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THE LINGUISTIC AND STYLISTIC FEATURES OF WRITTEN NARRATIVE AND INTERFACE VIDEOGAME TEXT

ЛІНГВІСТИЧНІ ТА СТИЛІСТИЧНІ ОСОБЛИВОСТІ ПИСЬМОВОГО СЮЖЕТНОГО ТЕКСТУ ТА ТЕКСТУ ІНТЕРФЕЙСУ ВІДЕОІГОР

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This paper describes the results of linguistic and stylistic analysis of the in-game text which was selected from six video games of different game genres and narrative settings, produced in 2015–2020. It aims to highlight the stylistic, grammatical, and lexical features of written narrative and interface text, comparing them to one another as well as spoken narrative text. The results show that the style of the written narrative text can vary depending on its sub-genre (e.g. diary, newspaper article, report, abstract from a novel, etc.), while interface text generally employs a more formal style, no matter what the sub-genre is (object description, statistics, compendium etc). Formal written narrative text and interface text both use literary lexis and passive voice more often and barely make use of colloquialisms, exclamations, or filler words. Informal or colloquial written narrative text, however, often imitates spoken narrative text by using a range of devices with a similar frequency, such as contracted forms, filler words, colloquialisms, contaminated speech, and derogatory or obscene lexis. However, one must note that contracted verb forms generally dominate in even more formal videogame texts, with the only exception being interface text, where both forms are used with a similar frequency. Grammatically, all narrative texts contain significantly more past and future temporal references, while interface text mostly utilises present forms and imperative modality. Numerals are more prevalent in written types of text, compared to spoken narrative text. In narrative written texts, those are often dates, which are part of certain genre conventions, while in the interface text, it's any numerical data that the game is conveying to the player, e.g., the game score. The results of the analysis can make a valuable contribution to the training of localisation specialists.

Key words: computer game, video game, videogame discourse, discourse of video games, in-game text, stylistics.

У статті наведено результати лінгвостилістичного аналізу внутрішньоігрового тексту, обраного із шести відеоігор різних ігрових та наративних жанрів, які вийшли у 2015–2020 роках. Метою статті є виділити стилістичні, граматичні та лексичні риси письмового сюжетного тексту та тексту інтерфейсу, та порівняти їх як між собою, так і з усним сюжетним текстом відеоігор. Результати аналізу свідчать про те, що стиль письмового наративного тексту може відрізнятися залежно від його піджанру (як-от щоденник, стаття у газеті, доповідь, відривок із роману тощо), в той час як текст інтерфейсу зазвичай імітує більш формальний стиль, незалежно від піджанру (як-от опис предметів, статистика, довідник тощо). В письмовому сюжетному тексті формального стилю та тексті інтерфейсу частіше вживається книжна лексика та пасивний стан, та майже не вживаються колоквіалізми, вигуки чи слова-філери. Неформальний письмовий сюжетний текст в свою чергу імітує усний сюжетний діалог, використовуючи засоби розмовного стилю із схожою частотністю, як-от скорочені форми дієслів, слова-філери, колоквіалізми, контаміноване мовлення, принизливу чи обсценну лексику. В той же час слід зазначити, що скорочені форми дієслів у відеоігровому тексті трапляються частіше ніж нескорочені навіть в текстах, що наближаються до офіційного стилю, і лише в тексті інтерфейсу скорочені та нескорочені форми вживаються із схожою частотністю. Щодо граматичного складу текстів, усі наративні тексти містять більше форм на позначення минулого та майбутнього часів, відтоді як текст інтерфейсу використовує більше форм, що виражають теперішній час та імперативну модальність. У порівнянні з усним сюжетним текстом, у будь-якому письмовому виді тексту більш розповсюджені числівники. У письмових наративних текстах числівники позначають дати, які є особливістю деяких жанрів (будь-якої кореспонденції), а в тексті

інтерфейсу – числові дані, важливі для гравця (як-от кількість очок). Результати аналізу мають стати в пригоді у навчанні спеціалістів з локалізації ігор.

Ключові слова: комп'ютерна гра, відеогра, відеоігровий дискурс, дискурс відеоігор, внутрішньоігровий текст, стилістика.

Defining the problem. Videogame industry is a highly profitable media business, whose market is expected to reach 257 billion US dollars by 2025 [1]. This certainly draws attention of the industry professionals and videogame researchers, opening new fields of study. Studying videogame discourse, for example, can provide insights into how in-game language works and what challenges it could pose for localisation specialists, which is a valuable asset for localisation specialists' training. However, despite a lot of research being conducted on videogame discourse in general, there are few works on the discourse features of videogame text, which would be relevant to translation studies and game localisation in particular.

Literature review. There is no universal approach to studying videogame discourse among the researchers. As A. Ensslin notes, "the discourse of games involves various layers of communicative interaction and multiple types of social actors" [2, p. 1]. These could include players talking to one another in a multiplayer game; gamers talking to their audience during a stream or while recording a walkthrough; communication between industry professionals, game journalists, stakeholders, etc. [3, p. 2]. As a result, even the term "videogame discourse" itself does not have a comprehensive definition, and its meaning varies from one work to another, including studying the online communication between gamers. As for the papers researching the in-game text programmed by game developers in particular [4; 5], their scope is often limited to a comparative analysis of two localisations of the same game (e.g., English and Ukrainian), assessing what means of translation were used and how successful the final adaptation is. There is currently a clear lack of literature that would instead focus on the discourse of in-game text as a whole, revealing its common and distinctive features based on the in-game text genre (e.g., spoken narrative text, written narrative text, or interface text), game genre (e.g., action, strategy etc.) or narrative genre (e.g., fantasy, science fiction etc.).

The aim of this paper is to help fill this gap by researching the stylistic, grammatical and lexical features of diegetic in-game text, i.e. the text which is programmed by the game developers and which belongs to the artistic world of the game. This article focuses specifically on written narrative text and interface text, comparing them to one another as well as spoken narrative text where appropriate.

Research methods. The research involved the following stages: 1) selection of six video games (see the "Materials" section) that belong to different game genres (action-shooter, action-adventure, role-playing game, simulator, etc.) and narrative genres or settings (military, sci-fi, fantasy, medieval, horror, Western); 2) creating a corpus of about 520,000 words based on the in-game spoken narrative text (480,000), written narrative text (20,000) and interface text (20,000); 3) classifying the stylistic, grammatical and lexical features with the help of a data analysis tool (MaxQDA Analytics Pro 2020); 4) interpreting the results.

While spoken narrative text is presented mostly as character dialogue, written narrative text and interface text, which are the main focus of this paper, have more distinguishable sub-genres. To ensure variety in the selected material, written narrative text was further separated into an informal or colloquial group (e.g., private letters, telegrams, notes in diaries, informal work-related correspondence, stenographic records) and a more formal group, which comprised a range of documents written in official, scientific, publicist or belles-lettres style (e.g., tourist leaflets, formal correspondence, log reports, text imitating 19th-century newspapers and novels). If both groups (informal and formal) were present in a certain game, the samples were chosen evenly (about 2,500 words from each type). Likewise, interface text was selected from different sub-genres as evenly as possible too, including text from the object descriptions and quest descriptions, statistics, compendium or glossary, and loading screen.

The key similarities and differences that can be explained by the type of in-game text rather than its game genre or narrative setting are presented below.

Results and discussion. Stylistics of written narrative text. Written narrative text aims to describe the virtual world of the video game and its characters and events, but, unlike the spoken narrative text, does that in written form. While spoken in-game text in story-rich games is usually presented through character dialogue, which the player can hear without being interrupted from the gameplay, the written text comes in a variety of forms and can be further divided into genres of its own: notes, text messages, letters, newspapers, etc., upon finding which the player can often decide whether to interact with them or not. Since the list of all the genres that the player can encounter in a video game would be rather extensive, it was decided to focus on two large groups as mentioned earlier, one of which would include colloquial or informal texts, and the other – more formal texts. The results of the findings are presented in Table 1.

Table 1

Stylistic features marked in the informal and formal written narrative videogame text

	Informal written narrative text		Formal written narrative text	
	%	Numerical values	%	Numerical values
Formal speech markers	11,70%	45	54,90%	192
↳ **Non-contracted forms**	7,60%	29	21,40%	75
↳ **Formal and literary lexis**	3,10%	12	16,60%	58
↳ **Archaisms**	1,00%	4	16,90%	59
Informal speech markers	88,20%	337	44,30%	156
↳ **Contracted forms**	52,90%	202	28,30%	99
↳ **Exclamation and filler words**	5,50%	21	0,60%	2
↳ **Phrasal verbs**	10,50%	40	10,00%	35
↳ **Colloquialisms**	8,90%	34	0	0
↳ **Dialectal lexis**	0	0	0	0
↳ **Contaminated speech**	3,10%	12	0	0
↳ **Derogatory and obscene lexis**	7,30%	28	5,40%	19
Code switching and mixing	0	0	0,90%	3
Total:	100%	382	100%	350

Quite predictably, in the informal written narrative group, 88.2% of all identified features were markers of the colloquial, informal style. It is noteworthy that colloquialisms and contaminated speech were present only in the informal texts. Markers of formal style were also present in the informal written narrative text, but to a smaller extent: 11.7%, out of which 7.6% were non-contracted verb forms either used for emphasis (e.g. *"I'll let you in on a secret: it is possible, and you can do it too"*) or to fit the Medieval setting better (e.g., "*We will show you how to defend yourself from witchcraft*", but this is due to the narrative setting of the game, not the text type).

Regarding the formal written narrative text, markers of formal or literary style were more prominent: 54.9% of all features highlighted versus 11.7% mentioned above for the informal group. However, the informal style markers occurred frequently too, at 44.3%. The reason is that out of these 44.3%, 28.3% accounted for contracted verb forms, which are widespread even in non-colloquial texts (e.g. *"This fall, this stone that's long been shrouded in legend will be on display during the auction"*, *"Regarding the incident in question, I'm glad to report that it has all been taken care of")* and might even be considered neutral rather than informal. If contractions were excluded, then formal markers would clearly dominate, as it would leave 54.9% of formal speech markers versus 16% informal ones. This poses a further question, whether contracted forms should be considered neutral and not colloquial in video games.

To elaborate further on the subject, researchers agree that contracted forms are generally associated with colloquial style, while non-contracted forms are neutral. G. Turner notes that "at present [the 1970s], 'do not' would appear to remain the unmarked form in writing and 'don't' to be marked as informal and chatty, but there are signs that 'do not' will eventually be written only when a pronunciation with two separate words is to be suggested" [6, p. 94]. Still, the 7th edition of the APA style guide [7], for example, encourages the writers not to use contractions in formal or academic writing. However, for video games imitating formal texts, the patterns might be different, some of which will be described further in the article for the interface text in particular.

The data for the use of passive voice were attributed to the analysis of grammatical features. However, it is noteworthy that the use of the passive voice becomes more frequent in the formal group of texts (10.6% of all identified grammatical features compared to 2.1% in informal one, and to just 0.9% in spoken narrative text).

Grammatical features of written narrative text. In any type of in-game text, the most prominent groups of grammatical features are different means of referring to present, past, and future, as well as means of expressing modality, as per Table 2. The difference, however, lies in the variety of structures used to express those.

Table 2

The most prominent groups of grammatical features marked in the different types of videogame text

	Spoken narrative text	Informal written narrative text	Formal written narrative text	Interface text
Present time reference	37,70%	34,90%	32,60%	40,90%
Past time reference	18,00%	17,50%	39,80%	5,80%
Future time reference	9,10%	9,70%	6,10%	2,40%
Expressing modality	32,30%	33,60%	18,60%	46,90%

Just like in the other types of text, the most commonly used tense and aspect in written narrative text, informal or formal, is present simple, which accounted for 31.4% out of 34.9% and 30.3% out of 32.6% present time references respectively. In general, narrative texts of any type display higher uses of structures to express past and future time references than the interface text does, which could be attributed to the fact that a lot of dialogue between the characters either describes past events, getting the player interested in the story, or the characters' future plans, giving the player motivation to continue the game.

However, there were certain grammatical differences found between the formal and informal corpora:

1) The informal written narrative text shows roughly the same frequencies for different grammatical structures as the spoken narrative text does, e.g.: expressing modality – 33.6% vs 32.3% respectively; present time reference – 34.9% vs 37.7%; past time reference – 17.5% vs 18%; future time reference – 9.7% vs 9.1%. Formal written narrative text, however, stands out due to its much lower frequency of expressing modality – 18.6%.

2) In particular, formal written narrative texts lack imperative modality, with it covering only 6.6% of all grammatical features marked vs 18.4% in informal texts.

3) Among the formal written narrative texts, past time references were the most prominent at 39.8%; however, this could be explained by the sub-genres that were included into the corpus like 'newspaper article' or 'report', which typically describe past events.

Lexical features of written narrative text. Written narrative text is generally similar in its lexical contents to other types of text, and most of the collected data (e.g. the frequencies of usage for the lexis denoting the concepts of help, danger, fear, nature, etc.) are better explained by the narrative setting or the game genre rather than the type of text. However, what stands out in both spoken nar-

rative text and written informal narrative text is their more frequent use of "*virtualmythopersonyms*" [8, p. 88] – onyms denoting proper names of videogame characters. The figures are 16.2% of all the lexical features marked for spoken narrative text, 10.1% for informal written narrative text, 4.9% for formal written narrative text, and 3.3% for the interface text.

In spoken narrative text, represented in the corpus of this research through character dialogue, the frequent use of virtualmythopersonyms can be attributed to the characters' regular references to each other and other characters. Informal written narrative text, represented in this corpus through letters, telegrams, informal work-related correspondence, etc., tends to use virtualmythopersonyms more frequently than the other two text types do for a similar reason.

Another quite prominent lexical group present in both informal (5.8% of all lexical features) and formal (6.4%) written narrative text is numerals, namely due to their use of dates as a genre convention. In spoken narrative text, for example, the figure for the use of numerals is just 2.1% of all lexical features.

Stylistics of interface text. In contrast to narrative texts, an overwhelming majority of features identified in the interface text were associated with the formal style (80% of all stylistic features marked), as displayed in Table 3.

Table 3

Stylistic features marked in the interface videogame text

	Percentages	Numerical values
Formal speech markers	80,00%	429
↳ **Non-contracted forms**	9,30%	50
↳ **Formal and literary lexis**	36,60%	196
↳ **Archaisms**	34,10%	183
Informal speech markers	19,90%	105
↳ **Contracted forms**	8,20%	44
↳ **Exclamation and filler words**	0,40%	2
↳ **Phrasal verbs**	9,10%	49
↳ **Colloquialisms**	0,40%	2
↳ **Dialectal lexis**	0	0
↳ **Contaminated speech**	0	0
↳ **Derogatory and obscene lexis**	0,90%	5
Code switching and mixing	0,90%	5
Total:	100%	536

This can be explained by the fact that interface text belongs to written discourse, and therefore has higher lexical density. Informal speech markers such as exclamation and filler words, colloquialisms, and obscene lexis, which are widespread in spoken narrative dialogue, barely appear in the interface text: the rare exceptions in the corpus appeared only in the sub-genre of quest summaries, and specifically in those which were written from the character's point of view (i.e. went beyond a standard description of what the player has to do, and were narrative in nature).

Literary lexis comprises the majority of formal speech markers (36.6% out of 80%), followed by archaisms (which are better explained by the narrative genre of some of the games in the corpus), and non-contracted forms of the copulative verb 'be' and auxiliary verbs (9.3%). However, contracted forms are represented in interface text too, and with a similar frequency (8.2%). Overall, the following tendencies were observed:

1) Auxiliaries and auxiliary modal verbs are usually contracted, e.g. *"Tell the Baron what you've learned about Anna", "Don't get spotted by the law"*. However, non-contracted forms were also used when they fit the setting of the game better, e.g. *"Cannot have title succession laws"* (medieval setting).

2) The copulative 'be' is contracted after pronouns and existential 'there', e.g. *"it's currently empty", "find out what's killing the villagers", "there's something inside".*

3) In contrast to narrative texts, copulative 'be' is always non-contracted after nouns (e.g. *"Being called both heartless and cold-blooded, this character is indifferent to most"; "The battlefield is the domain of the Brilliant Strategist"*), with the only exceptions appearing in the sub-genre of quest summaries.

Regarding the use of passive voice in interface text, at 7.5% of all the grammatical features marked, it is certainly more widespread than in spoken narrative (0.9%) or informal written narrative text (2.10%), but not as widely as in formal written narrative text (10.6%).

More neutral or informal speech markers made up 19% of all the markers highlighted in the text, with the two main features being phrasal verbs (9.1%) and the abovementioned contracted forms. What is peculiar about the use of phrasal verbs in the interface text is that they are used interchangeably with their one-word equivalents compared to spoken narrative text, where phrasal verbs clearly dominate. This is illustrated in Table 4.

Table 4

The frequencies of use for the five most common phrasal verbs and their one-word equivalents in spoken narrative and interface videogame text

	Spoken narrative text				**Interface text**		
	Phrasal verb (uses)	**One-word equivalent (uses)**	**Ratio**		*Phrasal verb (uses)*	*One-word equivalent (uses)*	*Ratio*
1	come on (643)	-	-	*1*	get out; go out (21)	escape (21)	1
2	come back (104) go back (69) get back (67)	return (76)	3.16	*2*	get in(to); get on; come in (10)	enter (22)	0.45
3	get out (290)	escape (79)	3.67	*3*	look for (9)	search for (13)	0.69
4	look for (248)	search for (76)	3.26	*4*	pick up (4)	collect (4)	1
5	get in (62) get on (72) come in (66)	enter (64)	3.13	*5*	take out (2)	kill (34)	0.06

While in the spoken narrative text phrasal verbs outnumbered their one-word equivalents by 3.1–3.7 times, in the interface text they were used with the same frequency at best. The phrasal verb '*come on*', which encourages the player to do a certain contextual action in spoken narrative text, was completely absent in the interface text, while the most common phrasal verbs all depicted five basic in-game actions: entering a territory or a vehicle, escaping, searching, picking items up, killing enemies.

Grammatical features of interface text. In interface text, the majority of grammatical items that were marked fit two groups (see Table 2 mentioned earlier): expressing modality (46.9% of all features marked) and present time references (40.9%). Past and future time references are clearly lacking (5.8% and 2.4%) compared to narrative texts.

Out of 542 present time references marked, 536 were expressed using present simple, and gave descriptions of in-game characters or objects, often in elliptic structures with the subject omitted, e.g. *"Grants immunity to poison", "Increases health regeneration outside combat".*

As for expressing modality, the majority of the marked features (41.4% out of 46.9%) were attributed to *imperative modality* in particular. In contrast to narrative dialogue, most of these were limited to second-person imperative mood (38.9% out of 41.4%) and modal verbs expressing necessity (2.5%), thus showing little variety among the structures. It is the second person imperative that is used throughout the sub-genre of quest objectives as it is the simplest and most direct way to give instructions to the player, e.g. *"Meet Jackie", "Scan and inspect the gun", "Kill the wolves".* These utterances in interface text often complement a longer utterance in the spoken

narrative dialogue, but present the objective in an easier-to-process form, often leaving it on the screen till it is achieved.

For describing in-game objects, modal verbs expressing necessity and obligation (2.5% of all grammatical features marked) are employed. Unlike the imperative mood, they do not require immediate action from the player, but explain the mechanics of the game instead, e.g. *"To equip this item, you need 10/14/18 Intelligence"*; *"Silver blades should be brought against them, as should Devil's Puffball"; "Must not be the realm capital"*.

Conditional sentences have a similar pragmatic meaning and account for 2.9% of grammatical features marked in the interface text. Most of the conditionals in the corpus belonged to type zero (2.7% out of 2.9%), e.g. *"If there is an advantage to be had, the Reckless is sure to seize it"*.

Another device used to clarify the game rules is modal verbs of ability, representing 4.2% of all the features marked, e.g. *"Can use Hostile Schemes against own children"; "Cannot inherit titles"*.

Lexical features of interface text. Among the features explained by the type of text rather than other factors, a much more frequent use of numerals is noteworthy (12.7% of all the lexis highlighted). It is precisely through the interface text that the player interacts with all the numerical indicators in the video game, whether it's the score or collected items.

Conclusions and scope for further research. The following conclusions can be drawn from the linguistic and stylistic analysis of videogame text:

1) Informal written narrative text, similarly to spoken narrative text, mostly employs means of informal style, while formal written narrative text and interface text show a wider range of formal stylistic devices. However, what stands out in formal narrative written text is its more frequent use of contracted forms rather than non-contracted forms (28.3% versus 21.4%).

2) The use of exclamations, filler words, and colloquialisms is a distinctive feature of spoken and informal written narrative texts, as they barely appear in formal written text and interface text.

3) For formal written narrative text and interface text, the two distinctive features are their more frequent use of literary lexis (16.6% and 36.6% of all the stylistic features marked respectively) and passive voice (10.6% and 7.5% of all the grammatical features marked respectively).

4) All three types of narrative text display higher frequencies of referring to past and future time. Interface text, however, barely uses those and mostly utilises different present forms (40.9%) and means of expressing modality (46.9%), especially imperative modality (41.4% out of 46.9%). It should be noted though that the means of expressing the latter are not as varied as in other types of text, as second-person imperative mood accounted for 38.9% of the marked grammatical features.

5) Virtualmythopersonyms are more prominent in spoken and informal written narrative texts, as their repetition helps the player memorise the characters.

6)Written narrative texts employ numerals more often than spoken narrative text (5.8–6.4% versus 2.1%); these are often dates, which are part of writing conventions. Interface text shows the highest use of numerals (12.7% of all lexical features marked) as it informs the player of any numeral game data.

7) While in spoken narrative text phrasal verbs outnumber their one-word equivalents by 3.1–3.7 times, in the interface text phrasal verbs were used just as or much less frequently, depending on their meaning.

This research was based on the American English localisation of the six video games mentioned in the "Materials" section. Further studies could explore whether similar patterns prevail in videogame text adapted for a range of different cultures.

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