zielone green
męskoosobowy (l. mn.) masculine personal (plural)	zieloni green
niemęskoosobowy (l. mn.) non-masculine personal (plural)	zielone green

All these facts cause problems while translating game texts, particularly for titles in which the character’s gender is not known or when it is not fixed (when the player may select their character’s gender), as well as when the text contains names of items or features defined by variables. Unfortunately, gender neutrality is very difficult to achieve in Slavic languages, if possible at all.

In a game where the player may configure their character, including gender, the biggest problems include frequently occurring greetings. Such dialogues as:

Greetings, stranger.

It's your loss, dear pilgrim...

cannot be translated neutrally into Polish, as ‘stranger’ and ‘pilgrim’ (as well as many nouns of similar function) have both masculine and feminine forms. On the other hand, many Polish nouns referring to jobs have only one gender form, because mostly persons of one gender perform the given job. Such terms include, for instance, *przedszkolanka*

(kindergarten teacher, only feminine term in Polish) or *szpieg* (spy, only masculine term in Polish, which may seem a bit strange).

When the game does not support the variability of grammatical genders for non-English languages, the translators must resort to tricks, which sometimes worsen the quality of the translation. For instance, the grammatical voice needs to be changed from active to passive while translating the second sentence of the following dialogue. If the gender of the player’s character is not fixed, this character cannot be the subject of the sentence using past tenses, because verbs in past tense are gender-sensitive in Polish.

Please, accept this. I cooked it with the meat of the boar I hunted today.

Forced translation: ***Weź to, proszę. Ugotowane na mięsie dzika upolowanego dzisiaj przeze mnie.***

The Polish version has the subject of the second sentence changed, as well as the voice (from active to passive). Generally, the sentence sounds unnatural, unlike the gendered versions:

Masculine: ***Weź to, proszę. Ugotowałem to na mięsie dzika, którego dzisiaj upolowałem.***

Feminine: ***Weź to, proszę. Ugotowałam to na mięsie dzika, którego dzisiaj upolowałam.***

Another example, where the player’s character is the subject in the original text:

This is a promise I gave to them when I left.

Forced translation: ***Taką obietnicę otrzymali ode mnie na odchodnym.***

This sentence in passive voice has a complicated structure, which is necessary to transfer the role of the subject from the player character (“I”) to “them”. Even this version is not completely safe, because *otrzymali* is a verb in masculine personal gender, so a tacit assumption is made that there is at least one male in this set of people. The gendered versions, possible when the gender of the player character is fixed or when the game supports gender variability of the texts, are much more coherent and more correct:

Masculine: ***To im obiecałem, odchodząc.***

Feminine: ***To im obiecałam, odchodząc.***

This issue is particularly severe when the context is lacking, for instance in the following sentence:

I made it some time ago.

It is necessary to know what “it” pertains to (in the game, it is some item which may be crafted by the character). The speaker’s gender may be known (let us assume male here), but the Polish translation will depend also on the grammatical gender of the item referred to in the sentence because Polish pronouns have various forms depending on the gender of the noun they substitute for. However, this information may be unavailable (for instance, this dialogue may be a generic message used in many situations, referring to various items).

Masculine:
*Wykonałem **go** dawno temu.* [when the item is, for instance, *pancerz* (armor) or *miecz* (sword)]

Feminine:
*Wykonałem **ją** dawno temu.* [when the item is, for instance, *zbroja* (armor) or *Szabla* (saber)]

Neuter:
*Wykonałem **je** dawno temu.* [when the item is, for instance, *wiadro* (bucket) or *widły* (pitchfork)]

Of course, there is also a possibility to translate the word “it” literally:

*Wykonałem **to** dawno temu.*

Unfortunately, it is not natural in Polish and would look awkward when the whole dialogue is displayed/spoken in-game.

More tricks for circumventing gender problems while translating into Polish will follow.

1 Possible grammatical gender issues

The problem with grammatical gender has several aspects (Mrzigod 2021):

1. Player’s gender (that of the person playing, not of their avatar)
2. The player character’s gender
3. Genders of other characters in the game
4. Grammatical gender of objects
5. Other problems with variables

1.1 Player’s gender (that of the person playing, not of their avatar)

This is not known, and it cannot be assumed. The most common tendency is to use male grammatical gender in the translation. It should be avoided at all costs. The texts addressed directly to the player should be translated always in such a way as not to determine their gender, i.e. avoid using forms with a specific grammatical gender. Such texts include, *e.g.*, interface messages and meta-game messages, such as newsletters texts or other marketing texts.

For instance:

	Not:	But:
Are you sure?	Jesteś pewny?	Na pewno?
Did you buy/have you bought the game?	Czy kupiłeś już grę?	Masz już grę?

1.2 Player character’s gender

Variant I – the player has a fixed character, they do not choose anything (e.g. *God of War* [Santa Monica Studio 2018], *Horizon Zero Dawn* [Guerrilla Games 2017]). This is a very comfortable situation; the translator just needs to determine when this character is mentioned to adjust the translation accordingly.

Variant II – the player can choose at least the gender of the character (*AC Odyssey* [Ubisoft Quebec 2018], *AC Valhalla* [Ubisoft Montreal 2020], *Far Cry 6* [Ubisoft Toronto 2021], *Saints Row* series [various developers, 2006–2022], MMORPGs). A more advantageous situation is when the game includes a system allowing for the substitution of gender forms or the game script contains separate alternative lines for the individual genders. However, a problem may arise in the case of texts of other characters’ dialogues or when the substitution system does not include other characters speaking about the player’s character, only the dialogues spoken by this character. In such cases, the translations need to be kept “gender neutral”.

1.3 Genders of other characters in the game

Information about the gender of individual characters in the game should be included in the loc-kit (also for non-player characters or NPCs). However, it is missing sometimes, and even if it is present, it usually concerns only the important characters who have their own personalities and backgrounds. Meanwhile, groups of generic characters, playing supporting roles, often include both women and men (and, increasingly, also non-binary persons). English-language terms such as: soldier, driver, guard, merchant, colonist, scientist, resident, inhabitant, technician are “gender

neutral”. But this is not the case in Slavic languages, as well as, for instance, in French or German.

Thus, translations had to be made “gender neutral” also here – but it is not always possible, and in Polish, it is practically impossible. The only possible solution is to assume that a male form will encompass persons of all genders. However, this is contrary to the strong social pressure currently prevailing in Poland on the use of feminatives, even when they were not used for a long time or did not exist (Hołojda-Mikulska 2016; Wysokie Obcasy 2018; Językowe espresso 2019; Florencka 2023; Kirska-Okuniewska 2023; Zachorska 2023). In the latter case, they are created in accordance with the principles of Polish word formation. The same situation applies to forms describing non-binary persons.

This problem is particularly acute when, for some reason, the game creators decide not to differentiate generic characters by their gender. As a result, the game does not contain any information about the gender of the character visible on the screen, and the displayed terms are the same regardless of this gender. An example here is the excellent game *Ghost of Tsushima* [Sucker Punch Productions 2021] where in the Polish version, every inhabitant of the villages on the island is referred to as *wieśniak* (peasant), regardless of the fact that the character’s appearance and voice may indicate a woman – *wieśniaczka*.

This issue is escalated by the tendency to use masculine forms also for persons of other genders in the USA. Despite the fact there are, for instance, ‘actor’ and ‘actress’ in English, new feminine forms are not created and the use of existing feminine forms is sometimes discouraged. While such words as ‘driveress’ or ‘doctoress’ exist in English, they are qualified as archaic by dictionaries. In racing games, drivers of any gender are referred to simply as ‘driver’ in English – and when the game script uses only one form, the translations are limited to one form too. In Polish, *kierowca* (a male form) is customarily used for drivers of any gender, and it not only looks unnatural in some contexts but may be also perceived as sexist. That is why the implementation of gender-sensitive systems, enabling the use of various gender forms, is so important.

1.4 Grammatical gender of objects

The problem of matching proper forms of verbs, adjectives and other parts of speech, depending on the grammatical gender of a noun arises in games having a random generation system for item names, composing these names from list-words.

For example, in a game set in a fantasy environment, equipment names may be constructed from variables in the format: [material] – [item type] – [fancy embellishment]. The game script will therefore contain lists of words, from which the game will randomly select terms to put together into a name. The list of values for the [material] variable may include words such as ‘bronze’, ‘iron’, ‘steel’, ‘silver’, ‘mithril’.

The list of values for the [item type] variable may include, for example, various weapon names: ‘dagger’, ‘sword’, ‘saber’, ‘spear’, ‘axe’, ‘halberd’.

And this is the source of the problem because *sztylet* (dagger), *miecz* (sword) and *topór* (axe) have masculine grammatical gender in Polish, *szabla* (saber), *włócznia* (spear) and *halabarda* (halberd) — feminine, *koromysło* (shoulder pole) — neutral, and *widły* (pitchfork) — non-masculine personal. Thus, if the material names are to be translated simply as adjectives — *żelazny* (iron), *stalowy* (steel), *srebrny* (silver) — it is very likely that items like *żelazny włócznia przeznaczenia* will appear in the game (Iron Spear of Destiny, where *żelazny* in a masculine form does not match to the feminine gender of *włócznia*). Or, if a randomly selected part of the adjectives is given the feminine gender, *srebrna sztylet podrzynania* (Silver Dagger of Throatcutting with *sztylet* being of masculine gender) may be received.

The translator will be saved, at least partially, when the order of variables may be changed. If the name format may be changed to [item type] – [fancy embellishment] – [material], the words in the value list for the [material] variable may be translated not as adjectives, but as nouns (iron – *z żelaza* (literally ‘of iron’), steel – *ze stali* (‘of steel’), bronze – *z brązu* (‘of bronze’), etc.; and the last one is even better than *brązowy* (bronze), easy to confuse with color brown). However, it should be mentioned that *włócznia przeznaczenia z żelaza* sounds slightly worse than *żelazna włócznia przeznaczenia* (but is grammatically correct, as opposite to *żelazny włócznia przeznaczenia*).

1.5 Other problems with variables

There are many games, particularly in the strategy/tactical genre, which use a variable system for message generation, mainly due to vast sets of game factions, unit types, attack types, weapon types, and so on. To avoid the manual creation of every single message variant needed for so many names of various types of things, some system of variables is usually implemented. For instance, when a message informing that an enemy unit has been defeated is needed, the game may use a message template with variables:

[Faction-adj1] [Unit-sin1] defeats [Faction-adj2] [Unit-sin2].

When the unit’s name is plural, the example sentence would take the following form:

[Faction-adj1] [Unit-pl1] defeat [Faction-adj2] [Unit-pl2].

Then, the game browses a list of faction adjectives, selecting proper adjectives for [Faction-adj#] variables. It also browses a list of unit names, selecting proper names for [Unit-sin#] and [Unit-pl#] variables. Of course, the numerical amount of the second unit in each message is not important, they are chosen arbitrarily. Therefore, the following three lists could be assumed (Table 3).

Table 3: ***Lists of “values” for the discussed variables***

[Faction-adj]	[Unit-sin]	[Unit-pl]
Polish	Cruiser	Musketeers
French	Gunboat	Catapults
Chinese	…	…
Roman		
…		

These terms substitute the variables’ codes in the template, so the displayed message reads as follows, for instance (articles omitted for simplicity):

Polish Cruiser defeats French Gunboat.

Or:

Chinese Musketeers defeat Roman Catapults.

Thus, only two versions of the message template are required (one for the singular name of the first unit, and another for the plural name of the first unit). The proper message is composed on-the-fly during play. If the French or Roman forces avenge their comrades, the order of words may be completely different, for instance:

French Cruiser defeats Polish Gunboat.

Or:

Roman Musketeers defeat Chinese Catapults.

Or also:

French Cruiser defeats Chinese Catapults.

Or:

Roman Musketeers defeat Polish Gunboat.

The operation of the system depends on whether the first unit’s name is singular or plural. This system works in English and some other languages, but not in gender-sensitive languages. In this case, there are four faction/unit pairs in each message:

Polish Cruiser	*French Gunboat*	*French Cruiser*	*Polish Gunboat*
Chinese Musketeers	*Roman Catapults*	*Roman Musketeers*	*Chinese Catapults*

After translation (the word order is the same in Polish, *i.e.* adjective-noun):

polski krążownik	*francuska kanonierka*	*francuski krążownik*	*polska kanonierka*
chińscy muszkieterowie	*rzymskie katapulty*	*rzymscy muszkieterowie*	*chińskie katapulty*

In other situations, also other combinations are possible, for instance: *rzymski krążownik, chińska kanonierka, polscy pikinierzy, francuskie katapulty, polskie katapulty*. Note that there is only one form of every faction adjective in English, but four forms in Polish: *polski, polska, polscy, polskie*. In fact, there are as many as five forms, because there are five grammatical genders in Polish as shown in Table 1. However, the singular neutral form is *polskie*, identical to the non-masculine personal plural.

Therefore, in order for the variable message system to work in gender-sensitive languages, two things are needed:

1) Not one, but many lists of faction adjectives, one for each gender. There would be four such lists in Polish, but it may vary depending on the language.
2) Some implementation of the gender information for every unit name; on the other hand this part may be realized by classifying the unit names by their grammatical gender and creating four unit lists. Then, the variable system could operate by matching the adjective list to the gender list of units. For instance, when a unit name from singular feminine names would occur in the message, the adjective would be selected from the list of singular feminine adjective forms.

This may look complicated already, but one thing was not even mentioned: Polish inflection. Actually, grammatically correct messages in Polish should not read:

Chińscy muszkieterowie pokonują rzymscy pikinierzy.

Rzymscy muszkieterowie pokonują chińscy pikinierzy.

But:

*Chińscy muszkieterowie pokonują rzyms*kich *pikinierów.*

*Rzymscy muszkieterowie pokonują chiń*skich *pikinierów.*

Thus, the case forms of words in the unit’s name depend on whether the unit is winning or losing the fight.

The system discussed above is not complete or ready for use – it is just a simplified construct created to illustrate the problem. It would require to be adapted to the needs of various languages.

2 Example methods for circumventing the issues

Methods for circumventing the gender issues in English to Polish game text translations proposed by the Author include, for example:

- verbs in conditional → use passive voice, impersonal verbs, gerunds;
- verbs in past tenses → use the forms mentioned above, sometimes present tense may be used too;
- verbs in Present Perfect → use present tense instead of past tense;

  One should note that Polish has significantly fewer tenses than English. There are verbs corresponding to, for instance, Simple Present and Present Continuous in Polish (I go – *chodzę*, I’m going – *idę* or *chadzam*), but they are mostly not considered separate tenses today: *chodzę* and *idę* are different verbs. *Chadzam* is a proper Present Continuous form of *chodzę*, but such forms are currently used in Polish for humorous purposes or for archaization.

- Adjectives → corresponding forms expressed with nouns, e.g. gerunds; nouns referring to persons, for instance jobs (e.g. friend, colleague, doctor, medic, astronaut) → ?

THERE ARE NO GENDER-NEUTRAL FORMS FOR SUCH TERMS IN SLAVIC LANGUAGES.

Below, a dozen or so examples of gender-neutral translation into Polish may be found. These are authentic texts from game scripts with translations actually used in localized versions. The examples include both proper sentences and instructions for the player or other lines which sometimes are not terminated with a punctuation mark.

Table 4: ***Examples of translating into gender-neutral forms***

English	Polish	Remarks
You have defeated the Pit Master![1]	Udało ci się pokonać mistrza areny!	Impersonal form ‘udało ci się’
	Pokonujesz mistrza areny!	Present tense
	Mistrz areny został pokonany!	Passive voice
Find the Post That Nakalla Was Tied To[1]	Znajdź słup, do którego przywiązano Nakallę	not ‘był przywiązany/a’
Are you absolutely sure you wish to proceed?[1]	Czy masz absolutną pewność, że tego chcesz?	avoiding gender-sensitive adjective ‘pewny’
As I feared[1]	Moje obawy się sprawdzają	not ‘Jest tak, jak się obawiałem/am’
You've been pranked[2]	Padasz ofiarą psikusa	a different sentence structure
I never planned to pick up the sword again, but I couldn't just ignore the horrible things that were happening in front of me.[2]	Ponowne sięgnięcie po miecz nigdy nie było w moich planach. Trudno było jednak ignorować straszliwe rzeczy, które działy się na moich oczach.	avoiding Past Tense in both cases (‘planned’, ‘couldn’t’) by using a more elaborate sentence structure
Once this war is over, I'm going to go home and get married.[2]	Gdy ta wojna się skończy, wrócę do domu i założę rodzinę.	‘get married’ or ‘marry’ are particularly problematic in Polish, as two completely different verbs are used in exact translation: *ożenić się* for male and *wyjść za mąż* for female.
I see you visited this city.[2]	Widzę, że znasz to miasto.	A different verb in present tense is used, as present form of ‘to visit’ in Polish would be improper

[1] Horizon Forbidden West 2022.

[2] Unpublished League of Legends spinoff.

English	Polish	Remarks
You were knocked unconscious during this challenge.[3]	Ogłuszono cię podczas tego wyzwania	Not ‘zostałeś/aś ogłuszony/a podczas tego wyzwania’
You didn't make it in time[3]	Nie udało ci się zdążyć na czas	Not ‘nie zdążyłeś/aś na czas’
Tell Eli you're ready[3]	Powiedz Eliemu o swojej gotowości	Not ‘Powiedz Eliemu, że jesteś gotowy/a’
You failed to meet the challenge goals[3]	Nie udało ci się osiągnąć celów wyzwania	Not ‘Nie osiągnąłeś/osiągnęłaś celów wyzwania’
I'm disappointed I'm not on this one.[3]	Nie czuję rozczarowania, że mnie tu nie ma.	The dialogue refers to a wanted poster
You did not reach your goal.[3]	Nie udało się osiągnąć celu.	
Joannie and the crew are planning to rob Harley's bank.\n\nCheck it out and call them in when you're ready.[3]	Joannie i ekipa planują napad na bank Harleya.\n\nZbadaj cel i zadzwoń do nich, gdy się przygotujesz.	Gender-sensitive adjective is avoided
Diamond needs you to make another run.[3]	Diamond potrzebuje cię na następny kurs.	Diamond is a male, but the player’s character gender may be any
But you seem troubled.[3]	Ale chyba coś cię trapi.	Gender-sensitive adjective is avoided – a verb in present tense is used instead

In many games, particularly of RPG and strategy genres, status effects are being imposed on characters or units. Most often, these effects are described by adjectives or adjectival participles which are both gender-sensitive in Polish. As they would require using one gender form for all genders, adjectives and adjectival participles should be avoided in the translation.

[3] Saints Row 2022.

Table 5: ***Translation of character status effects***

English	“First-choice” translations using adjectives or *gendered nouns	Gender-neutral translations using gerunds or **gender-insensitive nouns
stunned	ogłuszony	ogłuszenie (stun)
blind	ślepy/oślepiony	Ślepota**/oślepienie (blindness)
ill	chory	choroba** (illness)
drunk	pijany	upojenie (intoxication)
alcoholic	alkoholik*	alkoholizm** (alcoholism)
coward	tchórz*	tchórzliwość** (cowardness)
infected	zainfekowany	infekcja** (infection)

Character traits and attributes are constant features and they are most often described in English using nouns referring to persons. As mentioned above, such nouns are gender-sensitive in Polish, so they should be avoided in the translation. In Table 6 below, related nouns or terms are used.

Table 6: ***Translation of character traits and attributes***

Gambler	Zamiłowanie do hazardu
Glutton	Obżarstwo
Hypochondriac	Hipochondria
Idiot	Głupota
Infected	Infekcja
Loner	Zamiłowanie do samotności
Lazy	Lenistwo
Melancholic	Melancholia
Whiner	Marudność
Celebrity	Sława
Composed	Odporność psychiczna
Empath	Empatia

Enthusiast	Entuzjazm
Party Animal	Zamiłowanie do imprez
Fit	Sprawność
Gamer	Zamiłowanie do gier
Genius	Iskra geniuszu
Nerd	Nerd
Religious	Religijność
Rugged	Krzepa
Saint	Świętość
Sexy	Seksowność
Survivor	Bear G.
Workaholic	Pracoholizm

The translation of “Survivor” is a reference to Bear Grylls intended as a pun.

Examples in Tables 5 and 6 are gathered from *Surviving Mars*, a sci-fi city builder developed originally by Haemimont Games and published by Paradox Interactive.

3 Suggestions for game developers

A system for support of gender forms in a game may pertain to their various aspects. Matching the text to the gender of the player character is the most obvious one, but one should remember the issue of the grammatical gender of other characters too. Also, the grammatical genders of objects are important – as mentioned above, they make it difficult or even impossible to properly transfer the system of randomly generated names of items to Slavic languages.

There is no doubt that implementing any system for gender forms support means additional work for programmers. Therefore, the efforts of game developers who include such systems in their games are all the more worthy of appreciation. Unfortunately, in more than thirty years of the history of game localization in Poland such systems appeared in games quite rarely – for instance, in the *Neverwinter Nights* series and *Saints Row* titles of 2013 and 2022. Grammatical gender is also supported by the variable system in *Stellaris*, although to a very small extent limited to pronouns.

Obviously, not all games require such a system. It is not needed, for example, in games which do not contain a loot system with item names generated randomly. A gender

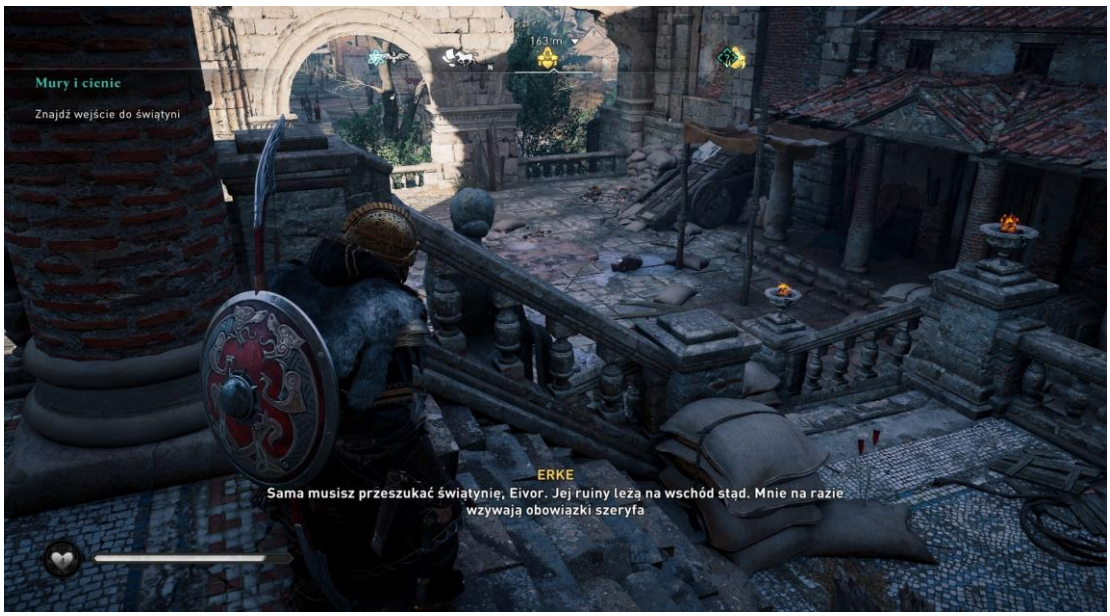
support system is also much less important in games that place great emphasis on the story, where the player’s character is not chosen by the player but imposed by the game (such series as *Dishonored*, *Grand Theft Auto*, *Uncharted*, *Final Fantasy*, or *Legend of Zelda*). However, even in such titles, a variable gender support system could be useful, if it concerned NPCs.

There are also games in which the player actually does not have their avatar – this is the case in most strategy, puzzle and sports games. In games without an avatar, the “gender problem” is limited to messages addressed directly to the person playing, whose gender cannot be assumed in any way. The only solution here is, as stated above, translation in a way that avoids gender-dependent forms. However, it should be noted that sports games are increasingly incorporating a career mode involving the choice of a player’s character of any gender. Also, a story mode is sometimes introduced, such as “Breaking Point” in *F1 21/23* or “Drive to Glory” in *Grid Legends* (in this mode, the player avatar is usually a character having a specific gender, as in the F1 series).

Implementing a system that supports gender forms is worth the effort. An ideal system related to the gender of a player's character would include not only the pronouns describing it but would be flexible enough to allow translators to introduce all gender forms (because it could encompass non-binary persons), also in the case of nouns and adjectives. Such a possibility would have a great impact on the speed of translation (because it would eliminate the need for special measures and deliberation), and, above all, would increase the final quality of the translation. Most gender-neutral expressions in Polish sound awkward and unnatural because they are not used in everyday language.

On the other hand, implementation of such a system would eliminate the inappropriate gender forms from the translation. Despite the increasing level of QA and testing, there are still incorrect gender references in localized game versions, usually the male gender referring to female characters (although it also happens the other way around, as can be seen in Fig. 1 – there is a feminine form *sama* despite the fact that a male Eivor has been selected by the player). And when there is no other option and it is necessary to choose a specific gender form (e.g. in job descriptions), this also means that in some cases the female character will be described with a male term (as in the above-mentioned *Ghost of Tsushima*). Every time, this causes a dissonance for the player and breaks immersion.

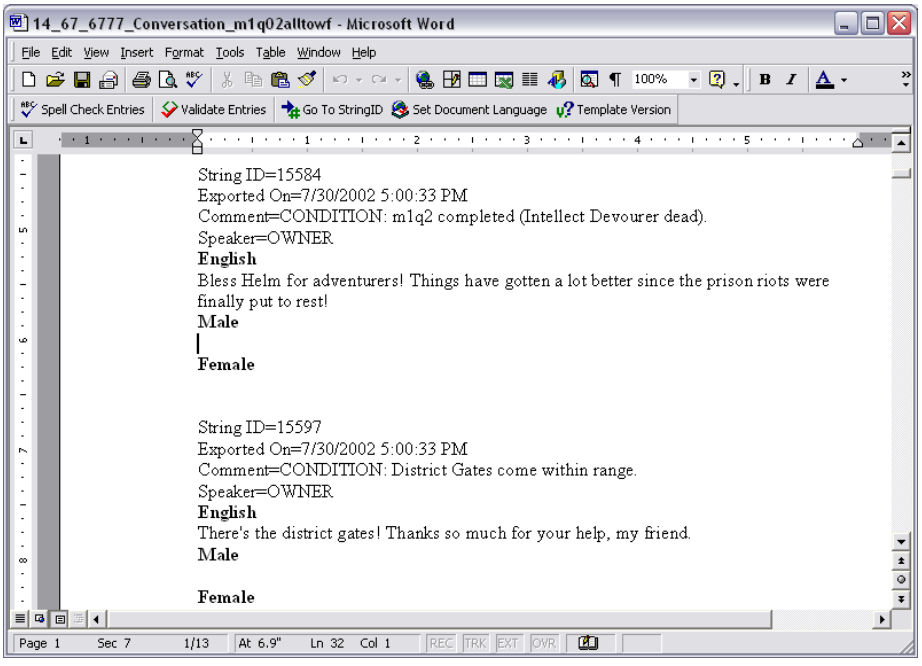
Fig. 1 – ***An example screenshot showing an impermissible ‘genderization’ (Assassin’s Creed Valhalla, Ubisoft 2020, screenshot from the Author’s collection)***



3.1 Separate places for male and female lines

The most immediate solution consists in leaving space in the script for separate strings written in the individual genders. For instance, the script of *Hordes of the Underdark*, one of the expansions for the first part of *Neverwinter Nights* series, had spaces for translations using a male and a female form, with the Female line being entered only if it actually differs from the Male line (Fig. 2). The script was translated as a doc file.

Fig. 2 – ***A fragment from the Hordes of the Underdark text script for translation (BioWare 2003)***



Currently, scripts with game texts are mostly exported for translation and processed in MS Excel format. It happens that the translation for the female gender is entered in an additional column of the sheet in the same line as the translation for the male gender.

3.2 Tags

Another solution consists in using tags marking male and female forms, as in the examples below. The strings encompassed by tags may include one word or several words. The tag symbols themselves are not displayed in-game.

Anthem (2019)

Important: The information below is taken from Dragon Age as a start. Information will be updated accordingly at a later point.	Usually the main character in BW games can be male or female - Gender tags can be used in BW titles for localized strings. For example: EN: The teacher is waiting. IT: {[M]Il maestro}{[F]La maestra} sta aspettando.
Speaker: use[{M}...][{F}...]	True
Listener: use[{M}...][{F}...]	True
Third-party: use[{M}...][{F}...]	False

(BioWare 2018)

Saints Row (2022)

Myślę, że [player-gender|ten Święty jest obiecujący|ta Święta jest obiecująca], ale czeka [player-gender|go|ją] nie lada wyzwanie!

3.3 Tokens

Still another solution, probably the most complicated and sophisticated one, consists in the use of tokens. A token is a defined string of characters which, in its simplest terms, contains two forms, male and female. They are connected by undisplayed code characters that let the game “know” their locations. This allows the game to select and display only that part of the token – that is, the gender form – which is needed in a given situation. However, efficient use of these mechanics requires considerable effort from the translator, who must remember what tokens are available. This is less convenient

than using tags. An example of an internal token system used by the localization department of CD Projekt in the 2000s is shown below.

Problemy z płcią rozwiązujemy używając specjalnych tokenów. Ponieważ wypowiedzi gracza (i o graczu) mogą dotyczyć obu płci można wstawiać specjalne sekwencje które mają to ułatwić. Znajdują się one między znakami < i >. Można ich używać w środku wyrazów. Uwaga, duże małe litery mają znaczenie. Wersja polska będzie miała następujące:

<_/a>	*[nic]/a*	*np. on<_/a>, zrobił<_/a>*
<_/A>	*[nic]/A*	*np. ON<_/A>, ZROBIŁ<_/A>*
<e/a>		*np. zrobił<e/a>ś, był<e/a>ś, wiedział<e/a>m!*
<E/A>		*j.w. tylko duże litery*
<y/a>		*np. któr<y/a>*
<ą/ę>		*np. wzi<ą/ę>ł<e/a>m*
<en/a>		*np. T<en/a> <FullName> (...)*
<ego/ej>		*np. j<ego/ej>, ni<ego/ej>, t<ego/ej>*
<EGO/EJ>		*j.w. (Duże litery, bo czasem niektóre potwory gadają samymi dużymi)*
<emu/ej>		*np. j<emu/ej> albo J<emu/ej>*
<EMU/EJ>		
<mu/jej>		*np. Daj <mu/jej> spokój!*
<MU/JEJ>		
<ego/ą>		*np. j<ego/ą>*
<EGO/ą>		
<go/ją>		
<GO/Ją>		
<im/ią>		*np. z n<im/ią>*
<IM/Ią>		
<ym/ą>		*np. "z t<ym/ą> <mężczyzn/kobiet>ą."*
<YM/ą>		
<im/ej>		*np. o ni<im/ej>*
<IM/EJ>		
<ym/ej>		*np. "O t<ym/ej>."*
<YM/EJ>		
<chł/dziew>		
<Chł/Dziew>		
<bracie/siostro>		
<Bracie/Siostro>		

<panie/pani>
<Panie/Pani>
<mężczyzn/kobiet> *np. "Zrób to, <mężczyzn/kobiet>o!"*
<Mężczyzn/Kobiet> *np. "<Mężczyzn/Kobiet>a, któr<y/a> tu był<_/a> przed chwilą!"*
(CD Projekt 2003)

Conclusions

Videogame translators face some specific challenges, including, among others, lack of context, inadequate information on game characters, incorrect sorting of dialogue lines, and last but not least, problems resulting from the grammar of their language. The latter category includes issues resulting from grammatical genders, which affect strongly some languages (for instance, Slavic, and Polish among them) more than English.

This problem occurs particularly in games where players may choose the gender of their character. Although it may be avoided by using special methods of translation (for example, using passing voice instead of active voice, impersonal verb forms or constructions), the results are often unsatisfactory. In such cases, a better quality of translation is achieved when the game supports a system allowing for different versions of the translation to be entered, corresponding to the individual character genders. Implementation of such systems requires more work and resources from the developer, but the text in local languages is then smoother and more natural, promoting the player’s immersion and overall impression of the game. Thus, it should be considered a welcome investment that will benefit both players and publishers.

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A chemist and professional translator, as well as a teacher working with high-school and academic students for more than thirty years. During this time, he has been active in almost 380 individual or team projects concerning game translations, including such well-known titles as *Horizon Zero Dawn* (and other parts of the series), *F1 23*, *Dishonored*, *The Sims*, *Spore*, or *Civilization II*. Moreover, he translated several hundred scientific texts such as journal articles or patents, and nine popular-scientific books for one of Polish publishers, including *The Weather Makers* by Tim Flannery and *The World Without Us* by Alan Weisman. Since 2012, he has a seminar on “Games and software localization” for the students of the Faculty of Humanities, University of Silesia in Katowice. He is the author of the first-ever Polish game localization handbook, *Meandry lokalizacji gier* (Helion S.A., Gliwice 2021).

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Is literal translation an appropriate solution in localization? – a case study

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Abstract

The following article explores the concept of video game localization, considering one of the possible translation techniques – literal translation (Vinay and Darbelent, 2000). The process of localization is a result of the growth of the game industry and players' demand for access to uninterrupted gameplay. It has forced the entire gaming market to consider adapting its product to different regions and large audiences (Esselink, 2000), which underscores the mandatory place of this process at the game development stage.

Keywords: video game localization, literal translation, Polish translation, proper names, English translation

It can be stated that localization is closely related to audiovisual translation, or rather, that it uses knowledge and concepts from audiovisual translation (Mangiron & O'Hagan, 2006). However, the practices used in the two processes are not identical. Localization represents a broader range of issues, concepts and problems, as it involves adapting the content presented to the linguistic, cultural and functional requirements of the region, for specific audiences (Mangiron & O'Hagan, 2006), emphasizing the functional value of the translated product.

Localization has a key role in making a game accessible to the market. It allows players from different languages and cultural backgrounds to enjoy playing the purchased product seamlessly. It ensures a full and smooth reception of the content. Games strive for natural reception, which preserves playability (Tirosh, 2020). However, the translation is only one stage of the process (Alvarenga, 2019). In addition, making the product compliant with legal requirements is an important aspect of localization that enables the game publisher to introduce the product to more markets, potentially increasing its revenue (Esselink, 2000).

Games are interactive products that belong to the so-called "entertainment software" (Bernal-Merino, 2007). The peculiarity of this type of software is that it involves an incredible need for adaptation of content, programming and the natural reception of entertainment. An additional aspect of dealing with games is that because they are software, they can be subject to updates and a series continuation may emerge. Moreover, in all cases of games, the player themselves intervenes in the gameplay, which involves ensuring natural interaction between the player and the presented game world. It requires a great deal of creativity from the translator, as well as considerable knowledge of the game, software and language (Mleczak, 2021).

In the presented paper, attention is drawn to the appropriateness of using the literal translation technique (Vinay and Darbelent, 2000), since the choice of method ensures a sufficient or poor understanding of the content. The literal translation is treated very reluctantly and with many reservations. In this method, the translator relies on translating words and structures from the source language into the target language. In the case of this study, the issue considered is that of proper names, which are often compound nouns. The caveat, however, is that the literal translation technique may not take into account the cultural or linguistic differences or the meaning nuances of the nouns concerned, leading to potential awkwardness, inconsistency and failure to meet basic localization goals.

The provided analysis is based on the English version of *Horizon Forbidden West* (Year, further referred to as HFW) game and its Polish translation. It is a sequel to the first part, which continues the story of Aloy's journey. The gameplay consists in the exploration of the open world and defeating enemies, so knowing their names is crucial for smooth and efficient navigation through the game world. What's more, the game contains many elements that emphasize the complexity of the localization process. First, it is a AAA game, which implies higher quality expectations, assuming it has a large production budget. Next, as a role-playing game (RPG), it contains a lot of content to be localized, such as dialogues, character names, and plots. In addition, the game is subject to full localization, meaning that all on-screen and off-screen elements are pre-translated and adapted to the target audience (Chandler & O'Malley Deming, 2011). Therefore, the multitude of information, text and localization options in this case seems to be virtually unlimited. The final element that increases the variety of options is the storyline. This is a game designed in a post-apocalyptic fantasy world entirely invented by the developers. Consequently, the translators had to rely heavily on their intellect and creativity since there were no previous reliable sources they could use.

The following study analyzed 43 proper names of the machines appearing in the HFW game. The survey included 9 names from the initially analyzed examples because the differences and similarities between the original English version and the Polish translation were the most surprising, and the so-called "machines" are the most important elements in this game. Their names appear constantly in missions, names of

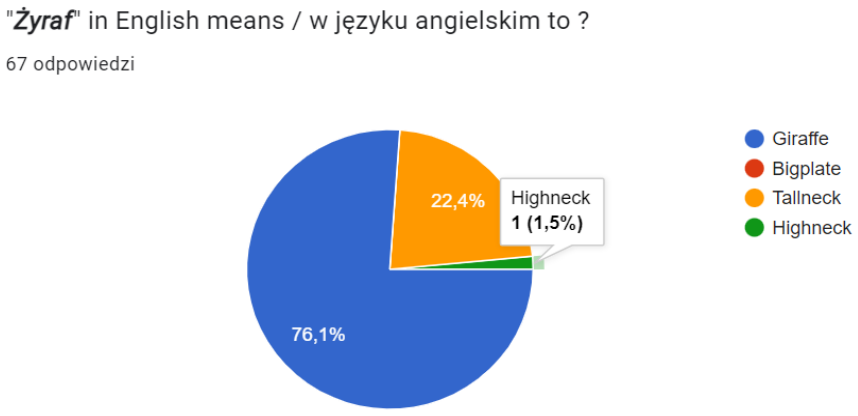
objects, areas, components, parts, etc. Therefore, understanding them is crucial to understanding the game. Based on them, it was possible to conclude how the process of translating the game was carried out in this language pair.

The questionnaire was available online from July 6, 2023, to July 31, 2023, on Facebook survey groups and gaming-related groups. The questionnaire included 3 questions on translation from Polish to English, followed by 3 questions in reverse order. Respondents always received only 1 correct answer, the others were made up or incorrect. Next was a section of open questions, which was optional because it required respondents to write their own opinions about a particular translation. There were 4 questions in this section, each of which related to an important translation problem, focusing on the respondent's assessment of his or her ease in understanding a particular equivalent in a second language. These were questions focused on reflection from a pragmatic point of view. A total of 67 responses and opinions were submitted.

The participants in the study were not from a specific group. They were not categorized by age, gender or background. The only questions asked to the respondents before completing the survey were those related to their language skills (Polish/English) and knowledge of the game. Because the survey was shared mainly on Facebook groups, both those dedicated to the game itself and surveys in general, potential respondents could be very diverse. The first thing we can deduce from the answers given by the respondents is that virtually 100% of them indicated that their native language is Polish. Next, 54% indicated intermediate English proficiency, and 33% indicated advanced English proficiency. This indicates that Poles with generally good English language skills took part in the survey. The second piece of information that may affect the analysis is the respondents' familiarity with the game, with 87% of them not knowing the game or not having played it before.

The first part of the survey consisted in selecting the most likely version of the original name (from the Polish translation into English) of the given machine name.

Figure 1 – ***Żyraf. Survey results, copyrighted by Ewa Holik, personal photo***



In the first diagram, the example was based on the word *Żyraf*. In Polish, the name of this machine is based on its similarity to the animal *Żyrafa*, in English *Giraffe*. Therefore, it is logical that most of the answers chosen by Polish native-speaking people consist of a literal translation of this word into English. However, it is worth noting that the original name of this machine is in English. So, it is possible that if the respondents knew about this information they would consider other options. The second most popular option was *Tallneck* which is the correct equivalent and original name of the machine. In English, the name focuses not on what the machine resembles, but on what its most visible feature is. In this case, it's a long neck (in Polish the name would probably be *Długoszyj*). The other proposed translations also drew attention to the characteristics of the machine – either again to the neck or to the head.

Photo 1 – ***Appearance of the machine, Żyraf. The commercial art, copyrighted by Sony Interactive Entertainment Europe***

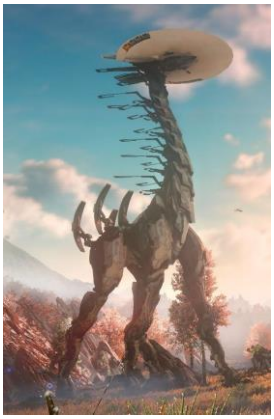
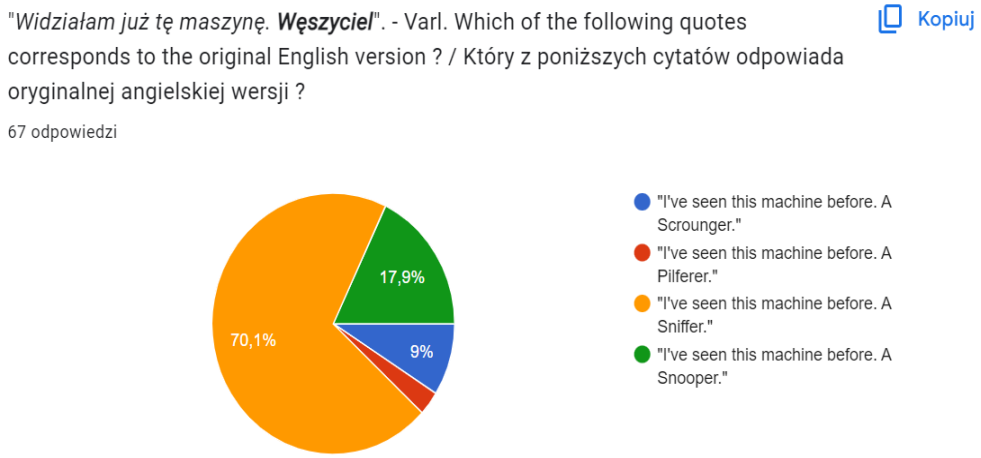


Figure 2 – ***Węszyciel. Survey results, copyrighted by Ewa Holik, personal photo***



The second diagram shows the same way of thinking repeated by the majority of respondents – a literal translation of *Węszyciel* to *Sniffer* seems to be the most logical, and it's not surprising since the rest of the translations require either knowledge of the English version of the game or a rich English vocabulary. If we focused on the Polish word *Węszyciel* – we would see that in this word the verb *węszyć* (in English *to sniff*) has

been transformed into a noun. However, the developers envisaged a different name in the original English version. The name of this machine has been based on its 'functioning'. The correct name is *Scrounger*, which comes from the verb *to scrounge*, which means 'someone who tries to get things, especially money or food, by asking for them instead of buying them or working for them'. Here we see the complexity of the meaning of this one verb, which was later suffixed with *-er* to make a noun. In Polish, this verb could be translated as *naciągać, sępić* which at first glance has nothing to do with the chosen Polish translation which is most likely based on the association that the machine resembles a sniffing dog in the way it moves and looks. We can, therefore, note that the Polish translation is based on the association of the visible physical features of the machine with animals, while the English version alludes to the machine's way of obtaining resources, as it preys on machine residues.

Photo 2 – ***Appearance of the machine, Węszyciel. photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***

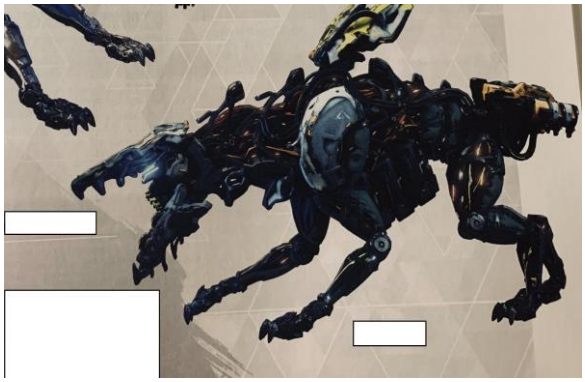
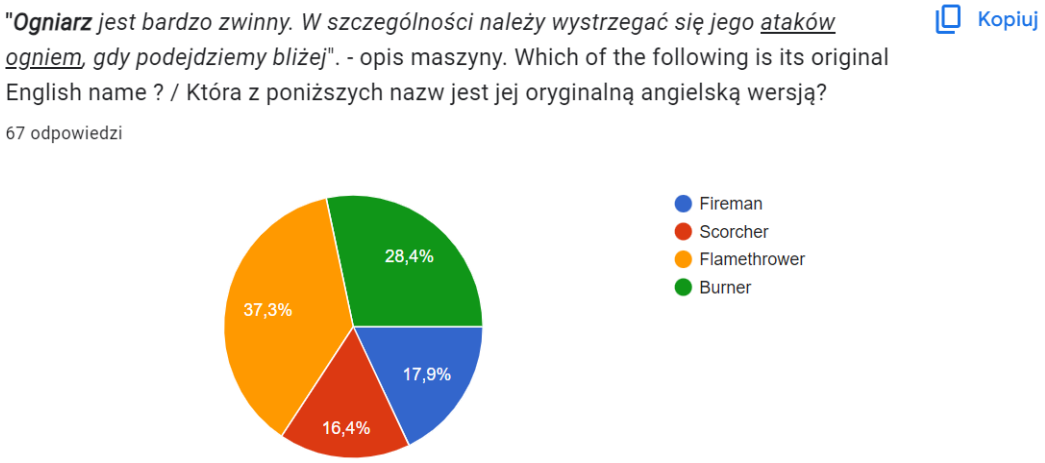


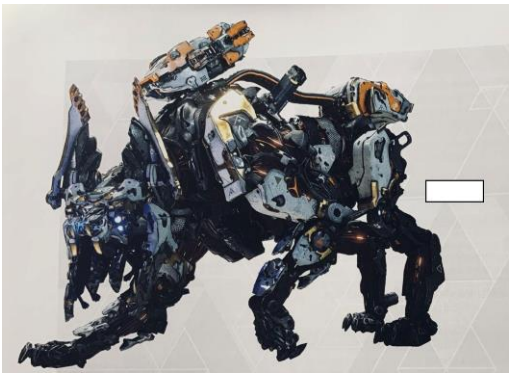
Figure 3 – ***Ogniarz. Survey results, copyrighted by Ewa Holik, personal photo***



The next question caused more difficulties for the respondents as many proposed translated names contain words that are basic in English and are associated with the Polish translation of the word *Ogniarz*, which contains the word *Ogień*, in English – *Fire*. In the fragment of the description of the machine placed in the question, the words

'ataków ogniem' (which means 'fire attacks') were underlined to show the combat operation of the machine. Hence, most of the respondents decided to choose the name *Flamethrower* as the original one. Then based on the association – if the machine attacks with fire, it burns, the name *Burner* ranked second. However, once again the original was based on a more complex basis. The correct answer to this question was – *Scorcher*, a word based on the verb *to scorch* (in Polish, *przypalać*) which means 'to burn a surface as to change its color and texture'. It follows that in the original the name of the machine shows its dangerous feature and the method of attack, however, this feature is shown as a possible consequence, but not the final result of the attack. It is a nuance based on a distinction between *to burn* (*spalić*) and *to scorch* (*przypalić*). Where, according to the dictionary definition, *to scorch* (*przypalić*) means 'partially burnt'. In the Polish translation, this nuance was omitted, focusing on emphasizing the connection of the machine with fire based on the method of its attack.

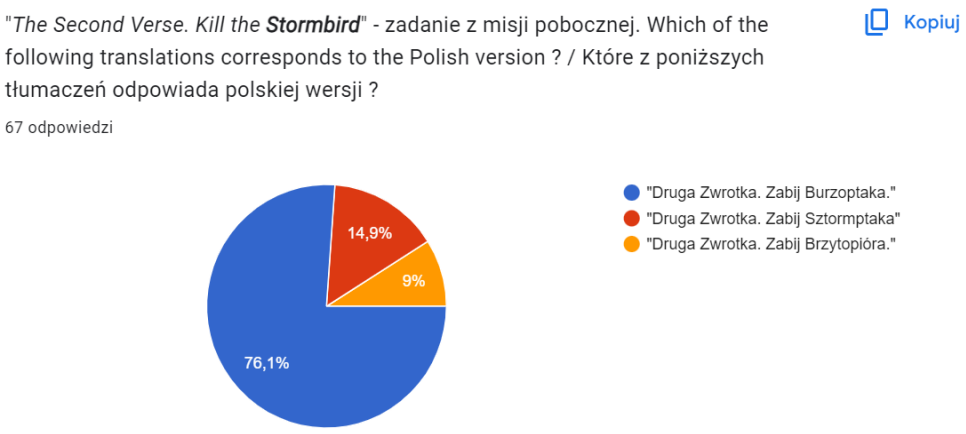
Photo 3 – ***Appearance of the machine, Ogniarz. photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***



In the second part of the survey, the questions concerned a potential translation into Polish from the original English version.

Holik, Ewa. 2023. Is literal translation an appropriate solution in localization? A case study. In: L10N Journal 2(1), pp. 88–101

Figure 4 – ***Burzoptak. Survey results, copyrighted by Ewa Holik, personal photo***



In this question, most of the respondents guessed what was the real translation of the name of the machine – *Burzoptak*, because in the Polish version the words *Storm*, and *Bird* were accordingly translated into *Burza* and *Ptak* using the literal translation method. This underlines that the respondents continued to follow the principle of word-for-word translation. The other two proposed options were either based on sound similarity – *Storm* as *Sztorm* or using a name that exists in the game – *Brzytwopiór* – but refers to a different machine, whose original name is *Skydrifter*.

Photo 4 – ***Appearance of the machine, Burzoptak. photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***

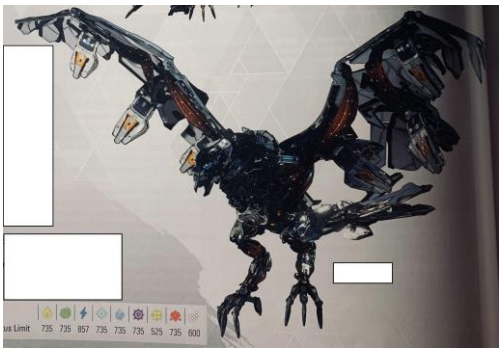
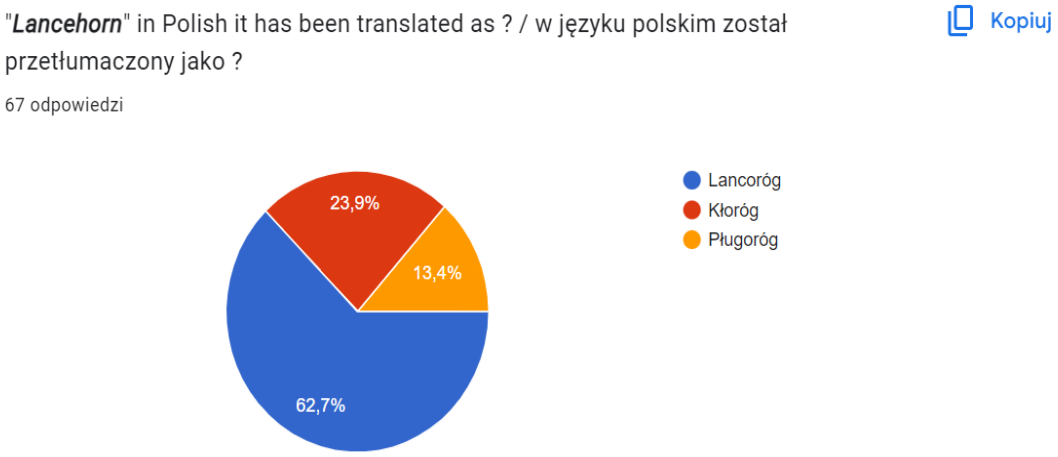


Figure 5 – ***Lancoróg. Survey results, copyrighted by Ewa Holik, personal photo***



To this question, again, the majority of respondents answered correctly. This time the Polish translation is based on the similarity of the form, sound and meaning of the translation. *Lancehorn* was translated into *Lancoróg* where *lance*, means *lanca* (here comes the question of inflexion in Polish, into *Lanco-*), and *horn* into *róg* literally. In both cases, the name refers to the physical appearance of the machine. The other two false propositions refer to different machines that exist in the game and look very similar to this one (*Kłoróg*, originally called *Fanghorn*, and *Pługoróg* – *Plowhorn*).

Photo 5 – ***Appearance of the machine, Lancoróg. photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***

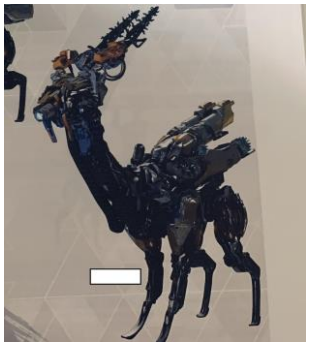
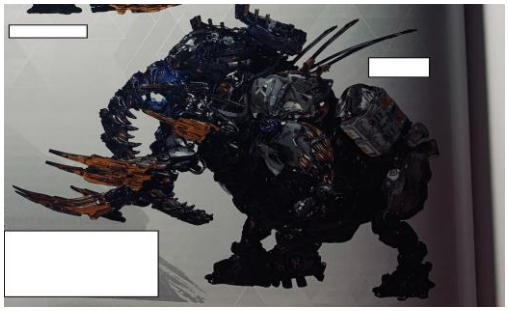


Figure 6 – ***Mumakieł. Survey results, copyrighted by Ewa Holik, personal photo***

Respondents had the biggest problem with this question being translated from English into Polish. It's hard to figure out why the translators made a different decision than most of the respondents. The correct translation into Polish is *Mumakieł*. In this question, the proposed answers did not address the English words or name of the machine at all. The English name might be too complicated lexically because *Tremor* means *Drżenie* and *Tusk* means *Kieł* (only for elephant-like animals). It makes the name too complex and based on one characteristic feature of the machine. That's why, analyzing the reasoning of Polish translators who have completely abandoned the literal translation, the people responding were given a hint that they must focus on the appearance of the machine. The only thing translators decided to keep from the original name is the fact that the machine has 'tusks', so in the two proposed names, there's *Kieł* in it (*Tusk*). Following, it was obvious that the first thought that came to people's minds was *Mammoth*, in Polish *Mamut*. Hence, a false translation of *Mamukieł* was proposed. For most of the respondents, as well as for the author, this translation seemed the most optimal. However, the translators decided to replace *Mamu-* with *Muma-* by switching places of 'A' and 'U'. It can be considered as an artistic procedure to make the name sound more 'mysterious'. The second proposed name, *Behemot*, refers to a fictional creature that resembles a mammoth in appearance. For those familiar with the story, this translation also seemed logical.

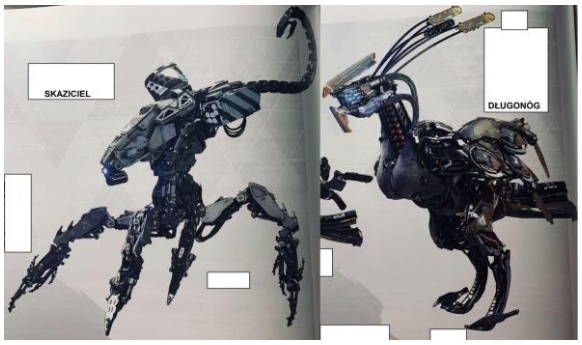
Photo 6 – ***Appearance of the machine, Mumakieł. Photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***



Following the analysis, the sections of optional *open questions* were created. These results served as a confirmation of the 'way of thinking' of the majority of the respondents. Looking at the photos of machines, the respondents were asked about their capacity to explain the decisions of the translators, the ease of the name presented, why they think that the given name was used, etc.

First question: Which machine name is easier to understand/imagine its characteristics *Długonóg* or *Skaziciel*?

Photo 7 – ***Appearance of the machines, Długonóg, Skaziciel. photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***



This question was to see how a Polish-speaking person would perceive the name based on the machine's appearance. In the case of the *Skaziciel* machine, I did not see any similarities in appearance – and as we noted earlier when translating from Polish to English – when there was no direct translation between words, and English words seemed more difficult, than the translators decided to base the machine name on the external features of its appearance. However, in this case, both *Skaziciel* (*Corruptor*) and *Długonóg* (*Longleg*) are words directly translated from the English language. Previously, this method was automatically chosen by the respondents – as an intuitive form of translation, but this example shows that it is not always the best solution. The vast majority of respondents who decided to answer this question indicated that, in their opinion, *Długonóg* is more related to the appearance of the machine. This underscores the fact that associating a name with its appearance feature is a good strategy for

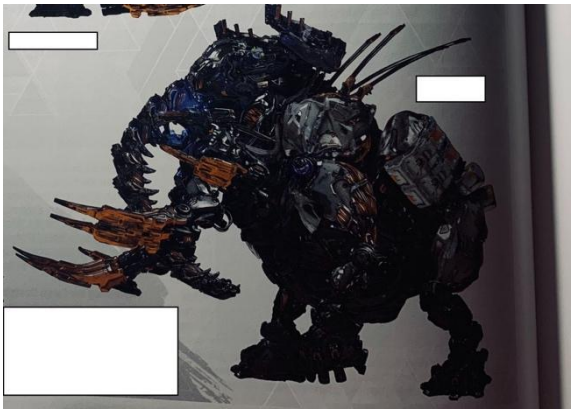
depicting creatures. Especially about imaginary worlds. This is a good point if we want to focus on the strategy of portraying reality through language. However, there have also been many comments that the name *Długonóg* well describes the characteristics of some machines, but not the one later seen in the attached image. According to the respondents, this machine has far too short legs to be called that way. Analyzing the answers of people for whom the name *Skaziciel* better reflects the machine's appearance, they emphasize its features and functionality. From this name, we can learn more about its operation – what to expect in a fight that, sublimely, this name will be more helpful for a player.

Second question: Which translation do you think is more 'logical' *Długonóg* (*Longleg*) or *Skaziciel* (*Corruptor*)?

The next question is a continuation of the first one but now we focus on the linguistic aspect. Again in this ranking, *Długonóg* was voted for more due to the simple and visible application of the literal translation method. The ease of the words used may contribute to this – in the word *Longleg*, rather, both of these words appear at an early stage of language learning. In addition, it is a combined word consisting of two words, so their translation into the target language is very visible. *Skaziciel* is considered less intuitive in this regard as well. Taking into account all the information about this pair of words – by far the majority of respondents consider *Longleg* to be more intuitive and better translated. However, with the great reservation that the very name of this machine is not appropriate in their opinion.

Third question: Are you able to justify the translators' decision to translate the English name *Tremortusk* into *Mumakieł* in Polish?

Photo 8 – ***Appearance of the machine, Mumakieł. photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***

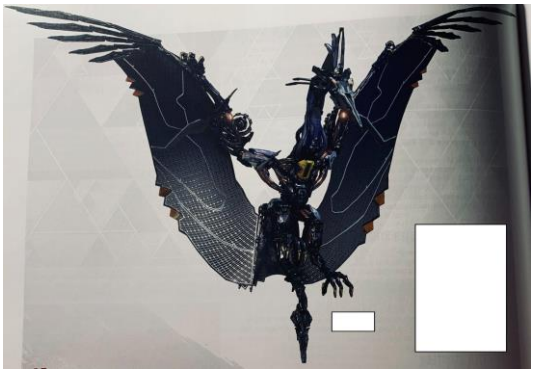


This question was asked out of pure curiosity because of struggles with explaining the process that took place during the creation of this word. Most of the respondents also

could not indicate where the Polish name of the machine came from. The relationship between *Tusk* and *Kieł* was well noticed by them, however, most of the respondents had a problem with the word '*Muma-*'. An interesting observation of some of them was the search for the origin of this prefix from the combination of the words *'Mummy'* + *'Mammoth'* because based on the appearance, this is how the animal looked to them. Or, guessing that maybe it's an old way of pronouncing some old-origin word. However, the decision taken by translators was liked by the respondents because they found it shocking. Many respondents suggested that the fact of translating this name as *Mumakieł* and not *Mamukieł* makes the sound of the name more pleasant to the ear and more mysterious.

Fourth question: Are you able to justify the translators' decision to translate the English name "*Sunwing*" into "*Solarptak*" in Polish?

Photo 8 – ***Appearance of the machine, Solarptak. photo from the book published by Future Press. Sony Interactive Entertainment Europe and Guerrilla Games license***



The last question was much easier to rearrange the occurring dependencies. Although in Polish the translators did not decide to translate a given word directly, they logically focused on assigning elements to a greater or lesser extent with the meaning of words and the appearance of the machine. So we see that the word *Sun*, *Słońce* in Polish, was translated into *solar-*, which is a direct reference to the Latin word – *solaris*, from *sol,* meaning *Sun*, then from Middle English – *solar*. This prefix is often used contemporarily to show a close affiliation and function depending on the sun. Then *wing*, *skrzydło* in Polish, was translated into *ptak* (*bird*). The translators decided, instead of using the part that belongs to the animal – which is the *wing*, to simply specify what kind of animal it is – *bird*. In this case, it was easier for the respondents to see on what grounds the translators' associations were based. The first part of the word *solar-* seemed more justified, as many respondents emphasized, because it is a prefix used in Polish and gives the machine an exotic character. As to the use of *bird* instead of *wing* – not everyone provided any justification, noting the incomprehensibility of the substitution of words. In general, the English name was more appreciated due to its more fluent pronunciation, whereas in the Polish name, the respondents found a certain 'difficulty'.

Summarizing the analyzed examples and the results of the survey, we see that it was important for most respondents to translate directly from one language to another when finding suitable translations. This is especially true in the case of compound words. It follows that for the majority to communicate with players around the world – it is best to base localization on a literal translation strategy. However, the question that localizers need to ask themselves is about the eternal conundrum – are we talking about communication or artistic aesthetics? "It depends on the game," the answer would be. However, the research shows that if HFW were to become an online game, it would be impossible to connect Polish- and English-speaking players in one game, as this would cause many difficulties or communication would be completely impossible.

Then, we see that respondents did better at translating from English to Polish than the other way around. This result depends on the machine names chosen, but it still underscores the fact that when the English name was easier – using basic English words – the translator was not tempted to reach for more complicated translations. It shows that there is certainly a lot of creativity in translation, and in particular we see a tendency to avoid direct translation when English machine words are more complicated.

The last observation is that most of the respondents were guided by words – they wanted to find the perfect translation, not localization. And that's fine, it wasn't their task. It confirms that localization is more than just translating words. The complete omission of word relationships causes some inconvenience for the audience because going beyond words prevents them from guessing the meaning. At this point, we can stop and simply try to discuss an important feature of the game: utility. But this is just such a small point. Coming back to localization gives the created world individuality and naturalness in the given target language (Czech, 2013). All this is done by going beyond words, looking at the context, use and representation of words. It is important to evaluate what we would like to achieve by choosing a localization strategy. For us as players, sometimes being understood is a more valuable feature than a creative character name in our language.

Answering questions about whether literal translation is a good strategy – it depends on the needs of the game, but it should not be denounced. If the game is single-player, a large dose of creativity will not change the way players communicate. It will only surprise players when they discover translations that add value to the gameplay. However, the question of applying this method to multiplayer games, where communication is of great importance, is puzzling. Maybe it wouldn't be good if every name was direct, but at least it could be associated with a character the same way in both languages. So that players speaking other languages could guess which character the translation stands for.

Holik, Ewa. 2023. Is literal translation an appropriate solution in localization? A case study. In: L10N Journal 2(1), pp. 88–101

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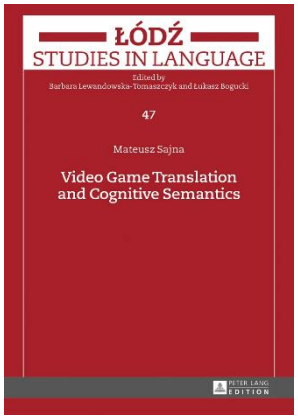
Horizon Forbidden West (2022) [Game]. Guerrilla Games.

Ewa Holik (video game localization trainee)

She lives in Gliwice, Poland and graduated from the University of Silesia's Faculty of Humanities in Sosnowiec with a Bachelor's degree, specializing in linguistics. Currently, she is pursuing her Master's degree at Sorbonne Université in Paris. She chose linguistics because languages have always been her passion and she wanted to enrich her knowledge of them. She believes that learning about how languages work helped her to open up more to the world and gave her the opportunity to see it from a different perspective. During her studies, she became very interested in the topic of game translation, as she spent plenty of time with them as a teenager. She would like to continue getting experience in this field, so she has decided to work on their analysis in terms of linguistic elements, combining her childhood passion with what she loves.

Final Variable

Traditionally the section presents reading-worthy books regarding various areas of video game localization. However, apart from the three books two social media pages were also tentatively suggested, as they are in Polish or at least try to use an accessible language.



Mateusz Sajna (2016). ***Video Game Translation and Cognitive Semantics***. (Series: Łódź Studies in Language, vol. 47). Berlin: Peter Lang Verlag.

This is by far the first monograph by a Polish scholar devoted to the topic of creating new language versions of video games. Mateusz Sajna, at the moment from the University of Gdańsk, analyses various examples of video game text that had been translated into Polish from the perspective of possible conceptual semantic metaphor blending over the translation.

https://www.peterlang.com/document/1050484

Mikołaj Deckert & Krzysztof Hejduk (2024) ***Player-Centric Studies in Video Game Translation***. London: Routledge.

Currently still forthcoming, the monograph edited by two Polish scholars from the University of Łódź is aimed at showing the wide range of study methodologies concentrated on the users of localized video games. It gathers researchers from various countries: Spain (Catalonia and the Basque Country), The UK, Canada, The United Arab Emirates, Iran and Poland, presenting tools for PX assessment, classifications of gamers, using eye tracking and surveys for measuring game reception, studying mobile games, localization practices for minority languages and accessibility features for users with visual disabilities.

Janusz Mrzigod (2021) ***Meandry lokalizacji gier [Intricacies of Video Game Localization]***. Katowice: Helion.

The first handbook concerning video game localization in Polish is written in a manner accessible not only for industry representatives or game developers but also for players with limited linguistic knowledge. While discussing the most urgent aspects of this process, its most common translation techniques and errors, the book provides the reader with much illustrative material – the book includes more than 150 screenshots from video games and much material for discussion regarding the approach to but not limited.

https://helion.pl/ksiazki/meandry-lokalizacji-gier-janusz-mrzigod,melogi.htm

Joanna Mleczak – ***Punkty Many / Mana Translation***

Apart from books and other printed sources, the Polish video game localization is vastly present in the social media. The website and social media page *Punkty Many* was created in April 2019 to popularize knowledge about video game localization and give advice to novice translators (additionally to offering commercial localization courses). The actively and continuously updated blog, Facebook, Twitter and LinkedIn pages in 2022 were joined by the Mana Translation page which is entirely in English. All of these is run by Joanna Mleczak an experienced video game localizer from Gdynia, who is very eager to share her insights, hints and accessible guidelines about working on various video-game related projects.

https://punktymany.pl/
https://manatranslation.com/

Ryszard Chojnowski – ***Grysław (Rysław)***

Ryszard Chojnowski (aka Rysław) is a translator form Wrocław who in 1999 established the first Polish video game translation agency *Albion Localizations* which is known for creating the Polish versions of the *Warcraft* and *Diablo* franchises. Since 2011, he has been active on YouTube with videos explaining some peculiarities of video game titles in English and their correct pronunciation. In 2015, he started a vlog Grysław (for some time also as a radio broadcast at *rockserwis.fm*) which is devoted mostly to general game-related content: news, recent game and hardware releases, gaming and pop culture. However, from time to time, he publishes videos related to the video game localization in Poland in 1980s, 1990s and 2000s. Regularly, he also shares some of his recent indie localization projects with his fans, sometimes even organizing live translation sessions where fans can suggest solutions to fragments of games that have been already translated by him.

This channel is created in Polish, but *Rysław* could be often met at industry conferences where he gives talks in English.

https://www.youtube.com/@Ryslaw