

ISSN 2218-2926

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

V. N. KARAZIN KHARKIV NATIONAL UNIVERSITY

COGNITION, COMMUNICATION, DISCOURSE

2025, # 30

International on-line scholarly journal

Publication area: Arts and Humanities; Philology

<https://periodicals.karazin.ua/cognitiondiscourse>

Published since 2010

Included in the list of specialized scientific publications in Ukraine, category “Б”
(The order of the Ministry of Education and Science of Ukraine
from 28.12.2019 No 1643).

Kharkiv
2025

UDC 811

Founder V.N. Karazin Kharkiv National University

Foundation year 2010. Semiannual

In this issue of a scholarly journal "Cognition, communication, discourse", Ukrainian and German researchers address multimodal issues of symbols in brand storytelling and similes in internet political memes; they investigate cognitive approaches to discourse in AI-supported language learning and metacognition on AI; suggest a diachronic onomastic study of *Poor Robin's Almanack*, and reveal identity dynamics in Frédéric Beigbeder's novels through the lens of synergetics. They also address broader underpinnings of translation as Gestalt and the cognitive-pragmatic potential of evaluation.

For linguists, teachers, graduate students, and undergraduates.

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June 30, 2025, minutes # 17

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All articles are double blind peer reviewed

Abstracting / Indexing:

Bielefeld Academic Search Engine (BASE),

Directory of Open Access Journals (DOAJ),

Index Copernicus,

Scientific Indexing Services (SIS),

Vernadsky National Library of Ukraine.

ERIH PLUS,

ResearchBib,

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ISSN 2218-2926

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
імені В. Н. КАРАЗІНА

КОГНІЦІЯ, КОМУНІКАЦІЯ, ДИСКУРС

2025, № 30

Міжнародний електронний збірник наукових праць

Галузь знань: Гуманітарні науки; Філологія

<https://periodicals.karazin.ua/cognitiondiscourse>

Започаткований у 2010 р.

Включено до Переліку
спеціалізованих наукових видань України категорії “Б”
(наказ МОН України від 28.12.2019 № 1643).

Харків
2025

УДК 811

Засновник Харківський національний університет імені В.Н. Каразіна

Рік заснування 2010. Періодичність 2 рази на рік

У статтях цього випуску журналу «Когніція, комунікація, дискурс» дослідники з України і Німеччини розглядають мультимодальні питання символів у бренд-сторітелінгу та образів в інтернет-мемах; досліджують когнітивні підходи до дискурсу у вивченні мови за допомогою ШІ та метакогніції у сфері штучного інтелекту; пропонують діахронічний ономастичний аналіз «Poor Robin's Almanack» та розкривають динаміку ідентичності в романах Фредеріка Бегбедера крізь призму синергетики. Статті також звертаються до ширших основ перекладу як ґешталту та когнітивно-прагматичного потенціалу оцінки.

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Затверджено рішенням Вченої ради Харківського національного університету імені В.Н. Каразіна
30 червня 2025 р., протокол № 17

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Текст подано в авторській редакції.

Статті пройшли внутрішнє та зовнішнє подвійне сліпе рецензування.

Журнал “Kognitsia, kommunikatsia, diskurs” індексовано в міжнародних базах даних:

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Cognition, communication, discourse, 2025, 30, 7-23

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-01>

Received April 27, 2025; accepted June 22, 2025; published online August 1, 2025.

SYMBOLS IN BRAND STORYTELLING

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Article citation: Belova, A.D. (2025). Symbols in brand storytelling. *Cognition, communication, discourse*, 30, 7-23. <https://doi.org/10.26565/2218-2926-2025-30-01>

Abstract

The article highlights the role of symbols in digital storytelling that is becoming an effective marketing strategy. Digital technologies made storytelling on websites and social media platforms multimedia and multimodal and opening up new creativity horizons. The research is based on the analysis of storytelling of famous jewelry maisons – *Cartie, Tiffany, Boucheron, Van Cleef & Arpels, Harry Winston* – on their websites. These brands creations are symbols of obsession, of great dreams, *idée fixe* for millions of people. Stories have become an essential component of textual and visual information on the websites thus providing access to the brand history, timeline, heritage and values for the wider, global audience. Luxury brands' logos are easily recognized symbols associated with exclusive design, unrivalled creativity, refined taste, high social status. Culture-specific symbols pertaining to different civilizations are efficiently integrated into jewelry design. Some creations become emblematic of the maisons and symbolize the brands. Jewelry pieces of luxury brands can turn into symbols – magical elements of flora and fauna, cosmos, human world. The maisons prescribe symbolic value to their creations in their advertising and marketing campaigns. Symbols turn out to be pivotal for meaning making in the storytelling techniques, both visually and textually, spanning the most important facts of the brands founders' personal and professional lives, the history of the brand, acquisition of unique gemstones and creation of iconic jewelry items that become the milestones in the brands' development. The stories about the brands and their creations visualize symbols. Culture-relevant symbols are aptly intergrated into jewelry pieces design and visualized in multiple stories on official websites. High Jewelry items and luxury jewelry items become brand-specific symbols. Luxury brands creations become iconic and might symbolize nature world, cosmos, human life and activities. Symbolic storytelling is interlaced with complicated cognitive and semiotic processes, interdiscursivity, diverse implications what makes meaning making and decoding more sophisticated and fascinating.

Keywords: *digital, marketing, meaning making, multimedia, multimodal, semiotic, symbol, storytelling.*

1. Introduction

Storytelling is becoming one of the essential strategies in modern marketing and advertising. Initially defined as “the act of telling a story” (“Storytelling”, n.d.), storytelling has evolved into multimedia and multimodal rendition of an event, invention, creation on websites and social media platforms. The intricate digital narration can be visualized with utmost creativity when heterogeneous images are juxtaposed in short captivating films or exquisite picture-text

combinations. *Stories* have become a conspicuous section of the official websites architecture. The prestigious jewelry maisons – *Cartie, Tiffany, Boucheron, Van Cleef & Arpels, Harry Winston* – established in mid-19th-early 20th century use storytelling to project their brands and creations on their official websites and social media. The brands that have become themselves the symbols of taste, wealth and social status write their history, create their mythology, chronicle the events associated with the rich, outstanding and famed via symbolic storytelling. The maisons' logos are easily recognizable brand symbols associated with impeccable style and flawless design. Luxury jewelry brands created fabulous jewels for the royalties, the richest people in the world, celebrities – trend-setters and megainfluencers of the past – who contributed to symbolization of the spectacular jewelry items and participated in their value co-creation. Diverse culture-specific symbols quite often become the source of inspiration for jewelry designers. Some maisons developed company-specific symbols and successfully utilized them in design, branding and marketing. Symbolic storytelling is efficiently used to convey messages and meaning, to describe and promote jewelry pieces, to arouse interest and positive emotions, to enforce memorability and create memorable marketing campaigns.

The article is *aimed* at the examination of semiotic dimension of brand storytelling on websites of famous jewelry houses.

The *objectives* of the research include the analysis of symbols and icons as sign types in symbolic storytelling of jewelry houses, symbolization as a discursive and marketing strategy, usage of symbols in multimodal communication.

The language *data*, visual images, samples of multimodal communication were collected on the official websites of the maisons – *Cartie, Tiffany, Boucheron, Van Cleef & Arpels, Harry Winston*. The information was retrieved in September 2024 – January 2025.

2. Methodology

Symbols are as old as humans; they are older than the written word. Humans are visual creatures and remember images better than words (“Measuring the Effectiveness”, 2024). Ernst Cassirer described human being as ‘animal symbolicum’ (Cassirer, 2021/1944). Humankind accumulated lots of universal symbols of creation and cosmos, plant and animal world, human world and spirit world (Archive for Research in Archetypal Symbolism, 2010). In the globalized world, with its linguistic and cultural diversity symbols might function as a universal language.

Generally, a symbol can be defined as a “a written character or mark used to represent something: a letter, figure or sign conventionally standing for some object, process, etc.” (Oxford English Dictionary, n.d.). Other definitions of symbols emphasize the relationship of the sign and reality: “something that stands for or suggests something else by reason of relationship, association, convention, or accidental resemblance” (“Symbol”, n.d.).

The meaning of signs and their role in the life of society was researched by eminent scholars of the 19th-20th centuries – Ferdinand de Saussure (Saussure, 2011), Charles Sanders Peirce (1931–1958: 2.297), Roland Barthes (Barthes, 1982), Umberto Eco (Eco, 1976; 1984; 2011) – who developed signification theory and created semiotics as a discipline. Charles Peirce's semiotic theory included taxonomy of signs where a symbol was one of the signs types together with an icon and index (Peirce, 1931–1958: 2.297).

In the last decades the attempts are made to redefine basic terms and central issues of semiotics (Bouissac, 1998; Bredin 1984; Bronwen & Felizitas, 2006; Bruce-Mitford & Wilkinson, 2008; Chandler, 2017; Cogley, 2010; Colapietro, 1993; Yiheng, 2023). In the 21st century, semiotics is being transformed into cognitive semiotics that implements broad transdisciplinary, conceptual-empirical approach to signs. Meaning making is studied in terms of transmediality, synergy, multimodality (Zlatev, Sonesson, & Konderak, 2016; Pelkey, Melanson, & Rosenbaum, 2019; Biglari, 2023; Chrzanowska-Kluczevska, 2023; Yefymenko, 2021).

Symbols simplify complex concepts making it possible to understand the idea at a glance and, thus, facilitate communication, cognition and information exchange. However, some signs might represent complex concepts, such as the shared values and ideologies of a particular culture or group. Some symbols need unpacking the hidden meaning to deconstruct the logo. This is the second order of meaning, or signification, that was identified by Roland Barthes in his “*Mythologies*” as a *myth* (Barthes, 1991).

Symbols are effectively utilized in business and marketing (Miller, 2015). Symbols quite often become the source of logos (visual symbols) and, thus, magnetic eye-catchers. In the 21st century, in the world of visual culture and information abundance, a logo is no longer just an artistic expression of the brand, it is a must-have for business. A simple and distinctive logo can reinforce brand identity and instantly trigger brand recognition. By using the same colors, shapes, and typography companies can achieve online and offline cohesion of a brand awareness symbols (“Measuring the effectiveness”, 2024). As an effective marketing tool a logo has a range of functions: it identifies produce of the brand, shapes the brand identity, communicates brand’s values, evokes positive emotions, influences purchase decisions, increases brand loyalty. The logo simplicity enables it to adapt to changing design trends and evolve without losing its core identity. Companies might re-brand their logos, transform them into favicons for online communication. Thus, by balancing the frequency of logos both in off-line communication and on-line presence, creating captivating narrative woven through symbols and symbolic language, brands can enhance their visibility on the market and connection with global audiences. In television commercials that tell stories within short time frames symbols are strategically placed in the very end to reinforce brand messaging, to make lasting impression, to make enduring impact on consumer perceptions. Through creative and successful marketing and advertising campaigns brands can “elevate from mere products to powerful symbols of aspiration and identity” evoking emotions, sparking conversations, and forging lasting connections with consumers (Torossian, 2021).

Symbols go beyond logos and brands. Luxury jewelry pieces have become samples of durable symbols associated with exceptional beauty, irreproachable elegance, refined taste, immaculate design, and high social and financial status.

3. Findings and discussion

Cartier, jeweller and watchmaker since 1847, launched its multimodal storytelling campaign in 2012 when the epic commercial *L’Odyssee de Cartier* (Golden Time TV, 2015) was released to commemorate the 165th anniversary of the brand. The commercial highlighted the central concept of the maison – integration of diverse civilizations aesthetics into jewelry design. The visual narration is based entirely on symbols.

The Odyssey of the *panther*, the brand *mascot*, starts and ends in Paris but on its itinerary the Big Cat visits three civilization centres that influenced *Cartier* approach to design – Russia, China and India. First, the panther travels to St. Petersburg and walks in symbolic Russian landscape of *snowy cold winter*, *troikas* and *sledges on frozen Neva*, *onion-shaped domes of the Russian-Orthodox churches*. Then the panther wanders along *the Great Wall of China* incarnated as a giant golden *dragon*, a legendary creature of Chinese mythology and culture, a well-known symbol of the ancient civilization. Afterwards the panther finds itself in India, it rides a giant *Indian elephant* with mini *Taj Mahal* atop, meanders in jewelry bestiary among countless *precious gems* encrusted in marvellous jewelry plants and flowers. The panther manages to leap off onto the plane piloted by *Alberto Santos-Dumont*, the Brazilian aviation pioneer, who casts a glance at the *Cartier wrist watch* named after him – *Santos de Cartier*. Finally, at the Grand Palais the *Cartier* mascot meets Shalom Harlow, a supermodel, whose wrist is decorated with *panther-bracelet*. Thus, the visual narrative unfolds via civilizations symbols, culture-relevant and brand-specific symbols. Real and imagined worlds mingle as well as Cartier masterpieces and 3D animation. That first three and a half minute film by *Cartier*, full of special effects, the product of two-year-work, was too exquisite

and sophisticated to be called a commercial. It was filmed in Paris, Prague, Spain and the Italian region of the Dolomites. Bruno Aveillan, the director, had a team of 60 people on location and 50 special effects operators working in post-production for six months (Culture Divine, n.d). The captivating advertisement wrapped up in *cultural symbolism* demonstrated that “French dominance in the international world of luxury jewellery is a fait accompli” (Davies, 2012).

L'Odyssée de Cartier continued in a series of eleven short films accessible on the website (Figure 1) and YouTube. These videos give more detailed information about civilizations and cultures as a source of inspiration for The Maison Cartier, about innovative approaches to design, singularity of Cartier jewellery, about celebrities who enjoyed fabulous masterpieces and contributed to their symbolic value and to the glory of the maison. Multiple culturally-relevant symbols are effectively integrated into the narrative. All the chapters of digital Odyssey are samples of multimodal storytelling with photos, episodes of documentaries, animation, one-point perspective virtual glass gallery that creates the impression of a splendid journey in time and space.



Figure 1. L'Odyssée de Cartier.

<https://www.cartier.com/en-us/la-maison/the-story/lodyssée-de-cartier/>



CHAPTER 1

Jeanne Toussaint, La Panthère

Figure 2. L'Odyssée de Cartier. Chapter 1.

<https://www.youtube.com/embed/uKPs3MT1sw>



CHAPTER 10

A Dialogue with China

Figure 3. L'Odyssée de Cartier. Chapter 10.

<https://www.youtube.com/embed/4UxRag5t1Yo>

One-point perspective brings into focus Cartier *panther*, the maison mascot, walking along the mirror gallery used to exhibit the enlarged Cartier masterpieces (Chapter 1) (Figure 2), to lay out impeccable *geometrical patterns* symbolic of Islamic architecture that marked a new approach in jewelry design (Chapter 4), to shower walls with innumerable sparkles of dazzling diamonds that are linked in priceless *Maharaji necklaces*, in unique jewelry pieces of luminous movie stars of the 20th century (Chapter 7), to pay tribute to China via *Chinese style* patterns on the gallery walls and virtual jewelry on the shelves (Chapter 10) (Figure 3). Easily recognizable symbols, patterns, colors of Islamic, Chinese, Indian civilization are incorporated into the videos with emblematic Cartier creations.

L'Odyssée de Cartier chapters are in English but with audible French accent to emphasize the roots of the brand and of the *Cartier* dynasty. This new Odyssey violates the chronological order and starts with the story about *Jeanne Toussaint*, female Artistic Director of High Jewelry from 1933 to the 1970s, nicknamed *Panthère*, who revolutionized contemporary jewelry design (Chapter 1) (Figure 2), invented a new bestiary, including the mesmerizing *panthère* that became the symbol of the brand in the second half of the 20th century. Janne Toussaint creatively rendered Persian, Indian, Chinese motifs in unexpected combinations of vibrantly colored stones with yellow gold and, thus, introduced a new style and unique elegance – “*Toussaint taste*” that influenced many famous women. Chapter 2 tells about London department where under Jacques Cartier legendary luxury watches – *the Cartier Crash* – were created. Assymetrical geometrical shapes symbolized a departure from Cartier classical style, embodied London spirit, and revealed the fantastic amount of intellectual, technical, creative efforts that marked any Cartier innovation. *The Cartier Crash* became a part of Cartier identity, an *emblem* of the brand, thus, acquired the symbolic value. The atmosphere of the bygone Russian empire, of the opulent Czar court is recreated with the photos of Russian aristocrats, winter St Petersburg cityscapes, black and white documentaries, films episodes, videos of airy tiaras and exceptional stones that got a new setting a century later, for example, in *The Romanov Bracelet, 2015* (Chapter 3). To meet Russian opulence Cartier started working with platinum and invented the new *Garlard* style easily recognized in famous *kokoshnik* tiaras, a symbolic Russian headdress. Later, being influenced by *Saisons Russes* in Paris Cartier combined blue and green in *peacock-feather motifs*. Being influenced by India in the early 1920s Cartier experimented a lot with bright colors combinations, united turquoise, emerald and diamonds, mixed sapphire, emerald and ruby, finally, *Tutti-Frutti Style*, one of the Cartier's emblems, emerged (Chapter 8).

Symbols are easily noticeable in the retro style films of The Maison Cartier (*The pioneering spirit: celebrating the history and legacy of Cartier*; Cartier Legendary Stories – *13, rue de la Paix*; *New Bond Street*; *The New York Mansion*) (Figure 4-6) when the narrative develops via old black and white photos of the legendary members of the Cartier family, music and brief texts limited to captions. *The pioneering spirit* ... tells about Alfred Cartier, the founder of the company, and his three sons – Louis, Pierre and Jacques. Louis Cartier's ideas revolutionized watch design making pocket watches outdated. Photos and videos of the watches sparkle in the kaleidoscope of black and white photos of old Paris, against the background of the symbolic *Eiffel tower* and other historic sights (Cartier, 2023b). Louis Cartier, founder's grandson, joined family business in Paris in 1898 and soon moved to 13, rue de la Paix, where Cartier style began to emerge, where such jewelry icons as *panthera*, *Trinity*, *tank watch*, *Tutti-Frutty* were designed and created (Figure 4). The journey through time and milestones of Cartier design history teleports viewers to another legendary Cartier address, New York Mansion in 1917 and 2017 that symbolizes 100-year-history, legacy and glory of the brand (Figure 6), and where other iconic creations – a *love bracelet* and a *nail* – were designed.



Figure 4. Cartier Legendary Stories: 13, rue de la Paix.

<https://www.youtube.com/watch?v=IJgK4fSTEzs>



Figure 5. Cartier Legendary Stories: London's New Bond Street.

https://www.youtube.com/watch?v=MX_EVtATovA



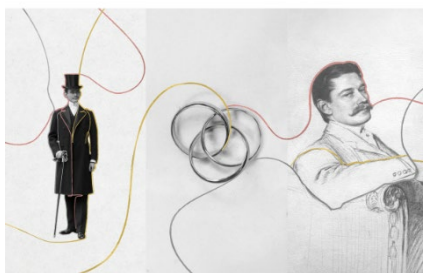
Figure 6. Cartier Legendary Stories: The New York Mansion.

https://www.youtube.com/watch?v=-AV2muAuX_U

Symbolic storytelling and advertising intermix in *Cartier Tank Française* (2022) where Guy Ritchie gave a retrospective vision of the spirit of Paris, of its creativity. Catherine Deneuve, the muse of French cinema, one of the symbols and personification of France, an ambassador of elegance, and one of The Maison Cartier long-term clients is starring in the film. Catherine Deneuve's photos, momentous episodes from her films shot in different decades, are concentrated on *Pont Alexandre III*, one of the most famous landmarks of Paris, and the filming location, but the actress successfully keeps pace with the times with the legendary *Tank Française* on her wrist (Motivate Val Morgan, 2023).

In 2024, on the occasion of *Trinity* collection centenary (Cartier, n. d., “The Trinity Collection”), The Maison Cartier launched another eleven-chapter-project – *Trinity Stories: A History*, “from the day Louis Cartier imagined its design to the moment it was adopted by the icons of past and present” (Figure 7). The word *icon*, synonymous to *symbol*, is used in the titles of several chapters (*The Birth of an Icon*; *One Icon, Multiple Styles*; *An Icon for Icons*) (Figure 8-9). The symbolic language is quite obvious in the Cartier icons' stories. In Chapter 2 the narration starts with a typical opening line of limmericks – “*There once was a man...*” – and exemplifies how centuries old narration traditions are interwoven into multimodal and multimedia brand storytelling. *Trinity* collection has become emblematic of the brand long ago, the word *trinity* selected as a name for the collection is one of the well-known symbols.

Cartier



TRINITY STORIES:
A HISTORY

Figure 7. Trinity Stories: A History.

<https://shorturl.at/edaXQ>



CHAPTER 5: ONE ICON, MULTIPLE STYLES

[Discover](#)

Figure 8. Chapter 5. One Icon, Multiple Styles.

<https://shorturl.at/edaXQ>



CHAPTER 6: AN ICON FOR ICONS

[Discover](#)

Figure 9. Chapter 6. An Icon for Icons.

<https://shorturl.at/edaXQ>

The **Maison Boucheron** storytelling is realized on the official website in *Our Maison* section with the subsections *Family Spirit*; *Freedon to Create*; *The Sense of Style*. *Family Spirit* includes video about Frédéric Boucheron, “a visionary, a unique jeweler like no other, who opened his first

boutique of jewelry pieces and precious curiosities”, who reinvented “the codes of High Jewelry” and demonstrated “never-seen-before-creativity that remains at the heart of the maison” (Boucheron, n.d., “Quarte Classique Tube”).

The timeline is located in the section *A Story of Firsts*: a set of short historical videos and brief texts about Frederic Boucheron and the maison's iconic creations – *Question Mark Necklace* (1879), the first necklace without a clasp, the *Reflet* watch, a watch of a groundbreaking design with the invisible clasp hidden within the case, and the largest order ever placed at Place de Vendôme (Boucheron, n. d., “Quarte Classique Tube”). The extraordinary *Question Mark Necklace* became a style icon that brilliantly withstood the test of time being constantly reinvented:

- (1) *This rare creation became the symbol of a High Jewelry feature ahead of its time. Its asymmetrical shape, unusual for the time, earned it the name of Point d'Interrogation – the question mark. More than 140 years after its creation, it remains one of the symbols of Boucheron's style. ... Firstly, for its unique, immediately recognizable asymmetrical shape – a true aesthetic statement for its time (late 19th century). But above all for its ability to transform with the theme and mood. During its first production period between 1881 and 1893, the Question Mark embraced floral, plant, animal, and figurative motifs. Since her arrival in 2011, Creative Director Claire Choisne has reinterpreted and contemporized the Question Mark. Year after year, the Boucheron Studio creates new variations on this great classic.* (Boucheron, n. d., “A Story of Firsts”).

The Maison Boucheron revealed its unparalleled expertise, innovation and unique sense of style the 26 first times (“26 Firsts”, 2025). No wonder, many stories about the maison's heritage include the cluster *never-seen-before* (a *never-seen-before* creativity, a *never-seen-before* ingenuity, *never-seen-before* intuition, *never-seen-before* innovation), for example:

- (2) *1928. Never seen before. On August 2, 1928, Paris was abuzz with the arrival of the Maharajah of Patiala. The Maharajah entrusted his treasure to Boucheron to create the largest order ever placed at Place Vendôme* (Boucheron, n. d., “A Story of Firsts”).

The descriptions of incredible gemstones and The Maison Boucheron timeless creations include fairy tales patterns such as *Once upon a time...*, *once in a blue moon*, for example:

- (3) *Once upon a time... On this August morning in 1928, the Maharajah was surrounded by warriors, who were just as imposing as him and carried iron chests. Louis Boucheron, who welcomed them in his boutique at 26 Place Vendôme, discovered an extraordinary treasure inside these chests.* (Boucheron, n. d., “Looking”)

In 2022, Creative Director Claire Choisne paid homage to this treasure by creating the *New Maharajahs High Jewelry Collection* – a new page of Boucheron's History of Style (Boucheron, n.d., “Looking”). Other jewelry pieces – *the Quatre icon*, Boucheron's contemporary signature, *the Serpent Bohème Collection*, the emblematic vintage icons of the Maison – extended the symbolic creations of The Maison Boucheron.

Like other jewelry houses Boucheron has its mascot – *Wladimir the cat*. Boucheron's bestiary traditions were initiated in its workshops in 1866. According to the archives the image of *Persian cat Wladimir* was used for brooch design since the end of the 19th century. In 1979 *Wladimir the cat* became the muse of the maison and the star in the advertising campaign (Figure 10). In 2018, the maison token was brought to life in the new ANIMAUX DE COLLECTION (Boucheron, n. d., “ANIMAUX DE COLLECTION”) (Figure 11).



Figure 10. Wladimir, the Cat, 1979.
https://www.boucheron.com/int_en/collier-wladimir-chat-jcl01323.html



Figure 11. Wladimir, the Cat Sleepers, Necklace, Pendant, Ring.
https://www.boucheron.com/int_en/collier-wladimir-chat-jcl01323.html

Van Cleef & Arpels collection (Van Cleef & Arpels, n.d., “The Van Cleef & Arpels Collection”), The Heritage Gallery (Van Cleef & Arpels, n.d., “The Heritage Gallery”), the Timeline (Van Cleef & Arpels, n.d., “Timeline”) contain many gorgeous creations that were becoming emblematic of the maison decade by decade. There are photos of the legendary jewelry items, sketches of the masterpieces, archival documents, textual information as well as posters of multiple exhibitions in megacities across the world that bring beauty and happiness to general public. In the 1920s, Van Cleef & Arpels was obsessed with geometrical forms and passion for oriental – Egyptian, Chinese, Japanese, Indian – motifs and incorporated numerous *culture-relevant symbols* into jewelry design. In the 1940s *ballerina clips*, *fairy clips*, *lovebird clips* revealed the designers’ poetic inspiration. The Maison created unique *Zip necklace* in the 1950s; made gorgeous jewelry for international figures and royal houses, designed the iconic *Alhambra long necklace* in the 1960s; launched its extraordinary *Snowflake* collection in the 1980s. *The Zip necklace*, *Alhambra long necklace*, *Ballerinas*, *Snowflake* collection have become well-known and easily recognizable symbols of The Maison (Figure 12-15).

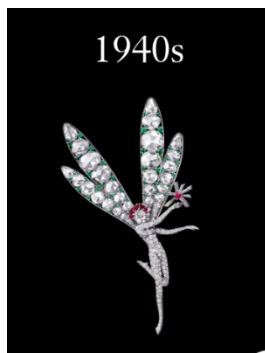


Fig.12. Little Winged Fairy Clip.
<https://www.vancleefarpels.com/en/the-maison/timeline.html>

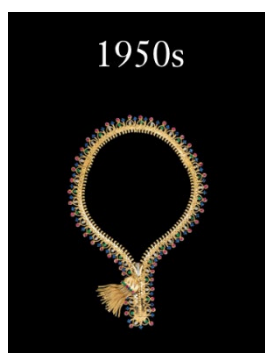


Fig.13. The Zip necklace.
<https://www.vancleefarpels.com/en/the-maison/timeline.html>

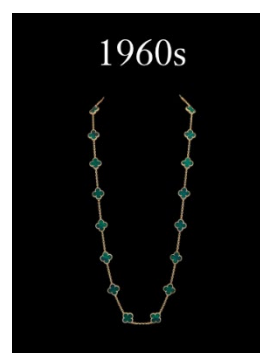


Fig.14. Alhambra long necklace.
<https://www.vancleefarpels.com/en/the-maison/timeline.html>



Fig.15. Snowflake Collection.
<https://www.vancleefarpels.com/en/the-maison/timeline.html>

Fairy and *Ballerina* clips (since 1941) inspired by dance quickly became emblematic of the brand and initiated a long and mutually beneficial partnership of The Maison and ballet troupes (Figure 16-18) (Van Cleef & Arpels, n.d., “The Graceful Fairies”). The acquaintance of Claude Arpels with George Balanchine sparked a ballet dedicated to precious stones – emeralds, rubies and diamonds – in 1967. In its turn, Van Cleef & Arpels imagined a four-chapter-collection (ballet, emerald, ruby, and diamond). Dancers were enjeweled in *Ballet Précieux High Jewelry* collection (2007) (Van Cleef & Arpels, n.d., “The Graceful Fairies”) and *Lady Arpels Ballerine Enchantée Watch* (2013) (Van Cleef & Arpels, n.d., “Lady Arpels Ballerine”). Semiotically, jewelry items of *Dancers of the world* collection can be interpreted as *icons*.



Fig.16-17. Delicate Dancers.

<https://www.vancleefarpels.com/en/the-maison/the-heritage-gallery/dancers.html>

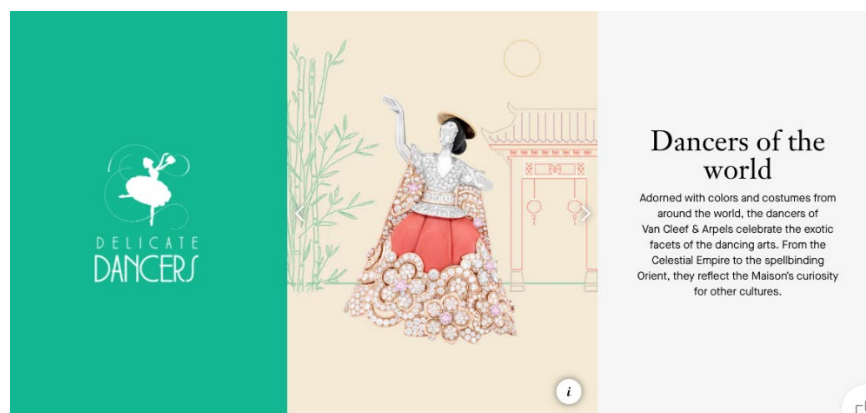


Figure 18. Delicate Dancers. Dancers of the world.

<https://www.vancleefarpels.com/en/the-maison/the-heritage-gallery/dancers.html>

The Maison *Van Cleef & Arpels* debuted with the collection in 1906 at Place Vendôme, Paris. In 2006, to pay tribute to the city of its birth, the Maison designed *Une Journée à Paris High Jewelry* collection, a bejeweled stroll along the symbolic sites in the French capital – the Jardin des Tuileries, Île de la Cité, Avenue Montaigne, the Eiffel Tower, the Opéra Garnier and Place Vendôme (Van Cleef & Arpels, n.d., “The High Jewelry”). Similarly, The *New York Collection* by Harry Winston was inspired by the symbolic sights, enduring spirit and style of the city that never sleeps (Central Park Ring, Manhattan Adornment Necklace, 718 Marble Marquetry Necklace, Brownstone Necklace, HW Graffiti Brooch, City Lights Earrings, Avenue Classic Graffiti). Photos of the spectacular jewelry pieces and watches are displayed on the website against the background of watercolours (Harry Winston, n. d.).

Van Cleef & Arpels – A Maison born from a love story – realizes its symbolic storytelling as Love Stories. The narrative starts with the black and white wedding photo of Alfred Van Cleef and Estelle Arpels. The “&” sign in the Maison’s name has become a symbol of unity, of happy and successful marriage. Not accidentally, fairy tale formulaic language is used in the love story:

- (4) *Once upon a time, there was a story of love and precious stones... It all started in 1895, in the heart of Paris, with the marriage of Estelle Arpels, daughter of a dealer in precious stones, and Alfred Van Cleef, son of a lapidary. The young couple shared the same values: a spirit of enthusiasm and innovation, a sense of family and a passion for precious stones*” (Van Cleef & Arpels, n.d., “Estelle Arpels”).

Love stories have become a rich source of inspiration for the Maison: *a diamond heart*, mentioned in the sales records from 1906; numerous creations that accompanied love affair of the Duke and Duchess of Windsor, the wedding of Grace Kelly and Prince Rainier of Monaco, engagement rings, wedding bands, watches, High Jewelry creations, *Lady Arpels Pont des Amoureux* watch, *Histoires d’amour* High Jewelry watches, etc. (Van Cleef & Arpels, n.d., “Love Stories”). A magnificent collection of sweet nothings, *tokens of love* –*hearts, cupids, arrows, Love Birds* are advertised on the eve of Valentine’s Day (Van Cleef & Arpels, n.d., “Token of Love”).

In 2019, Van Cleef & Arpels interpreted William Shakespeare’s ode to love, his *Romeo and Juliet*. *Romeo & Juliet* clips (Figure 19), symbolizing lovers, have become the most figurative pieces of the collection, as well as *The Balcone clip* where the couple declared their love... (Figure 20).



Figure 19. Romeo and Juliet.

<https://www.vancleefarpels.com/en/collection/s/high-jewelry/thematic-collections/romeo-juliet.html#romeo-and-juliet>



Figure 20. Balcone.

<https://www.vancleefarpels.com/en/collection/s/high-jewelry/thematic-collections/romeo-juliet.html#balcone>

Tiffany & Co. that offers *With Love, Iconic Gifts Since 1837*, is inextricably associated with *Tiffany Blue* color. The hue was selected by Charles Lewis Tiffany in 1845 for the cover of his first catalogue (Tiffany, n. d., “The Tiffany Blue Box”). The catalogue with the emblematic cover is still being published but in the 21st century Tiffany & Co. has other Blue Books: *Blue Book 2023: Out of the Blue* (Tiffany, n. d., “Blue Book 2023”) and *Blue Book 2024: Tiffany Céleste* (Tiffany, n. d., “Blue Book 2024”). Color symbolism is utilized by the brand in the website design as background color.

Tiffany Blue box was an object of desire and a symbol of dreams since the middle of the 19th century (Tiffany, n. d., “The World of Tiffany”). The image of the blue box with the *Bird on a rock*, Tiffany legendary creation, atop marks the Landmark at 727 The Fifth Avenue, New York (Figure 21).

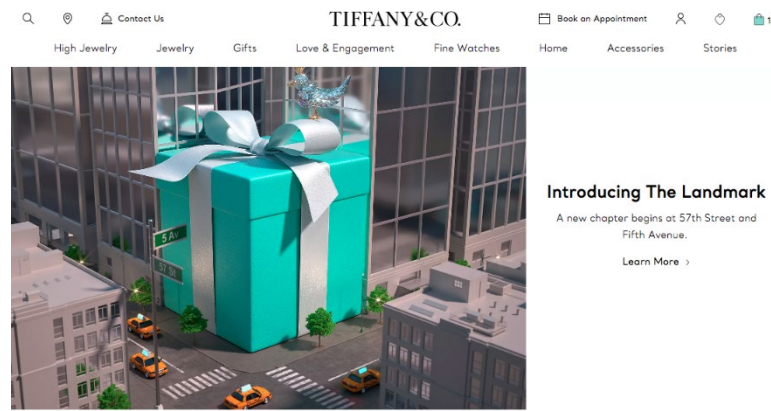


Figure 21. The Landmark.

<https://www.tiffany.com/stories/the-landmark-nyc-immersive-experiences/>

“Capturing Tiffany’s unparalleled artistry and innovation, each handcrafted high jewelry design is an extraordinary symbol of the House’s savoir faire” (Tiffany, n. d., “Beyonce Toured”). Tiffany & Co. prescribes symbolic value to its creations: Lock by Tiffany – A symbol of Protection (A timeless icon inspired by a padlock from 1883, Lock is an expression of love’s enduring protection. A universal symbol of what matters most, Lock keeps safe that which is cherished (Tiffany, n. d., “Lock) (Figure 22); Knot by Tiffany – A symbol of Connection (Knot is an expression of love’s unwavering bonds. Inspired by an archival bow crafted in 1889 – a symbol of life’s most enduring ties –Knot embodies meaningful connection (Tiffany, n. d., “Knot”) (Figure 23); T by Tiffany – A symbol of Possibility (Figure 24); Sixteen Stone by Tiffany – A symbol of Strength (Figure 25).

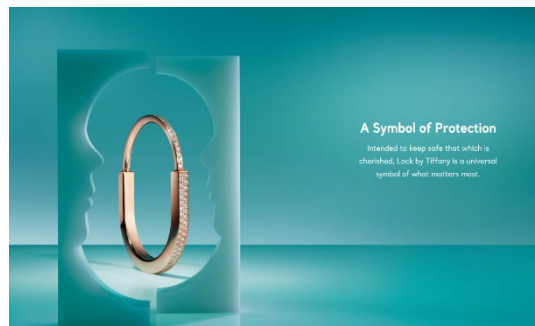


Figure 22. Lock by Tiffany – A symbol of Protection.

<https://www.tiffany.com/stories/collections/lock-by-tiffany/>

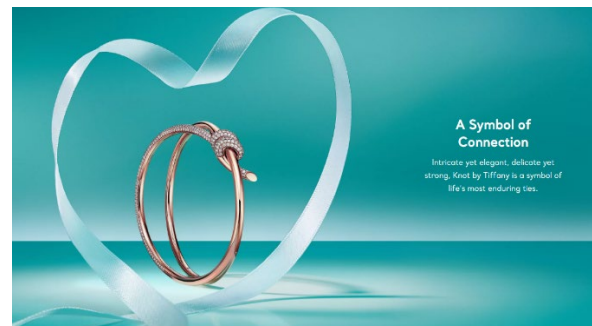


Figure 23. Knot by Tiffany – A symbol of Connection.

<https://www.tiffany.com/stories/collections/knot-by-tiffany/>



Figure 24. T by Tiffany – A symbol of Possibility.

<https://www.tiffany.com/stories/collections/t-bytiffany/>

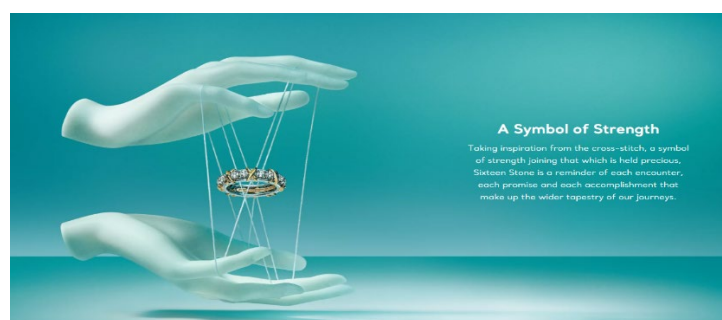


Figure 25. Sixteen Stone by Tiffany– A symbol of Strength.

<https://www.tiffany.com/stories/collections/sixteen-stone-by-tiffany/>

Many Tiffany creations are marketed as *symbols of love, icons of love that make the language of love* (Figure 26-28).

Some of the Tiffany love symbols were re-imagined with the minimalist design. For example, a padlock – an Archival Motif for the brooch with the key (Figure 29) – inspired *Lock by Tiffany* (Figure 22) 140 years later.

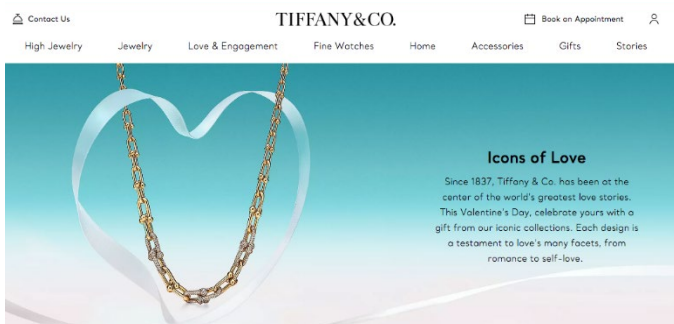
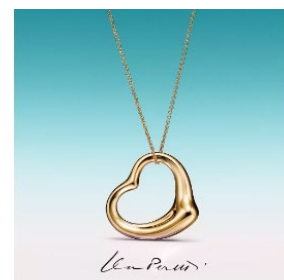


Figure 26. Icons of Love.

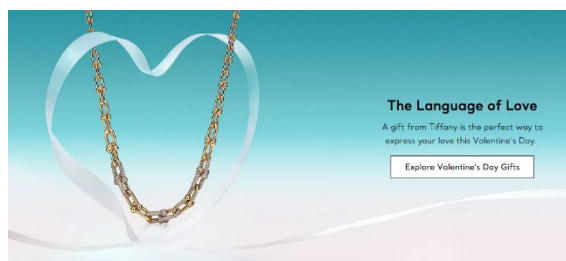
<https://www.tiffany.com/stories/guide/luxury-valentines-day-gift-ideas/>



Love Symbols Jewelry

Figure 27. Love Symbols Jewelry.

<https://www.tiffany.com/>



Extraordinary Valentine's Day Gifts

Figure 28. The Language of Love.

<https://www.tiffany.com/>

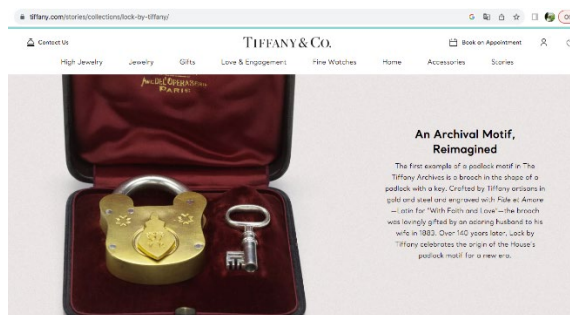


Figure 29. An Archival Motif, Reimagined.

<https://www.tiffany.com/stories/collections/lock-by-tiffany/>

The legendary *Bird on a rock* by Jean Schlumberger (Figure 30) was reimagined in several wearable masterpieces. The *Bird on a rock* became the main character for animated story about the *Landmark* at 727 The Fifth Avenue, New York, a ten-story-mansion, full of Tiffany treasures and immersive installations (Figure 31).



Figure 30. Bird on a Rock.

<https://www.tiffany.com/high-jewelry/jean-schlumberger/bird-on-a-rock/>

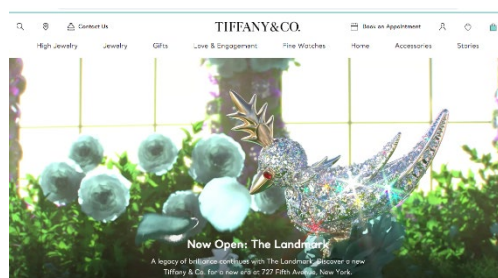


Figure 31. Landmark.

<https://www.tiffany.com/stories/the-landmark-fifth-avenue/>

Audrey Experience intallation celebrates the iconic film *Breakfast at Tiffany's*, “a key moment in cinematic history and the cultural impact of the House” (Figure 32).

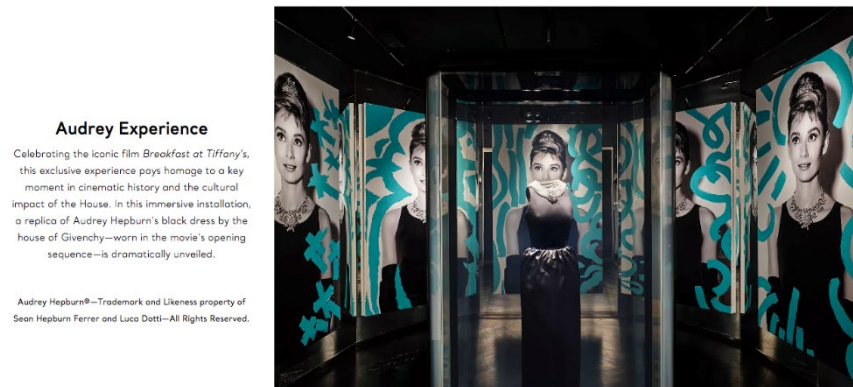


Figure 32. Audrey Experience.

<https://www.tiffany.com/stories/the-landmark-nyc-immersive-experiences/>

The 2024 Holiday Campaign also pays tribute to the legendary American movie. Anya Taylor-Joy demonstrates the iconic brand creations (*Knot by Tiffany*, *Lock by Tiffany*, *Hardware by Tiffany*, *Sixteen Stone by Tiffany*) – “facets of love all of which are a gift” (Figure 33). *Tiffany Blue Box* externalizes the dearest dreams. The actress with *Tiffany Blue Bags* is looking at the virtual shop window as Audrey Hepburn was looking at the window of Tiffany & Co. flagship store in 1961 (Figure 34). The semiotic intermixture of Tiffany & Co. symbolic creations in the 2024 commercial with the iconic episode from the legendary *Breakfast at Tiffany's* (1961) is a perfect example of interdiscursivity in meaning making.



Figure 33. The 2024 Holiday Campaign.

<https://www.youtube.com/watch?v=Fmn67ANHJpg>



Figure 34. Audrey Hepburn in *Breakfast at Tiffany's* (Edwards, 1961).

4. Conclusion

Symbols are utilized by brands in their marketing and storytelling in several ways. Culture-relevant symbols are aptly intergrated into jewelry design. Luxury brands logos turn into the objects of obsession, admiration and dreams. High Jewelry items and luxury jewelry items become the symbols of the brands – brand-specific symbols. Becoming iconic luxury brands creations convert objects of plant and animal word, elements of cosmos, phenomena of human life, that inspired the jewelry design, into symbols.

Symbolic storytelling augmented by designers' creativity has enormous potential in the era of visual culture. Symbolic storytelling is interlaced with complicated cognitive and semiotic processes, interdiscursivity, diverse implications what makes meaning making and decoding more sophisticated and fascinating.

Further research might span use of diverse media for brand storytelling, symbolism in storytelling of other business, brand storytelling on diverse social media platforms.

Declaration of the conflict of interest

The author has no competing interests or funding support to declare.

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СИМВОЛИ У БРЕНДОВОМУ СТОРІТЕЛІНГУ

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Рукопис надійшов 27.04.2025; отримано після рецензування 22.06.2025; опубліковано online 1.08.2025.

Анотація

У статті висвітлюється роль символів у цифровому сторітелінгу, який набуває популярності як ефективна маркетингова стратегія. Цифрові технології відкрили нові можливості для сторітелінгу на веб-сайтах, зробивши його мультимодальним. Символи виявляються надзвичайно важливими для нарративу ювелірних брендів класу люкс. Дослідження базується на аналізі сайтів відомих ювелірних домів – Cartie, Tiffany, Boucheron, Van Cleef & Arpels, Harry Winston. Творіння цих домів стали символами одержимості, мрією, ідеєю фікс для мільйонів людей. Історії стали невід'ємним компонентом архітектури веб-сайтів, забезпечуючи доступ глобальній аудиторії до історії бренду, цінностей і спадщини компанії. Логотипи люксових брендів – це легко впізнавані символи, що асоціюються з ексклюзивним дизайном, вишуканим смаком, неперевершеною креативністю, високим соціальним статусом. Культурні символи, що належать до різних цивілізацій, ефективно інтегровані як у дизайн ювелірних виробів, так і у прийоми сторітелінгу. Деякі прикраси стають емблемами брендів. Доми надають символічне значення своїм творінням під час рекламних кампаній. Ювелірні вироби люксових брендів можуть перетворити в символи елементи флори і фауни, космосу, світу людини. Люксові дома наділяють символічною цінністю прикраси у своїх рекламних і маркетингових стратегіях. Символи виявляються ключовими для формування сенсу в сторітелінгу, яку візуальному, так і текстовому форматах, охоплюючи найважливіші факти особистого та професійного життя засновників брендів, історію бренду, придбання унікальних дорогоцінних каменів і створення знакових ювелірних виробів, які стають віхами розвитку брендів. Культурні символи влучно інтегровані в дизайн коштовностей та візуалізуються у багатьох історіях на сайті. Прикраси, що належать до рівня високого ювелірного мистецтва, розкішні ювелірні вироби стають символами бренду. Творіння люксових брендів стають культовими і можуть символізувати світ природи, космос, життя та діяльність людини. Символічний сторітелінг переплітається зі складними когнітивними та семіотичними процесами, інтердискурсивністю, різноманітними імплікаціями, що робить створення сенсів та декодування інформації більш витонченим і захоплюючим.

Ключові слова: маркетинг, мультимедійний, мультимодальний, семіотичний, символ, створення значення, сторітелінг, цифровий

Декларація про конфлікт інтересів

Автор заявляє про відсутність будь-якого конфлікту інтересів щодо статті.

Cognition, communication, discourse, 2025, 30, 24-39

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-02>

Received May 2, 2025; accepted June 25, 2025; published online August 1, 2025

MULTIMODAL AND COGNITIVE APPROACHES TO ACADEMIC DISCOURSE IN AI-SUPPORTED LEARNING

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Article citation: Dovhaniuk, E., Piwowar, A., & Oliynyk, N. (2025). Multimodal and cognitive approaches to academic discourse in AI-supported learning. *Cognition, communication, discourse*, 30, 24-39. doi.org/10.26565/2218-2926-2025-30-02

Abstract

This article examines how academic discourse is reshaped in higher education through the integration of artificial intelligence (AI) and multimodal design, understood here in the sense of multimodal discourse theory (not multimodal AI models). Grounded in cognitive linguistics, sociocognitive discourse theory and multimodal semiotics, the study analyzes how academic concepts are structured and communicated in AI-enhanced learning environments. It focuses on two Micromodules developed at the University of Osnabrück – *Welcome to the AI Jungle* and *Expedition AI*. Micromodules are short multimedia units suitable for Blended Learning that integrate text, visuals, interactivity, and AI-generated feedback within the Stud.IP Learning Management System (LMS). Using a combination of cognitive discourse analysis and multimodal content analysis, the study explores how learners engage with the concepts of *learning*, *argumentation*, and *autonomy* in AI-mediated contexts.

Our findings show that learners navigate content using conceptual metaphors like LEARNING IS A JOURNEY, reinforced by modular layout and AI feedback mechanisms. Argumentation is shaped through additive elaboration rather than critical opposition, while autonomy is bounded by interface cues and AI prompts. The study also analyzes how AI systems – specifically tailored to and embedded within the LMS – can participate as semiotic agents, influencing meaning-making through tone, visual presence, and structured interaction. These patterns suggest a shift toward dialogic, hybrid academic discourse in which agency is distributed across human and non-human actors. The article argues that in AI-supported, multimodal learning environments, academic literacy should be reimaged as something created through collaboration between

students, educators, and digital tools. It also highlights that developing critical digital literacy is essential for designing curricula that meet the demands of the future.

Keywords: *academic discourse, artificial intelligence, autonomy, cognition, digital literacy, multimodal learning.*

1. Introduction

Recent developments in artificial intelligence (AI) and the increasing use of multimodal learning platforms are profoundly reshaping academic communication in higher education. Traditional forms of academic discourse – rooted in lectures, essays, and formal assessments – are being redefined through tools that integrate text, image, audio, interface, and algorithmic agents. This evolution raises critical questions about how academic knowledge is construed, scaffolded, and communicated in digitally enhanced learning environments.

While prior studies have examined the role of AI in assessment (Zawacki-Richter et al., 2019), feedback generation (Chevalier et al., 2022), and digital pedagogy (Kress, 2010), relatively few have addressed the intersection of AI agency, multimodal design, and cognitive structuring of academic concepts within actual university-level instructional content. This article builds on foundational research in cognitive linguistics (Lakoff & Johnson, 1980), sociocognitive discourse theory (van Dijk, 2008), and multimodal semiotics (Kress & van Leeuwen, 2006), extending these perspectives to analyze the evolving nature of academic discourse in AI-mediated environments.

The *subject-matter* of this study is academic discourse as it unfolds in AI-supported, multimodal instructional modules, where meaning is constructed collaboratively between learners, educators, and algorithmic systems. The *material* analyzed consists of two micromodules developed at the University of Osnabrück – *Welcome to the AI Jungle* (University of Osnabrück, 2024c) and *Expedition AI* (University of Osnabrück, 2024a) – which exemplify the integration of AI-generated feedback, visual design, and modular sequencing within the LMS Stud.IP.

The article proceeds from the assumption that academic discourse is not merely a vehicle for information transfer but a cognitively and socially embedded practice. Previous research has shown that metaphoric framing (Fauconnier & Turner, 2002), interface architecture (Piwowar & Dovhaniuk, 2025), and learner feedback loops (Mousavi, Mares, & Stonham, 2015) all shape how students engage with abstract concepts such as *learning*, *argumentation*, and *autonomy*. However, these dynamics have not yet been critically examined in terms of how AI and multimodal design co-construct academic meaning.

The *aim* of the article is to investigate how AI-supported, multimodal environments reshape academic discourse at the level of concept formation, learner agency, and knowledge communication. The *objectives* are as follows:

- to identify the cognitive patterns that shape learners' understanding of key academic concepts in AI-integrated settings;
- to analyze the multimodal strategies used to scaffold meaning and guide learner interaction;
- to examine the discursive role of AI as an active participant in academic meaning-making.

These objectives correspond to the broader research task of redefining academic literacy in digital contexts where human and algorithmic actors collaborate. The article further aims to contribute to current debates on AI in education by emphasizing the need for critical digital literacy and reflective pedagogical design.

2. Theoretical framework

This section outlines the theoretical foundations that inform the study, combining insights from cognitive linguistics and multimodal discourse theory. These two approaches are used in tandem to analyze how academic concepts are construed and communicated in AI-supported educational settings.

2.1. Cognitive approach to discourse

A cognitive perspective on discourse emphasizes the idea that language is deeply connected to how we perceive, organize, and make sense of experience. In academic contexts, this means looking at how learners mentally structure abstract concepts through linguistic choices. The notion of construal – how language reflects different ways of viewing a situation – plays a key role in understanding how students interpret and express academic content (Langacker, 2008).

In addition, this study draws on the theory of conceptual metaphor and mental space blending, which explain how abstract academic ideas (such as “learning paths” or “argument strength”) are often built from more concrete or embodied domains (Fauconnier & Turner, 2002). The sociocognitive model of discourse proposed by van Dijk (2008) is also particularly relevant here, as it highlights how context models – mental representations of communicative situations – guide language use in structured environments like classrooms or online forums.

2.2. Multimodal discourse theory

Multimodal discourse theory provides a framework for analyzing how meaning is constructed not only through language, but through the interplay of visual, spatial, and interactive modes. In digitally mediated academic environments, communication is increasingly realized across a range of semiotic resources – from layout and typography to platform architecture and learner interfaces. Drawing on the work of Kress and van Leeuwen (2006), this study adopts the view that each mode offers distinct affordances for meaning-making, and that the design of learning content like micromodules relies on the *orchestration* of these modes in pedagogically structured ways.

In this regard, the notion of ‘transmedia learning’ further enriches the multimodal perspective. Fleming (2013) describes transmedia learning as “*the application of storytelling techniques combined with the use of multiple platforms to create an immersive learning landscape*” (p. 371), where “*learners and content... flow seamlessly across media platforms.*” This perspective is especially relevant to the micromodules, which combine textual explanations, visuals, embedded media, and interactive elements into cohesive, stepwise learning experiences. By sequencing knowledge through media transitions – such as from infographic to quiz, or from video to reflection prompt – micromodules embody a transmedia logic that promotes learner autonomy and deeper conceptual integration. These patterns highlight not only the multimodal, but also the narrative and cognitive coherence necessary in AI-enhanced academic environments

2.3. AI-Supported academic environments

The increasing use of AI tools in education adds another layer to both the cognitive and multimodal dimensions of discourse. Tools like ChatGPT and automated writing feedback systems introduce new agents and formats into the communicative process. These technologies influence not only genre and formality, but also how turn-taking, feedback, and topic development occur in real-time (Zawacki-Richter et al., 2019). Moreover, AI tools are not passive platforms; they often co-construct knowledge with users by generating suggestions, predicting learner needs, and prompting further elaboration (Jones et al., 2022). This shifts the traditional roles of teacher and student, raising new questions about authorship, agency, and the boundaries of academic voice in AI-mediated communication.

At the University of Osnabrück, AI integration is approached through a range of tools designed to support both content creation and learner interaction (University of Osnabrück, 2024b). Free and data protection-compliant access to large language models is provided through an internal platform called ‘kiwi’, which allows students, teachers and university staff to interact with advanced language models via their institutional accounts. In addition, an AI-powered Stud.IP plugin called AI Quiz automatically generates quiz questions based on the content presented in Courseware, which is a plugin within the LMS for multimedia-content-creation. Integrated within Courseware,

AI Quiz can be used to “chat” with the content of single pages of the units. This functionality exemplifies how AI tools can dynamically structure academic content and facilitate knowledge retrieval in ways that go beyond static instructional design.

The University of Osnabrück also employs Whisper, an AI transcription tool that converts spoken language from audio and video files into editable text. This supports inclusive learning and promotes multimodal engagement by making spoken content accessible in written form – an important consideration for both accessibility and cognitive processing. Moreover, AI-generated visuals are used to enhance learning, with text-to-image tools employed to visualize abstract concepts, metaphors, and argumentative structures. These visuals contribute to a coherent visual language across course materials, reinforcing thematic and conceptual clarity. Collectively, the active use of tools such as GPTs, AI Quiz, Whisper, and visual AI generators reflects the university’s commitment to embedding AI meaningfully into instructional design. These examples demonstrate how algorithmic systems are reshaping the production, delivery, and reception of academic discourse in higher education.

The examples discussed above demonstrate how algorithmic systems are reshaping the production, delivery, and reception of academic discourse in higher education. In the following sections, we refer to these systems as exhibiting forms of AI agency – a term used to describe the perceived or functional ability of AI tools to guide, shape, or co-construct meaning within learning contexts. Likewise, we introduce the notions of semiotic actor (AI as a participant in meaning-making processes) and bounded autonomy (learner independence constrained by design cues and algorithmic scaffolding). These terms are used analytically to highlight the complex interplay of control, representation, and decision-making in AI-enhanced educational environments.

3. Method and material

This study adopts a qualitative, discourse-based approach to examine how academic meaning is constructed within AI-supported, multimodal learning environments. The analysis centers on a set of micromodules developed as part of the UOS.DLL project at the University of Osnabrück, which serve as authentic data for exploring the interplay between cognitive processes, multimodal representation, and AI-mediated interaction in academic communication.

3.1. Context and data corpus

Micromodules are short, interactive online learning units (~90 minutes) designed to foster transversal academic competencies such as digital literacy, critical reflection, and self-directed learning. They are freely accessible via the university’s learning management system Stud.IP, which also acts as the administrative backend for distribution and integration. All micromodules are licensed under Creative Commons (CC-BY 4.0) and incorporate a range of media formats – text, video, infographics, quizzes, hyperlinks, and AI-generated prompts – creating a multimodal and semiotically rich learning environment.

The present study focuses on two specific micromodules:

- *Welcome to the AI Jungle* (originally in German: *Willkommen im KI-Dschungel*) (University of Osnabrück, 2024c);

- *Expedition AI – How Text-Generating AI Ticks* (originally in German: *Expedition KI – Wie textgenerative KI tickt*) (University of Osnabrück, 2024a).

These were selected because they are the most recent micromodules in the UOS.DLL series and directly address the topic of artificial intelligence while also integrating AI tools into their structure and delivery. Their dual role – both thematically and technologically centered on AI – makes them particularly relevant for examining the evolving nature of academic discourse in AI-supported learning environments. Both modules are designed to promote awareness of AI’s role in academic practice, foster responsible tool use, and support reflection on the cognitive and ethical dimensions of digital communication. They include student-facing content, dynamic feedback, and

interactive pathways, making them ideal for analyzing how academic concepts are construed, scaffolded, and sequenced in AI-supported discourse.

Importantly, these micromodules function as more than instructional artifacts; they represent hybrid discourse spaces where meaning is co-constructed through the coordinated input of students, instructors, AI-based tools, and Stud.IP infrastructure. Their modularity, openness, and embedded automation offer a replicable, transparent, and pedagogically structured setting for investigating how academic discourse is evolving in response to technological mediation.

3.2. Methodological approach

The analysis applies concepts and tools from Cognitive Discourse Analysis and Multimodal Content Analysis – both described in Section 2 – to examine how academic concepts are shaped and communicated across textual, visual, and interactive modes. Special attention is paid to metaphorical language, learner feedback, and the design logic of the micromodules, including the role of AI-generated content in shaping reasoning and navigation. This approach supports the investigation of both internal conceptual structuring and external semiotic orchestration in AI-mediated academic discourse.

3.3. Discourse participants and ethical considerations

Discourse in the micromodules unfolds through the interaction of multiple agents:

- *Students* engage with the material, navigate the learning paths, and respond to both fixed and AI-generated prompts.
- *AI based tools*, especially within *Expedition AI* (University of Osnabrück, 2024a), generate tailored feedback based on learner input, modeling academic reasoning processes.
- *Instructors and course designers* curate content, define learning goals, and construct the pedagogical flow of the modules.
- *Stud.IP* administrators manage the platform infrastructure and oversee module integration, usability, and data access protocols.

All data analyzed in this study are publicly available, anonymized, or covered under open licenses (CC-BY 4.0). No personal student information or direct interaction data were accessed. In accordance with General Data Protection Regulation and institutional research ethics, the analysis is limited to non-sensitive, content-based materials and anonymized feedback where relevant.

4. Results and analysis

This section analyzes academic discourse in AI-integrated learning environments through cognitive and multimodal lenses, using examples from two previously introduced micromodules developed at Osnabrück University: *Expedition AI – How Text-Generating AI Ticks and Welcome to the AI Jungle* (University of Osnabrück, 2024a; University of Osnabrück, 2024c).

The analysis is structured around four key dimensions. Section 4.1 examines how learners cognitively construct core academic concepts like learning, argumentation, and autonomy. Section 4.2 explores the multimodal strategies employed in micromodule design to support comprehension and engagement. Section 4.3 discusses how AI functions as a discursive participant in shaping knowledge and interaction. Finally, Section 4.4 brings in learner perspectives to assess how students perceive and evaluate AI-mediated academic discourse. Together, these dimensions offer a comprehensive view of how meaning is co-constructed in digitally enhanced, AI-supported higher education settings.

4.1. Cognitive patterns in concept construction

In this study, we focus on three key concepts – learning, argumentation, and autonomy – as entry points for analyzing the cognitive and discursive dynamics of AI-assisted academic modules. Their centrality is well-documented in the literature on academic literacies (Lea & Street, 1998), cognitive discourse functions (Dalton-Puffer, 2013), and learner agency (Mercer, 2011). These concepts represent foundational dimensions of academic discourse across disciplines and are essential to understanding how learners engage with knowledge in formal education settings. As such, they offer a coherent framework for examining the shifts that occur when academic communication is mediated by AI-driven platforms.

4.1.1. Learning. In academic discourse, learning is frequently represented as a developmental and cumulative process, often framed through metaphors of growth, construction, or movement (e.g., “*building knowledge*”, “*progressing through stages*”, “*gaining insight*”). These metaphoric structures reflect underlying cognitive schemas that help learners make sense of abstract educational experiences (Lakoff & Johnson, 1980; Sfard, 1998).

In the context of our micromodules, we observe the prevalence of what Lakoff and Johnson (1980) define as the conceptual metaphor LEARNING IS A JOURNEY. This framing is evident not only in educational language (e.g., “*learning path*”, “*progress report*”) but also in how learners describe their own experience of grappling with knowledge over time. In their reflections, the students describe themselves as “*just starting out*” or “*moving forward*”. It is the digital learning architecture – the quiz-based, stepwise progression interface – that reinforces this metaphor. Quizzes serve as checkpoints, videos as on-ramps, and AI prompts as guides nudging students forward or suggesting alternate routes (e.g., “*You might want to revisit the section on AI bias*”).

The table below presents selected examples of student feedback that explicitly or implicitly reflects the LEARNING IS A JOURNEY metaphor. These responses, drawn from evaluations of the micromodule *Welcome to the AI-Jungle*, illustrate how learners perceive their engagement with the course as a process involving entry points, progressive stages, detours or delays, and strategic navigation. Each comment is accompanied by its English translation and categorized by the phase of the journey it represents. This metaphorical framing offers insight into the experiential logic underpinning learners’ interactions with courseware.

Table 1

Illustrative Student Feedback Reflecting the LEARNING IS A JOURNEY Metaphor*

	German (Original)	English Translation	Cognitive Metaphor Phase
1.	<i>gute Integration → auch Zeitpunkt (am Anfang) hat sehr gut gepasst</i>	<i>Good integration → the timing (at the beginning) worked very well.</i>	Starting Point
2.	<i>Sehr gelungen/passend – als Grundlage zu Beginn</i>	<i>Very well designed/fitting – as a foundation at the beginning.</i>	Starting Point
3.	<i>Durch Videos & Aufgaben → Texte wurden i.d.R. überflogen</i>	<i>Through videos and tasks → texts were usually skimmed.</i>	Progression Through Stages
4.	<i>Durch die Quizfragen und den Videos → grafische Darstellungen</i>	<i>Through the quiz questions and videos → graphic representations.</i>	Progression Through Stages
5.	<i>Quiz hat aufgezeigt, was noch vertieft werden sollte.</i>	<i>The quiz showed what still needed to be deepened.</i>	Progression Through Stages
6.	<i>Texte teilweise zu lang → Texte wurden überflogen → Quiz half das Wichtigste mitzunehmen.</i>	<i>Texts were partly too long → texts were skimmed → the quiz helped to grasp the most important points.</i>	Detours / Repetition
7.	<i>Texte + Quiz → u.U. etwas viel, wenn am Stück gemacht mit allen Links etc. → Motivation ↓</i>	<i>Texts + quiz → possibly a bit too much if done all at once with all the links etc. → motivation dropped.</i>	Detours / Repetition
8.	<i>Videos, Zusätzliche Links für vertieftes Wissen</i>	<i>Videos, additional links for deeper knowledge.</i>	Detours / Repetition
9.	<i>mehr Zeit benötigt als 90 Minuten</i>	<i>Took more time than 90 minutes.</i>	Detours / Repetition
10.	<i>Abwechslung hat Aufmerksamkeit aufrecht gehalten; Videos haben Texte gut untermauert.</i>	<i>Variety kept attention up; videos supported the texts well.</i>	Wayfinding / Navigation
11.	<i>Videos und Quizfragen → aber die Texte waren gut.</i>	<i>Videos and quiz questions → but the texts were also good.</i>	Wayfinding / Navigation
12.	<i>Durch die Aufgaben und das Quiz → Zusammenfassung der Inhalte.</i>	<i>Through the tasks and the quiz → summary of the content.</i>	Wayfinding / Navigation

The metaphor is also spatially and temporally embedded: learners describe movement through content (text, video), adaptation to pace (“2 hours straight doesn’t work”), and the need to regulate effort over time. This path-based reasoning supports cognitive coherence and enhances learner orientation in multimodal environments where linearity is not always obvious.

4.1.2. Argumentation as additive refinement. Argumentation has long been central to academic discourse, traditionally involving reasoned debate, engagement with counterclaims, and the testing of ideas (Toulmin, 2003; Andrews, 2009). In the micromodules, however, argumentation appears not through dialogic contestation but through affirmative elaboration – what we term *additive refinement*.

A telling example occurs in *Expedition AI*, where an AI Quiz asks a learner to give a brief definition of “humanization” (University of Osnabrück, 2024a). After analyzing the given answer, the AI responds with: “*Thank you for your answer. Let’s expand on that,*” before elaborating on ethical, epistemic, and social dimensions. This feedback simulates academic reasoning and models disciplinary depth, but it does so without opposing or critically interrogating the original idea. The result is a form of algorithmic alignment – an epistemic nudge toward complexity, but within a pre-scripted framework (see Jones et al., 2022).

The language used by the AI is strikingly personified: phrases like “*Let’s expand on that*” or “*I appreciate your input*” frame the AI as a conversational partner (cf. Nass & Moon, 2000). Visually, the interface mimics a dialogue: student input and AI feedback appear in paired blocks, echoing chat interactions and reinforcing the illusion of human-like exchange. Through this stylization, the AI adopts a rhetorical identity – not merely delivering information, but performing a tutoring persona.

However, this persona also introduces a subtle constraint. Learners are encouraged to elaborate, not to disagree. By affirming and extending rather than challenging input, the AI narrows the range of acceptable discursive moves, potentially undermining criticality. This reflects a broader shift in argumentation pedagogy toward low-risk elaboration over confrontational reasoning, especially in scaffolded digital settings (Mercer, 2011; Zawacki-Richter et al., 2019).

Student reflections mirror this pattern: learners describe how the course “*expanded my understanding*” or “*helped me look at the topic from a different perspective,*” but rarely report instances of argument construction through opposition or critique.

4.1.3. Autonomy as bounded agency. Autonomy – broadly associated with learner control, choice, and metacognitive awareness (Little, 1991) – is a central goal in digitally mediated education. In the micromodules, autonomy is structurally supported: learners can skip content, revisit sections, or navigate at their own pace. However, this freedom is bounded by choice architecture: subtle nudges and layout cues (or *prompts*, in the sense of Thaler & Sunstein, 2008) that guide learner behavior without explicitly directing it.

Prompts like “*You might want to review this topic before continuing*” signal suggested routes rather than open exploration. “*You might want to review this topic before continuing*” signal suggested routes rather than open exploration. This aligns with Evans’ (2007) concept of bounded agency, where learners navigate within structured yet adaptable environments that foster guided independence rather than complete autonomy.

In *Welcome to the AI Jungle*, this guidance becomes more embodied. The use of AI-generated voice overs and avatars via tools like *HeyGen* introduces a literal AI “presence”. This digital persona doesn’t just deliver content – it speaks with intonation, emotion, and consistency. The result is a semi-anthropomorphic AI figure that performs instruction; reinforcing trust and emotional engagement through affective semiotics (see Sundar & Kim, 2019). While this increases immersion and accessibility, it may also reduce critical distance, leading learners to internalize rather than interrogate the content.

Still, the micromodules preserve elements of learner agency: users can choose entry points, opt out of AI feedback, or navigate non-linearly. This interaction reflects negotiated autonomy, where learners must balance personal initiative with the persuasive logic of interface design and algorithmic feedback.

In summary, AI in these learning environments functions as both semiotic and pedagogical actor. It shapes how learners move, think, and choose – often through subtle cues that simulate human interaction while operationalizing instructional intent. Understanding AI as a discursive participant reveals the urgent need for critical digital literacy: not only to navigate academic content, but to interrogate the systems through which that content is increasingly produced and personalized.

4.2. Multimodal strategies in meaning-making

The micromodules developed at the University of Osnabrück demonstrate a highly intentional use of multimodal design strategies to facilitate academic meaning-making in AI-supported learning environments. These strategies align with the foundational principles of multimodal discourse theory, which views meaning as constructed not through language alone but through the orchestration of multiple semiotic modes – visual, spatial, textual, and interactive (Kress & van Leeuwen, 2006). Within these micromodules, such modes are not ancillary but central to the communicative architecture of the learning experience.

One prominent example is the spatial modularity of content. Micromodules are organized into sequenced courseware blocks – including text, learning cards, hyperlinks, videos, and quizzes. This structure supports what Kress (2010) terms “reader-designed pathways”, allowing learners to navigate material in ways that suit their prior knowledge and learning goals. Visual formatting, such as bolded headings, colored icons, or navigational tabs, provides a clear “red thread” through the content, reducing cognitive load while supporting continuity and learner orientation (Piwowar & Dovhaniuk, 2025).

Figure 1 below illustrates the screenshot from the micromodule *Expedition AI* (University of Osnabrück, 2024a) introducing the advantages of the *kiwi* platform, which provides access to large language models through the Osnbrück university’s infrastructure. This introductory paragraph supports multimodal learning by combining visual elements (icons and tables), spatial structuring (comparison columns), and microcopy (tooltips and privacy notes) to scaffold learner understanding of system functionalities. The presentation of information is not merely factual – it is designed to build trust, encourage exploration, and frame user agency.

Die Uni Osnabrück stellt ihren Mitgliedern unter [kiwi.uos.de](#) einen **kostenlosen und datenschutzkonformen** Zugang zu verschiedenen textgenerierenden KI-Modellen (LLMs) zur Verfügung.

Und ganz wichtig: Deine Chats können nicht von Dozierenden eingesehen oder dir zugeordnet werden!


Deine Vorteile mit kiwi		
	kiwi 	andere LLMs
Preis	kostenlos	unterschiedlich teuer
Datenschutz	DSGVO-konform	deine Daten werden oft weiterverarbeitet
Zugang	einfach über deine Uni-Kennung	du musst dir mühsam einen Account einrichten
verschiedene Modelle?	ja, sogar von verschiedenen Anbietern und lokal betrieben!	immer nur von einem Anbieter

Figure 1. Screenshot of the page in the micromodule *Expedition AI* introducing the *kiwi* platform (University of Osnabrück, 2024a).

Within the micromodules themselves, visual media play a dual role: both as cognitive scaffolds (e.g., infographics that clarify abstract concepts) and as affective cues that sustain learner engagement across asynchronous, self-paced units. Decorative or thematic visuals – such as AI-generated illustrations – signal content transitions and make otherwise dense topics feel accessible and relevant (Piwowar & Dovhaniuk, 2025).

Interactive elements reinforce this design. For example, pre-quizzes in *Expedition AI* (University of Osnabrück, 2024a) do not merely test factual recall but encourage reflection and self-assessment through adaptive feedback mechanisms.

One of the most salient features is the strategic deployment of visual elements such as infographics, images, and tables. These serve to clarify abstract concepts, organize information spatially, and reduce cognitive load, thereby supporting learner comprehension.

In addition to these pedagogically functional visuals, AI-generated decorative imagery is occasionally used to maintain attention and signal thematic shifts, contributing to a more dynamic and engaging learning environment (Piwowar & Dovhaniuk, 2025). This design reflects the broader goal of supporting sustained learner engagement, particularly in asynchronous self-study settings.

Importantly, the design also incorporates interactional features that emulate dialogic patterns common in human-led educational settings. Although learners do not interact with a human instructor in real time, the system offers responsive elements such as adaptive feedback prompts (Figure 2), embedded suggestions for reflection or further action (e.g. Always verify the accuracy of the generated texts, as AI-generated content may contain hallucinations), elaborative quiz responses, etc. These features simulate conversational feedback and scaffold deeper processing, which is essential for conceptual transfer and learner autonomy (Zawacki-Richter, Marín, & Bond, 2019).



Figure 2. Screenshot from the micromodule *Expedition AI* - Showing the AI pointing out options to a student, i. e. returning to specific aspects within the completed unit again that emphasize the given answer even more.

The tone of instructional language in the MiMos also reflects deliberate stylistic choices that balance formality with accessibility. The presentation emphasizes the importance of tonal calibration – alternating between serious and humorous, formal and informal registers – to maintain learner engagement without sacrificing academic credibility (Figure 3). This aligns with recent shifts in digital pedagogy that advocate for more personalized and emotionally resonant communication, especially in modular, AI-supported environments.

Willkommen im KI-Dsch... / 1. KI-Entwicklungsstand im Somm... / Sprachmodelle: Nur stochastische Papageien?

diesem Interview.

Weizenbaum: [...] Der Computer bearbeitet Symbole, die für den Computer absolut bedeutungslos sind. Und der Computer spuckt dann Signale aus in natürlicher Sprache, also Englisch zum Beispiel. Und es ist dann der Beobachter, der diese Signale interpretiert und sagt: Ja, die sind sehr Menschen-ähnlich, menschenähnlich.

Ich bin beeindruckt. Aber das bedeutet nicht, dass der Computer das geringste Verständnis hat über das, was gesagt wird. Zum Beispiel, wenn ich dem Computer sage: Gestern hat mich dieses Mädchen, in das ich, ich denke, so fast verliebt bin, hat ihre Hand auf meine Schulter gelegt. Was ich da erlebt habe, das kann ich dir gar nicht sagen. Und der Computer sagt: I understand. Ich verstehe. Na, dann ist es eine Lüge. Da ist doch niemand da in dem Computer. Der Computer ist doch nicht sozialisiert. Er hat doch nie in der Welt gelebt zum Beispiel [...].

Quellen: <https://www.oew.ac.at/detail/news/gefangen-im-eliza-effekt>;
<https://www.zukunft-braucht-erinnerung.de/joseph-weizenbaum/>

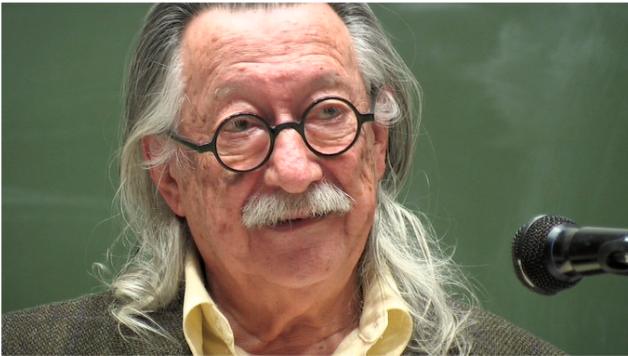


Abb. 5: Joseph Weizenbaum 2006 in Jena, Foto von Peter Haas, Flickr, CC BY SA

▼ Link

[Hier kannst du mit Eliza, der "Uroma" von Siri und Alexa, sprechen. \(Externer Link zu www.masswerk.at\)](https://www.masswerk.at)

Figure 3. Screenshot from the micromodule *Welcome to the AI Jungle* – Focusing the call to action below: Here you can speak with Eliza, the “great-grandmother” of Siri and Alexa (external link to www.masswerk.at)

Overall, the multimodal strategies observed in the micromodules are not merely enhancements but integral components of academic discourse construction. They shape how learners interact with content, manage their cognitive load, and internalize complex ideas. By combining linguistic clarity with visual structure and interactive responsiveness, micromodules offer a compelling example of how multimodal design can support both comprehension and critical engagement in digitally mediated higher education.

4.3. AI as a discourse participant

In the micromodules, AI is not a passive delivery mechanism but an active participant in the construction of academic discourse. In the micromodule *Expedition AI – How text-generative AI ticks* (University of Osnabrück, 2024a), an AI quiz generator is presented with its main functionalities – such as automated feedback and adaptive content generation – which demonstrates the growing discursive presence of algorithmic systems in shaping how academic knowledge is framed, scaffolded, and evaluated.

For example, a student selecting an incorrect answer might receive a tailored explanation or an invitation to revisit a prior content block (Figure 4). This pattern mirrors formative feedback loops traditionally provided by instructors and is instrumental in guiding the learner through self-regulated learning pathways (Zawacki-Richter et al., 2019).

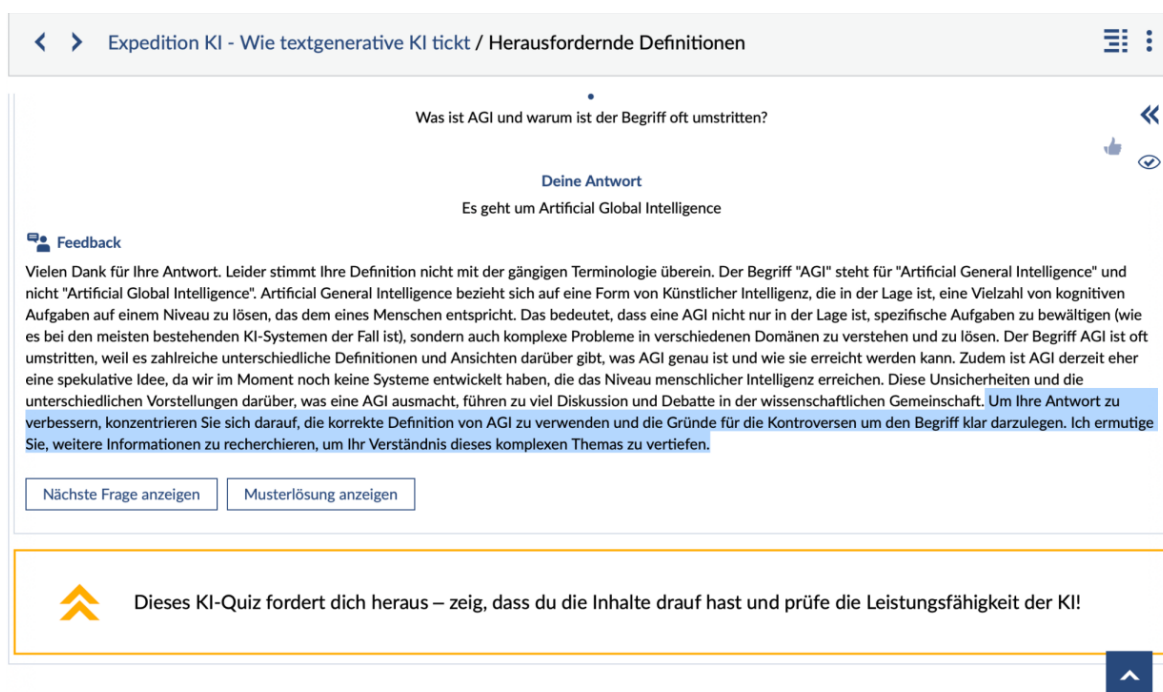


Figure 4. Screenshot from the micromodule *Expedition AI* with learner's response and AI generated feedback.

The micromodule *Welcome to the AI Jungle* (University of Osnabrück, 2024c) experiments with AI tools like *HeyGen* for content creation. Such a tool was employed to function as a co-authoring agent as well as to keep learners engaged.

From a discourse perspective, this form of AI integration reconfigures the traditional roles of teacher and text, placing learners in a hybrid interactional space where content is delivered not solely by a human instructor but by a semi-autonomous system. This shift raises important pedagogical questions: when learners accept AI prompts or explanations without interrogation, student autonomy and metacognitive agency can be inadvertently limited. Recent research by Kosmyna et al. (2024) shows that students who used ChatGPT to support essay writing exhibited lower brain connectivity, reduced ownership, and less cognitive engagement compared to those who completed the task without AI support. These findings suggest that, while AI tools can increase efficiency, they may also lead to passivity and a decline in metacognitive activity, raising important questions about how LLMs reshape academic learning.

At the same time, the modules offer interactive affordances that allow learners to skip, return, or remix content – preserving a degree of agency. For instance, the integration of self-paced navigation, editable OER content, and “call to action” elements not tied to every content page gives students flexibility in how deeply they engage with AI-scaffolded materials.

In summary, the micromodules reflect an emerging model of AI as a semiotic and pedagogical agent. By participating in meaning-making through feedback, content formulation, and tone modulation, AI systems begin to occupy an authorial space traditionally reserved for educators. This development underscores the importance of critical digital literacy – both for students who must learn to navigate AI-generated discourse critically, and for educators designing with these tools in mind.

4.4. Learner perspectives on AI-supported academic discourse

The integration of student feedback provides a valuable perspective on how learners perceive, interpret, and emotionally respond to AI-mediated academic discourse. Responses collected from 27 students across two seminar groups following the use of the micromodule *Willkommen im KI-Dschungel* (University of Osnabrück, 2024c) reveal important themes related to learning strategies,

cognitive engagement, multimodal preferences, and the perceived affordances and limitations of AI in higher education.

Many students reported that they learned most effectively through a combination of videos, quizzes, and infographics, noting that this multimodal format supported comprehension and retention. Several explicitly mentioned using the quiz to “revisit the text”, suggesting a recursive learning pattern and aligning with cognitive models of self-regulated learning (Hadwin et al., 2018). One student noted: “*Learned well through the quiz – texts were long and in-depth – the quiz made me look at the text again,*” highlighting the quiz as a cognitive trigger rather than a mere assessment tool.

Student reflections also demonstrate how autonomy is framed as navigational choice within courseware. While some praised the self-paced flexibility, others described the structure as “*too much if done all at once,*” indicating a tension between perceived control and cognitive overload.

Student awareness of AI’s limitations was evident. Several respondents reflected critically on the epistemic authority of AI-generated content. For instance, one student cautioned that AI-generated materials should not be “*blindly trusted or passed on to students.*” Another highlighted the need for transparent sourcing of information, suggesting a metacognitive awareness of how knowledge is constructed within AI systems: “*One has to reflect – where does the information come from?*”

This reflects a shift from argumentation as acceptance to argumentation as verification, positioning students as co-constructors of knowledge who engage with AI feedback not passively but evaluatively. The value of AI in prompting such reflection is reinforced by comments like “*Can AI stimulate thinking?*” which frames the machine as a provocateur of academic reasoning.

Feedback on multimodal design was particularly revealing. The use of videos was polarizing – some found them “motivating” and helpful for complex topics, while others considered them “exhausting” or preferred textual formats. One student summarized: “*Texts were long and deep – video helped support the text when complex,*” indicating a preference for strategic multimedia pairing rather than constant audiovisual input.

Visual tools such as infographics and icons were widely praised for aiding navigation and summarization. Multiple students commented that the course structure and visual layout were sometimes overwhelming, with issues such as unclear interface, navigation challenges on laptops, and difficulty tracking progress. These issues highlight the need for a clearer alignment between interaction design and cognitive load.

Several noted the potential of integrating AI into lesson preparation and student motivation but emphasized the need for critical framing. For example: “*AI is here to stay – enables innovative teaching – topic: motivation!*” However, concerns were also raised about data protection, student readiness, and context-specific use: “*Not everything is GDPR-compliant: can/may not be used in school with students.*”

These student voices affirm the discursive and cognitive findings of Sections 4.1 – 4.3 while offering important user-centered insights. They suggest that for AI-supported discourse to be effective, it must balance guidance and autonomy, personalize content without overwhelming, and invite reflection without over-structuring responses. The pedagogical design must account not only for what learners are meant to achieve but how they feel and position themselves in relation to AI as a knowledge partner.

5. Discussion

The findings of this study foreground the emergence of academic discourse as a multimodal, cognitive, and increasingly hybrid process shaped by both human and AI actors. The micromodules from the University of Osnabrück illustrate a paradigmatic shift from static, monologic discourse to a form of interactive reasoning that blends narrative scaffolding, visual logic, and machine feedback.

Cognitively, students’ experiences reflect an internalization of metaphoric frames such as LEARNING IS A JOURNEY, reinforced not only linguistically but structurally through sequential

quiz prompts, AI-generated suggestions, and path-based navigation. These interactions illuminate how digital tools co-construct meaning with users, transforming cognitive metaphors into interface logic. Learners don't merely move through content—they traverse cognitively framed terrains, guided by semiotic and algorithmic cues.

The multimodal design of the micromodules plays a decisive role in shaping academic understanding. Visual elements like infographics and AI-generated illustrations, along with adaptive text and feedback layers, actively support comprehension and emotional engagement. Student feedback underscores this value but also signals a threshold: multimodality, if overused or misaligned, can overwhelm rather than assist, highlighting the need for intentional design attuned to cognitive load.

AI emerges not just as a tool but as a participant in academic discourse. It performs functions traditionally associated with instructors – such as feedback, explanation, and prompting – while also shaping the tone and rhythm of academic interaction. Students describe AI feedback as insightful and even “human-like,” suggesting a reconfiguration of epistemic authority. Yet they also express skepticism, questioning the reliability and source transparency of AI-generated content. This ambivalence signals the development of epistemic vigilance – a critical competence in the age of AI-mediated knowledge.

These developments challenge established models of academic literacy. In contrast to traditional pedagogies emphasizing solitary authorship and linear argumentation, the AI-supported environment promotes collaborative, iterative meaning-making within a bounded yet flexible architecture. Learner autonomy is exercised within guided pathways; argumentation is framed more often as elaboration than confrontation. The implication is not a wholesale replacement of traditional discourse but an evolution toward more fluid, dialogic, and multimodally encoded academic practices.

These findings resonate with prior work in both cross-cultural metaphor research (Shevchenko & Shastalo, 2021) and multimodal discourse analysis in affective film contexts (Krysanova & Shevchenko, 2021), highlighting the cognitive flexibility of meaning-making across domains and modalities. They also align with the objectives of the Erasmus+ DigiFLEd project, which supports the integration of AI tools and multimodal course design in foreign language teacher education across Ukrainian institutions. Like the Osnabrück case, DigiFLEd promotes modular, learner-centered learning environments, embedding digital literacy and reflective pedagogy into scalable training formats. Together, these initiatives point to a shared imperative to reimagine academic discourse as a collaborative endeavor between human and algorithmic agents.

To navigate this new terrain, both learners and educators must cultivate not only digital proficiency but critical digital literacy – the ability to interpret, question, and strategically engage with AI-mediated discourse. This calls for pedagogical approaches that foreground transparency, agency, and reflexivity in the design and use of AI tools in higher education.

6. Conclusion

This article has examined how AI-supported, multimodal environments reshape academic discourse in higher education, using micromodules from the University of Osnabrück as a case study. Through a combined cognitive and multimodal discourse analysis, the study has shown how learners construct meaning at the intersection of human cognition, digital design, and AI-generated input.

The metaphor of *LEARNING AS A JOURNEY* emerged as a central cognitive schema, embodied in both interface design and student reflection. Multimodal strategies – including visual scaffolds, dialogic feedback, and tonal modulation – were found to be essential not only for comprehension but for sustaining engagement and signaling authority. At the same time, the presence of AI as a discursive co-participant raises critical questions about agency, authorship, and trust.

Student perspectives affirmed the potential of these environments for personalization and engagement but also revealed concerns about overload, interface usability, and epistemic reliability. These tensions underscore the need for pedagogical frameworks that integrate critical digital literacy with instructional innovation.

In conclusion, academic discourse in the age of AI is no longer a purely human endeavor. It is co-authored, multimodally expressed, and algorithmically scaffolded. *The challenge ahead* is to ensure that such environments support – not substitute – critical thinking, reflexive learning, and equitable participation in academic knowledge-making. As educators, researchers, and designers, we must engage with AI not just as a tool, but as a transformative presence in the evolving ecology of higher education.

Declaration of competing interest

No potential conflict of interest was reported by the authors.

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МУЛЬТИМОДАЛЬНІ ТА КОГНІТИВНІ ПІДХОДИ ДО АКАДЕМІЧНОГО ДИСКУРСУ В НАВЧАННІ З ШІ-ПІДТРИМКОЮ

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Рукопис надійшов 2.05.2025; отримано після рецензування 25.06.2025; опубліковано online 1.08.2025.

Анотація

У статті розглядається, як академічний дискурс трансформується у вищій освіті під впливом інтеграції штучного інтелекту (ШІ) та мультимодального дизайну, що розуміється тут у межах мультимодальної теорії дискурсу (а не в сенсі мультимодальних ШІ-моделей). Спираючись на когнітивну лінгвістику, соціокогнітивну теорію дискурсу та мультимодальну семіотику, дослідження аналізує як академічні поняття структуруються та передаються у навчальному середовищі, збагаченому ШІ. Об'єктом емпіричного аналізу є два мікромодулі, розроблені в Оснабрюкському університеті – *Welcome to the AI Jungle* і *Expedition AI*, які поєднують текст, візуальні елементи, інтерактивність та зворотний зв'язок від ШІ на платформі управління навчанням Stud.IP (LMS). Методологічно дослідження поєднує когнітивний аналіз дискурсу з аналізом мультимодального контенту, зосереджуючись на тому, як студенти опрацьовують поняття *навчання*, *аргументації* та *автономії* в умовах взаємодії з алгоритмічними агентами.

Результати показують, що студенти орієнтуються у контенті через концептуальні метафори на зразок НАВЧАННЯ – ЦЕ ПОДОРОЖ, які підкріплюються структурою модулів та механізмами зворотного зв'язку. Аргументація реалізується у вигляді поетапного розгортання думки без полеміки, тоді як автономія формується у межах інтерфейсної навігації. ШІ постає як семіотичний учасник академічного дискурсу, впливаючи на побудову значення через тональність, візуальні образи та стилізацію діалогу. Ці патерни вказують на зміщення у бік гібридного, діалогічного академічного спілкування, де агентність розподілена між людьми та алгоритмами. У статті стверджується, що в умовах мультимодального навчання з використанням ШІ академічну грамотність слід переосмислювати як результат співпраці між студентами, викладачами та цифровими інструментами. Також наголошується, що розвиток критичної цифрової грамотності є ключовим для створення навчальних програм, орієнтованих на виклики майбутнього.

Ключові слова: автономія, академічний дискурс, мікромодуль, мультимодальність, пізнання, штучний інтелект, цифрова грамотність.

Декларація про конфлікт інтересів

Автори не мають жодних конфліктів інтересів щодо цієї статті.

Cognition, communication, discourse, 2025, 30, 40-52

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-03>

Received May 1, 2025; accepted June 20, 2025; published online August 1, 2025.

PROTOTYPE DYNAMICS IN THE RESTORATION VERNACULAR PRINT: A DIACHRONIC ONOMASTIC STUDY OF *POOR ROBIN'S ALMANACK*

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Article citation: Karaban, A. (2025). Prototype dynamics in the Restoration vernacular print: A diachronic onomastic study of *Poor Robin's Almanack*. *Cognition, communication, discourse*, 30, 40-52. <https://doi.org/10.26565/2218-2926-2025-30-03>

Abstract

This study quantifies the internal semantics of the mock-saint calendars that appeared annually in *Poor Robin's Almanack* between 1664 and 1674, the most widely circulated comic almanac of Restoration London. From ten digitized issues a corrected onomastic corpus of 2728 tokens was compiled; every name is time-stamped by month and year, classified under one of eight narrative roles — *Heroes & Knights*, *Lovers*, *Magic & Supernatural*, *Notorious Women*, *Outlaws & Rogues*, *Sages & Satirists*, *Tricksters & Fools*, and *Tyrants & Traitors* — and tagged for cultural provenance (Greek myth, broadside ballad, contemporary pamphlet, etc.). Token frequency serves as an historical production norm; the category concentration and intra-class typicality translate that frequency into prototype strength. Results reveal a graded folk taxonomy. *Lovers* and *Heroes & Knights* form tight, myth-anchored nuclei dominated by a handful of classical and romance figures, whereas *Tricksters & Fools* and *Tyrants & Traitors* display deliberately flat profiles open to continual topical additions. Provenance tags show a strong correlation between lexical concentration and cultural homogeneity: categories with high concentration draw most of their tokens from a single narrative pool, while diffuse categories recruit names from five or more source domains. Diachronically, the calendar's centre of gravity first shifts toward political invective, then toward jest-book humor, quantifying how popular print renegotiates the sacred–profane boundary in step with shifting political climates and the taste for novelty. Methodologically, the article demonstrates that fixed-format onomastic satire can be mined much like production norms: name extraction, semantic tagging, prototype metrics and diachronic slicing together provide an alternative for historical cognitive linguistics.

Keywords: *almanac; onomastics; cognitive linguistics; prototype; historical linguistics; Early Modern English; London vernacular; folk taxonomy; calendral folklore*

1. Introduction

Restoration and early-Georgian almanacs constituted the bestselling vernacular print genre of seventeenth-century England, moving an estimated 400,000 copies annually during the reign of Charles II (Wardhaugh, 2012). Their structured month-by-month calendars, planetary tables, and household "remembrancers" offered ordinary people a structured framework of time comparable in cultural significance to the Bible and statute book for the elite (Kassell, 2011). However, alongside these earnest publications emerged a vibrant genre of mock almanacs, satirizing everything from astrological forecasts to religious marginalia. Chief among these satirical counterparts was *Poor Robin's Almanack* (1663–1828), issued by the Stationers'

Company and traditionally attributed to the Essex pamphleteer William Winstanley (Wardhaugh, 2012). At its peak during the late Restoration period, Poor Robin achieved annual sales reaching approximately 20,000 copies, rivaling serious almanacs like Old Moore and far exceeding comparable pamphlet formats (Akers, n.d.; Smyth, 2008).

A distinct feature of Poor Robin was its distinctive dual-calendar structure, juxtaposing a traditional saints' list on the left column with an irreverent “mock saints” list featuring characters like Robin Hood and Mother Bunch on the right. Walker (2018) argues that mock almanacs cultivate a ‘purposeful ignorance’ which exposes the contingency of seemingly totalizing forecasts. Poor Robin’s mock-saint lists exploit exactly this strategy: once the high-diagnostic frame *Saint X’s Day* is recognized later as a comic violation — a textbook prototype effect. Burke’s (1984) review of modern saint-studies underlines that ‘sainthood’ is a negotiated social label, thus Poor Robin’s pseudo-hagiographical device not only mocked ecclesiastical authority but also reflected and reinforced popular moral hierarchies by positioning celebrated outlaws closer to virtue than established figures of authority or scandal. Due to minimal changes in layout despite significant variation in content, these calendars offer a stable corpus ideal for investigating how Restoration readers cognitively reorganized elements of folklore, history, and scandal within a sacred frame.

While the almanac tradition and its comic counterpoints have attracted scholarly interest, existing literature largely focuses on aspects like authorship, satirical intent, political propaganda, mathematics, and print culture (Capp, 1979; Perkins, 1996; Palmeri, 1998; Wardhaugh, 2012). Capp’s (1979) foundational catalogue documents the historical print parameters but relegates Poor Robin to anecdotal status. Perkins’s (1996) monograph chapter was the first sustained literary analysis, arguing how Poor Robin’s persona of the “Knight of the Burnt Island” lampooned social and professional elites, a dynamic that sustained its extraordinary longevity and inspired myriad provincial “Poor” imitations on both sides of the Atlantic. Palmeri (1998) expanded the satiric view, reading mock almanacs between 1660 and 1760 as vehicles for Whig historiography through calendrical humor, using familiar authority of the almanac form to expose the arbitrariness of both political allegiance and religious devotion, inviting readers to laugh at the fervor of would-be martyrs and prophets. Wardhaugh (2012) shifted analytical focus to numeracy, examining how Poor Robin popularized arithmetic puzzles within rural households.

Despite these critical advancements, the existing scholarship primarily adopts formalist and historicist approaches, neglecting linguistic and cognitive dimensions. Poor Robin’s mock-saints lists are frequently noted but have not been analyzed systematically for onomastic patterns or cognitive organization. Yet, insights from prototype theory (Rosch, 1975; Lakoff, 1987) and folk-taxonomy research (Anderson, 2003; Kay & Smith, 2004) suggest that repeated lists inherently encode a graded category structure, where some names act as prototypical exemplars and others as peripheral members. Employing a diachronic and onomastic angle, this study *aims* to critically evaluate the semantic prototypes underlying Poor Robin’s mock sainthood and analyze how these prototypes evolved throughout the politically volatile Restoration decade. *Objectives* of this research are twofold: first, to quantify the internal semantic structure of Poor Robin’s mock calendars by identifying prototype strength within name categories; and second, to explore how these semantic prototypes shifted diachronically, reflecting broader political and cultural transformations. By linking these semantic patterns explicitly to historical context and cognitive theories, the present study not only adds to the existing scholarly discourse but also introduces a methodological framework for analyzing onomastic satire in fixed-format historical texts. The *subject-matter* of this study is the semantic organization of mock-saint calendars within Poor Robin’s Almanack. The *material* comprises the corpus of Poor Robin’s almanacs spanning the years 1664 to 1674.

2. Materials and methods

Although prototype theory has been quantified mainly in synchronic experimental and computational measures: typicality-rating studies (Rosch, 1975; Rosch & Mervis, 1975; Rogers, 2016); category-production norms (Battig & Montague, 1969; Van Overschelde et al., 2004); distributional semantics (Rips et al., 1973; Boleda, 2020) — the present article extends this toolkit to an historical corpus. Instead of eliciting modern judgements, token frequency in calendar prose is viewed as an implicit production norm, and two concentration metrics are adapted to quantify centrality: the Herfindahl–Hirschman Index captures how steeply a semantic class is peaked, while the T_i -percentage identifies the focal exemplars themselves. By adding time-stamping tokens, it can be further tracked how prototypes strengthen, weaken or migrate across eleven years. Satirical almanacs supply an ideal test-bed for this type of study: the *Poor Robin* series riffs on the same compilation of cultural types year after year, leaving a frequency-rich record of Restoration England’s moral imagination. Thus the *Poor Robin* ledger complements experimental work by showing, in a single satirical artefact, how prototype structure can be measured, compared and allowed to drift through historical time.

All name tokens across the Mock Saint/Sinner in fully digitized transcriptions of the *Poor Robin* issues 1664-1674, held by Early English Books Online (EEBO) constitute the primary dataset. High-resolution PDFs were downloaded, for each monthly calendar page the right-hand “mock saints” column (in most issues February lists them as Sinners) was isolated — the locus of the parody name list — and subjected to OCR recognition with following manual proofreading and correction. The output was tokenized and annotated to one of eight semantic classes (*Heroes & Knights*, *Lovers*, *Magic & Supernatural*, *Notorious Women*, *Outlaws & Rogues*, *Sages & Satirists*, *Tricksters & Fools*, and *Tyrants & Traitors*). A pilot feature inventory showed that names grouped this way (Table 1) share maximal family-resemblance attributes within class while remaining conceptually distinct across classes. The eight-way split therefore maximizes within-class feature overlap while keeping classes large enough for the token counts. The labels mirror the satirist’s comic binaries — virtue vs vice, authority vs subversion, natural vs supernatural — allowing the data to speak directly to changing moral emphases.

Table 1.

Semantic Classification and Defining Attributes

Semantic class	Defining attributes
Heroes & Knights	Valorous figures embodying chivalric ideals
Lovers	Figures noted for constancy and amatory martyrdom
Magic & Supernatural	Figures explicitly linked to supernatural powers
Notorious Women	Prominent women marked by scandal or infamy
Outlaws & Rogues	Folk-hero lawbreakers and highwaymen
Sages & Satirists	Persons famous for wisdom, intellect, or moral commentary
Tricksters & Fools	Comic deceivers and professional jesters
Tyrants & Traitors	Infamous figures who misuse or betray authority

The right-hand “mock saints” lists recur unchanged in format for every issue, yielding a neat year-by-month grid. They also stand apart from verses or epigrams, as the author had to select and name

an individual for each calendar slot, which produces discrete onomastic data: the number of times a figure appears across the decade works like a historical production norm, revealing which mock saints felt most familiar or salient to Restoration readers; the same grid is printed in each surviving issue, so the cast of characters can expand, contract or pivot with changing political moods. These names are not just proper nouns; they are compressed cultural schemas. For instance, *Robin Hood* activates a whole bundle of features (outlaw, archer, Sherwood, justice), thus treating each name as a data-point therefore brings onomastics and cognitive linguistics together by counting how often each schema is invoked — and how those counts drift — given insight into how the folk conceptual system of Restoration readers evolved in real time.

The cleaned corpus (Poor Robin’s mock-saint calendars, 1664-1674) contains 2728 individual tokens distributed across 542 distinct names. These names fall into eight semantic frames that parody the canonical sanctorale (Table 2). A single residual slot (*Unclassified*) contains Giles Pritchard (3 tokens).

Table 2.

Distribution of Name Tokens by Semantic Class

Category	Distinct names	Tokens
Tyrants & Traitors	166	811
Tricksters & Fools	128	553
Magic & Supernatural	60	384
Outlaws & Rogues	42	270
Sages & Satirists	67	264
Notorious Women	37	200
Heroes & Knights	23	157
Lovers	18	86
<i>Unclassified</i>	1	3
Total	542	2747

To demonstrate that the *Poor Robin* name-lists are structured around prototypes rather than random choice, the structure of *Poor Robin*’s mock-saint taxonomy is captured by two complementary indices. The Herfindahl–Hirschman Index (HHI), originally a measure of market-share dominance, is repurposed as a metric of prototype strength: if one or two names monopolize a category’s token budget, HHI rises towards 1; an even distribution drives it down towards $1 / n$. In prototype theory this maps onto how strongly a category is pulled toward its cognitive centre. The typicality weight T_i , by contrast, is a member-level statistic: it expresses, in percentage terms, the share of a given name in its own class’s token budget and thus states which individuals function as focal exemplars. The two metrics reveal not only whether a category is tightly centred or diffuse, but also which names perform the centring or, in other words, HHI reveals whether a class behaves like a tight nucleus or a loose list while T_i reveals who sits at that nucleus for *Poor Robin* almanacs.

Using the 1664–1674 name corpus (120 viable months as 1673 almanac skips the mock saint calendar), we compute for each name i in a macro-class C . First we convert every raw token count to a relative share

$$p_i = \frac{\text{token}(i)}{\sum_{j \in C} \text{tokens}(j)}.$$

Next, we square each share—thereby magnifying the weight of frequent items—and sum the results:

$$HHI_c = \sum_{i \in C} p_i^2.$$

Because squaring amplifies large frequencies, two very common names contribute far more to HHI than ten rare ones; the index therefore records how strongly a class is monopolized by its prototype set (Table 3). Classes such as *Tyrants & Traitors* (HHI = 0.0083) and *Tricksters & Fools* (0.0119) display extremely flat frequency profiles, signalling a diffuse prototype. In contrast, *Lovers* (0.0760) and *Heroes & Knights* (0.0542) show sharply peaked distributions governed by a few names, signalling a focused prototype.

Table 3.

Category-level concentration

Category	HHI (here – prototype concentration)
Tyrants & Traitors	0.0083
Tricksters & Fools	0.0119
Magic & Supernatural	0.0224
Outlaws & Rogues	0.0320
Sages & Satirists	0.0207
Notorious Women	0.0349
Heroes & Knights	0.0542
Lovers	0.0760

Category-internal typicality values specify which names serve as focal prototypes, so for every unified name i in category C we calculated:

$$T_i = \frac{\text{tokens}_i}{\sum_{j \in C} \text{tokens}_j} \times 100$$

Where T_i is the *typicality weight* of name i within its semantic category C ; tokens_i is the raw frequency count of name i in the corpus. $\sum_{j \in C} \text{tokens}_j$ is the sum of tokens for every name j that belongs to the same category C and by multiplying by 100 we convert the resulting proportion to a percentage, so T_i expresses what share of the category's total mentions is contributed by name i . Thus, if *Mother Shipton* occurs 34 times in the *Magic & Supernatural* class and the entire class contains 429 tokens, her typicality weight is $T_{\text{Shipton}} = \frac{34}{429} \times 100 \approx 7.9\%$.

The higher the percentage, the more that name dominates its category and anchors our mental representation of what counts as a *Tyrant & Traitor*, *Outlaw & Rogue*, etc., in Poor Robin's satirical world. Flat distributions suggest no single exemplar clearly governs the category; steep ones indicate such exemplars (Table 4). Because the text is humorous, typicality also hints at which cultural figures Poor Robin expected readers to recognize instantly within each frame (e.g., Mother Shipton in *Magic & Supernatural*).

Table 4.

Top prototypes by typicality			
Category	Name	Tokens	T_i
Lovers	Penelope	10	11.63
Lovers	Hero	10	11.63
Lovers	Patient Grissell	10	11.63
Lovers	Leander	7	8.14
Lovers	Paris	7	8.14
Heroes & Knights	Amadis de Gaul	12	7.64
Heroes & Knights	Parismus	12	7.64
Heroes & Knights	Maiden Knight	11	7.01
Heroes & Knights	Tom Thumb	11	7.01
Lovers	Flora	6	6.98

3. Results

3.1. Distribution of prototype strength across semantic classes

3.1.1. Highly concentrated prototypes. The *Lovers* class displays the highest concentration in the corpus ($\text{HHI} \approx 0.076$). Five names alone *Table 1* — *Hero*, *Patient Grissell*, *Penelope*, *Leander* and *Paris* — claim over half of all tokens in the set ($T_i = 11.6\%$, 11.6% , 11.6% , 8.1% and 8.1% respectively). In cognitive terms the almanac creates a distinct “martyr for love” prototype whose core is female fidelity and self-sacrifice. Prototype theory predicts that tightly centred categories often display a radial organization in which peripheral members inherit subsets of properties from the focal exemplar (Lakoff, 1987). The *Lovers* class illustrates this through the core triad — *Hero*, *Patient Grissell*, *Penelope* — as they all enact a script of female constancy and granted prototype status comparable to that of real saints. Peripheral members such as *Leander* and *Paris* preserve only parts of that script (tragic devotion, illicit passion) and therefore occupy second-ring positions. Thus the *Lovers* class can be viewed not as a flat list but as a radial network whose fringe represent shared narrative attributes, i.e. the family-resemblance chaining that Rosch took to be diagnostic of natural categories.

The next most focused category, *Heroes & Knights* ($\text{HHI} \approx 0.054$), is anchored by romance heroes imported from continental fiction — *Amadis de Gaul* and *Parismus* (both $T_i = 7.6\%$). Although less monolithic than *Lovers*, the set still behaves as a true prototype: three to five literary paladins are enough to evoke the entire chivalric schema. The prominence of Spanish and French titles rather than Arthurian ones suggests that Restoration popular piety, as refracted through satire, preferred printed romance to native legend when forging secular saints.

3.1.2. Balanced prototype cores. Mid-range HHI values occur in *Notorious Women* (0.035) and *Outlaws & Rogues* (0.032). In the former, notorious brothel-keepers *Sue Flavel* ($T_i = 5.5\%$) and

Damaris Page (5.0 %) sit alongside the long-standing model of *Jane Shore* (4.5 %). Here the almanac links topical Restoration scandal with fifteenth-century court gossip, producing a composite but recognizable anti-saint model of female transgression. The *Outlaws & Rogues* class is headed by *Little John* (5.9 %) and ballad-writer *Martin Parker* (4.8 %), followed at a short distance by *Robin Hood* himself (4.1 %). The presence of a living pamphleteer next to legendary forest brigands confirms that the satirist's strategy is to keep a small collection of salient names while leaving the periphery open to new arrivals.

3.1.3. Diffuse categories. Prototype concentration drops sharply in the remaining four classes. *Magic & Supernatural* (HHI ≈ 0.022) is led by *Friar Bungay* and *Mother Shipton* (both $T_i = 4.7$ %), but no single witch or prophet monopolizes the frame; the category behaves more like an open list of supernaturals than a canon. *Sages & Satirists* (0.021) distributes its tokens almost evenly among obscure prophetic writers such as *Arise Evans* (3.8 %) and humanist by-names like *Aristippus* (3.4 %). *Tricksters & Fools* (0.012) and *Tyrants & Traitors* (0.008) are the flattest of all: their highest-scoring members — *Lazarillo* (2.0 %) and *Hannam* (2.3 %) respectively — never exceed two to three percent of the class budget. The vanishingly small HHIs indicate a satirical choice to replace fixed focal saints with a revolving door of clowns, heretics and despots, ensuring that each new issue can absorb topical villains without destabilizing the reader's schematic expectations.

3.2. Correlation of prototype strength with cultural origins

In order to test whether prototype strength is tied to cultural provenance, every mock-saint name was annotated with a Source label (e.g. Greek mythology, Restoration pamphlet, English folklore – Robin-Hood cycle). Table 5 summarizes origin diversity for all eight semantic classes and a clear gradient emerges: *Lovers* display both the sharpest lexical prototype (HHI = 0.076) and the narrowest origin base, with fully 45 % of their tokens drawn from Greek mythology. Prototype homogeneity thus coincides with cultural homogeneity. At the opposite end, *Outlaws & Rogues* and *Magic & Supernatural* mirror their flat lexical HHIs – these classes recruit exemplars from at least five distinct cultural pools – classical epic, medieval balladry, news-pamphlet criminal biography, continental folklore, and pseudo-historiography – so no origin gains sufficient entrenchment to anchor a focal prototype.

Table 5.

Dominant source categories per semantic class

Semantic class	Top token sources
Lovers	Greek mythology (38); European folklore – ATU 887 (10); Greek mythology – Homeric epic (10)
Heroes & Knights	Medieval romance (27); Elizabethan fiction (21); Greek mythology (14)
Magic & Supernatural	Greek mythology (83); German folklore – Faust legend (21); Renaissance fiction – Rabelais (21)
Outlaws & Rogues	Historical – Stuart England (34); English folklore – Robin-Hood cycle (26); English folklore – Child Ballad 145 (16)
Notorious Women	Historical – Restoration England (21); English broadside bawd – 17th c. (11); English broadside ballad (9)
Tyrants & Traitors	Historical – Interregnum England (regicide 1660) (150); Historical – Restoration England (19); Biblical (16)
Sages & Satirists	Historical – Stuart England (Welsh visionary, d. 1660) (10); English satire – 17th-c. (9); Historical – Classical Greece (9)
Tricksters & Fools	English satire – playing-card knave cycle (c. 1600) (20); Renaissance fiction – Cervantes (1605) (20)

3.3. Diachronic implications for prototype distribution. In addition to the prototype counts, every mock-saint token was logged with its year, month, name and semantic class and the ten almanacs fall into three contiguous blocks (Table 6). For each year, the eight class totals were converted to percentages of that year's token budget; these percentages were then averaged within each block.

Table 6.

Relative composition across periods

Semantic class	Early Restoration (1664-66)	Mid Restoration (1667-69)	Late Restoration (1670-72 + 1674)
Tyrants & Traitors	27 %	37 %	27 %
Tricksters & Fools	16 %	17 %	27 %
Magic & Supernatural	15 %	13 %	13 %
Sages & Satirists	13 %	9 %	6 %
Outlaws & Rogues	9 %	9 %	12 %
Notorious Women	6 %	6 %	8 %
Heroes & Knights	7 %	4 %	5 %
Lovers	6 %	5 %	2 %

In Early Restoration (1664-66), the earliest issues still reproduce a recognizably medieval moral code. A stable quarter of the entries is given over to *Sages & Satirists*, *Lovers* and chivalric *Heroes & Knights*— figures that re-map martyrdom, wisdom and fidelity onto secular stories. Yet the largest single share already belongs to *Tyrants & Traitors*. The imagination of the newly restored kingdom is still haunted by the civil war memory of regicide and by pamphlet tales of persecution. In prototype terms, readers carry two entrenched schemas simultaneously: the role model (Hero, Patient Grissell, Aristippus) and the arch-villain (Phalaris, Nero, Cromwell), with moralizing comedy mediating between them.

In Mid Restoration (1667-69), the share of *Tyrants & Traitors* climbs by nine percentage-points by dredging up ever more despots from the recent past and newsbooks, reaching 37 % and the gain comes almost entirely at the expense of *Sages & Satirists* (– 4 pp) and *Lovers* (– 2 pp). The almanac's cognitive centre of gravity shifts toward a sharply bounded prototype — the murderous ruler — while the moral exemplars begin to erode; fewer fresh tokens are added to *Lovers* or *Sages & Satirists* and soon lose retrieval strength.

In Late Restoration (1670-72 + 1674) *Tyrants & Traitors* drop back to their original share, and those ten percentage-points migrate almost intact to *Tricksters & Fools*, which jump from 17 % to 27 %. By 1674 nearly one calendar day in three honors a jest-book rogue or professional buffoon. Diffuse categories that invite constant replenishment — *Outlaws & Rogues*, *Notorious Women* — also grow, while the once central *Lovers* retreat to statistical irrelevance. Cognitively, the prototype field flattens: instead of a few highly salient villains or paragons, the mock calendar now offers a rolling catalogue of low-stakes anti-heroes. The change coincides with the rise of cheap printed genres prioritizing novelty over morality. Table 7 shows how *Poor Robin's* almanac captures the culture that first tries to moralize the recent trauma of civil war, then grows weary of admonition

and turns instead to the quick pleasure of topical scandal and slapstick and ultimately functions as a barometer of what ideas were easiest to conjure in Restoration London.

Table 7.

Diachronic share reallocation

Category	Early to Mid Restoration (percentage-points)	Mid to Late Restoration (percentage-points)
Tyrants & Traitors	+ 9.0	– 9.9
Tricksters & Fools	+ 1.8	+ 11.0
Outlaws & Rogues	– 0.6	+ 4.0
Sages & Satirists	– 4.1	– 3.1
Lovers	– 2.0	– 3.0

4. Discussion

The prototype patterns uncovered in *Poor Robin's Almanack* show far more than the mechanics of its humor. They chart what Restoration readers in Early-Modern London found instantly accessible, morally resonant and culturally thinkable, revealing how entrenched knowledge, topical novelty and social anxiety interacted in the collective mind. The mock-saint calendars confirm a central claim of prototype theory: repeated naming in a fixed format produces a graded, feature-clustered taxonomy rather than a random roster. The *Lovers* and *Heroes* frames show steep Herfindahl indices and a tight radial structure, demonstrating that Restoration readers still accessed a small core of courtly-moral exemplars; yet those cores sit in a sea of diffuse, low HHI classes that show preference for topical variety over mnemonic depth.

For instance, three Greek-myth heroines dominating *Lovers* category reflect the cognitive shortcut that Greco-Roman myths offered to a populace drilled on Latin grammar-school curricula. Because those stories were already lodged in long-term memory, the mere mention of *Hero* or *Leander* was enough to activate a fully-fledged script of tragic fidelity. *Poor Robin* exploits this entrenched schema to parody sainthood with minimal processing effort, effectively showing how pedagogical canons become cognitive canons. At the opposite pole, the almanac cultivates shallow, wide activation rather than deep entrenchment. The pleasure for readers came not from recalling a fixed life story, but from the sheer variety of rogues, heretics, bawdy caricatures paraded across the calendar pages year after year. That design choice reflects a Restoration taste for topical miscellany — newsbooks, diurnal sheets, theatre prologues optimized for novelty, surprise and instant discardability rather than durable moral exemplarity. The very coexistence of these two architectures — sharp nuclei beside flat catalogues — illustrates the elasticity of Restoration folk cognition. Familiar, prestige-laden narratives (Greek myths, continental romance) are granted prototype status, while the chaotic margins remain deliberately open, able to absorb every new rogue, bawd or pamphlet villain that the press could supply.

Diachronically, the corpus documents a two-step re-weighting of attention. In the middle years (1667-69) the cognitive centre of gravity tightens around *Tyrants & Traitors*, matching the polemical atmosphere of parliamentary debates on tyranny and popery. What can be observed here is usage-driven conceptual accessibility — the frequency data show which stories sat on the tip of the tongue in 1660s London: classical myths confer status and mnemonic efficiency; topical pamphlet lore supplies a pool of rapidly swappable names; blending across time allows satire to be both biting and safe.

5. Conclusions

This study set out to reconstruct the conceptual architecture encoded in the comic saint-lists of *Poor Robin's Almanack*. Treating every name in the right-hand calendar as a token of a culturally loaded schema, demonstrated that the lists constitute a structured folk taxonomy rather than a casual miscellany. Two quantitative metrics made that structure visible: showed that while some classes such are sharply peaked around a handful of exemplars, others display deliberately flat profiles open to continual topical replenishment; and identified the focal exemplars within each class. Adding provenance tags revealed a further regularity: strong lexical concentration is coupled with cultural homogeneity while diffuse classes engage names from multiple narrative pools. Across the years the almanac's semantic centre moves twice: first toward polemical *Tyrants*, then toward jest-book *Tricksters* and folk-hero *Outlaws*. The shift quantifies how *Poor Robin* recalibrated the sacred–secular boundary in response to political events and commercial tastes, confirming that prototype salience is historically contingent rather than timeless.

A promising cognitive-semantic follow-up could track how the emotional tone of adjectives that co-occur with each mock-saint name shifts across later print, testing whether highly prototypical names keep a tighter, more stable affective profile than peripheral ones.

Declaration of the conflict of interest

The author has no competing interests or funding support to declare.

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ДИНАМІКА ПРОТОТИПІВ У ПОПУЛЯРНОМУ ДРУЦІ ДОБИ РЕСТАВРАЦІЇ: ДІАХРОННЕ ОНОМАСТИЧНЕ ДОСЛІДЖЕННЯ *POOR ROBIN'S ALMANACK*

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Рукопис надійшов 1.05.2025; отримано після рецензування 20.06.2025; опубліковано online 1.08.2025.

Анотація

Це дослідження кількісно визначає внутрішню семантику календаря жартівливих святих, які щорічно з'являлися в *Poor Robin's Almanack* між 1664 і 1674 роками, найпоширенішому комічному альманасі Лондона епохи Реставрації. З десяти оцифрованих випусків було укладено виправлений ономастичний корпус з 2728 лексем; кожне ім'я має позначку часу за місяцем і роком, класифікується за однією з восьми наративних ролей – Герої та лицарі, Закохані, Магія та надприродне, Сумнозвісні жінки, Розбійники та пройдисвіти, Мудреці та сатирики, Хитруни та блазні, Тирани та зрадники і позначено за походженням (грецький міф, широкоформатна балада, сучасний памфлет, тощо). Частотність функціонує як історична норма продукції: концентрація категорії та внутрішньокласова типовість перетворюють цю частотність на силу прототипу. Результати показують градуйовану народну таксономію. Закохані та Герої і Лицарі утворюють щільні, закріплені міфами ядра, в яких домінує жменька класичних і романтичних постатей, тоді як Хитруни та блазні, Тирани та зрадники демонструють навмисно пласкі профілі, відкриті для постійних тематичних доповнень. Походження засвідчує тісний зв'язок між лексичною концентрацією й культурною однорідністю: високо-концентровані категорії черпають імена здебільшого з одного наративного джерела, тоді як дифузні класи залучають персонажів щонайменше з п'яти різних традицій. У діахронному розрізі центр тяжіння календаря спершу зміщується до політичної полеміки, а згодом — до ярмаркового гумору, що дає змогу кількісно простежити, як популярний друк переглядає межу між святим і профаним у відповідь на зміни політичного клімату та запит на новизну. Методично робота показує, що сатиричну ономастику фіксованого формату можна досліджувати за зразком норм продукції: відбір імен, семантичне маркування, вимірювання прототиповості та діахронічні зрізи утворюють альтернативний інструментарій для історичної когнітивної лінгвістики.

Ключові слова: *альманах; ономастика; когнітивна лінгвістика; прототип; історична лінгвістика; ранньоніовоанглійська мова; лондонський діалект; народна таксономія; календарний фольклор*

Декларація про конфлікт інтересів

Автор не має конфлікту інтересів щодо цієї статті.

Cognition, communication, discourse, 2025, 30, 53-80

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-04>

Received May 3, 2025; accepted June 21, 2025; published online August 1, 2025.

META-COGNITION ON AI: WHAT STUDENTS THINK ABOUT USING AI FOR ACADEMIC PURPOSES

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Article citation: Ketzer-Nöltge, A., & Rüger, A. (2025). Meta-cognition on AI: What students think about using AI for academic purposes. *Cognition, communication, discourse*, 30, 53-80. <https://doi.org/10.26565/2218-2926-2025-30-04>

Abstract

There is currently a broad debate concerning the application of AI-based tools in academic contexts, particularly in the domain of academic writing of students, as well as concerning the AI-related skills necessary for these pursuits (cf. Long & Magerko, 2020). The utilization of Generative AI (genAI), underpinned by Large Language Models (LLM), holds considerable promise in facilitating academic processes, particularly for students to whom the language of academic study is not their first language (L1). A cross-sectional survey of students at German universities (von Garrel & Mayer, 2023) revealed that approximately two-thirds of respondents were already using genAI-based tools in the 2022/23 winter term, but only a quarter did so (very) frequently. Similar studies have primarily yielded a series of discrete snapshots of genAI utilization in academia. A notable limitation of these studies is the absence of any distinction between L1 and L2 students. The survey we conducted focuses on potential group differences between students with German as L1 and German as L2 and also aims to track developments in the use of tools based on genAI, knowledge about genAI, and attitudes toward genAI in the first years of the general availability of genAI-tools (2023-2025). To this end, a total of 143 questionnaires from students of various degree programs (primarily German as a Foreign and Second Language) from the University of Leipzig encompassing a period of two years are evaluated. The results of the survey presented in this paper concentrate on the students' awareness of and disposition towards genAI / LLM (but see Ketzer-Nöltge & Rüger, in press, for complementary results).

Keywords: *Artificial Intelligence (AI), generative AI, AI usage, AI literacy, Large Language Models (LLM), academic purposes, student's attitudes, longitudinal study, survey*

1. Introduction

Shortly following the release of ChatGPT by OpenAI in November 2022, Kasneci et al. (2023) pointed out the numerous opportunities presented by Large Language Models (LLMs) for educational applications in a position paper. They listed a wide range of potential applications for

academic work at universities. The authors also explicitly mention the considerable opportunities for dealing with (foreign) languages in higher education and for disadvantaged student groups. The new opportunities for empowerment, particularly for students with (German as) a second language (L2) or from educationally disadvantaged backgrounds, were also the starting point for the study presented in this article. The utilization of Artificial Intelligence (AI) in educational settings, assessments, and research endeavors has been a subject of intense debate, often accompanied by considerable skepticism (see, for instance, Dwivedi et al. 2023). However, the question arose as to whether and how students with L2 German, in particular, would actually understand and use the new (generative) AI tools as a support. In order to take this into account in our teaching and to be able to provide meaningful impetus, students in selected seminars at the Herder Institute of the University of Leipzig were surveyed from the summer semester of 2023 to the winter semester of 2024/25 about their assessments, insights, and actual use of generative Artificial Intelligence (genAI) in their studies. For the majority of the students surveyed, German is not their native language and they attended seminars to enhance their academic language skills in German. A particular emphasis was placed on potential differences between students with German as their L1 and L2. Consequently, this study is also regarded as a contribution to the empirically supported implementation of AI in study and teaching from a diversity-oriented research perspective (cf. Gottburgsen, Hofmann, & Willige, 2023, p. 138). Furthermore, the survey was administered repeatedly at various points in time to address the necessity for longitudinal studies.

In the following, we first present the relevant theoretical and empirical foundations. It is on this basis that we derive the specific research interest and research questions.

1.1. AI usage in academic contexts

In recent years, numerous studies have examined how often and for what types of tasks students use genAI based on LLMs. These studies often consist of large-scale quantitative surveys with several thousand participants (cf., e.g., von Garrel & Mayer, 2023). Most studies report a relatively high number of students using genAI in their studies, and some have shown significant increases over time between studies. This suggests that using genAI in academic contexts is becoming more common (cf. Freeman, 2024). However, the student surveys on AI use up to 2024 could not yet identify regular, intensive, and broad use for a wide range of academic tasks. Different levels of usage were observed, especially among different academic subjects: GenAI usage was particularly prevalent among computer science and mathematics students (cf. Hüscher et al., 2024).

A study by Wulff, Häusler, and McGury (2024) compared students for whom German was either a first or second language, as well as students from German- and non-German-speaking countries. From November 2023 to January 2024, the authors surveyed a total of 192 students of German Language and Literature / German as a Foreign Language. The number of L1 and L2 students was approximately balanced. The authors found relatively minor differences between the two groups regarding AI use (e.g., ChatGPT usage: 64% for L1 vs. 66% for L2 German). Additionally, there were hardly any differences between the language groups regarding the goals and concerns for genAI usage or the students' assessments of problematic aspects regarding this usage.

In the survey study presented in this paper, students with German as L1 and L2 were also asked about their genAI use in general and for specific tasks for academic purposes. The results of this quantitative part of the survey are published in Ketzer-Nöltge and Rüger (in press) and are summarized in the following. To enable a longitudinal comparison, the participants were divided into two cohorts, each of which comprised two consecutive semesters (cohort 1: May 2023 to February 2024 and cohort 2: April 2024 to February 2025). The data showed that students were increasingly using AI for their studies (approximately 90% of respondents in cohort 2 vs. 40% in cohort 1) and that AI was being used in more differentiated ways in the study context. A comparison of the two language groups (L1 vs. L2, encompassing both cohorts) revealed many

similarities but also a tendency for L2 German students to use genAI tools more frequently for writing, correcting, and rephrasing study-related texts. In contrast, students with L1 German used these tools more often for conceptual tasks, such as brainstorming and creating outlines. The current paper reports the results of the same survey on selected aspects of AI literacy, particularly students' knowledge of genAI and their attitudes and opinions about the potentials and limitations of using genAI in an academic context.

1.2. Definitions of Artificial Intelligence

It is imperative that students, as users of genAI-based tools, possess a fundamental understanding of the nature of AI. To that end, it is essential that they understand how a particular AI-supported tool works and what it is based on, thereby acquiring an understanding of its capabilities and applications. Consequently, the present survey inquired about the respondents' conceptions and definitions of AI. In the following, this paper will therefore elucidate the various definitions of AI that are discussed in the extant research literature. These definitions also correspond to the deductive codes used to categorize the students' answers, which are noted in parentheses.

There are numerous competing descriptions of the term AI, which are not necessarily mutually exclusive. The term Artificial Intelligence was coined in 1956 by John McCarthy (cf. Russel & Norvig, 2010, p. 27), who focused on the comparison with human behavior: The objective is to engineer machines that exhibit behaviors akin to human intelligence (see also Nilsson, 2009). Loder and Nicholas (2018, p. 11) formulate this as follows: "Computers that perform cognitive tasks, usually associated with human minds, particularly learning and problem-solving." (Code 1; the concept of Codes is explained in section 3.1.1 below).

Current definitions of AI frequently allude to the acquisition of knowledge without guidance: "Artificial Intelligence (AI) is a broad term used to describe a collection of technologies that can solve problems and perform tasks to achieve defined objectives without explicit human guidance" (Cisek, 2021, p. 4; Code 2). This definition encompasses a further aspect, namely that AI does not refer to a (single) specific technology, but is used as a generic term for various (analytical) methods, such as machine learning, data mining, neural networks, deep learning, or specific algorithms (Celik, Dindar, Muukkonen, & Järvelä, 2022; Code 4).

According to Long and Magerko (2020, p. 3), many people perceive AI as synonymous with robotics (Code 5), leading to the attribution of the designation "not AI" to any entity that does not exhibit human-like intelligence (*ibid.*). This is where the distinction between weak/narrow AI (AI for explicitly delineated, specific tasks) and strong/general AI (vision for AI that emulates human intelligence across diverse domains) becomes salient (*ibid.*), whereby contemporary AI, particularly generative AI/large language models, can be exclusively ascribed to the former category.

In the academic domain, which is the focus of this study, students primarily engage with textual materials. Consequently, Natural Language Processing (NLP), defined as the automated processing of human language (e.g., ChatGPT), is predominantly utilized in this context. Respective tools are also classified as generative AI because they generate language (cf. Köbis, 2023, pp. 34–36). A corresponding understanding of currently available AI applications and the classification of new ones is part of AI literacy, which will be described in more detail below.

1.3. AI literacy

At this point, the competencies required to work successfully with AI in higher education will be discussed. We will focus on the AI literacy model developed by Long and Magerko (2020), which provides respective competencies for the analysis of the survey results reported.

Long and Magerko (2020) define AI literacy as "a set of competencies that enable individuals to critically evaluate AI technologies; communicate and collaborate effectively with AI; and use AI as a tool online, at home, and in the workplace" (Long & Magerko, 2020, p. 2). The objective is thus the adept and contemplative utilization of AI as a tool, for which media competencies in

general (digital literacies) are a fundamental prerequisite, as well as particular competencies pertaining to AI. In their article, Long and Magerko (2020) conducted a comprehensive review of 150 scientific publications on AI competencies (including gray literature) in the field of AI education for learners without a technical background (as a scoping study). The identified 17 competencies are then classified into five overarching areas (Long & Magerko, 2020): “What is AI?” (Competencies 1-4), “What can AI do?” (Competencies 5-6), “How does AI work?” (Competencies 7-15), “How should AI be used?” (Competency 16), and “How do people perceive AI?” (Competency 17; Long & Magerko, 2020, pp. 3-10).

The first area of competence, “What is AI?” (cf. also 1.2), is pertinent for students who utilize AI in their studies. This is particularly relevant when certain expectations regarding the performance of AI tools are not aligned with reality. For instance, expectations regarding the accuracy of content generated by (mere) LLM are misguided, as these have not been developed nor trained for this task. As stated by Long and Magerko (2020, p. 3), “the ability to recognize AI [...] is a critical skill necessary for informed interactions with AI.” Hence, the survey’s primary focus is on this first competence area of AI literacy, as a comprehensive understanding of AI is fundamental to its recognition and effective utilization. Consequently, participants were requested to provide their own definition of AI (see 3.1).

The second area of competence, “What can AI do?” is concerned with two aspects. Firstly, it encompasses an understanding of the strengths and weaknesses of AI, which falls under Competency 5. Secondly, it involves the ability to envision the future of AI, which falls under Competency 6. This area is also encompassed by the scope of our survey. The third area, entitled “How does AI work?” is only partially addressed in the current survey, yet it plays a role in our inquiries concerning students’ own approaches to using AI tools. The fourth area, entitled “How should AI be used?” focuses primarily on ethical aspects (Competency 16). The students’ reflections on this topic are integrated into their expectations and concerns regarding advancements in the domain of AI. The fifth area of competence “How do people perceive AI?” is also pertinent to these reflections (see 3.2).

1.4. Research questions and epistemic interests

The review of current studies indicates a necessity for diversified data collection concerning students’ utilization of, cognizance of, and disposition toward AI, with a particular emphasis on a differentiation between students for whom German is their L1 or L2. Respective findings will enable conclusions to be drawn about whether, how, and to what extent students with German as an L2 may benefit from the use of generative AI in their studies at universities in German-speaking countries, and how they can be supported in a meaningful and targeted manner. The findings of this study may also be applicable to L2 students worldwide.

Moreover, extant surveys do not permit direct conclusions to be drawn about developments over a longer period of time, as the data collected at different points in time are hardly comparable due to the diversity of target groups and questionnaire items. To this end, surveys were conducted at multiple points in time over the course of two years. These considerations give rise to the following research questions:

1. How often and for what purposes do students use (which) AI-based tools?
2. What do students know about AI?
3. What are students’ attitudes toward the use of AI in their academic studies, particularly for coping with requirements of language for academic purposes?

For each of the three research questions, the data was analyzed comparing students with L1 and L2 German, additionally the development over the survey period was examined. The results of the first research question have been published previously by Ketzer-Nöltge and Rüger (in press; for a short summary see 1.1). The following therefore refers to the second and third research questions, only.

2. Method

2.1. Participants

This survey constitutes a longitudinal study, specifically a trend study, in which different subsets of a participant population are surveyed at multiple points in time. A total of 143 online questionnaires were completed by 136 respondents over a period of two years¹. To establish two comparable cohorts, the participants were segmented into two groups, with each group encompassing two consecutive semesters. The sample size for the first cohort, ranging from May 2023 to February 2024, was 73 participants, while the second cohort, spanning from April 2024 to February 2025, comprised 63 (or 70 individuals, respectively¹). The survey was administered as part of three courses: Two courses were specifically designed to address German as a Second Language for L2 students, with one being offered within the university-wide BA programs and the other within the MA program German as a Foreign/Second Language (GFL/GSL). The third course was a subject-specific content seminars in the BA GFL/GSL program. The students who were in attendance at the seminar were given the opportunity to complete the questionnaire during the course of the seminar. Alternatively, the remaining students could complete the questionnaire online. Participation was voluntary and not reimbursed.

The majority of respondents indicated in the demographic section of the survey that they were studying GFL/GSL ($n = 71$), while 36 participants were studying other subjects in the field of linguistic and cultural studies. The subjects studied by the remaining participants can be assigned to the subject groups of social sciences ($n = 22$) and natural sciences ($n = 6$; one response missing). The distribution across degree programs is as follows: The data set includes 98 individuals who are studying in a BA program, 26 in an MA program, 11 individuals who are undergoing teacher training², and one individual was engaged in doctoral studies.

With regard to first languages (L1), the responses show that 32 participants grew up speaking German (three of whom also speak another L1). Additionally, nine participants started German language acquisition prior to the age of 11. Consequently, the total number of individuals who indicated German as a second language (L2) is 95, while the total number of languages indicated as their L1 is 25, with multiple L1s being possible. The most prevalent L1s are Arabic ($n=19$), Russian ($n=12$), Chinese ($n=7$), Spanish ($n=7$), and Ukrainian ($n=7$).

The respondents evaluated their own digital literacy on a scale ranging from 1 (beginner) to 10 (expert), with an average rating of 6.80 ($SD = 1.76$). The distributions of all characteristics presented here are comparable between the two cohorts (2023/24 and 2024/25) and language groups (L1 or L2 German). Therefore, it can be posited that the criteria L1, field of study, and self-assessed digital literacy do not exert an undue influence on the comparison groups to be addressed subsequently.

2.2. Materials

The survey instrument was composed of six sections. First, respondents provided demographic data (a). Next, respondents indicated their media skills and the frequency of their media use during their academic studies (b). Third, respondents were requested to describe their initial encounters with Artificial Intelligence (c). Fourth, respondents were asked to define Artificial Intelligence (d). Fifth, respondents were prompted to identify their experiences with Artificial Intelligence use in academic writing and work (e). Finally, respondents indicated their attitudes regarding Artificial Intelligence, in particular their expectations and wishes for the future (f). In section d), participants were asked to formulate their definitions as free text. In sections e) and f), closed questions (single and multiple choice) were supplemented by open questions on approaches, surprises, and challenges in AI use to date, as well as on the potential and concerns regarding further developments.

3. Findings

This chapter will report on and classify selected results. The present paper will focus on research questions 2 and 3, i.e., the students' attempts to define AI (3.1) and the respondents' attitudes toward AI (3.2). In each instance, the data analysis procedure will be first delineated, followed by the presentation of the results.

3.1. Students' conceptualizations and definitions of AI

3.1.1. Data evaluation procedure. In order to assess the open-ended responses to the item, "AI – what is it actually? Please try to formulate your own brief definition of 'Artificial Intelligence'.", we were able to inductively derive four codes from the extant literature (see 1.2)³:

- Code 1: comparison to human behavior / human intelligence, or rational behavior;
- Code 2: acquisition of knowledge / learning without (human) guidance, solely through input;
- Code 4: AI as equal to specific analytical method(s): algorithm, neural network, deep learning, machine learning, neural networks, etc.;
- Code 5: AI as synonym for robotics / robots.

Furthermore, an iterative coding process was employed, resulting in the creation of three additional deductive Codes:

- Code 6: naming a specific application/ AI-based tool, such as ChatGPT (thus equating AI with the named tool);
- Code 7: naming / listing general (a) or specific (b) functions / goals of genAI (AI-based tools);
- Code 8: AI is reduced to being a searchable database or an advanced search engine.

Two supplementary codes must also be noted: The Code "unclassifiable" is used for responses that could not be interpreted (in the sense of the established Codes; 9 instances). For example, consider the response of P97 (L2), which falls outside the purview of the prevailing classification system: *It is a tool that scientists are constantly developing* (#01⁴). "n/a" is used when a response is missing (6 instances).

All responses were analyzed by two coders according to the presented code system⁵. Subsequently, cases that were initially coded differently underwent a process of standardization, and the underlying rationales were thoroughly documented⁶.

3.1.2. Results. Given the detailed and multifaceted nature of the comments made by the students surveyed, a total of 42 responses were assigned multiple codes: 38 responses were assigned two codes, while 4 responses were assigned three codes.

With 56 cases, Code 7 "naming / listing general (a) or specific (b) functions / goals of genAI (AI-based tools)" was assigned most frequently (two times both general and specific functions were named). The following response is an example of a general function description (7a):

#02 (P2, L2) *These are media that people can use to make their lives easier.*

Specific functions related to AI-based tools (7b) include:

#03 (P69, L1) *Tools that can produce or evaluate texts, images, and videos based on different data* (In addition, Code 8 was assigned to this example).

#04 (P79, L1) *A writing program with access to various platforms that can help you answer a wide range of questions, provide suggestions, or solve tasks.*

The second most common response was Code 1, i.e., definitions of AI that refer to comparisons with human behavior, intelligence, or rational thinking (34x):

#05 (P44, L2) *When machines try to imitate human abilities.*

#06 (P113, L1) *the ability of the machine to perform tasks that normally require human intelligence (making decisions, being creative, etc.)*

In most cases, Code 1 appears alone, but is sometimes specified with concrete or general functional assignments (5x codes 1 + 7), e.g.:

#07 (P142, L2) *Imitation of human cognitive abilities in order to obtain information or achieve performance faster (not necessarily more correctly).*

It is noteworthy that three individuals supplied definitions of such complexity and comprehensiveness that Codes 1 and 2 were jointly allocated to them, e.g.:

#08 (P19, L1) *AI can independently establish connections between topics, draw conclusions from them, and learn from them. In this sense, it forms an analogy to the cognitive processes in the brain/human memory, in which new neural connections are constantly being created and new knowledge is stored and linked to existing knowledge.*

These three respondents are all BA students of GFL/GSL or German studies from the first cohort (P5, P17, P19). They rate their media skills as “average” (5, 6, 6) and indicate German as their L1.

Subsequently, the categorization of AI as data collection or search engine (Code 8) manifests itself 33 times.

#9 (P70, L1) *AI is a computer program (software) that searches for information on the Internet on demand or provides the information with which it was trained.*

#10 (P102, L2) *AI collects results and data available on the internet and presents them in a structured manner.*

This Code occurs particularly frequently in connection to the naming of functions (Code 7; 13x):

#11 (P33, L2) *A tool that can perform tasks by collecting large amounts of data.*

#12 (P71, L1) *AI is a program that can serve different purposes. For example, it can be used as a search engine or to create images or texts. What makes it special is that it responds to search commands in a very individual and precise manner.*

Code 2, which refers to unguided learning by AI, was assigned a total of 20 times, only 6 of which were independent (e.g., #13: for *self-learning program*, P86, L2) and the rest in combination with Code 1 (3x), Code 7 (4x), Code 8 (3x), Code 4 (3x) and once together with Codes 1 and 7:

#14 (P143, L2) *AI is a technological product that is capable of processing large amounts of information, performing various tasks, and, above all, learning like a human being.*

Specific analytical methods (Code 4) were mentioned 14 times (e.g., #15: *neural networks*, P65, L1), and 6 people understand AI as synonymous with robotics / robots (Code 5):

#16 (P130, L2) *online machine-human / robot that generates information.*

A specific AI application (Code 6, here: #17: *ChatGPT*) was referenced on a single occasion by P83 (L1) as a definition or synonym for AI.

In the L1 group, the responses were distributed almost evenly across Codes 1, 2, 7, and 8, with each code accounting for approximately 20% of the total (see Table 1). A comparison of the two language groups reveals differences primarily regarding Code 7. It was assigned to slightly more than one third of the responses (36%) from respondents with L2 German, but only 20% of L1 speakers. The responses of the L2 participants were particularly infrequent for Code 2 (L2: 6% vs. L1: 22%).

Table 1.

Distribution of Codes (including multiple codings) among all given answers (in percent)

Codes	Percentage of Codes (overall; n = 144)	Percentage of Codes (L1; n = 55)	Percentage of Codes (L2; n = 124)
Code 1: Comparison to human behavior / human intelligence, or rational behaviour	19%	20%	19%
Code 2: Acquisition of knowledge / learning without (human) guidance, solely through input	11%	22%	6%
Code 4: AI as equal to specific analytical method(s): algorithm, neural network, deep learning, machine learning, neural networks, etc.	8%	7%	8%
Code 5: AI as synonym for robotics / robots	3%	2%	4%
Code 6: Naming a specific application / AI-based tool, such as ChatGPT (and thus equating AI with the named tool).	1%	2%	0%
Code 7: Naming / listing general (a) or specific (b) functions / goals of genAI (AI-based tools).	31%	20%	36%
Code 8: AI is reduced to being a searchable database or an advanced search engine.	18%	24%	16%
unclassifiable	5%	4%	6%
n.a.	3%	0%	5%

3.2. Student's attitudes toward AI-supported tools

3.2.1. Data evaluation procedure. The final section of the survey addressed the students' impressions, expectations, and attitudes regarding the integration of AI in their academic pursuits. First, closed questions were used to gather the students' conjectures regarding the (future) utilization of AI for various predefined study-related activities. Second, the students were presented

with the opportunity to elaborate on and provide clarifications for their assessments through free-text responses.

The items for the closed questions were formulated based on the research process (e.g., “selecting quotes and incorporating them into texts” or “developing research questions”) and supplemented with additional study-related aspects (e.g., “AI as a learning coach”, “evaluation of exam performance”). The provided answer options, which range from positive expectations to skepticism or concerns, were numerically coded as follows in order to identify corresponding trends and draw comparisons (German original in parentheses):

- +2 = That is/will be a great relief. (“Das ist/wird eine große Erleichterung.”)
- +1 = Sounds cool, but is it possible? (“Klingt cool, aber geht das?”)
- 0 = I have no idea. (“Keine Ahnung.”)
- 1 = This still requires people. (“Dafür braucht man weiter Menschen.”)
- 2 = That worries me. (“Das macht mir Sorgen.”)

This also made it possible to calculate averages for individual subgroups, which revealed a tendency toward optimistic, to rather cautious or skeptical attitudes.

The closed questions in this final section of the questionnaire were supplemented by the following open-ended questions (free text): “Where do you see the greatest potential for AI in the next 2-3 years?” and “What do you consider unrealistic with regard to AI in the next 2-3 years? What are the concerns that you have regarding this matter?” The responses were coded deductively, with multiple items from the closed questions also being utilized as codes (see Appendix III). As the students’ open comments were designed to provide additional context and clarification to their responses to the closed questions, they are primarily presented in relation to the quantitative results. This approach is taken to obtain a more precise representation of the students’ positive expectations, as well as their concerns and doubts.

3.2.2. Results. In the following, first, a presentation of general findings from the open-ended comments will be made, after which a summary of important results from the closed questions on students’ expectations of AI in an academic context will be presented. Important results will be supplemented by quotes from the open-ended questions.

a) General results of the open-ended questions

It should be noted that approximately 20% of the 136 respondents did not respond to the two open-ended questions. The proportion of those non-responders is much higher among cohort 1 and among L2 students compared to the other groups. 26 students did not respond to the question regarding potentials of AI or they indicated that they lacked the necessary knowledge to provide a comprehensive assessment. A total of twenty-five students did not provide responses to the inquiry regarding their concerns about AI. The following and analogous statements are also coded as “No answer / don’t know”:

#18 (P100, L2) *I really don't know enough about it, I have no idea. I'm actually not very interested in the topic.*

#19 (P73, L2) *I still have to learn.*

The open comments, in particular, demonstrate that the majority of students occupy a position between two extremes. A mere 10% of the polled student population falls into either the “extremely optimistic” (code 2-8, n=12) or “very skeptical” (code 1-11, n=11) categories regarding the imminent prospects of AI, albeit without providing further elaboration. This phenomenon is exemplified by the following statements, among others:

#20 (P27, L2) *Everything is realistic, to be honest*

#21 (P103, L2) *Nothing is impossible.*

#22 (P143, L2) *There are no limits to the sky*

vs.

#23 (P85, L1) [Potentials] *I do't see any.*

#24 (P52, L2) *I'm not interested in AI, so I don't see any potential [...]*

Most of the students' comments relate to academic work and study tasks, e.g.:

#25 (P62, L1) *It will change academic tasks just as the calculator changed math class*

However, a significant number of comments express skepticism regarding the social impact of AI developments, e.g.:

#26 (P13, L2) *I am concerned that parts of the population will feel useless: potential for social unrest.*

#27 (P28, L2) *It will become more difficult to know what is real and what is artificial.*

#28 (P105, L2) *That artificial intelligence will be used in wars and to harm humanity*

In a subset of approximately 20% of the comments, all groups most frequently indicated a rather general simplification for various domains of work as a potential benefit (Code 1-1).

#29 (P59, L2) *Saving time on extensive tasks*

#30 (P83, L1) *Making certain tasks easier or easier to understand*

The most frequently articulated concerns or doubts relate to the uniqueness of human interactions compared to those with machines (Code 2-1). This perspective is shared by 28% of the respondents. However, the belief that AI is incapable of assuming all human tasks or that human intervention is necessary for AI to function is expressed at a much higher frequency in cohort 2 (38%) than in cohort 1 (19%). L1 and L2 students do not differ in this regard. This is evidenced, for example, by the following statements:

#31 (P23, L2) *You can never write a term paper with it*

#32 (P80, L2) *People still need people. And AI still makes mistakes.*

#33 (P110, L2) *Even as AI continues to evolve, human input will still be necessary.*

b) Evaluation of the role of AI in Academic Studies

As answer options to the closed question, "How would you rate the potential of AI-based tools for your future studies in the following areas?" ("Wie schätzen Sie das Potenzial von KI-basierten Tools für Ihr weiteres Studium in den folgenden Aufgabenbereichen ein?"), the following 15 areas were specified:

- a) Generating and structuring ideas ("Ideen generieren und strukturieren")
- b) Help with wording, text correction ("Formulierungshilfe, Textkorrektur")
- c) Writing texts/drafts ("Text(entwürf)e schreiben")
- d) Researching contents, managing sources ("Inhaltlich recherchieren, Quellen verwalten")
- e) Selecting quotations and incorporating them into texts („Zitate auswählen und in Texte einbauen")
- f) Formatting text ("Texte formatieren")
- g) Developing research questions ("Forschungsfragen entwickeln")
- h) Preparing data, e.g., transcription ("Daten aufbereiten, z. B. Transkription")

- i) Analyzing data, e.g., coding (“Daten analysieren, z. B. Kodierung”)
- j) Creatively expressing thoughts as images, sounds, or videos (“Gedanken als Bild, Ton, Video kreativ umsetzen”)
- k) Programming without programming skills (“Programmieren ohne Programmierkenntnisse”)
- l) Assessment (“Prüfungsleistungen bewerten”)
- m) AI as personal tutor (“KI als persönlicher Lerncoach”)
- n) Providing individual learning content / tasks (“Lerninhalte/-aufgaben individuell kombinieren”)
- o) Learning through exchange (“Lernen durch Austausch”)

The students’ expectations for the various areas of application differ quite considerably in some cases. In Figure 1, the two upper categories of each bar correspond to confident assessments. As can be seen, students’ attitudes toward any area of application of AI are more positive when the bar is lighter. Students see considerable potential for AI in the domains of text correction and formatting, as well as in the preparation of research data. A large proportion of students also have high expectations for the use of Artificial Intelligence in literature-based research. Skepticism pertains to the utilization of AI for assessment and its potential role as an individual learning coach. No definitive optimistic or skeptical stance can be ascertained for the other areas of application.

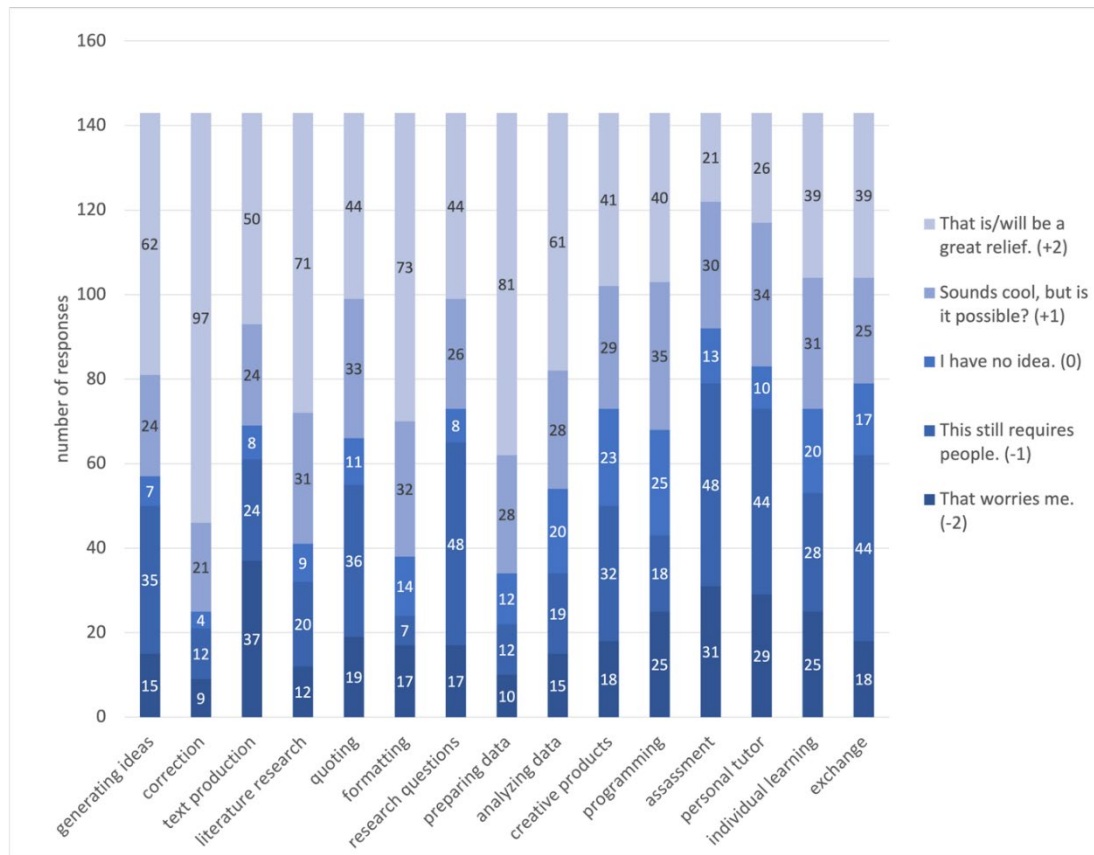


Figure 1. Expectations regarding the use of AI for various activities. Distribution of overall responses to preformulated items in absolute numbers, sorted from negative “That worries me.” (-2, dark blue) to positive “That is/will be a great relief.” (+2, light blue).

Consequently, in the open-ended question concerning the prospects of AI—in addition to an anticipated general simplification of work, especially for routine tasks (Code 1-2, 15x)—frequently positive expectations are expressed for tasks involving working with texts (Code 1-6, 11x), idea

generation (Code 1-3, 13x), and the processing of research data (Code 1-5, 11x). For instance, the following statements were made:

#34 (P15, L2) *Perhaps AI can help with proofreading, finding sources, or structuring ideas.*

#35 (P16, L1) *Many people find it difficult to start homework assignments and instead put them off. If AI can help by gathering and structuring ideas, many people will be more motivated.*

#36 (P137, L2) *[...] simplification when dealing with complicated programs such as data analysis [...]*

The concerns highlighted in the quantitative data are corroborated by the open comments. The respondents generally ascribed particular importance to a diversified human perspective (Code 2-1, 38x). In addition to emphasizing personality, individuality, and emotions as unique characteristics of humans (Code 2-1d, 13x), the use of AI for evaluating exams (Code 2-1a, 16x) and as a learning companion (Code 2-1b, 10x) is viewed with particular skepticism:

#37 (P71, L1) *AI cannot recognize human feelings and thoughts. This means that it can only evaluate exam performance if this is completely irrelevant to the task at hand. Individual writing style also plays a role here. Can AI recognize what is well written and what is poorly written?*

#38 (P132, L2) *AI as a personal learning coach lacks empathy, which is important.*

c) Comparison of language groups

For most areas of application, the mean responses of L1 and L2 students are relatively close, however some differences also become apparent. The graph in Figure 2 shows the means for all students (left bar, blue), for L1 students only (middle bar, red), and for L2 students only (right bar, green) for each task area. Overall, most assessments are slightly positive (mean for all task areas: +0.46). Since the scale ranges from minus 2 to plus 2, mean values close to 0 indicate a divided picture of opinions. For L1 students in particular, the mean is relatively high in some cases (above 1). L1 students are clearly more optimistic than L2 students, especially in the task areas related to the research process. The discrepancy between L1 and L2 students is particularly strong in their assessment of the potential of AI for research, text formatting, formulating research questions, handling research data, and for individualizing learning processes. When it comes to creative tasks and designing their own learning (AI as a tutor and exchange partner), but also with regard to the assessment of exams (with -0.27 overall, the lowest value), L2 students show slightly more confidence in AI than L1 students. In general, however, students are much more skeptical about the latter tasks than about most research-related activities. The greatest agreement between L1 and L2 students can be seen on the potential of AI for text correction, with the highest overall value (+1.29), and on skepticism regarding the use of AI for selecting and using citations in writing for academic purposes.

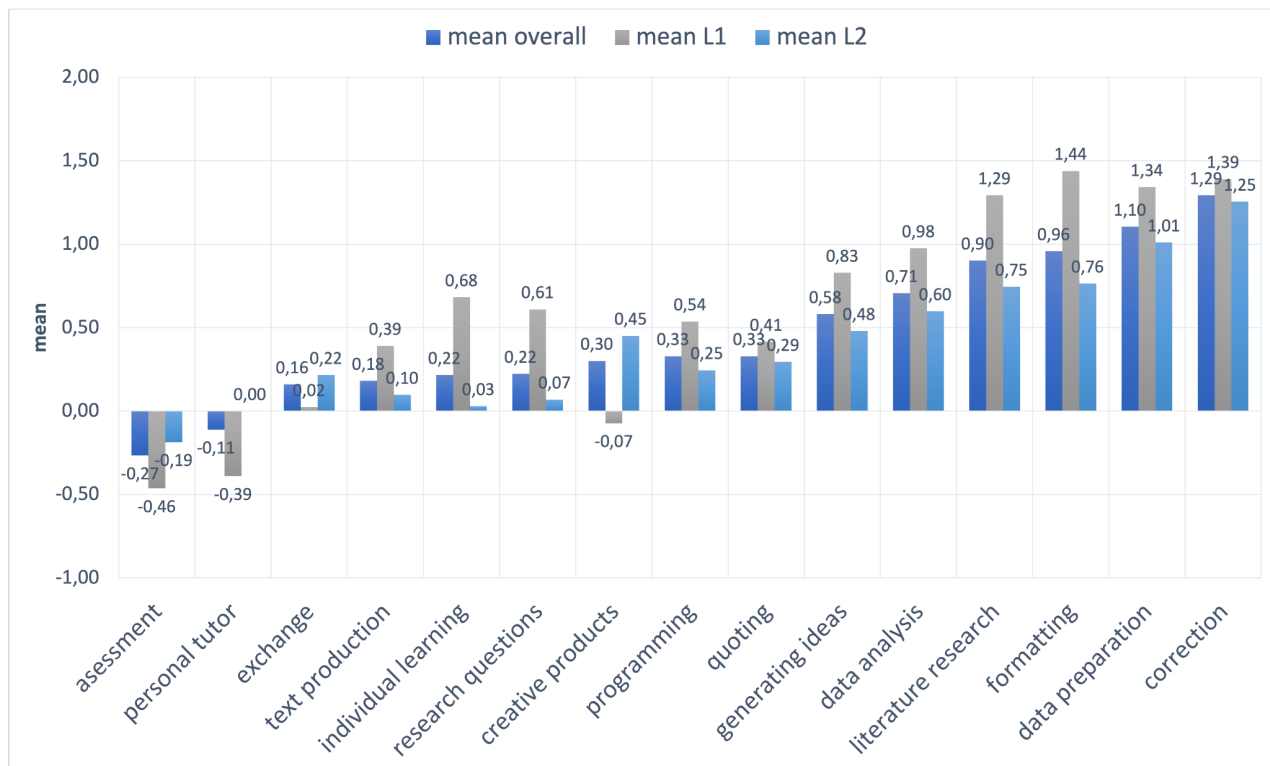


Figure 2. Expectations regarding the use of AI for various activities. Comparison of results between language groups (L1 vs. L2), sorted by increasing mean value (overall).

It is evident from the comments that only minor discrepancies between language groups are discernible. Most notably, students with L1 German express higher levels of confidence in the use of AI-powered research assistance. This finding is consistent with the quantitative data analysis. Concerning the reliability and credibility of research outcomes in the field of AI, both L1 and L2 students concur on the associated concerns (Code 2-4, 16x, with 7x being L1 and 9x being L2):

#39 (P17, L1) *AI frequently makes mistakes or works with “made-up facts” and is therefore not particularly reliable.*

#40 (P137, L2) *Researching sources -> currently difficult because, for example, ChatGPT cites non-existent sources and quotes incorrect passages/no passages at all.*

Conversely, a greater proportion of spontaneous comments from L2 students (code 1-5, 11x, of which 1x L1 and 10x L2) pertain to the potential of AI in data analysis, thereby contextualizing the quantitative findings. A discernible discrepancy emerges in the quantitative data concerning the individualization of learning processes, with L1 students exhibiting a more pronounced inclination than L2 students. Within the section designated for comments, general explanations are provided that refer to the education system or educational institutions outside the university (Code 1-7, 11x). It is also important to note that some of these explanations include the broader accessibility of learning resources.

#41 (P50, L2) *Transcriptions and accessibility in education.*

#42 (P70, L1) *As an individual learning coach (too many students, too few teachers; every student can be supported more individually with AI).*

However, an excess of individual support from AI gives rise to concerns that independence will be curtailed due to excessive reliance on AI. Code 2-3, designated “People become lazy, dumber, and

less independent through the use of AI”, was assigned 20 times, with corresponding statements distributed proportionally across cohorts and language groups.

#43 (P100, L2) *My concern is that the thought process is increasingly being left to third parties—until one is no longer able to formulate a thought themselves.*

d) Comparison of cohorts

A comparison of the two survey periods also yields some interesting results. As illustrated in Figure 3, the alterations are evident in a number of selected task areas. For the majority of task areas, no significant alterations or only negligible increases in the mean values are evident when comparing cohort 1 (2023/24) with cohort 2 (2024/25). The overall mean value increased from 0.43 to 0.5. The most prominent increases are observed within the range of 0.1 to 0.2 (for instance, in the context of data analysis, from 0.63 to 0.79, or for the utilization of artificial intelligence for the selection of quotations, from 0.25 to 0.41). A more substantial increase in confidence in AI is evident in the domains of text correction (from 1.12 to 1.47) and text production (from 0.01 to 0.36). By contrast, there has been a substantial decline in students’ optimism regarding the utilization of AI for research tasks, with a decrease from 1.15 to 0.64.

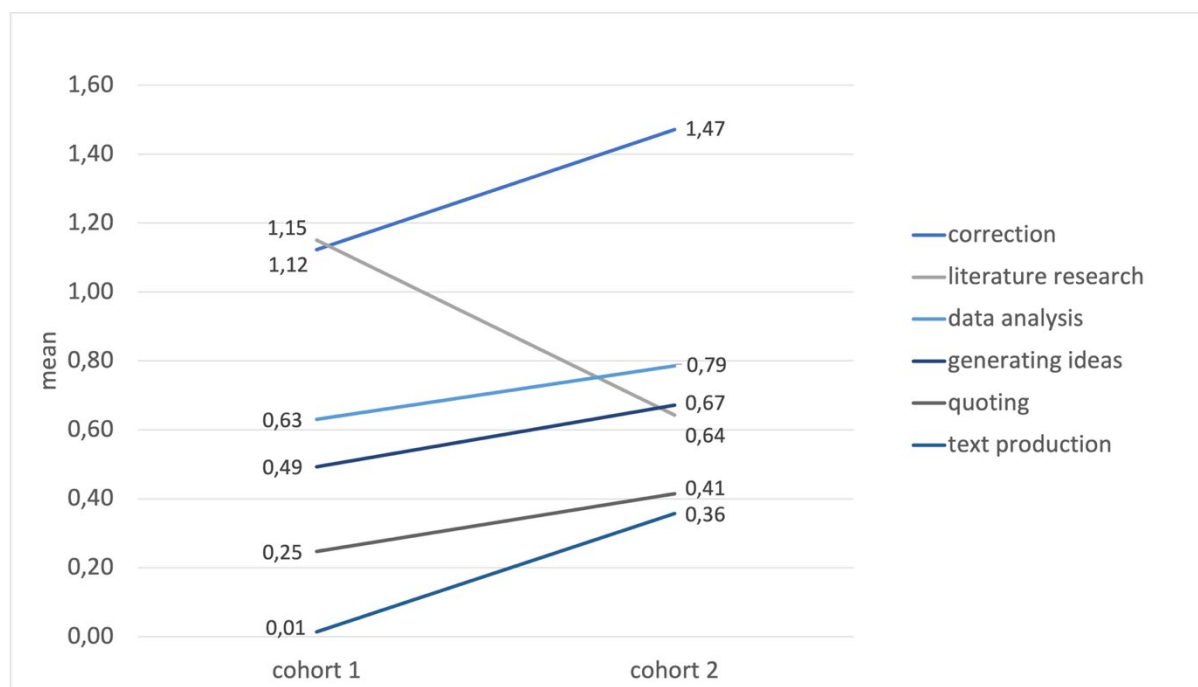


Figure 3. Changes in expectations regarding the use of AI for various academic activities. Comparison between means of the two cohorts for selected task areas.

The lower level of optimism among cohort 2 regarding AI as an aid to research activities is also evident in the students’ free comments (Code 1-4, cohort 1: 9 out of 73 vs. cohort 2: 4 out of 63). Concurrently, cohort 1 also refers more frequently to concerns about fake news, bias, and unreliable research results (code 2-4, cohort 1: 12x vs. cohort 2: 4x). In some cases, the same individuals express both optimism and concerns on this topic, e.g.:

#44 (P82, L1) Question about the potentials of AI: *In my opinion, AI can enable quick research and ensure that you can quickly get a basic idea of tasks. Very good for presentations/term papers*

#45 (P82, L1) Question about concerns towards AI: *Incorrect information*

A final illustrative example demonstrates this contradiction through the juxtaposition of optimistic expectations and doubts within the same statement. In this statement, an additional aspect becomes apparent, namely the recognition that certain skills are required in order to utilize the new technological possibilities in a meaningful and targeted manner (Code 1-12).

#46 (P35, L2) *AI can shorten the path to new ideas and promote human creativity, but only if it is used correctly (as a tool, not an author) and if we learn to ask precise questions.*

4. Discussion

The most important findings will now be summarized and discussed. Overall, the presented data suggests that, as expected, knowledge of AI (see section 3.1) and attitudes toward its potential and challenges in academic contexts (see section 3.2) are heterogeneous. However, given the wide range of LLM-based AI tools and their concrete applications for study-related tasks, some of which have already been tested with positive results, it is surprising how little students know about and use these tools (on the usage see Ketzer-Nöltge & Rüger, in press). The most common attempts at definition (Code 7 – naming functions of AI tools and Code 8 – database/search engine) reflect that many students' ideas of what AI is, remains vague. On the other hand, AI seems so ubiquitous as a basis for applications, and the tools that work with it are so diverse, that this does not automatically lead to a concrete idea of what AI may be. Clearly, students associate AI, a rather complex concept, with something they are familiar with, an understandable strategy for comprehension. At the same time, the idea that AI makes large amounts of data analyzable and usable is accurate and fundamental to critically assessing what happens to one's own data. Concerning this, five students explicitly expressed corresponding concerns about data protection elsewhere (3.2).

Code 7, i.e., the naming of specific AI functions, was by far the most frequently assigned code for L2 students' definition attempts (36%), while three of the most conceptually comprehensive definitions (Codes 1 and 2) came from native German speakers. Due to the restricted number of participants, differences between language groups should not be overinterpreted; however, these differences in definitions between L1 and L2 speakers could mean that it is linguistically easier to name concrete functions and applications (Code 7) than to provide abstract, conceptually comprehensive definitions (e.g., expressing uncontrolled learning as a property of AI, Code 2).

Overall, many respondents demonstrated only limited understanding of what AI is, how it works, and how generated data is created. Only a few of the students surveyed were able to provide a definition of AI that indicated that they knew and understood the basic functioning of genAI. However, keep in mind that complex answers (Codes 1 and 2; #08) do not necessarily mean that students are knowledgeable about these aspects; they may simply be repeating what they have heard or read. Nonetheless, detailed answers show that students are engaged with the topic and find it relevant.

The results allow us to draw cautious conclusions about the group surveyed regarding the areas of AI competence described by Long and Magerko (2020), such as "What is AI?", "How does AI work?" and "What can AI do?". These competence areas seem to be underdeveloped in many students. The results suggest that university teaching should give greater consideration to the topic of AI, its fundamentals, and how it works. This is necessary to ensure students can use AI-based tools purposeful and effectively.

The answers to the definition question and the other open questions reflect social debates within and beyond the academic context. These debates include the expectation of a general relief of workload in many areas along with the risk of massive job losses. It also includes the influence of AI on creative human activities and ethical concerns such as questions of data protection and the appropriate use of genAI.

However, a relatively large proportion of respondents (more L2 than L1 students) did not take the opportunity to answer the open questions about the potential and challenges of genAI. In some

cases, they explicitly stated that they did not yet have sufficient knowledge to answer. In cohort 2, however, the proportion of unanswered questions decreased by far. This can certainly be attributed to the increasing public presence of the topic, but above all to the students' own experiences, meaning that they are more familiar with genAI and have formed opinions on the topic.

The questioned students see a lot of potential, but they also express concerns, some of which concern society and are global in nature, others relate to their professional future. These concerns reflect the public debate about the disruptive potential of AI technology. Many responses address the question of the human component: What specific human abilities and skills cannot be replaced by AI? In this regard, a differentiated view, individual personality, and emotions are mentioned as particularly relevant for tasks such as exam assessment and learning support—areas of AI application viewed with skepticism (see Figure 2).

According to the data presented here, students with German as their L2 tend to be slightly more optimistic than L1 students about AI's potential for performing routine tasks. However, they also express greater concern about AI replacing humans in many professional fields. Quantitative data on students' expectations for using AI for various study-related tasks shows that students with German as their L1 are more optimistic overall, even if the differences are small. Expectations were positive for almost all of the suggested task areas on a scale from +2 to -2. Respondents saw the greatest potential (with a mean value of over +1) in text correction and in preparing research data. They were particularly skeptical about using AI for exam assessment and as a learning coach. Students are also divided on the generation of text by AI (AI-supported text production: mean value close to 0). Consequently, it can be inferred that conceptual activities performed by humans and interaction with humans in academic context remain important to students.

A comparison of the two cohorts (2023/24 vs. 2024/25) revealed that concerns about the unreliability of AI-based tools declined. The greatest increase in expected potential is seen in the use of AI for text correction. Although AI-supported tools are indeed becoming more reliable, there is still a risk that AI is blindly trusted, based to an overestimation of the usefulness and functionality of AI-based tools and an uncritical approach to AI-generated outputs. Critical and reflective promotion of AI skills at universities is necessary in this context as well, including the ethical component targeted with Competency 16, "How should AI be used?" by Long and Magerko (2020).

Conversely, fewer students in the 2024/25 cohort see positive potential for source work and scientific research with AI tools. Regarding this, trust is much higher among L1 students than among L2 students. The lack of trust in AI-based tools for literature research may be due to (L2) students' frequent use of these tools with poor results. This may be because AI is not used competently in this area, hence often delivering inaccurate, inappropriate, or incorrect results.

Finally, it should be argued that this study is a small-scale survey focusing exclusively on students at one university. This naturally limits the scope and generalizability of the results. However, in contrast to earlier studies, the present survey offers a more in-depth, qualitative analysis of knowledge, attitudes, and utilization of AI in higher education students. The perspectives of different student groups—in this case, students with German as their L1 or L2—were also considered more thoroughly. However, when we regard the distinction between L1 and L2 as a continuum for comparing L1 and L2 students, it is not always possible to clearly classify the results. L2 students who have acquired German since childhood (and were categorized as L1 students in this study) may not have been socialized in the German education and academic system. However, this could be a decisive factor for the survey results presented here. Assigning these students to the L1 group (a total of nine students) may have led to an overemphasis or blurring of the results when comparing L1 and L2 students. Future studies with larger cohorts could examine this more closely.

5. Conclusion

The study presented here encompasses various courses offered at the Herder Institute of the University of Leipzig, including study programs for teacher training² as well as BA and MA

degrees. Since the survey was repeated in the same seminars (with different cohorts), it provides comparable insights into the status quo of knowledge and attitudes toward AI over two years, particularly regarding L2 students. L2 students made up approximately two-thirds of the respondents and have largely been overlooked in previous AI surveys at German universities. Due to its design as a longitudinal study, initial conclusions can be drawn about trends in attitudes toward AI since the widespread release of ChatGPT. However, it is unclear to what extent these results can be generalized to other university contexts.

The survey results show that the use of AI in higher education is developing dynamically. Students are also shown to be aware of social and academic debates on the topic of AI, and they are gaining experience that influences their knowledge and understanding of AI, as well as their assessments and expectations of future developments. Nevertheless, the results reveal respondents' uncertainties about the competent use of AI and their limited understanding of AI. Some respondents also have vague or contradictory expectations about AI's potential for academic work.

Comparing the AI usage of students with German as their L1 to those with German as their L2 would allow us to draw conclusions about whether L2 students benefit from AI in compensating for linguistic disadvantages in their studies. The current results show that—similar to L1 students—L2 students are familiar with some essential AI functions and characteristics and are increasingly concerned about the topic. Students (both L1 and L2) are more confident in the future potential of AI for text correction than for text production. Although L2 students use AI tools in many areas, they are more cautious than L1 students about the future of AI in most areas of study. Overall, respondents are particularly cautious about evaluating exams with AI and using AI as a learning companion, i.e., for activities more related to teaching. This also shows a fairly fundamental skepticism about AI performing tasks considered very human. Nonetheless, confidence is increasing for certain tasks in the academic work process.

However, the available data does not allow us to conclude that L2 learners benefit from AI in their studies. This would require a different study design that focuses on specific AI usage processes and results. Such a study would be worthwhile, especially since language skills are important for interacting with AI. Language is the most important medium for education and the central interface of human-computer interaction (e.g., Ballod, 2024, p.82). Accordingly, there is currently a discussion about prompting skills (see, e. g., Gattupalli, Maloy, & Edwards, 2023), and there is a growing trend of user-friendly AI tools offering prompt support. As discussed above (see 1.2), meaningful prompting is just one of many AI skills that need to be developed. The present study's heterogeneous results indicate that these skills do not arise automatically but require targeted promotion in courses to provide all students with equal opportunities. Budde, Tobor, and Friedrich (2024, p. 25), among others, argue that AI skills must be firmly anchored in all programs of study and they hold university management, rather than individual teachers, responsible for this.

Notes

¹ Seven respondents stated that they were participating in the survey for the second time.

² As do many German universities, University of Leipzig offers degree programs targeted specifically at teacher students as an alternative to MA and BA programs, ending with a state examination.

³ Code 3 was originally designated for statements that exhibited characteristics of Codes 1 and 2. This approach was subsequently discontinued in favor of a more systematic “double coding”.

⁴ To ensure transparency, all data examples provided within the paper are numbered consecutively and translated into English. In addition, Appendix I contains a tabular overview listing the original, uncorrected responses in German.

⁵ The percentage of rater agreement is 79.02%. Cohen's κ yielded $\kappa = 0.72$ as the proportion of agreement exceeding chance ($z = 18.9$, $p < .001$ ***). This can be classified as “good” (Altman 1991).

⁶ All coding tables can be viewed on OSF and in Appendixes:

<https://osf.io/smwfj/files/osfstorage/68567cf1b99951ad985cfd22> [2025-06-23].

Abbreviations

genAI – generative Artificial Intelligence

LLM – Large Language Model

L1 – first language

L2 – second language

GFL/GSL – German as a Foreign / Second Language

BA – Bachelor

MA – Master

Declaration of the conflict of interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

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Appendix I

Tabular overview of data examples provided within the paper, including the original, uncorrected responses in German and English translations. Numbered consecutively according to order of appearance in the paper.

Example #	Participant	German Original	English Translation
#01	P97, L2	<i>Es ist ein Werkzeug, das Wissenschaftler ständig weiterentwickeln</i>	<i>It is a tool that scientists are constantly developing</i>
#02	P2, L2	<i>Es sind Medien der Man nutzen kan um das Leben einfacher zu machen.</i>	<i>These are media that people can use to make their lives easier.</i>
#03	P69, L1	<i>Tools, die basierend auf unterschiedlichen Daten, Texte, Bilder und Videos produzieren bzw. auswerten können</i>	<i>Tools that can produce or evaluate texts, images, and videos based on different data</i>
#04	P79, L1	<i>Ein Schreibprogramm mit Zugang zu verschiedenen Plattformen, die einem helfen können verschiedenste Fragen zu beantworten oder Anregungen zu geben oder auch Aufgaben zu lösen</i>	<i>A writing program with access to various platforms that can help you answer a wide range of questions, provide suggestions, or solve tasks</i>
#05	P44, L2	<i>Wenn die Maschinen menschliche Fähigkeiten imitieren versuchen.</i>	<i>When machines try to imitate human abilities.</i>
#06	P113, L1	<i>die Fähigkeit der Machine, die Aufgaben zu erledigen, die normalerweise menschliche Intelligenz erfordern (Entscheidung treffen, kreativ sein usw)</i>	<i>the ability of the machine to perform tasks that normally require human intelligence (making decisions, being creative, etc.)</i>
#07	P142, L2	<i>Imitation menschlicher kognitiven Fähigkeiten, um Informationen zu erreichen oder Leistungen schneller (nicht unbedingt richtiger) zu erzielen.</i>	<i>Imitation of human cognitive abilities in order to obtain information or achieve performance faster (not necessarily more correctly).</i>
#08	P19, L1	<i>KI kann wie selbstständig Verbindungen zwischen Themen herstellen und daraus Schlussfolgerungen zu ziehen und</i>	<i>AI can independently establish connections between topics, draw conclusions from them, and learn from them. In this</i>

		<i>dazu lernen. In diesem Sinne bildet sie eine Analogie zu den kognitiven Prozessen im Gehirn/dem menschlichen Gedächtnis, bei denen stetig neue neuronale Verbindungen entstehen und neues Wissen gespeichert und mit bereitsvorhandenem Wissen verknüpft wird.</i>	<i>sense, it forms an analogy to the cognitive processes in the brain/to human memory, in which new neural connections are constantly being created and new knowledge is stored and linked to existing knowledge.</i>
#09	P70, L1	<i>KI ist ein Computerprogramm (Software), welche auf Nachfrage Informationen aus dem Internet heraussucht bzw. die Informationen zur Verfügung stellt, mit denen Sie trainiert wurde.</i>	<i>AI is a computer program (software) that searches for information on the Internet on demand or provides the information with which it was trained.</i>
#10	P102, L2	<i>KI sammelt Ergebnisse und Daten, die auf dem Internet zur Verfügung stehen, und gibt diese strukturiert wieder.</i>	<i>AI collects results and data available on the internet and presents them in a structured manner.</i>
#11	P33, L2	<i>Ein Tool die Aufgaben erledigen können, indem es große Menge von Daten sammelt.</i>	<i>A tool that can perform tasks by collecting large amounts of data.</i>
#12	P71, L1	<i>Eine KI ist ein Programm, das für unterschiedliche Zwecke dienen kann. Man kann sie bspw. als Suchmaschine nutzen, sich Bilder oder Texte erstellen lassen. Das Besondere ist, dass sie dabei sehr individuell und präzise auf den Suchbefehl eingeht.</i>	<i>AI is a program that can serve different purposes. For example, it can be used as a search engine or to create images or texts. What makes it special is that it responds to search commands in a very individual and precise manner.</i>
#13	P86, L2	<i>Selbstlernendes Programm</i>	<i>self-learning program</i>
#14	P143, L2	<i>KI ist ein technologisches Produkt, das in der Lage ist, eine große Menge an Informationen zu verarbeiten, verschiedene Aufgaben auszuführen und vor allem die Fähigkeit zu haben, wie ein Mensch zu lernen.</i>	<i>AI is a technological product that is capable of processing large amounts of information, performing various tasks, and, above all, learning like a human being.</i>
#15	P65, L1	<i>neuronale Netzwerke</i>	<i>neural networks</i>
#16	P130, L2	<i>online Maschinenmensch / Roboter, der Informationen generiert.</i>	<i>online machine-human / robot that generates information.</i>
#17	P83, L1	<i>ChatGPT</i>	<i>ChatGPT</i>
#18	P100, L2	<i>Ich kenne mich wirklich viel zu wenig aus, ich habe keine Ahnung. Mich interessiert das Thema tatsächlich eher wenig.</i>	<i>I really don't know enough about it, I have no idea. I'm actually not very interested in the topic.</i>
#19	P73, L2	<i>Ich muss noch lernen.</i>	<i>I still have to learn.</i>
#20	P27, L2	<i>alles ist realistisch ehrlich gesagt</i>	<i>Everything is realistic, to be honest</i>
#21	P103, L2	<i>Nichts ist unmöglich.</i>	<i>Nothing is impossible.</i>

#22	P143, L2	<i>Nach oben sind keine Grenzen gesetzt</i>	<i>There are no limits to the sky</i>
#23	P85, L1	<i>[Potenziale] Sehe ich nicht</i>	<i>[Potential] I don't see any</i>
#24	P52, L2	<i>Ich habe keine Interesse mit KI und dann sehe kein Potenzial [...]</i>	<i>I'm not interested in AI, so I don't see any potential [...]</i>
#25	P62, L1	<i>Es wird das wissenschaftliche Arbeiten verändern so wie der Taschenrechner den Matheunterricht veränderte</i>	<i>It will change academic tasks just as the calculator changed math class</i>
#26	P13, L2	<i>Ich mache mir Sorgen , dass Teile der Bevölkerung sich unnützlich fühlen: Potenzial für soziale Unruhe.</i>	<i>I am concerned that parts of the population will feel useless: potential for social unrest.</i>
#27	P28, L2	<i>Es wird schwieriger zu wissen was wahr oder künstlich ist.</i>	<i>It will become more difficult to know what is real and what is artificial.</i>
#28	P105, L2	<i>Dass künstliche Intelligenz in Kriegen und zum Schaden der Menschheit eingesetzt wird</i>	<i>That Artificial Intelligence will be used in wars and to harm humanity</i>
#29	P59, L2	<i>Zeitsparen bei umfangreichen Aufgaben</i>	<i>Saving time on extensive tasks</i>
#30	P83, L1	<i>Gewisse Aufgaben zu erleichtern oder Dinge verständlicher zu machen</i>	<i>Making certain tasks easier or easier to understand</i>
#31	P23, L2	<i>Man kann niemals damit eine Hausarbeit schreiben</i>	<i>You can never write a term paper with it</i>
#32	P80, L2	<i>Menschen brauchen immer noch Menschen. Und KI macht immer noch Fehler.</i>	<i>People still need people. And AI still makes mistakes.</i>
#33	P110, L2	<i>Auch wenn sich die KI weiterentwickelt, ist menschlicher Input weiterhin erforderlich.</i>	<i>Even as AI continues to evolve, human input will still be necessary.</i>
#34	P15, L2	<i>Vielleicht kann KI mit Korrekturlesen helfen oder Quellen zu finden oder Ideen strukturieren.</i>	<i>Perhaps AI can help with proofreading, finding sources, or structuring ideas.</i>
#35	P16, L1	<i>Es fällt vielen schwer, Hausarbeiten anzufangen und stattdessen schieben sie die vor sich her. Wenn durch eine KI geholfen und Ideen gesammelt und strukturiert werden können, bekommen viele mehr Motivation.</i>	<i>Many people find it difficult to start homework assignments and instead put them off. If AI can help by gathering and structuring ideas, many people will be more motivated.</i>
#36	P137, L2	<i>[...] Erleichterung beim Umgang mit komplizierten Programmen wie bei der Datenanalyse [...]</i>	<i>[...] simplification when dealing with complicated programs such as data analysis [...]</i>
#37	P71, L1	<i>Die KI kann keine menschlichen Gefühle und Gedanken erkennen. Somit kann sie Prüfungsleistungen auch nur dann bewerten, wenn so etwas völlig irrelevant für die Aufgabenstellung ist. Hier zählt auch der individuelle Schreibstil rein.</i>	<i>AI cannot recognize human feelings and thoughts. This means that it can only evaluate exam performance if this is completely irrelevant to the task at hand. Individual writing style also plays a role here. Can AI</i>

		<i>Kann eine KI erkennen, was gut und was schlecht formuliert ist?</i>	<i>recognize what is well written and what is poorly written?</i>
#38	P132, L2	<i>KI als persönlicher Lerncoach hat keine Empathie, was wichtig ist</i>	<i>AI as a personal learning coach lacks empathy, which is important</i>
#39	P17, L1	<i>KI macht häufig Fehler oder arbeitet mit 'ausgedachten Fakten' und ist dadurch nicht sonderlich verlässlich.</i>	<i>AI frequently makes mistakes or works with "made-up facts" and is therefore not particularly reliable.</i>
#40	P137, L2	<i>Quellen recherchieren -> momentan schwierig, weil z.B. ChatGPT nicht existierende Quellen und beim Zitieren falsche Textstellen/keine Textstellen angibt</i>	<i>Researching sources -> currently difficult because, for example, ChatGPT cites non-existent sources and quotes incorrect passages/no passages at all.</i>
#41	P50, L2	<i>Transkriptionen und Barrierefreiheit in der Bildung</i>	<i>Transcriptions and accessibility in education</i>
#42	P70, L1	<i>Als Individuellen Lerncoach (zu viele Schüler zu wenig Lehrer; jeder Schüler kann mit KI individueller gefördert werden</i>	<i>As an individual learning coach (too many students, too few teachers; every student can be supported more individually with AI</i>
#43	P100, L2	<i>Meine Sorgen bestehen darin, dass der Denkprozess immer öfter an Dritten überlassen wird – bis man selbst nicht mehr in der Lage ist, einen Gedanken zu formulieren.</i>	<i>My concern is that the thought process is increasingly being left to third parties—until one is no longer able to formulate a thought themselves.</i>
#44	P82, L1	<i>Frage zu Potenzialen: KI kann meiner Meinung nach schnelles Recherchieren ermöglichen und dafür sorgen, dass man schnell eine grundsätzliche Idee von Aufgaben haben kann. Sehr gut für Vorträge/Hausarbeiten</i>	<i>Question about the potentials of AI: In my opinion, AI can enable quick research and ensure that you can quickly get a basic idea of tasks. Very good for presentations/term papers</i>
#45	P82, L1	<i>Frage zu Sorgen: Falsche Informationen</i>	<i>Question about concerns towards AI: Incorrect information</i>
#46	P35, L2	<i>Die KI kann Wege zu neuen Ideen verkürzen und die menschliche Kreativität fördern, aber nur wenn man sie richtig nutzt (als Hilfsmittel und nicht als Autor) und wenn man lernt, genaue Fragen zu stellen.</i>	<i>AI can shorten the path to new ideas and promote human creativity, but only if it is used correctly (as a tool, not an author) and if we learn to ask precise questions.</i>

Appendix II

Codes used for responses to question asking for AI definitions

Code# in Paper "Meta-Cognition on AI" (CCD, 2025)	Original German code used in coding process	Code definition	Anchor examples (uncorrected German original)
Code 1 (inductive): Comparison to human behavior / human intelligence, or rational behaviour	1 – Vergleich zu menschlichem Verhalten / menschlicher Intelligenz, bzw. rationalem Handeln	“computers [that] perform cognitive tasks, usually associated with human minds, particularly learning and problem- solving” (Russel & Norvig, 2010, p. based on the original definition by McCarthy, 1956) and “that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment” (Nilsson, 2009, p. xiii).	“Künstliche Intelligenz versucht Antworten und Reaktionen ähnliche die eines Menschen zu geben.”; “Tools/Programme/Frameworks, die die Aufgaben erledigen können, die gewöhnlicher Weise menschlicher Intelligenz bedürfen (zB Entscheidungen treffen, Übersetzen usw)”
Code 2 (inductive): Acquisition of knowledge / learning without (human) guidance, solely through input	2 – Aneignung von Wissen / Lernen ohne (menschliche) Anleitung allein durch Input	Reference to more recent attempts at definition: “Artificial Intelligence (AI) is a broad term used to describe a collection of technologies that can solve problems and perform tasks to achieve defined objectives without explicit human guidance” (Cisek, 2021, p. 4)	“KI bezeichnet eine Maschine oder ein Programm, die/das lernfähig ist.”; “Ein Programm, welches mit meinen Input (und je nach vorhandenen Input/Informationen) neue Informationen bzw. Antworten generiert”; “Selbstlernendes Programm”
no separate code used for combinations of several codes, codes are always named directly	3 – Mischung: Menschliche Intelligenz + Wissensaneignung durch Input	see 1 + 2	“Ein Algorithmus, der durch Unmengen an eingespeisten Daten von Nutzern deren Verhalten kopieren und damit “eigenes” Verhalten generieren kann”; “KI kann wie selbstständig Verbindungen zwischen Themen herstellen und daraus Schlussfolgerungen zu ziehen und dazu lernen. In diesem Sinne bildet sie eine Analogie zu den kognitiven Prozessen im

			Gehirn/dem menschlichen Gedächtnis, bei denen stetig neue neuronale Verbindungen entstehen und neues Wissen gespeichert und mit bereits vorhandenem Wissen verknüpft wird
Code 7 (inductive): Naming / listing general (a) or specific (b) functions / goals of genAI (AI-based tools).	4 – Benennung / Auflistung von allgemeinen (a) oder konkreten (b) Funktionen / Zielen von KI (- Tools)	The functions or intended uses of AI tools are identified: general functions, such as being helpful (4a), or specific functions (4b), such as translation (translation program) / grammar correction / idea generation (a + b not always easy to differentiate).	“Hilfsmittel für unser Leben, kann z.B. das Erlernen anderer Sprachen, oder das Lehren erleichtern”; “Ein Schreibprogramm mit Zugang zu verschiedenen Plattformen, die einem helfen können verschiedenste Fragen zu beantworten oder Anregungen zu geben oder auch Aufgaben zu lösen”
Code 8 (inductive): AI is reduced to being a searchable database or an advanced search engine.	5 – Datensammlung / Suchmaschine	AI is reduced to being a searchable database or a better search engine.	“Künstliche Intelligenz ist eine Programm, dass Informationen aus einer Datenbank verarbeitet und so Fragen beantworten kann (mit der größten Wahrscheinlichkeit aus der Datenbank).”; “Ein Tool die Aufgaben erledigen können , indem es große Menge von Daten sammelt.”
Code 6 (inductive): Naming a specific application / AI-based tool, such as ChatGPT (and thus equating AI with the named tool).	6 – konkrete Anwendung: z. B. ChatGPT	Name a specific application / AI tool, such as ChatGPT.	“ChatGPT”
Code 4 (inductive): AI as equal to specific analytical method(s): algorithm, neural network, deep learning, machine learning, neural networks, etc.	7 – Konkrete Analysemethode(n) : Algorithmus, neuronales Netz(werk), DeepLearning, Machine Learning, Neuronale Netzwerke, etc.	AI as a generic term for various methods such as machine learning, data mining, neural networks, or specific algorithms. AI as a generalizing term that encompasses various analytical methods: machine learning (ML), neural networks, and deep learning (Celik et al. 2022).	“Eine auf Wahrscheinlichkeit Theorie basierte mathematische Modelle”; “Eine Netzwerk des Neuron-Verbindungen, die trainiert wird, bestimmte Aufgaben zu erfüllen.”

Code 5 (inductive): AI as synonym for robotics / robots	8 - Synonym für Robotics / Roboter	Many people think that AI is synonymous with robotics (Long & Magerko, 2020, p. 3).	Künstliche Intelligenzen sind schlaue, nicht- menschliche Roboter oder Programme.
no separate code used for combinations of several codes, codes are always named directly	9 - Mischung verschiedener Codes (dann in Kommentar Nummern konkret benennen)	Note: use as infrequently as possible	“Eine neue Tool, die nicht menschliche Intelligenz ist aber von Menschen entwickelt wurde. KI - Anwendungen befinden sich in sehr viel verschiedenen Bereichen. Mit dieser neuen Benutzung der KI kann man leicht und schnell viele Problem / Fragen lösen und antworten.” (1, 4)
Code 10 (inductive): unclassifiable	10 - nicht kategorisierbar	Answer cannot be interpreted (in terms of the codes)	“Bei der Bearbeitung des Textes ist zu beachten, dass es sich lediglich um einen Vorschlag handelt, der nicht als hervorragend bewertet werden kann. Hilfe sollte in Anspruch genommen werden.” unsere Zukunft” “Computer, der gut Verlinkungen bearbeiten kann”
n.a.	n.a.	No entry / empty field or not answered	“fällt mir gerade leider nichts ein”

Appendix III

Coding of responses to open-ended questions about potential and concerns regarding the use of AI (in studies)

n = 136, frequent multiple codings

Part 1: “Where do you see the greatest potential for AI in the next 2-3 years?” Teil 1: “Worin sehen Sie das größte Potenzial von KI in den nächsten 2-3 Jahren?”		
Code	Description (original code in German in parenthesis)	Number (177)
1-1	General: AI makes life easier in various areas (Allgemein: Erleichterung durch KI in verschiedenen Lebensbereichen)	29
1-2	Completion of routine tasks (Erledigung von Routineaufgaben)	15
1-3	Generate and structure ideas (Ideen generieren und strukturieren)	13
1-4	Literature research & source work (Recherche & Quellenarbeit)	13
1-5	Data processing/ data analysis (Datenverarbeitung/-analyse)	11
1-6	Text work (formulation, correction)	11

	(Textarbeit (Formulierung, Korrektur))	
1-7	Customization of learning processes (Individualisierung von Lernprozessen)	11
1-8	Completion of creative tasks (Erledigung von kreativen Aufgaben)	9
1-9	Programming (Programmieren)	9
1-10	Translation (Übersetzung)	7
1-11	Improvement and democratization of education (Verbesserung und Demokratisierung von Bildung)	7
1-12	Despite potential, reference to risks (Trotz Potenzialen, Verweis auf Risiken)	5
1-13	General skepticism, no potential (Allgemeine Skepsis, keine Potenziale)	11
1-14	No response / I don't know (Keine Angabe / weiß nicht)	26

Part 2: “What do you consider unrealistic in terms of AI in the next 2-3 years? What concerns do you have? ” (Teil 2: “Was halten Sie für unrealistisch in Bezug auf KI in den nächsten 2-3 Jahren? Welche Sorgen haben Sie? ”)		
Code	Description	Number (204)
2-1	General: People are important; machines cannot do everything. (Allgemein: Menschen sind wichtig, Maschinen können nicht alles)	38
2-1a	→ People are important: grading exams (→ Menschen sind wichtig: Prüfungen bewerten)	16
2-1b	→ People are important: Learning coach/ Learning is social (→ Menschen sind wichtig: Lerncoach/ Lernen ist sozial)	10
2-1c	→ People are important: various academic activities (→ Menschen sind wichtig: verschiedene akademische Tätigkeiten)	10
2-1d	→ People are important: unique characteristics such as subjectivity, personality, emotions, and interaction (→ Menschen sind wichtig: Alleinstellungsmerkmale Subjektivität, Persönlichkeit, Emotionen und Austausch)	13
2-2	Replacing/degrading people leads to injustice (Ersatz/Herabsetzung von Menschen führt zu Ungerechtigkeiten)	21
2-3	AI use makes people lazy, dumber, and dependent (Menschen werden durch KI-Nutzung faul, dümmer und unselbstständig)	20
2-4	Fake news, falsehoods, bias, unreliability (Fake, Unwahrheiten, Bias, Unzuverlässigkeit)	16
2-5	great power of AI to the detriment of humanity (große Macht von KI zum Schaden der Menschheit)	10
2-6	Loss of value in art, etc. (collapse of the creative industry) (Wertverlust in Kunst usw. (Zusammenbruch Kreativindustrie))	7
2-7	Data protection (Datenschutz)	5
2-8	General confidence, no worries	12

	(Allgemeine Zuversicht, keine Sorgen)	
2-9	No response / I don't know (Keine Angabe / weiß nicht)	25
2-10	unclassifiable (nicht kategorisierbar)	1

МЕТАКОГНІЦІЯ І ШТУЧНИЙ ІНТЕЛЕКТ: ЩО СТУДЕНТИ ДУМАЮТЬ ПРО ВИКОРИСТАННЯ ШТУЧНОГО ІНТЕЛЕКТУ В АКАДЕМІЧНИХ ЦІЛЯХ

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Рукопис надійшов 3.05.2025; отримано після рецензування 21.06.2025; опубліковано online 1.08.2025.

Анотація

Наразі точиться широка дискусія щодо застосування інструментів на основі штучного інтелекту в академічному контексті, зокрема в галузі академічного письма студентів, а також щодо навичок, пов'язаних зі штучним інтелектом, необхідних для цих занять (див. Long & Magerko, 2020). Використання генеративного штучного інтелекту (genAI), що базується на великих мовних моделях (LLM), є дуже перспективним для полегшення освітніх процесів, особливо для студентів, для яких мова академічних досліджень не є рідною. Перехресне опитування студентів німецьких університетів (von Garrel & Mayer, 2023) показало, що приблизно дві третини респондентів вже використовували інструменти на основі genAI в зимовому семестрі 2022/23, але лише чверть робила це (дуже) часто. Релевантні дослідження переважно дали серію окремих показників використання genAI в академічних колах. Істотним обмеженням цих досліджень є відсутність будь-якого розрізнення між студентами L1 і L2. Проведене нами опитування зосереджується на потенційних групових відмінностях між студентами, для яких німецька мова є L1, і тими, для яких німецька мова є L2, а також має на меті відстежити розвиток використання інструментів на основі genAI, знання про genAI та ставлення до genAI у перші роки загальної доступності цих інструментів (2023-2025). Із цією метою було оцінено загалом 143 анкети студентів різних навчальних програм (переважно німецька мова як іноземна та друга мова) Лейпцизького університету за дворічний період. Результати опитування, представлені в цій статті, зосереджуються на обізнаності студентів та їхньому ставленні до genAI / LLM (щодо додаткових результатів див. Ketzer-Nöltge & Rüger, у друці).

Ключові слова: *штучний інтелект, генеративний ІІІ, використання ІІІ, грамотність у сфері ІІІ, великі мовні моделі (LLM), академічні цілі, ставлення студентів, довготривале дослідження, опитування*

Декларація про конфлікт інтересів

Автори не мають жодних конфліктів інтересів щодо цієї статті.

Cognition, communication, discourse, 2025, 30, 81-91

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-05>

Received April 20, 2025; accepted June 11, 2025; published online August 1, 2025.

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Як цитувати: Мартинюк, А., Гулієва, Д. (2025). Гештальтність перекладу. *Cognition, communication, discourse*, 30, 81-91. <https://doi.org/10.26565/2218-2926-2025-30-05>

Анотація

Метою статті є інтегрування теоретико-методологічних можливостей перекладознавства і когнітивної лінгвістики для запровадження цілісної методики перекладацького аналізу, яка базується на тлумаченні перекладеного мовного виразу як одного з взаємопов'язаних мовних і немовних (аудіо-візуальних та візуальних) експонентів загального гештальтного смислу, який конструється з урахуванням усіх можливих вимірів контексту: як мовного (семантико-синтаксичного), так і позамовного (ситуативного і соціально-культурного). Пропонована процедура перекладацького аналізу включає: 1) опис ситуативного та соціально-культурного контексту, в якому відбувається дія / подія, актуалізована аналізованим вербально-візуальним висловлюванням; 2) з'ясування внеску взаємопов'язаних лексико-фразеологічних і граматичних, а також візуальних експонентів в конструювання гештальтного смислу оригінального і перекладеного висловлювань. Застосування пропонованої методики для аналізу субтитрування мовлення Шерлока Холмса у британському міні-серіалі *Шерлок* виявило тенденцію збереження раціонального пропозиційного змісту при втраті модальних емоційно-оцінних смислових нюансів. Ця тенденція проявляється у: 1) спрощенні синтаксичної структури оригінального мовлення, що, проте, не знижує точності відтворення раціонального пропозиційного змісту; 2) відмові від перекладу часток і модальних дієслів, що ускладнюють присудок і беруть участь в нюансуванні категоричності дедуктивних припущень, а також конструюванні іронії і сарказму, що частково компенсується візуальним рядом і звуковою доріжкою; 3) збереженні ілюстративної відповідності зображення і мовлення, проте втраті вербально-візуальної гри через застосування українських еквівалентів, які цілісно переосмислюють референтну ситуацію, відображуючи її смисл, але складаються зі слів зовсім іншої, порівняно з оригіналом, семантики.

Ключові слова: вербально-візуальне висловлювання, експонент гештальту, контекст, модальність, перекладацький аналіз, пропозиційний зміст, субтитрування.

1. Вступ

Автори перекладацьких досліджень усіх рівнів – від курсової роботи до дисертації на ступінь доктора філологічних наук – мають спиратися на певну класифікацію перекладацьких рішень

або синтезувати положення кількох класифікаційних систем. Перекладацькі рішення називають різними термінами – “стратегія” / “strategy” і “тактика” / “tactic”, “метод” / “method”, “підхід” / “approach”, “процедура” / “procedure”, “операція” / “operation”, “трансформація” / “transformation”, “прийом” або “спосіб” / “technique”, “зміна” / “change”, “зсув” / “shift”, “заміна” / “replacement” (див. огляд термінів і співвідношень між ними Akhmedova, 2023). Ми вживатимемо термін “перекладацьке рішення”, який відображає розуміння перекладу як творчої діяльності (Rebrij, 2012) і видається нам найбільш універсальним.

Багаторічний досвід роботи з існуючими класифікаціями перекладацьких рішень як українських (див., зокрема, Karaban, 2004; Maksimov, 2012; Naumenko & Hordieieva, 2011), так і зарубіжних (див., зокрема, Newmark, 1988; Vinay & Darbelnet, 1958) авторів, свідчить, що усі вони орієнтовані на *структуралістську концепцію мови* (Saussure, 1916; Hjelmslev, 1953), де мова мислиться як система ієрархічно організованих одиниць символічної природи – фіксованих, конвенційних і довільних співвідношень форм і значень, які утворюють словник і комбінуються за певними правилами, що конституують граматику. Основною властивістю одиниць мови вважається розкладність на компоненти і комбінаторність. Відповідно, уявляється, що одиниця вищого рівня ієрархії утворюється на основі комбінування одиниць нижчих рівнів і значення одиниці вищого рівня можна вивести, комбінуючи значення її компонентів.

За такого підходу основною одиницею перекладацького аналізу є слово або словосполучення (вільне чи фразеологічне), яке є вирваним із ширшого мовного контексту, а точніше – із семантико-синтаксичної структури. Зарубіжні автори (див., наприклад, Newmark, 1988; Vinay & Darbelnet, 1958) переважно лише побічно і узагальнено згадують про граматику в загальному переліку перекладацьких рішень. Українські автори (див., наприклад, Karaban, 2004; Maksimov, 2012; Naumenko & Hordieieva, 2011) описують лексичні і граматичні трансформації окремо. В обох випадках не враховується, що саме семантико-синтаксична структура створює, так би мовити, “слоти”, які заповнюються різноманітними словами і словосполученнями, інтерпретація яких визначається не лише їхньою семантикою, зафіксованою в словниках, а й їхньою позицією у відповідній семантико-синтаксичній структурі і семантико-синтаксичними зв’язками з лексичними / фразеологічними одиницями, що заповнюють інші слоти цієї структури.

Цю особливість враховує *функціонально-когнітивна концепція мови*, запроваджена когнітивними лінгвістами (Lakoff, 1987; Langacker, 1987), які ставлять під сумнів загальноприйняте структуралістське положення, що значення складного виразу зводиться до значень його компонентів і граматичних правил їх комбінування, і постулюють, що функціонування граматично правильних речень-висловлювань уможливорюється активацією *цілісних концептуальних структур взаємопов’язаних елементів* (Fillmore, 1968; Lakoff, 1977), які репрезентують як мовний, так і немовний (раціональний та сенсорно-емоційний) досвід, вбудований в “безпосередній контекст мовлення (immediate context of speech), який в широкому сенсі інтерпретується як такий, що включає фізичні, ментальні, соціальні і культурні обставини” (Langacker, 2001, p. 145).

Для перекладознавства основний висновок, що закономірно витікає з прийняття функціонально-когнітивної концепції мови, зводиться до того, що значення будь-якого аналізованого перекладеного мовного виразу є компонентом більшої структури, яка відображається в нашій свідомості як гештальт, який хоч і можна умовно розкласти на компоненти, проте зрозуміти смисл цих компонентів можна, лише за умови усвідомлення усієї системи взаємозв’язків між ними. Відтак, перекладацький аналіз має враховувати:

1) семантико-синтаксичну структуру вербального висловлювання, яка конструює відповідну референтну ситуацію, компоненти якої позначені словами чи словосполученнями, які ми аналізуємо, і яка задає систему семантичних взаємозв’язків між цими компонентами;

2) мультимодальний ситуативний фізичний контекст, який з необхідністю включає як вербальні висловлювання, так і комунікативно значущу невербальну поведінку учасників укупі з усіма іншими сенсорно сприйнятими складниками комунікативної ситуації;

3) ментальний ситуативний і соціально-культурний контекст, в який занурене вербально-невербальне висловлювання, і без усвідомлення якого його неможливо комунікативно вдало інтерпретувати.

У цьому зв'язку видається актуальним переглянути традиційні методики перекладацького аналізу з урахуванням набутих когнітивної лінгвістики.

Метою статті є інтегрування теоретико-методологічних можливостей перекладознавства і когнітивної лінгвістики для розробки методики аналізу перекладу, яка б дозволила максимально залучити до розгляду контекст – як мовний (лексико-граматичний), так і позамовний (фізичний ситуативний і соціально-культурний).

Матеріал дослідження включає 97 фрагментів мовлення Шерлока Холмса в британському міні-серіалі *Шерлок* та українські субтитри у супроводі відповідного візуального ряду, представлені на сайті (Rezks-ua-tv, n. d.). Усі приклади, аналізовані у статті, дібрані з цього джерела.

Вибір матеріалу зумовлений тим, що він моделює реальну комунікативну взаємодію, де вербально-невербальне висловлювання є зануреним в сенсорно сприйнятий мультимодальний ситуативний контекст, і, водночас, ментально-усвідомлюваний поточний соціально-культурний контекст, який природним чином включає і осмислення фізичного ситуативного контексту.

Об'єктом аналізу є українські субтитри, що відтворюють мовлення Шерлока Холмса, персонажа британського міні-серіалу *Шерлок*, знятого за мотивами творів Конан Дойля, а **предметом** – взаємодія синтаксису, лексики / фразеології, і зображення / візуального ряду в конструюванні гештальтних смислів і відтворенні їх у перекладі.

Пропонований у статті підхід забезпечує перспективність цього дослідження порівняно з численними розвідками мультимодальності в (кіно)перекладі (Boria & Tomalin, 2020; Kaindl, 2013; O'Sullivan & Cornu, 2019; Pérez-González, 2014) і кіно дискурсі (Bateman & Schmidt, 2012; Krysanova & Shevchenko, 2022), зокрема, перекладі вербально-візуальної гри (Aleksandrova, 2020; Kaźmierczak, 2017; Martínez-Sierra, 2005), оскільки поняття гештальту дозволяє врахувати і поєднати усі можливі експоненти смислів, які беруть участь в продукуванні та інтерпретації оригінального мультимодального тексту і його перекладу.

2. Теоретико-методологічне підґрунтя

У когнітивній лінгвістиці інтерпретація речень-висловлювань, описується в термінах активації цілісних концептуальних структур взаємопов'язаних елементів, які мають різні назви в різних розгалуженнях цього наукового напрямку – “фрейми”, “ідеалізовані когнітивні моделі”, “образ-схеми”, “матриці доменів”, “ментальні простори”. Разом з тим, можна стверджувати, що базовою структурою когнітивно-лінгвістичного аналізу є *семантичний фрейм* – “набір концептів, пов'язаних таким чином, що для розуміння одного з них потрібно зрозуміти цілісну структуру, до складу якої вони залучені” (Fillmore, 1982, p. 111). Семантичні фрейми будуються на основі *пропозицій*, тобто абстрактних схем, що організують концепти, які репрезентують сутності оточуючого світу (ЩОСЬ / ХТОСЬ), в термінах певних *семантичних ролей* або *аргументів* – СУБ'ЄКТ ДІЇ, ОБ'ЄКТ ДІЇ, РЕЦИПІЄНТ, ЕКСПЕРІЄНСЕР, ІНСТРУМЕНТ тощо. Ці семантичні ролі задаються предикатом (ДІЯ / ПРОЦЕС / СТАН), який визначає кількість можливих аргументів і взаємовідношення між ними. Наприклад, речення-висловлювання *John bought Mary a birthday present* можна зрозуміти завдяки активації у свідомості інтерпретатора семантичного фрейму КОМЕРЦІЙНА ДІЯЛЬНІСТЬ, який задається предикатом *bought* (купувати-ДІЯ з БАГАТЬМА ОБ'ЄКТАМИ) і містить інформацію про усі взаємопов'язані сутності, задіяні в референтній ситуації: ПОКУПЕЦЬ-

СУБ'ЄКТ ДІЇ (*John*), ТОВАР-ОБ'ЄКТ ДІЇ (*a birthday present*), РЕЦИПІЄНТ-БЕНЕФІЦІАНТ ДІЇ (*Mary*). Активація фрейму не є суто автоматичним процесом і включає виведення *інференцій*.

Різні конфігурації аргументів і предикатів створюють різні *конструкти*, які є “проявом нашої здатності розуміти і відображати одну і ту саму ситуацію альтернативними способами” (Langacker, 2008, p. 43). Класичним прикладом різних конструктів однієї і тієї самої референтної ситуації є англійські конструкції активного і пасивного стану (*Mary loves John = John is loved by Mary*). Розбіжність граматичних структур мов оригіналу і перекладу може втілюватися в різних конструктах і спричиняти перекладацьку проблему навіть при відтворенні елементарних абстрактних речень. Наприклад, вибір пасиву в англійському описі бійки Джона і Біла *Bill was hit by John* імплікує емпатію мовця до Біла, на відміну від активу *John hit Bill* (Croft & Cruse, 2004, p. 61). Специфіка українського дієслівного стану, через яку активні конструкції переважно неможливо трансформувати в пасивні без стилістичного ушкодження (**Біл був ударений Джоном ← Джон ударив Біла*) спонукає перекладачів шукати інші можливості конструювання відповідної ситуації.

Перехід від аналізу абстрактних речень до живої комунікації, нехай і змодельованої в серіалі, дозволяє зрозуміти, що активну роль в конструюванні значення мовних виразів як експонентів компонентів гештальту відіграє накопичений досвід нашої взаємодії зі світом, який включає “(1) як нові, так і прийняті уявлення; (2) не лише “інтелектуальні” поняття, але також і сенсорний, моторний і емоційний досвід; (3) усвідомлення фізичного, лінгвістичного, соціального і культурного контексту; (4) уявлення, що скоріше розвиваються і розгортаються в різних часових рамках (аніж виявляються одночасно)” (Langacker, 2008, p. 30)

Однією з проблем, яка виникає при аналізі субтитрування і є тісно пов'язаною з орієнтованістю існуючих класифікацій перекладацьких рішень на дискретність аналізу, що не враховує гештальтність думки, є відсутність інструментів аналізу різноманітних відтінків модальності.

Модальність розуміємо як суб'єктивне ставлення мовця до змісту висловлювання, яке виражається поєднанням експонентів компонентів активованого висловлення гештальту, і накладається на раціональний пропозиційний зміст.

В аналізованому детективному серіалі модальність увиразнюється у двох аспектах мовлення Холмса:

1) ступені вірогідності того чи іншого припущення в *дедуктивному* мовленні персонажа, яке є низкою суджень-пропозицій, пов'язаних причинно-наслідковими відношеннями, де перше судження (аргумент) описує певний факт, стан справ, або подію, а наступне є умовиводом (наслідком), що випливає з аналізу цього факту, стану справ або події, і робиться на підставі інференцій; синтаксично і аргумент, і наслідок можуть бути представлені граматичними структурами різної кількості і складності (від складнопідрядних з багатьма підрядними до однослівних неповних речень); ступінь вірогідності, як правило, відтворюється модальними дієсловами у структурі присудку або вставними компонентами;

2) іронічному або саркастичному ставленні суб'єкта мовлення до об'єктів мовлення, співрозмовників і навіть до самого себе, яке виражається низкою взаємопов'язаних компонентів речень-висловлювань, включно з модальними дієсловами.

Специфікою аналізованого матеріалу є те, що модальність як смисловий компонент гештальту актуалізується мультимодально – за взаємодії мовлення і візуального ряду, який, як власне і мовлення, є частиною сенсорно-сприйманого фізичного контексту як компоненту *події мовлення* (Langacker, 2001). Фізичний контекст події мовлення включає як фонове зображення / візуальний ряд, що репрезентує аналізовану подію в усіх її деталях (місце, час, кількість і ролі учасників), так і репрезентацію невербальної поведінки учасників, зокрема, міміки та інтонації.

В термінах Барта (Barthe, 1964/1986), у взаємодії зображення і тексту (вчений говорив, насамперед, про письмовий текст, проте, те ж саме стосується і усного мовлення), текст може

виконувати функцію “якоря” в морі смислів (anchorage) – як, скажімо, підпис “Дівчина на лавці”, що буквально описує зображення дівчини, яка сидить на лавці в парку і пильно вдивляється в далечінь алеї, або “реле-перемикача” (relay) – як підпис “В очікуванні коханого” під тим самим зображенням, який перемикає реципієнта із зображення на текст, привносячи в ситуацію нові смисли.

Подібним чином, візуальний ряд серіалу може виконувати або *ілюстративну функцію*, підтримуючи вербально-актуалізовані якірні смисли (див. приклади 5, 6), або *конструктивну функцію*, привносячи в ситуацію нові смисли і перемикаючи реципієнта з вербально-актуалізованих смислів на смисли, актуалізовані візуальним рядом (див. приклади 7, 8).

Що стосується невербальної (насамперед, міміки) і паравербальної (інтонації) комунікативної поведінки, вона теж може реалізувати *ілюстративну функцію*, коли мовлення і зображення активують одні й ті самі смисли, або *конструктивну функцію*, де мовлення і зображення активують різні смисли.

Беручи до уваги зазначені вище обставини, ми пропонуємо таку процедуру перекладацького аналізу:

1) опис поточного ситуативного контексту, в якому відбувається дія / подія, актуалізована аналізованим вербально-візуальним висловлюванням, з урахуванням соціально-культурного контексту, в який занурена ця дія / подія;

2) встановлення смислових зв'язків між граматичними та лексичними / фразеологічними компонентами оригінального і перекладеного висловлювань та з'ясування їхнього внеску в конструювання гештальтного смислу;

3) ідентифікація функції візуального ряду (як невербальної і паравербальної комунікативної поведінки, так і фонового зображення) та з'ясування його внеску в конструювання загального гештальтного смислу оригінального і перекладеного висловлювань.

3. Результати

Результати аналізу англо-українського субтитрування мовлення Холмса в британському міні-серіалі *Шерлок* свідчать, що субтитри, як правило, відтворюють раціональний зміст оригіналу, проте втрачають смислові нюанси модальності. Наприклад:

(1) *I referred to her husband in the past tense. She joined in. Bit premature. They've only just found the car.*

Наведений фрагмент діалогу між Холмсом та Ватсоном відбувається на місці чергового злочину – вбивства. Холмс викладає Ватсону аргумент, наслідком якого має стати умовивід, що дружина вбитого може бути причетною до його смерті. Аргумент, виражений лінійною послідовністю простого двоскладного речення з перехідним дієсловом-присудком, ускладненим обставиною способу дії [*Я говорив про її чоловіка в минулому часі*]; простого двоскладного речення з неперехідним дієсловом-присудком [*Вона приєдналася*], ситуативно неповного речення, яке надає оцінку діям дружини і робить акцент на деталі, що спонукала Холмса до підозри [*Трохи передчасно*] і простого двоскладного речення з перехідним дієсловом-присудком і додатком [*Вони тільки лише знайшли машину*]. Наведена низка буквально відтворених речень-висловлювань зводиться до інференції [Дружина говорила про чоловіка як начебто він був мертвим, хоча доказів цього не існувало]. На цей раціональний зміст накладається саркастично-глузливе ставлення Холмса до злочинниці, гру якої йому вдалося розкрити. Це ставлення виражається взаємодією вербаліки і невербаліки, де міміка і інтонація виконують ілюстративну функцію а саме: часткою *bit* – *трішки*, яка актуалізує протилежне буквальному значення, адже концепт ПЕРЕДЧАСНІСТЬ не передбачає градації, і,

водночас, мімікою Холмса (у напів-посмішці підняті кути губ, проте очі не посміхаються) та інтонацією (перебільшено висхідний рух тону на словах *Bit premature*).

Перед авторами субтитрів стоїть завдання виконати переклад, який би активував усі описані смислові нюанси. І це завдання можна вирішити, лише якщо сприймати і інтерпретувати референтну ситуацію як гештальт і не прив'язуватися до конкретного вербального і невербального втілення її компонентів:

(2) *Я говорив про її чоловіка у минулому часі. Вона теж. Зарано, поки що тіло не знайшли.*

Автори субтитрів зберігають структуру першого речення, вдаючись до лексичного узагальнення шляхом контекстуальної заміни дієслова-присудку *referred* – *згадував* на більш загальне *говорив*. Друге речення перетворюють в неповне, ситуативно залежне від першого, проте функційно еквівалентне оригінальному. Щодо ідентифікації перекладацького рішення, в існуючих класифікаціях практично неможливо знайти відповідний ярлик, оскільки вони не враховують когезійні і когерентні зв'язки між фрагментами мовлення. Третє і четверте речення об'єднують у складнопідрядне причини з головним безособовим, а при відтворенні словосполучення *found a car* вдаються до модуляції, пояснюючи / нагадуючи глядачеві, що у знайденому автомобілі тіла жертви не було. У підсумку, субтитри, як і оригінальний текст, підводять реципієнтів до інференції [Дружина говорила про чоловіка, як начебто він був мертвим, хоча доказів цього не існувало]. Проте, такий переклад не можна вважати комунікативно вдалим, оскільки автори субтитрів відмовляються від передачі частки *bit*, що унеможлиблює відтворення сарказму, хоча ця втрата частково компенсується візуальним рядом і звуковою доріжкою.

Наступний приклад також демонструє взаємодію вербального і невербального модусів в активації гештальтного змісту референтної ситуації:

(3) *So, this investigation might move a bit quicker if you were to take my word as gospel.*

Репліка Холмса представлена складнопідрядним причинно-наслідковим реченням. Модальне дієслово *might* у структурі присудку головного речення, яке, зазвичай, виражає малу вірогідність, у цьому контексті укупі з часткою *a bit* та модальним дієсловом *were* у структурі присудку підрядного речення імплікують іронію: насправді Холмс цілком впевнений, що розслідування рухалося б не трішки, а значно швидше, якби поліцейський інспектор Лейстер, з яким він якраз розмовляє, до нього прислухався. Іронія перетворюється на сарказм завдяки вживанню фразеологізму-метафори *to take one's word as gospel*, який означає "сприймати щось як істину", як наче б це був євангельський постулат. З урахуванням особистості Холмса, для якого не існує ні абсолютних авторитетів, ні абсолютних істин, тим більше релігійних, а також загального зневажливого ставлення Холмса до інспектора Лейстера, відомого глядачеві з контексту попередніх подій, висловлювання звучить як глузування над співрозмовником. Саркастична інтерпретація підтримується і невербальною поведінкою Холмса, подібною до описаної в процесі аналізу прикладу (1).

Автори субтитрів надають такий текст перекладу:

(4) *Це розслідування рухалось би дещо швидше, якби Ви вірили мені на слово.*

Переклад відтворює синтаксичну структуру оригіналу за допомогою умовного речення. Лексичне значення дієслова-присудку головного речення теж передається буквально, як і частка *a bit* – *дещо*, хоча при цьому спостерігаємо відмову від відтворення модального дієслова *might*, яке бере участь у вираженні сарказму. Фразеологізм *to take one's word as gospel* у підрядному умови замінено українським культурним еквівалентом – *вірити на слово*,

який, проте, не має метафоричного змісту. Як наслідок, втрачаються імплікації, пов'язані з євангельськими постулатами. До того ж, автори субтитрів відмовляються від перекладу модального дієслова *to be to (were)* у структурі присудку підрядного умовного речення. У підсумку, субтитри передають раціональний зміст оригіналу, однак втрачають образність і саркастичність мовлення Холмса і, відповідно, активують далеко не всі компоненти гештальту. Як і в субтитрах (2), смислові втрати частково компенсуються візуальним рядом і звуковою доріжкою, які репрезентують саркастичну міміку та інтонацію Холмса.

Представлений нижче приклад цікавий тим, що демонструє не лише взаємодію мовлення і невербальної та паравербальної комунікативної поведінки персонажів, а й ілюстративну функцію зображення / візуального ряду в конструюванні гештальтно пов'язаних смислів, де зображення взаємодіє з мовленням за принципом якорю:

(5) *We're looking for a killer who can climb, who can shin up a rope. Where else would you find that level of dexterity?*

Перебуваючи в цирку разом з Ватсоном і його колегою Сарою, Холмс озвучує свої дедуктивні міркування. Аргумент Холмса виражається складнопідрядною структурою з двома означальними підрядними реченнями, пов'язаними безсполучниковим сурядним зв'язком. Підрядні речення розкривають, якими навичками володіє ймовірний вбивця – може лазити вгору по стіні і мотузці. Наслідок втілюється риторичним реченням, буквальный зміст якого – [*Де ще б могли ви знайти такий рівень спритності?*] – виводиться із залученням візуального ряду, який ілюструє місце знаходження персонажів і наповнює риторичне запитання змістом, спонукаючи глядачів до інференції [Злочинця слід шукати в цирку]. Модальне дієслово *would* ускладнює структуру присудку риторичного запитання, надаючи висловлюванню Холмса певної відстороненості, стриманості, а укупі зі словосполученням *level of dexterity*, яке буквально означає *рівень спритності*, ще й передає іронію / сарказм, оскільки малоімовірно, що Холмс насправді вихваляє вбивцю за спритність. На вірність такої інтерпретації вказує і невербальна поведінка Холмса (відповідна міміка та інтонація, що описані в прикладі (1)).

Субтитри дещо зміщують смислові акценти оригіналу:

(6) *Наш убивця може лазити по стінах і мотузці. У кого ще можуть бути такі навички?*

Автори субтитрів перетворюють підрядно-сурядну синтаксичну структуру аргументу на просту, і зводять аргумент до констатації навичок убивці. Риторичне запитання переміщує акцент з місця на людину: в оригіналі Холмс акцентує на тому, що вбивцю слід шукати в цирку, а субтитри – на тому, що означені навички можуть бути притаманними артисту цирку. Візуальний ряд підтримує таку інтерпретацію. Словосполучення *level of dexterity* передається словом *навички*, що фактично є узагальненням перелічених в аргументі здібностей ймовірного вбивці. Через стислість і стилістичну нейтральність цей лексичний вибір не здатний передати іронії / сарказму. Як і в описаних вище випадках, ці смислові втрати частково компенсуються візуальним рядом і звуковою доріжкою, які репрезентують саркастичну міміку та інтонацію Холмса.

У представленому нижче прикладі зображення / візуальний ряд виконує конструктивну функцію, взаємодіючи з мовленням за принципом реле:

(7) *Because dead men get listened to, he needed to do more than kill you. He had to discredit every word you ever said about your father. And he had the means right at his feet.*

Холмс, Ватсон, Інспектор Лейстред та Генрі знаходяться на болоті. Вони знаходять доктора Франкланда з собакою-роботом, який є ключем до розкриття злочину. Холмс пояснює Генрі, чому злочинцю було важливіше дискредитувати, аніж просто вбити його. Аргумент виражений низкою синтаксичних структур: складнопідрядним причини [*Оскільки до мертвих прислухаються, йому потрібно було зробити більше, аніж вбити вас*]; складнопідрядним означальним, яке деталізує наміри злочинця [*Йому було потрібно дискредитувати кожне слово, яке ви коли-небудь говорили про свого батька*]; простим реченням з додатком і обставиною місця [*І він мав засоби прямо від ногами*]. Модальне дієслово *need* в першому реченні вказує на необхідність та імплікує сарказм, розкриваючи цинізм стратегії злочинця. Цікавим є повтор дієслова *had*, де перше вживання актуалізує модальне значення необхідності, а друге – володіння. Повтор привертає увагу до другого вживання дієслова *had*, яке є частиною фразеологізму *to have right at one's feet*. Цей фразеологізм є полісемічним і має як буквальне значення – “в безпосередній фізичній близькості; близько до ніг”, так і переносне значення – “асоціюється з легким успіхом”, яке підкреслює легкість доступу до засобів дискредитації. Вербальний модус активує переносне значення виразу, а візуальний ряд – його буквальне значення, вказуючи на те, що засоби втілення задуму злочинця – болото, перетворене на засіб вбивства за допомогою собаки-робота, – в буквальному сенсі знаходилося у злочинця під ногами. Одночасна активація двох несумісних семантичних структур створює вербально-візуальну гру.

Автори субтитрів відтворюють описану референтну ситуацію таким чином:

(8) *Бо мертвим вірять, треба було не вбити тебе, а дискредитувати те, що ти казав про свого батька. А зброя була просто під носом.*

Синтаксична структура фрагменту змінюється. Автори субтитрів наслідують лише граматичну структуру підрядного причини, вдаючись до модуляції значення дієслова-присудку *get listened to* – *прислухаються* → *вірять*. Головне речення складнопідрядного причини спрощують і з'єднують з підрядним означальним, яке теж спрощують, відмовляючись від перекладу низки компонентів, внаслідок чого губиться імплікація, що те, що задумав злочинець, на думку Холмса, було гіршим за вбивство. Останнє речення, яке бере участь у створенні мовної гри, цілісно переосмислюється: *засоби (means)* замінюються на *зброю*, а фразеологізм *to have right at one's feet* – на український еквівалент, який образно переосмислює концепт ДОСТУПНІСТЬ: “бути під ногами” → “бути під носом”, адаптуючи мовне втілення цього концепту до української лінгвокультури. У підсумку, вербально-візуальна мовна гра втрачається.

4. Висновки

Інтегрування теоретико-методологічних можливостей перекладознавства і когнітивної лінгвістики для розробки методики аналізу перекладу, яка б дозволяла взяти до уваги як мовний (семантико-синтаксичний), так і позамовний (як фізичний – візуально-аудіальний, так і ситуативний, і соціально-культурний) контекст, дозволяє зрозуміти, що комунікативно вдале відтворення значення мовного виразу є можливим, лише за умови усвідомлюваного / неусвідомлюваного розгляду цього мовного виразу як одного з взаємопов'язаних мовних і немовних (невербальних / візуально-аудіальних та зображальних / візуальних) експонентів загального гештальтного смислу, який конструюється з урахуванням усіх можливих вимірів контексту. Існуючі класифікації перекладацьких рішень не відображають комплексної мультимодальної природи кіноперекладу.

Результати аналізу англо-українського субтитрування мовлення Холмса в британському міні-серіалі “Шерлок” виявляють такі тенденції.

1. Має місце спрощення синтаксичної структури оригінального мовлення в перекладі (опущення компонентів складних речень і трансформація складних речень у прості), що частково пояснюється часовими і просторовими обмеженнями, які накладаються на субтитрування як вид кіноперекладу. Проте, синтактичне спрощення не знижує точності передачі раціонального пропозиційного змісту оригінального мовлення.

2. Спостерігається відмова від перекладу часток і модальних дієслів, що ускладнюють присудок і беруть участь в нюансуванні категоричності дедуктивних припущень, а також конструюванні іронії і сарказму. Втрата цих суб'єктивно-оцінних модальних смислів частково компенсується візуальним рядом і звуковою доріжкою.

3. При відтворенні взаємодії вербального і візуального модусів в конструюванні смислів, авторам субтитрів вдається досягти ілюстративної відповідності зображення і мовлення, проте не вдається вирішити більш складного завдання відтворення конструктивної функції візуального ряду, зокрема при перекладі вербально-візуального каламбуру, через застосування українських еквівалентів, які цілісно переосмислюють референтну ситуацію, відображуючи її смисл, проте складаються зі слів зовсім іншої, порівняно з оригіналом, семантики.

Перспективи дослідження пов'язуємо з тестуванням запропонованої методики перекладацького аналізу на ширшому мультимодальному матеріалі з подальшою її деталізацією.

Декларація про конфлікт інтересів

Автори не мають жодних конкуруючих інтересів або фінансової підтримки, про які вони могли б заявити.

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TRANSLATION AS GESTALT

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Received April 20, 2025; accepted June 11, 2025; published online August 1, 2025.

Article citation: Martynyuk, A., & Huliieva, D. (2025). Translation as gestalt. *Cognition, communication, discourse*, 30, 81-91. <https://doi.org/10.26565/2218-2926-2025-30-05> (in Ukrainian).

Abstract

This article aims to integrate theoretical and methodological affordances of translation studies and cognitive linguistics to introduce a holistic methodology of translation analysis, which is based on the interpretation of the translated linguistic expression as one of the interconnected linguistic and non-linguistic (audio-visual and visual) exponents of a general gestalt meaning, which is constructed with the participation of all possible dimensions of the context: both linguistic (semantic-syntactic) and extralinguistic (situational and socio-cultural). The proposed procedure for translation analysis includes: 1) a description of the situational and socio-cultural context in which the action/event, actualized by the analysed verbal-visual utterance, takes place; 2) clarification of the contribution all the interconnected lexical-phraseological and grammatical, as well as visual exponents make into the construction of the gestalt meaning of the original and translated utterances. The application of the proposed methodology to the analysis of the subtitling of Sherlock Holmes' speech in the British mini-series *Sherlock* revealed a tendency to preserve rational propositional content while losing modal emotional-evaluative shades of meaning, which is manifested in: 1) simplification of the syntactic structure of the original speech, which, however, does not reduce the accuracy of the reproduction of the rational propositional content; 2) refusal to translate particles and modal verbs that complicate the predicate and participate in constructing certainty degrees of deductive assumptions, as well as irony and sarcasm, which is partially compensated by the visuals and the soundtrack; 3) preservation of the illustrative correspondence of the image and speech, but the loss of verbal-visual puns due to the use of Ukrainian equivalents, which holistically rethink the referential situation, reflecting its meaning, but consist of words of completely different semantics compared to the original.

Keywords: *context, gestalt exponent, modality, propositional content, subtitling, translation analysis, verbal-visual utterance.*

Declaration of competing interest

The authors have no conflict of interest or funding support to declare.

Cognition, communication, discourse, 2025, 30, 92-104

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-06>

Received May 6, 2025; accepted June 23, 2025; published online August 1, 2025

MULTIMODAL SIMILE IN INTERNET MEMES ON X RESPONDING TO THE 2024 U.S. PRESIDENTIAL ELECTION

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Article citation: Meleshchenko, O., & Radchenko, O. (2025). Multimodal simile in internet memes on X responding to the 2024 U.S. presidential election. *Cognition, communication, discourse*, 30, 92-104. <https://doi.org/10.26565/2218-2926-2025-30-06>

Abstract

This article explores how multimodal similes are construed in internet memes on the X platform responding to the 2024 U.S. presidential election. Drawing on insights from cognitive linguistics, a multimodal simile is defined as a simile in which the source and target domains are cued in different modes. The study analyzes four representative memes that prompt figurative comparisons between verbally and visually cued domains. Captured in the *X is like Y* format, multimodal similes are categorized as either narrow-scope or broad-scope. Narrow-scope examples typically pair emotionally charged images with *when-* or *if-*clauses, prompting viewers to map specific emotional or physical states onto abstract experiences. These similes rely on EFFECT-FOR-CAUSE metonymy, mapping vivid, delimited attributes onto the target domain. In contrast, broad-scope similes tend to involve *be like*-clauses to trigger more complex, dynamic mappings. For instance, one meme mocks Kamala Harris's electoral loss by comparing her campaign trajectory to the erratic movement of a faulty shopping cart. Another critiques Democratic priorities through a comparison of Democrats with a lone figure celebrating a minor legal victory amid urban devastation. These examples rely on frame metonymy and metaphor to construct satirical political critique. In all cases, humor emerges from the incongruity between incompatible conceptual structures, while the simile serves as both a cognitive mechanism and a communication strategy. The findings suggest that, despite being often overshadowed by metaphor in cognitive-linguistic research, a multimodal simile has substantial rhetorical power, exploiting the affordances of verbal and visual modes to forge figurative links across disparate conceptual domains.

Key words: 2024 U.S. presidential election, cognitive linguistics, humor, internet memes, metaphor, metonymy, multimodal simile, X platform.

1. Introduction

With the rise of social media, internet memes have become one of the most popular forms of online communication. Given their ability to influence public opinion, exacerbate ideological divisions and convey group identity through humorous and emotionally charged content (Mahasneh & Bashayreh,



2021; Ross & Rivers, 2018; Shifman, 2014), memes are by no means just entertainment; they play a significant role in political discourse.

Originally coined by Richard Dawkins (1976) to describe a replicable unit of culture, the term *meme* has gained renewed relevance in the digital era. According to the *Merriam-Webster Dictionary* (n.d.), a meme is “an amusing or interesting item (such as a captioned picture or video) or genre of items that is spread widely online especially through social media.” In social studies, memes are more precisely defined as “(a) a group of digital items sharing common characteristics of content, form, and/or stance, which (b) were created with awareness of each other, and (c) were circulated, imitated, and/or transformed via the Internet by many users” (Shifman, 2014, p. 41).

The aftermath of Donald Trump’s 2024 election victory once again underscored the rhetoric power of memes. In the days following the announcement, supporters of Trump flooded the platform X (formerly Twitter) with memes celebrating his return and poking fun at Democratic figures such as Joe Biden, Kamala Harris, and the Democratic Party as a whole. Often satirical, emotionally charged, and visually exaggerated, these memes served as digital acts of political alignment, critique, and celebration. They functioned not only as humorous commentary but also as ideologically motivated discourse reflecting partisan attitudes in the wake of the election.

A large portion of these memes took the form of image macros, i.e., captioned pictures combining verbal and visual cues to deliver punchy, often humorous political messages. Although internet memes appear in a variety of formats, including captioned images, short videos, hashtags, slogans, and recurring characters like *Pepe the Frog* or *Scumbag Steve*, one of the most prevalent formats is the image macro. Recognized as a prototypical meme form (Lou, 2017, p. 107), image macros are described as “emerging multimodal constructions relying as much on image as on text” (Dancygier & Vandelanotte, 2017, p. 565).

This article focuses on image macros as multimodal constructions that activate a variety of cognitive mechanisms, including metaphor, metonymy, and more complex conceptual processes. Due to their multimodal nature, these memes exploit the semiotic affordances of both verbal and visual modes, fostering creativity in the evocation of multimodal tropes. As a result, a growing body of research has explored visual and multimodal metaphor and metonymy in internet memes (Benammar, 2024; Bondarenko, 2024; Dancygier & Vandelanotte, 2017; ElShami, Shuaibi, & Zibin, 2023; Huntington, 2016; Krysanova, 2024; Martynyuk & Meleshchenko, 2022; Meleshchenko, 2024; Ngan & Dung, 2025; Piata, 2016; Scott, 2021; Younes & Altakhaineh, 2022). Despite this scholarly interest, multimodal simile remains significantly understudied, with relatively few contributions addressing this trope (Benammar, 2023; Dancygier & Vandelanotte, 2025; Lou, 2017; 2021). This imbalance is perhaps unsurprising, given simile’s long-standing secondary status to metaphor in cognitive linguistics.

This study *aims* to address this gap by investigating how multimodal similes are constructed in internet memes, specifically those disseminated on X/Twitter in the wake of the 2024 U.S. presidential election. The specific *objectives* are: 1) to define a multimodal simile and distinguish it from metaphor from a cognitive linguistics perspective; 2) to identify types of multimodal similes used in internet memes related to the 2024 U.S. presidential election; 3) to explore their socio-pragmatic potential to construct political critique and generate humor through incongruity.

The *material* for this study consists of 100 multimodal memes retrieved from the social media platform X (formerly Twitter) between November 6, 2024, and January 19, 2025, a period marked by a surge in politically charged online discourse following the U.S. presidential election.

2. Methodology: theoretical background

Simile has long been treated in literary studies and rhetoric as a figure of speech (a trope) that prompts an explicit comparison between two unlike entities (Leech, 1969, p. 156). However, its close conceptual and functional ties to metaphor have prompted debates across disciplines regarding its theoretical status. According to common assumption both tropes rely on resemblance, but while

simile makes this resemblance explicit through comparative markers such as *like* or *as*, metaphor presents it implicitly: the “parts of the analogy have to be hypothesized from 'what is there' in the text” (Leech, 1969, p. 153). In light of ongoing debates about whether simile is a subtype of metaphor or a distinct cognitive phenomenon, it is necessary to consider it from the perspective of cognitive linguistics.

Conceptual Metaphor Theory (CMT) offers a foundational framework for understanding metaphor as a cognitive process rather than a figure of speech. In CMT, metaphor is defined as “understanding and experiencing one kind of thing in terms of another” (Lakoff & Johnson, 1980, p. 5). This process involves a partial and unidirectional conceptual mapping: the target domain is typically construed via a more concrete source domain (Kövecses, 2002). While similes also rely on mappings between domains, according to Dancygier and Sweetser (2014), simile and metaphor exhibit “different patterns of mapping” (p. 148). Similes result in more constrained, surface-level inferences, whereas metaphors encourage deeper conceptual integration (Dancygier & Sweetser, 2014, p. 148). Ruiz de Mendoza Ibáñez (2023, p. 125) similarly highlights that simile establishes a “less tight, more open relationship” than metaphor, with a stronger emphasis on overt comparison and less subjectivity.

This contrast is also reflected in their constructional properties. Similes “rely heavily on comparative forms” (Israel et al., 2004), and their markers such as *like* or *as* play a crucial role in signaling the need to identify a mapping between source and target domains. As Dancygier and Sweetser explain, “the target domain is ‘compared’ to the source and construed in terms of it” (2014, pp. 146–147). This contrast is formalized in the simile pattern *X is like Y*, as opposed to the metaphorical *X is Y*.

While the general construction of similes involves explicit comparison, scholars have noted important differences in how similes are interpreted. To capture this variation, Moder (2008) introduced, and Dancygier and Sweetser (2014) later elaborated on, a distinction between narrow-scope and broad-scope similes. Narrow-scope similes are characterized by their ability to “evoke specific dimensions of similarity” (Dancygier & Sweetser, 2014, p. 143) between the source and target domains. They “are restricted in their interpretation by the explicit linguistic specification of the attribute or dimension along which the mapping from source to target domain is to be made” (Moder, 2008, p. 312). These similes highlight specific qualities or features and typically serve an attributive function. For instance:

(1) *He slept like a log.*

In this case, the attributes STILLNESS, IMMOBILITY, and UNRESPONSIVENESS are mapped from the source domain (LOG) to the target domain (PERSON), yielding a focused and constrained comparison.

Broad-scope similes, by contrast, tend to be “typically relational rather than attributive and more open in their possible interpretations than the narrow scope similes” (Moder, 2008, p. 313). They are less accessible and require context to determine the relevant dimension of comparison. Consider a popular joke employing a broad-scope simile:

(2) *Men are like plungers... they spend most of their lives in a hardware store or the bathroom.*

Here, the simile establishes a humorous, less immediately obvious comparison. The link between *men* and *plungers* is inferred through context and background knowledge. Further explanation helps to evoke similarity between the behavior of men and plungers in terms of preferred ways of spending time.

While these distinctions are useful for analyzing verbal similes, the digital environment introduces an additional layer of complexity: multimodality. Accordingly, we can extend

Forceville's (2009) concept of multimodal metaphor, "whose target and source [domains] are represented exclusively or predominantly in different modes" (p. 24), to a multimodal simile, defined a simile in which the source and target domains are cued in different modes. Lou (2017, p. 109), who has conducted an extensive research of multimodal similes, points out that unlike multimodal metaphors, where the verbal and visual components are tightly integrated to evoke a conceptual blend, multimodal similes often preserve the distinctiveness of each mode and selectively map specific attributes across them.

According to Lou (2017, p. 128), in multimodal broad-scope similes the visual input may initially appear jarringly incongruous with the accompanying text. However, the intended comparison can often be uncovered by unpacking frame metonymies (Lou, 2017, p. 128), defined as cases where "characteristic parts of a frame are sufficient to call up whole frames" (Dancygier & Vandelandotte, 2017, p. 567). This aligns with Kövecses & Radden's (1998, p. 39) broader definition of metonymy as a cognitive process in which one entity provides access to another within the same domain.

Multimodal narrow-scope similes, on the other hand, tend to be more accessible. Even if the image and text initially seem mismatched, they usually highlight a clear perceptual similarity, facilitating mapping between the modes (Lou, 2017, p. 128). Lou (2017) further distinguishes between two subtypes of a multimodal simile: the *multimodal mimetic simile*, where the image directly depicts the action or emotion expressed in the text, and the *source-focused simile*, in which the absurdity or incongruity of the image is preserved rather than clarified by the verbal component (p. 128). In the current study, mimetic similes are treated as a subtype of narrow-scope simile, as they highlight a specific emotional or perceptual attribute across modalities. While source-focused similes fall outside the scope of this analysis, they remain relevant for broader typological classification.

Finally, it is important to acknowledge that meaning-making in social media discourse is "a complex process that depends on the information supplied by different semiotic resources, social context of perception, and the end user's personal experience" (Shevchenko, 2022, p. 67). Accordingly, the analysis of multimodal similes in this study takes into account not only verbal and visual cues of the analyzed memes, but also the specific political and social context in which they emerged.

Having outlined the main types of simile and their multimodal characteristics, we now turn to the analysis of multimodal simile in internet memes on X created and disseminated in response to the 2024 U.S. presidential election.

3. Multimodal simile types in political internet memes: analysis and discussion

3.1. Multimodal narrow-scope simile: *when*-memes

As an initial example, let us consider Figure 1, which features a photo of Kamala Harris accompanied by a *when*-clause. According to Lou (2017; 2021) this meme is a typical *when*-meme that employs both visual and verbal modes to cue a multimodal simile.

In figure 1 below, the meme presents a close-up image of Kamala Harris, the former Vice President of the United States and a 2024 presidential candidate. The blurred background draws the viewer's full attention to Harris's facial expression: she appears serious and strained, her eyes seem thoughtful, and there is no trace of a smile. She looks as though she is either processing something deeply disappointing or reacting to a harsh realization. The verbal component of the meme is split into two parts: the top caption reads, "*When you tried to be unburdened by what has been,*" while the bottom line adds an ironic twist: "*Only to realize you were the burden all along.*"

While the meme does not include an explicit simile marked by conventional forms such as *like* or *as*, it cues a multimodal simile through the interplay of the *when*-clause and the image with the image functioning as the *then*-clause of a complex sentence. As argued by Lou (2021, p. 141),

when-memes are simile-based in that they use an image to show someone or something feeling the same as what is expressed verbally.



Figure 1. “*When you tried to be unburdened by what has been ... Only to realize you were the burden all along*” meme (Coach Cam, 2024).

In this example, the emotional state suggested by Harris’s facial expression is mapped onto the situation in which someone realizes they are the cause of their own problems. Importantly, Harris is not actually realizing that she has done something wrong; rather, she appears to be giving an interview. Consequently, the multimodal simile cued by this meme can be paraphrased as:

- (3) *When you tried to be unburdened by what has been only to realize you were the burden all along feels like Kamala Harris feels in a 2022 NBC interview.*

The text cues the target domain of the simile, while the image, capturing Harris’s expression of tension and disappointment, cues the source domain. Notably, in the 2022 NBC interview, Harris discussed the nation’s “suffering” following the Supreme Court’s decision on abortion rights (Kamisar, 2022). Thus, the emotional state cued by the image and mapped onto the target domain can be interpreted as *SUFFERING* and *DISAPPOINTMENT*. It is accessed through an *EFFECT-FOR-CAUSE* metonymy: *HARRIS’S FACE EXPRESSION FOR MENTAL STATE*.

In the context of Donald Trump’s presidential victory, this meme is not intended to elicit identification with Harris personally. The audience is neither invited to empathize with her nor to view the situation from her perspective. Instead, the meme mocks Harris as someone whose well-meaning efforts (“*when you tried to be unburdened*”) ironically contributed to the very outcome she likely feared, i.e., Trump’s re-election. The humor arises from the incongruity between the earnest tone of the original quote and the unexpectedly self-deprecating punchline. Harris’s visible expression of disappointment reinforces this incongruity and amplifies the meme’s humorous effect.

3.2. Multimodal narrow-scope simile: *if*-memes

Figure 2 provides another instance of a multimodal narrow-scope simile, which unlike the previous example uses a conditional clause. This meme features a viral photo of Joe Biden taken during the White House Christmas tree lighting ceremony on December 5, 2024. The image was widely

circulated online, sparking numerous memes that poked fun at the former U.S. president's appearance.

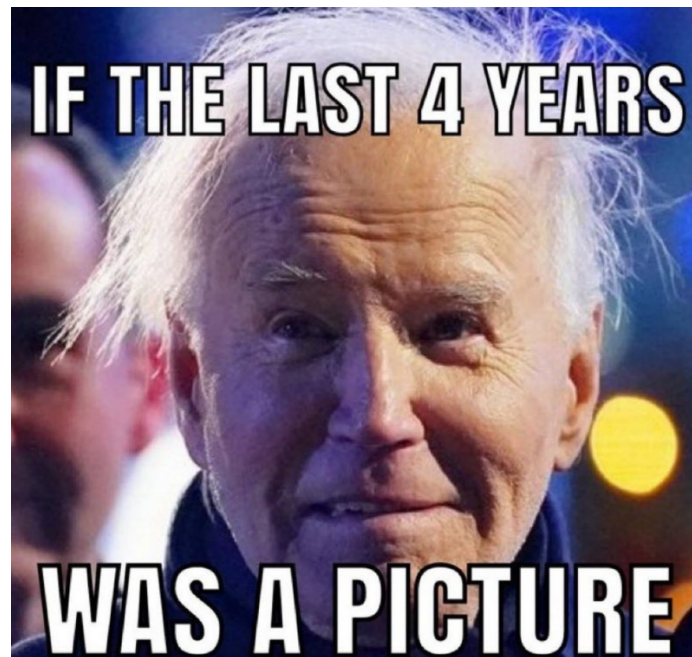


Figure 2. “*If the last four years was a picture*” meme (Gunther Eagleman, 2024)

In the meme, Biden appears disheveled and weary: his hair is unkempt, his eyes look slightly unfocused, and his facial expression conveys fatigue, confusion, and decline. The deliberately unflattering photograph is paired with a caption in bold white capitals, placed above and below the image, reading “*If the last 4 years was a picture.*”

Although this meme does not include a conventional simile marker such as *like* or *as*, we argue that it still functions as a narrow-scope simile. The meme invites the viewer to compare an abstract temporal experience, “*the last four years*”, to a single, emotionally charged image. The multimodal simile it evokes can be paraphrased as:

- (4) *Biden’s four years of leadership look like Biden looked in 2024 White House Christmas tree lighting ceremony.*

The photo of Biden cues the source domain of the simile while the text “*the last four years,*” put in the context of Trump’s recent victory, cues its target domain – Biden’s four years of leadership. Crucially, it is not Biden as a political figure per se who is targeted by the simile; rather, the simile maps certain attributes onto his presidential term to reflect the collective experience of those years. Biden’s visual appearance maps DECLINE, DISORDER and FATIGUE through an EFFECT-FOR-CAUSE metonymy (BIDEN’S PHYSICAL APPEARANCE for MENTAL/PHYSICAL STATE) onto the target domain of the simile. The comparison remains restricted to a specific, perceptually salient attribute: emotional/physical decline and fatigue. This mapping aligns the example with narrow-scope similes¹, which are typically characterized by clearly delimited interpretive dimensions and vivid, often exaggerated, representations of the source domain.

The rhetorical force of the simile also relies on a CONTROLLER FOR CONTROLLED metonymy (Kövecses & Radden, 1998), in which the agent (Biden) stands for his state. Therefore, a metonymic chain might be further inferred: BIDEN’S APPEARANCE FOR BIDEN’S MENTAL/PHYSICAL STATE FOR THE STATE OF THE COUNTRY UNDER BIDEN’S LEADERSHIP. Although an underlying conceptual metaphor such as TIME IS A PERSON may also be at play, it is not structurally

foregrounded. The incongruity between the abstract notion of a timeframe and the concrete, exaggeratedly unflattering image of Biden creates a humorous effect, making the meme both expressive and emotionally charged.

3.3. Multimodal broad-scope simile: *be like*-memes and frame metonymy

Unlike the previous examples, where the source domains map vividly embodied physical and/or emotional states, restricting interpretation to salient attributes, the meme in Figure 3 is a broad-scope simile. Rather than merely attributing static qualities, it sets up a dynamic comparison between relational processes, namely, Kamala Harris's 2024 presidential campaign and the erratic movement of a shopping cart with a faulty wheel.

Wheels on a shopping cart be like



Figure 3. “*Wheels on a shopping cart be like*” meme (Planet Of Memes, 2024).

The meme contains the caption “*Wheels on a shopping cart be like*”, which appears above four images arranged in a 2×2 grid. The first three images are identical official portraits of Kamala Harris: she is smiling, dressed in a navy-blue jacket, with the U.S. flag in the background. The fourth image, located in the bottom right corner, is a still from a video in which she addresses her supporters for the first time after losing the 2024 presidential election. In this photo, Harris looks dejected; her expression suggests fatigue or discomfort. Unlike the earlier images, she is not smiling and appears against a backdrop of beige curtains rather than the U.S. flag seen in the portraits.

The verbal part of the meme evokes the frame of pushing a shopping cart with a faulty wheel, which is a frustrating and widely relatable situation. It introduces the simile through the phrase *be like*, a construction characteristic of African American Vernacular English (Cukor-Avila, 2002). Although one might say that the meme cues the simile *Wheels on a shopping cart are like Harris's presidential campaign*, we argue that this is the case of reversibility of a multimodal simile, which is made possible by the multimodal format as audiences are likely to process the image before reading the text (Lou, 2017, p. 118). That is, the meme is likely to invite the viewer to conceptualize Harris's presidential campaign in terms of the dysfunctional dynamics of a shopping cart and not the other way around. Therefore, the simile can be paraphrased as:

(5) *Harris's presidential campaign was like maneuvering a shopping cart with a faulty wheel.*

The source domain (maneuvering shopping cart with a faulty wheel) is conveyed exclusively through the verbal mode, while the target domain (Harris's campaign) is communicated visually. The comparison is constructed not just on static imagery, but through the progression and contrast between images, drawing attention to the shift from steady appearances to a moment of breakdown or exhaustion.

Crucially, the multimodal simile relies on frame metonymy. The dejected image of Harris does not merely depict her personal emotional state; it evokes the entire frame of her campaign with its challenges, public reception, and outcome. This is an example of PART-FOR-WHOLE metonymy, where one photograph representing the aftermath of Harris's campaign gives access to the whole frame.

The simile sets the stage for humor, which emerges from the incongruity between a familiar bodily experience (maneuvering a wobbling cart) and a complex political trajectory. By projecting low-stakes bodily annoyance (janky cart) onto high-stakes political failure, the meme mocks Harris by downscaling the seriousness of the situation. The meme frames Harris's campaign as unstable, difficult to manage, or directionless not by directly critiquing her as a person, but by exaggerating a mundane mechanical failure to reflect campaign mismanagement, contributing to its perceived downfall.

3.4. Multimodal broad-scope simile: *be like*-memes and metaphor

While the preceding meme constructs its multimodal simile through frame metonymy, the example in Figure 4 introduces an explicitly metaphorical setting in its source domain. It stages a dystopian landscape to compare alleged Democrats' post-election response to that of a lone figure finding consolation amid widespread ruin.

Democrats be like
“at least we have abortion”



Figure 4. “*Democrats be like ‘at least we have abortion’*” meme
(Declaration of Memes, 2024)

The meme displays a *be like*-clause at the top reading, “*Democrats be like ‘at least we have abortion’*”. Below, an image shows a lone woman in a tattered dress standing atop a hill, overlooking a devastated, dystopian city. Most of the buildings are damaged or collapsed, and a high-rise in the background is in flames, with thick smoke rising into the sky. The juxtaposition of the woman in the foreground and the sprawling destruction before her constructs a bleak, emotionally charged scene.

This juxtaposition creates a strong tension between the visual and verbal elements. The quoted speech “*at least we have abortion*” adopts a tone of defiant consolation or misplaced relief, which

clashes with the apocalyptic landscape. The simile, cued by the meme's construction, could be paraphrased as:

(6) *Democrats are like a person overlooking a destroyed city, saying, "at least we have abortion."*

Here, the verbally cued target domain, Democrats as a political group, is compared to a visually constructed source domain: a lone woman in a ruined cityscape responding with misplaced optimism. The verbal cue "*Democrats be like...*" initiates a comparison between a real-world political subject (Democrats after Harris's electoral loss) and a fictionalized scenario (a lone woman responding to a catastrophe). This broad-scope simile maps not just specific traits or emotions, but a full attitudinal stance, embodied in the woman's placement, passivity, and verbal reaction, which prompts viewers to interpret alleged consolation of Democrats through the lens of emotional misalignment with material reality.

The dystopian cityscape also functions metaphorically, reflecting the meme's portrayal of the United States' condition after Trump's victory. The metaphor THE U.S. AFTER BIDEN'S LEADERSHIP IS A RUINED CITY is implied, with DESTRUCTION mapped onto the outcome of Biden administration's policies (e.g., inflation, crime, and border control). Despite this 'ruin,' the meme suggests that Democrats remain focused on abortion rights, an issue portrayed here as relatively unimportant in the face of broader national concerns.

The meme also relies on metonymy. Firstly, the verbal input "*at least we have abortion*" evokes the broader frame of Democratic policies on abortion rights, encompassing their philosophy, achievements, and shortcomings. Notably, although Harris lost the presidency, Democrats succeeded in advancing abortion rights in 7 of the 10 states that held referendums during the 2024 presidential election (see Derøux & Romain, 2024). Secondly, the Democrats represent the Democratic Party as a whole, including its leadership, platform and voter base, which is an example of PART-FOR-WHOLE metonymy.

The humor derives from the incongruity between the visual chaos and the perceived triviality of the spoken consolation, reinforcing the critique of the Democratic Party's messaging. By visually dramatizing post-election devastation and pairing it with a statement of misplaced optimism, the meme presents a satirical critique of the Party's priorities, implying that this focus may have contributed to their 2024 electoral defeat.

4. Conclusions

This study has examined how multimodal similes were constructed and functioned in political internet memes in the aftermath of the 2024 U.S. presidential election. Drawing on insights from cognitive linguistics, a multimodal simile has been defined as a simile in which the source and target domains are cued in different modes. The study examined four representative memes that give rise to similes prompting comparisons between the source and target domains cued in verbal and visual modes.

The two narrow-scope similes (the memes with *when-* and *if-*clauses) focused on clearly delimited emotional or physical attributes such as SUFFERING, DISAPPOINTMENT, DECLINE, DISORDER, or FATIGUE, which were accessed through the EFFECT-FOR-CAUSE metonymy evoked by facial expressions or body language and mapped then onto abstract target domains like self-perception or a presidential term.

In contrast, the two broad-scope similes (both built around *be like*-clauses) engaged viewers in more complex mappings of relational or narrative processes accessed via frame metonymies and a metaphor. One meme poked fun at Kamala Harris presidential election loss by comparing her campaign to the experience of navigating a malfunctioning shopping cart. The other meme embedded the metaphor THE U.S. AFTER BIDEN'S LEADERSHIP IS A RUINED CITY within the source

domain of its simile. The meme aimed to critique Democratic priorities by comparing Democrats as a group to a lone figure rejoicing over the passing of an abortion law while observing a city in ruins.

Across all examples, humor emerged through incongruity between incompatible conceptual structures. Simile, as both a cognitive mechanism and a communication strategy, enabled comparison and critique: it brought together disparate domains while exposing contradictions, misalignments, or perceived weaknesses in political performance and public perception. The findings suggest that, although often eclipsed by metaphor in cognitive-linguistic studies, a multimodal simile possesses considerable potential to shape public opinion by creatively using the semiotic affordances of verbal and visual modes to construe figurative links across different conceptual domains.

Future research could apply this analytical framework to a broader corpus of political memes to examine how multimodal similes function across different genres, platforms, and ideological contexts. Corpus-based studies of simile constructions (e.g., *be like*-, *when*-, *if*-memes) could also yield deeper insight into how verbal and visual modes interact to co-construct meaning in online political discourse.

Notes

¹The “*If the last four years*” meme might be seen as edging toward broad-scope evoking the overall outcomes of Biden’s presidency. However, its mapping remains limited to specific attributes such as DECLINE, DISORDER, and FATIGUE, thus supporting its classification as a narrow-scope simile.

Declaration of competing interest

The authors have no conflict of interest or funding support to declare.

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МУЛЬТИМОДАЛЬНЕ ПОРІВНЯННЯ В ІНТЕРНЕТ-МЕМАХ НА ПЛАТФОРМІ X У КОНТЕКСТІ ПРЕЗИДЕНТСЬКИХ ВИБОРІВ У США 2024 РОКУ

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Рукопис надійшов 6.05.2025; отримано після рецензування 23.06.2025; опубліковано online 1.08.2025.

Анотація

У статті досліджується те, як конструюються мультимодальні порівняння в інтернет-мемах на платформі X, які присвячені виборам президента США 2024 року. Спираючись на здобутки когнітивної лінгвістики, мультимодальне порівняння визначається як порівняння, в якому джерельний і цільовий домени подаються в різних модусах. Проаналізовано чотири репрезентативні меми, які породжують порівняння, що спонукають зіставляти джерельний та цільовий домени, втілені вербальним та візуальним модусами. Мультимодальні порівняння мають формат *X є як Y* та поділяються на порівняння вузького та широкого діапазону. Приклади порівнянь вузького діапазону зазвичай поєднують емоційно насичені зображення з підрядними часу та умови, спонукаючи глядачів проектувати конкретні емоційні або фізичні стани на абстрактний досвід. Грунтуючись на метонімії НАСЛІДОК ЗАМІСТЬ ПРИЧИНИ, ці порівняння проєктують яскраві, чітко окреслені атрибути на цільовий домен. Натомість порівняння широкого діапазону зазвичай використовують конструкції з *be like*, залучаючи складніші та динамічніші мапування. Наприклад, один із мемів висміює поразку Камали Гарріс на виборах, порівнюючи траєкторію її кампанії з хаотичним рухом несправного візка для покупок. Інший критикує пріоритети демократів через порівняння їх із самотньою особою, що

святкує прийняття незначного закону на тлі зруйнованого міста. Такі приклади спираються на фреймову метонімію й метафору для створення сатиричної політичної критики. У всіх випадках гумор виникає з інконгруентності між несумісними концептуальними структурами, тоді як порівняння функціонує і як когнітивний механізм, і як комунікаційна стратегія. Отримані результати свідчать, що, попри те що порівняння часто залишається в тіні метафори у когнітивно-лінгвістичних студіях, мультимодальне порівняння має значний риторичний потенціал завдяки творчому використанню семіотичних можливостей вербального та візуального модусів з метою створення образних зв'язків між різними концептуальними доменами.

Ключові слова: *вибори президента США 2024 року, гумор, інтернет-меми, когнітивна лінгвістика, метафора, метонімія, мультимодальне порівняння, платформа X.*

Декларація про конфлікт інтересів

Автори заявляють, що не мають жодних конфліктів інтересів щодо цієї статті.

Cognition, communication, discourse, 2025, 30, 105-116

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-07>

Received April 15, 2025; accepted June 14, 2025; published online August 1, 2025.

IDENTITY DYNAMICS IN FRÉDÉRIC BEIGBEDER'S NOVELS: A SYNERGETIC ANALYSIS

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Article citation: Paramonov, B. (2025). Identify dynamics in Frédéric Beigbeder's novels: A synergetic analysis. *Cognition, communication, discourse*, 30, 105-116. <https://doi.org/10.26565/2218-2926-2025-30-07>

Abstract

The article explores the concept of identity in Frédéric Beigbeder's autofictional and autobiographical novels through the prism of synergetics, self-organised systems and meta-metaphor. By analysing the writer's works, including trilogies about Marc Marronnier and Octave Parango, as well as his autobiographical texts, the study examines how the processes of self-organisation and the interaction of various social, cultural and psychological factors determine the formation and evolution of characters' identity. The application of the synergetic approach reveals the mechanisms of identity formation through the system of attractors (goals, values, aspirations) and repellers (crisis events, destructive factors), which demonstrates the dynamics of the characters' self-identification in the conditions of modern socio-cultural changes.

Meta-metaphors in the works by Frédéric Beigbeder play an important role in the construction of layers of meaning, conveying complex aspects of individual and collective self-identification. For example, the arrest in *Un roman français* symbolises the awareness of his own past, the dam in *Un barrage contre l'Atlantique* reflects the struggle against destructive natural tendencies, the Tower of Babel in *Windows on the World* represents globalisation, and the cathedral in *Au secours pardon* illustrates existential crisis and the search for meaning. In addition, meta-metaphor serves as a way of literary transformation of biographical experience, turning the author's personal experiences into universal models of identity comprehension.

The results of this study show that Frédéric Beigbeder's autofictional and autobiographical works are complex multi-layered systems that combine the author's personal experience with postmodernist writing strategies. His protagonists function as dynamic systems undergoing transformations under the influence of social, cultural and psychological factors. The study highlights the significance of self-organised systems and meta-metaphors in the modelling of identity and opens new perspectives for the analysis of postmodern novels, showing how literature reflects the processes of personal self-determination in a changing world.

Keywords: *identity, synergetics, self-organised systems, meta-metaphor, discourse, Frédéric Beigbeder, autofictional/autobiographical novels.*

1. Introduction. Identity in literature: an interdisciplinary approach

Literature is a complex phenomenon that reflects not only objective reality, but also the multifaceted nature of human consciousness. As a means of representation of social processes and cultural transformations, it forms a space for comprehending identity in all its diversity. Literary texts of different epochs and traditions express both individual experiences and collective perceptions of

self-determination conditioned by historical, political and philosophical contexts. It follows that the study of literature as an instrument of identity modelling allows gaining a deeper understanding of the mechanisms of constructing the 'Self' in the socio-cultural space.

The study of identity is a complex scientific task due to its multidimensional and interdisciplinary nature. This concept covers a wide range of philosophical, sociological, psychological and cultural aspects, which requires the application of complex methodological approaches. In this context, the synergetic analysis, which allows considering the processes of formation and transformation of identity as a result of systemic interaction of various factors, is of particular importance. This approach contributes to a deeper theoretical reflection and empirical understanding of the mechanisms of identity construction in the socio-cultural space.

Western Romance literature, characterised by genre and thematic diversity, as well as the influence of various cultural and historical traditions, is a significant object of research in the context of identity studies. Its texts demonstrate the complex processes of formation, representation and transformation of the individual and collective self, which makes them valuable material for complex analyses.

Directly, the novels of the French writer Frédéric Beigbeder are largely represented by autobiographical and autofictional works, where a direct connection between the author and the literary projections of his protagonists can be traced, which makes him an ideal object for identity research. Such works allow to trace the evolution of author's identity against the background of socio-political and cultural changes (Allamand, 2018), globalisation, digitalisation, cancel culture, isolation and other phenomena of modernity (Sargar, 2013). The personal and creative experience of Frédéric Beigbeder provides valuable material for analysing the concept of identity, as it reflects the historical and cultural context in which his novels were created. The writer's childhood was spent in an affluent environment, which undoubtedly influenced the development of his cognitive and socio-emotional qualities. Growing up in a privileged environment, he had access to a wide range of educational opportunities and intellectual stimulation that laid the foundation for his later creative endeavours. Also, his life illustrates the complex interplay of factors of postmodern environment, social status, and personal choices that shaped his development as a literary figure. Frédéric Beigbeder's contribution to contemporary French and world literature is of particular importance due to several key aspects that make his works particularly valuable for identity studies.

Based on the foregoing, the **objective** of this study is to provide a comprehensive analysis of identity in the works of the French writer Frédéric Beigbeder through the lens of self-organizing systems and meta-metaphors. To achieve this objective, the following **tasks** must be undertaken:

- to analyse the concept of synergetics as the basis of the theory of self-organised systems and its connection with meta-metaphor;
- to define the concepts of meta-metaphor and self-organised systems in the context of literary analysis;
- to examine the novels by Frédéric Beigbeder in order to find examples of meta-metaphors and self-organised systems;
- to analyse these examples and their role in shaping and revealing the identity of the characters.

The subject of the study is the concept of identity in Frédéric Beigbeder's autofictional and autobiographical novels through the use of self-organised systems and meta-metaphors, and **the material** is Frédéric Beigbeder's works, namely his autofictional works of the trilogy about Marc Marronnier: *Mémoires d'un jeune homme dérangé* (Beigbeder, 1990), *Vacances dans le coma* (Beigbeder, 1994), *L'amour dure trois ans* (Beigbeder, 1997), the trilogy about Octave Parango: *99 Francs* (Beigbeder, 2000), *Au secours pardon* (Beigbeder, 2007), *L'Homme qui pleure de rire* (Beigbeder, 2020) and the autobiographical works: *Un roman français* (Beigbeder, 2009), *Un barrage contre l'Atlantique* (Beigbeder, 2022) and *Windows on the World* (Beigbeder, 2003).

2. Theoretical background

2.1. Synergetics principles of identity dynamics

Since antiquity, philosophers have endeavoured to find a universal method of cognition of existence. Thus, the ancient Greek thinker Heraclitus came to the conclusion that “only the whole has meaning” (Hussey, 1982, p. 36), thus initiating a new concept. This idea continued to develop and regained relevance in the 20th century. In 1926, the term ‘holism’ was introduced into philosophical discourse by Jan Smuts, who argued that the whole is more than the sum of its parts (Smuts, 2005/1927), and that the study of the world should take into account all its aspects.

It was the idea of holism that became one of the prerequisites for the emergence of synergetics, a scientific trend that explains the processes of formation and self-organisation of patterns and structures in open systems that are in a state far from thermodynamic equilibrium (Pikhtovnikova, 2018, p. 273). In other words, synergetics studies open systems, which are not only the objects of its research, but also actively interact with each other.

Moreover, objects in the field of synergetics exchange energy, information or matter with the environment. It is important to note that such systems can be of a different nature: they can be cognitive, social, technical, biological, chemical and even cosmic. In addition, synergetics analyses the phenomenon of self-organisation, a process in which different systems establish interrelationships that determine their further development.

2.2. Self-organised systems and their elements

Any system works on the principle of self-organisation if it is able to independently adequately respond to external changes and influences, adjusting its parameters, structure and functions, thus preserving its integrity. The response of the system is not necessarily reduced to passive self-adaptation – it may include active change of the system’s position and influence on the environment. Such a system acting on the basis of self-organisation is usually called self-organised (or self-managed).

A self-organised system inevitably has a purpose (or purposes) for its existence, which may change and develop over time. In addition, it is characterised by both obligatory and inadmissible factors that determine its stability or, on the contrary, can lead to its destruction. In synergetics, according to Pikhtovnikova (2018, p. 281) the goals of a self-organised system are denoted by the term ‘attractors’, and the factors necessary for its existence or detrimental to it are called ‘repellers’.

For example, in the system of self-identification, attractors can be, for example, a person’s awareness of his/her belonging to a certain social group and the desire to consolidate this feeling, or, on the contrary, the desire to leave this group. At the same time, the ability to perceive and realise one’s belonging acts as a repeller: in its absence or interruption, any self-identification disappears.

Attractors in systems often oppose repellers, facilitated by external factors. In synergetics, these external influences are called order parameters, because they can order the goals and structure of the system in a new, optimal way or, on the contrary, contribute to its destruction. Such relative opposition of attractors and repellers stimulates evolutionary changes, transformations of self-identity, which leads either to the formation of a new configuration of the system or to its collapse.

The concept of synergetics, which is an interdisciplinary field of knowledge that studies the processes of self-organisation and evolution of complex systems, has a deep connection with the concept of discourse. As a form of social interaction and communication, discourse manifests itself in a variety of forms and meanings, representing a dynamic process of exchanging information, ideas, and meanings. The synergetic approach allows considering discourse not only as a means of information transmission, but also as a mechanism that contributes to the evolution and self-organisation of social systems. Thus, synergetics and discourse, being interrelated concepts, open new horizons for analysing and understanding the processes occurring in socio-cultural systems.

It follows from the above that self-organised systems are systems capable of independently responding to external influences and changing their parameters, structure and functions to maintain integrity. Such systems are not limited to passive adaptation, but actively change their position,

influencing the environment. They are characterised by the presence of goals (attractors) that can develop and change over time, as well as limiting factors (repellers) that determine their stability or can lead to destruction.

2.3. Meta-metaphor as a symbol and image of identity

Every self-organised system has a certain purpose and a set of constraints that influence its development. In the context of discourse, the goal is to structure the communication process between participants, as well as to create and transmit specific information and knowledge. In literary discourse, the goal is to form and disseminate visual and aesthetic information that reflects the perception of the world and the author's interpretation. To realise this goal, a meaningful dialogue is established in literary discourse not only between the author and the reader, but also within the discourse itself – between the author and his protagonists.

Concretisation of the general purpose of the literary discourse is carried out through the author's choice of key ideas, characters, image construction, speech strategies, authorial codes and stylistic features. At the same time, the author has to take into account a number of constraints, such as the linguistic picture of the world of a given nation and epoch, accepted norms of narration, archetypes of genres and communicative practices, as well as the extra-linguistic context of the work's creation. In literary discourse, special importance is attached to metaphor and metonymy, which together form literary works, performing not only expressive, but also numerous pragmatic functions – from nominative and conceptual to evaluative, expressive and the function of influencing the recipient of information.

Pikhtovnikova (2012) states that classical metaphor is sometimes unable to fully express the author's idea, which is especially noticeable in voluminous works with deep content or in short satirical genres such as fables and parables (p. 15). In such cases, regardless of the length of the text, whether it is an extended work of fiction or a concise work united by a single idea, the concept of meta-metaphor is widely used. Individual metaphorical elements may carry different meanings, but they are united by a common semantic basis and are often organised in a hierarchical structure, which reinforces the common meaning.

“Meta-metaphor is defined as a system in which ordinary metaphors are combined into a two-way hierarchical construction, where each component forms a syntagmatic relationship in the text” (Pikhtovnikova, 2012, p. 16). Since all the elements of this metaphorical structure relate to the same object, meta-metaphor establishes semantic links on the paradigmatic axis, ensuring the expansion of meaning through remote interaction.

Undoubtedly, the idea of meta-metaphor is closely related to the features of identity, which brings additional comprehensiveness to the analysis of these concepts in the works by Frédéric Beigbeder. Meta-metaphor, which implies the use of symbolic elements and images (McLeish, 2020), fulfils a key role in conveying aspects of identity. As Prykhodko notes (2008, p. 29), these components have informational, evaluative and symbolic character.

In the works by Frédéric Beigbeder, the memories and personal characteristics of the protagonists are not presented as abstract categories, but realised through concrete symbols and images. Such image-symbolic elements highlight the identities, distinguishing them from their fictitious counterparts, and give the characters additional depth, making them more authentic to the reader.

The use of meta-metaphor in the writer's works emphasises the importance of symbolic components in the mechanisms of memory and identification, demonstrating the uniqueness of human experience, which cannot be fully emulated or interpreted by fully-fictional works. In addition, this literary technique enriches Frédéric Beigbeder's texts, offering readers the opportunity to view the world through his unique point of view. Frédéric Beigbeder masterfully integrates complex ideas and concepts through meta-metaphors, demonstrating the diversity of aspects of

human experience, and the study will be focused on the most expressive and significant examples of their use in his novels.

Thus, meta-metaphor is literary device in which the meanings of one concept are transferred to another through figurative expression, which makes it possible to establish new semantic links in the text. In literary discourse, meta-metaphor performs not only an expressive function, conveying aesthetic and conceptual information, but also a pragmatic function – it organises a dialogue between the author, his characters and the reader, increasing the emotional and evaluative impact of the work.

3. Results and discussion

3.1. Self-organised systems in Frédéric Beigbeder's narratives

From the perspective of complex self-organised identity systems, the autofictional novels by Frédéric Beigbeder are of particular interest. Changing the facts in the fiction only enhances the literary and narrative integrity of the three stories. By creating a fictionalised version of real events and people, the writer is given the creative freedom to shape the narrative to best suit the purpose of the story. This allows him to explore themes, develop characters, and create compelling storylines without being constrained by the confines of reality.

Frédéric Beigbeder's approach to autofiction is distinguished by the dual nature of the process of 'fictionalisation'. He does not limit himself to simply transforming his biography into a novel (the so-called 'fictionalisation of the self') but uses literature as a tool for creating an authentic narrative of the author's life, where it becomes an iconic mediator that defines both the 'Self' and the 'Other'. It is through literature that a virtual identity is formed, bringing together three key elements of autofiction: the emphasis on personal experience and self-expression, the representation of the self in the text, and the establishment of the boundaries of the autobiographical narrative. This dual process of fictionalisation turns autofiction into a factual event, positioning the writer in the role of a 'chronicler' who records real events and facts within the framework of literary reality, while blurring the line between fiction and reality.

The first novel in the trilogy about Marc Marronnier, *Mémoires d'un jeune homme dérangé* (Beigbeder, 1990), presents a young and promising socialite presenter, Marc Marronnier, who self-identifies with the bohemian community. In this context, the attractor, i.e., the goal of the system, belongs to this environment – a sense of wealth, elitism, popularity, prestige and influence. However, the meeting with Anne becomes a destructive repeller for the protagonist. His self-identification undergoes an evolution: although he continues to see himself as a representative of high society, this status is no longer paramount. From now on, the main attractor for him becomes his relationship with Anne and the time he spends with her.

In the next novel of the trilogy, *Vacances dans le coma* (Beigbeder, 1994), the new attractor of purpose is suppressed by the old one: the emphasis shifts again to belonging to the bohemian community – the protagonist goes to the noisiest party in Paris, where the further events of the narrative unfold. As it should be bright discos, all the 'stars' are gathered here: the best DJ, first-class music, excellent alcohol, small talk – all the signs of the elite community, which again draws Marc Marronnier into its net.

Towards the end of the novel, however, the protagonist encounters several destructive repellers. The first of these is an encounter with a girl who is "something different from all the other women at the party. She is different, she is above everyone else" (Beigbeder, 1994, p.196). As it turns out, this is Anne, to whom Marc Marronnier has already been married for two years. The second repeller, which radically changes the course of events, is the trio of dead, mutilated representatives of bohemia in the ladies' lavatory. After this, Mark finally cuts his ties with high society, seeking to leave the club with Anne as soon as possible. This destructive repeller not only affects the inner state of the protagonist but also sets a new narrative vector in the story of Marc Marronnier.

The final novel of the trilogy, *L'amour dure trois ans* (Beigbeder, 1997), centres on the protagonist's relationship with his objects of love. The narrative begins with the news of Marc Marronnier and Anne's divorce, which instantly destroys the former attractor – the goal of a comfortable and sincere relationship with which the protagonist was associated. However, the process of the destruction of this goal manifests itself gradually: Mark finds that he is unable to devote himself to one woman for the rest of his life; he finds long-term relationships commonplace, which prompts him to put forward the theory that “love lasts three years” (Beigbeder, 1997, p. 26). Without undergoing a significant evolution or changing the fundamental attractor, the protagonist merely replaces one link in the chain – Anne with Alice, a married woman he meets at his grandmother's funeral. And, having achieved what he wants, having established a new relationship and seemingly having restored his former purpose, the protagonist betrays Alice as he continues to count down the ‘three years’. On the so-called ‘Day X’ the novel ends, leaving the finale open-ended. In the final lines of the narrative, an author's voice declares: “*Marc Marronnier is dead. I killed him. From now on it is only me here, and my name is Frédéric Beigbeder*” (Beigbeder, 1997, p. 228), revealing the identity hidden behind the image of Marc Marronnier.

The Octave Parango trilogy is also of interest for the analysis of complex self-organised systems. In the first novel *99 francs* (Beigbeder, 2000) the protagonist appears before the reader in the role of a successful advertising specialist. His main goal (attractor) is to enter the circle of people who control the mass consumer. As he states:

It seems that you are free to choose, but here it is: one day you will see my product on the supermarket shelf and take it just to try it; believe me, I know the oats (Beigbeder, 2000, p.9).

Octave Parango is surrounded by an abundance of material wealth and leads a promiscuous lifestyle, indulging in drugs and sexual liaisons. It is during this period that he meets Sophie, who immediately attracts his attention. However, Sophie's confession that she is pregnant by him becomes fateful, which acts as a destructive factor (repeller). Now the protagonist faces a dilemma: to keep the usual way of free life, but without Sophie, or to experience the joy of fatherhood. Octave chooses the first option, which throughout most of the novel he deeply regrets. Unable to cope with the pain of loss and the grief that Sophie, who has left with their boss, commits suicide, the protagonist falls into despair, commits murder and ends up in prison.

In the next novel, *Au secours pardon* (Beigbeder, 2007), the plot begins when Octave Parango is released from prison. However, he is no longer offered prestigious positions as before but is merely assigned to the role of an ordinary scouter, which excludes him from the circle of the elite with whom he once identified. Octave goes to Moscow in search of a new face for a cosmetic advert. During this search, he encounters the harsh reality of Russian life – a destructive repeller which radically diverges from his previous ideas about the world. Amidst a maze of snow, beautiful women and cocaine, Octave falls in love with Lena, whom a priest has told him about. The climactic destructive repeller is the discovery that Lena is his daughter, which leads to the cathedral being blown up, where the story ends.

In *L'Homme qui pleure de rire* (Beigbeder, 2020), Frédéric Beigbeder presents a mature Octave Parango in a state of existential crisis, reflecting on his experiences and the pressing problems of modernity. This work acts not only as a memoir of the fictional protagonist's carefree years, but also as a socio-political analysis of globalisation, cultural interactions, and the influence of humour and social media on today's lifestyles. With a background in radio, Octave Parango assumes the role of an analyst, closely observing events and trends in society. The narrative focuses on how media, advertising and political structures influence people's behaviour and thinking. Frédéric Beigbeder's deep media background is obvious, as evidenced by his participation as a consultant to presidential candidate Robert Hue in 2002 and his experience as a television presenter.

The analysis of Frédéric Beigbeder's works through the prism of self-organised systems demonstrates the complex dynamics of identity of his protagonists and author. The writer's autofictional novels blur the boundaries between the real and the fictional, allowing him to construct a literary version of his biography and explore personal transformations. The development of Marc Marronnier and Octave Parango obeys the mechanics of attractors and repellers, which reflects the non-linear nature of their evolution. Each new stage of the protagonists' lives is conditioned by their encounter with destructive factors, leading to a change of reference points. In this context, Frédéric Beigbeder's autofiction becomes a way of literary reflection on identity, where the author's reflection becomes a tool for analysing and constructing subjective reality. By critically examining the relationship between Frédéric Beigbeder's personal development and the storylines of the characters Marc Marronnier and Octave Parango, the reader is able to see how the author's philosophical quest and evolution are reflected in his postmodern works, challenging established norms. This article section highlights the dynamic dialogue between the writer's self-analysis and the development of his characters' narrative, demonstrating how these processes are intertwined with his own evolution. Frédéric Beigbeder's oeuvre clearly shows the multifaceted nature of his literary personality, reflected in the autobiographical elements of his fictional works.

3.2. Meta-metaphors in Frédéric Beigbeder's texts

Meta-metaphor is not just a complex literary device, but a way of multilayered comprehension of reality, in which the personal, cultural and historical intersect. In Frédéric Beigbeder's texts, this technique plays a key role, turning biographical and social events into symbolic constructions that reveal the deep contradictions of the modern world. The arrest in *Un roman français* (Beigbeder, 2009), the dam in *Un barrage contre l'Atlantique* (Beigbeder, 2022), the Tower of Babel and the Twin Towers in *Windows on the World* (Beigbeder, 2003) – these images go beyond their literal meanings, connecting individual experiences with collective myths. The study of meta-metaphor in Frédéric Beigbeder's autobiographical novels reveals how literature redefines the boundaries of the personal and the social, the material and the symbolic, the real and the imaginary.

In *Un roman français* (Beigbeder, 2009), the arrest of Frédéric Beigbeder appears not only as a fact of the writer's biography, but also as a profound meta-metaphor. Here the notion of detention takes on a double meaning: it refers both to the literal confinement of his physical body and to the symbolic imprisonment of his memories, from which he tried to escape through amnesia as a consequence of his irresponsible lifestyle. Realising his guilt for his self-isolation from his past, his loved ones and his family, Frédéric Beigbeder decides to confront his own ignorance by breaking down the barriers between past and present, between who he was and who he has become, as if freeing himself from imprisonment. In the end, the writer emerges from his state of 'confinement' by recovering for himself the most significant memories. Thus, this 'confinement' becomes a meta-metaphor reflecting the complexity and multi-layered nature of the protagonist's inner world, which allows the reader to penetrate deeper into his experiences and understand how the past affects his present and future.

In *Un barrage contre l'Atlantique* by Frédéric Beigbeder the use of meta-metaphor is evident. The Cap Ferret peninsula, located between the Gulf of Arcachon and the Atlantic Ocean, acts as a barrier, shielding the inner part of the bay from sea waves. As the world faces unprecedented environmental challenges – accelerating climate change, increasing frequency of extreme weather events, rising sea levels and disrupted ecosystems – Frédéric Beigbeder raises the issue of environmental destruction and focuses on the role of humans in exacerbating natural disasters. This issue is reflected through the fate of ordinary people, represented by Benoît Bartherotte.

Thus, the 'dam' in this context appears not only as a material structure that protects against ocean waves, but also as a symbol of human resistance to destructive natural forces, climatic changes and other factors that hinder this struggle. The comparison with Marguerite Duras's *Dam Against the Pacific* only reinforces the multi-layered nature of this meta-metaphor, as in both works the dam becomes an emblem of human perseverance and determination in the face of

insurmountable natural and social forces. “Benoît is Marguerite Duras’s mother, who wanted to cultivate a rice field at sea level, on the swampy plain of Prey-Nop, in Cambodia” (Beigbeder, 2022, p.159).

In *Windows on the World* (Beigbeder, 2003), Frédéric Beigbeder resorts to a meta-metaphorical device to analyse human selfishness by integrating a motif from the Book of Genesis into the narrative. Despite the fact that he notes: “I do not know why I am thinking of the Book of Genesis” (2003, p.39), a complex metaphorical construction is evident in this context. The initial component of this meta-metaphor is the imagery of the Twin Towers, echoing the Tower of Babel described in Genesis 11, where people erected a tower in an effort to make themselves a name.

According to Frédéric Beigbeder, modern society has provoked God’s wrath by its desire for greatness and ‘reaching for the heavens’: this has manifested itself not only through the erection of the World Trade Centre towers, but also through attempts to establish a new global order through a capitalist system aimed at creating a unified social space. Thus, Frédéric Beigbeder uses the image of the Twin Towers as a symbol of the centre of world existence and American hubris, which is reflected in such names as ‘World Trade Centre’, ‘Windows on the World’, ‘The Greatest Bar on Earth’ and others, and the terrorist attack is perceived as a heavenly punishment for arrogance.

The second component of the meta-metaphorical image lies in the language in which, according to the Book of Genesis, the Tower of Babel was built before God mixed the languages, depriving people of mutual understanding and stopping the construction, and in modern English, which is its direct continuation. In the post-war period, American capitalism has had a significant impact on the world, infiltrating the fields of business, technology, science and entertainment. After the collapse of the USSR, according to the writer, the United States assumed a dominant position, actively promoting its own ideology. As Frédéric Beigbeder notes, “Today, having lost its antipode, America has become a ruler whom one would like to overthrow. America has become its own enemy” (2003, p. 125).

Thus, American English became the only ‘language of the future’ and ‘language of perspectives’, replacing the one that had lost its importance at the time of the Tower of Babel. The spread of English began as early as 1600 and went through a series of stages. The main stage occurred in 1900, when the colonies began to actively introduce education in English and organise special courses for immigrants in the USA, Canada and Australia. The independence gained by the British colonies in 1945 also contributed to its global spread.

The widespread use of English in science, technology, international organisations, aviation, maritime navigation, communications and business, as well as its use in the work of the United Nations, has stimulated the interest of young people from different countries in learning it. In particular, Frédéric Beigbeder notes that:

My parents met on the Basques coast, but almost immediately went to America to study. Today, no one remembers anymore how much American universities, particularly business schools, attracted brilliant French graduates (Beigbeder, 2003, p. 126).

Frédéric Beigbeder states: “I love Frenglish, it is the language of the future” (2003, p.128). In the novel *Windows on the World* (Beigbeder, 2003), the author focuses on the impact of Frenglish (French-English) on French culture. Language fusion, due to the influence of English on other language systems, is further developed in the context of globalisation. At the 1998 Debates of the Canadian Senate, former Senator Lowell Murray reflected on the precarious situation of French-speaking minorities outside Quebec, emphasizing that despite progress made under the Official Languages Act, French was still at a disadvantage compared to English. He pointed to census data showing stagnating or declining numbers of francophones in several provinces, which he saw as a result of institutional neglect and insufficient support for French-language education and services. Senator Murray warned that without sustained political will and federal commitment, French risked becoming marginalized in the face of English’s dominance in public life, media, and interprovincial

mobility (Senate of Canada, 1998). This displacement of other languages by English can be traced in many other countries.

Within the framework of global linguistic contacts, the influence of American English language is manifested in a variety of linguistic communities, as evidenced by the growing interest in the process of borrowing not only in French-speaking countries, but also around the world. The abundance of Anglicisms (Duběda, 2020) throughout the novel, as well as the presence of untranslated lines from American characters, serve a dual purpose: they not only contribute to a deeper immersion of the reader in the tragic atmosphere of the work, but also reflect the gradual embedding of English in other cultures as an integral part of the modern world. As Frédéric Beigbeder emphasises:

We should not be afraid of English words. They enter peacefully into our language, creating a world language, defying God: the only language of the Tower of Babel. The World's Words. The new lexicon of SMS (A12C4), emoticons on the Internet, the popularity of "dorky" spellings, the proliferation of argot – all these help to give birth to the newspeak of the third millennium (Beigbeder, 2003, p.128).

In autofiction, meta-metaphor fulfils the function of not only a literary device, but also a mechanism for comprehending reality through multilayered symbolic constructions. In the novel *Au secours pardon* (Beigbeder, 2007), meta-metaphor is realised through the image of the Cathedral of Christ the Saviour, chosen by Frédéric Beigbeder as a place of action for the protagonist Octave Parango. This architectural symbol is endowed with multiple layers of meaning, reflecting its complex history going back to the 19th century. The initial decision to build the cathedral was taken after the War of 1812, but the first project proposed for its construction was rejected, in part due to corruption factors. In 1832, the approved new project allowed ordinary citizens to raise funds for the construction of the building, which was consecrated in 1883. Thus, this meta-image embodies not only the memory of the past, but also the idea of national unity with a pronounced social connotation.

Later, in 1931, by order of the Soviet authorities, the cathedral was closed and destroyed, and its restoration in 1999 became a symbol of the people's repentance for their denial of God, giving the metaphor the meaning of a return to eternal religious values. On the other hand, the modern building is often criticised for its lack of authenticity, as it is perceived as a product of post-perestroika times, incapable of evoking true religious feelings. The protagonist of the novel *Au secours pardon* (Beigbeder, 2007) also fails to find a sacred beginning in the cathedral, which emphasises the absurdity of modern attitudes towards religion and sacred objects, adding a critical tone to the meta-metaphor. As in the trilogy about Marc Marronnier, Frédéric Beigbeder plays with the death of his alter ego in the work. In the finale of the novel *Au secours pardon* (Beigbeder, 2007), Octave Parango stages a terrorist attack by blowing up the Cathedral of Christ the Saviour, leaving some 526 people, including Octave himself, missing and 362 injured.

Thus, the image of the cathedral acts as a meta-metaphor uniting different levels of perception and interpretation of reality, which allows the author to reveal more deeply the complexity and contradiction of the modern world, and its subversion – the rejection of everything that connected it with the modern world and even humanity.

4. Conclusions

In this article, a comprehensive analysis of the concept of identity in the novels of Frédéric Beigbeder was carried out using the approaches of self-organised systems and meta-metaphor. The study allowed identifying the main mechanisms of formation and transformation of identity in autofictional literature on the example of the French writer's works.

The analysis has shown that Frédéric Beigbeder's autofictional novels are a complex system of interaction of various factors such as social environment, cultural transformations, personal

experiences and philosophical reflections of the author. His protagonists Marc Marronnier and Octave Parango act not only as a reflection of the writer's personal experience, but also as models for comprehending the dynamics of self-identity in the modern world.

The use of the synergetic approach allowed to consider Frédéric Beigbeder's novels as self-organised systems in which the process of identity formation is determined by the interaction of attractors (goals, values, aspirations) and repellers (destructive factors, crises, social challenges). This analysis showed that the protagonists' self-identity goes through stages of evolution, changes in priorities and encounters with external and internal conflicts.

Meta-metaphor, in turn, has been identified as a key tool for constructing layers of meaning in Frédéric Beigbeder's texts. Through symbolic and multilayered images, such as the arrest in *Un roman français* (Beigbeder, 2009), the dam in *Un barrage contre l'Atlantique* (Beigbeder, 2022), the Tower of Babel in *Windows on the World* (Beigbeder, 2003) and the cathedral in *Au secours pardon* (Beigbeder, 2007), the author conveys the deep processes taking place in the minds of the characters and society as a whole. These meta-metaphorical structures enhance the expressiveness of the narrative and create an additional dimension in the interpretation of identity.

Overall, the study confirmed that Frédéric Beigbeder's autofictional and autobiographical works are multi-layered constructions which reveal identity through the prism of self-organised systems and meta-metaphors. This approach allows for a deeper understanding of the literary mechanisms used by the author to model identity and opens up new perspectives for the analysis of postmodern novels in a broad cultural context.

The results obtained may be useful for **further research** in the fields of literary, philosophy, and cultural studies, as well as for a more detailed study of autofiction and autobiography as genres reflecting contemporary trends in the perception and construction of individual and collective self.

Declaration of competing interest

The author has no conflict of interest or funding support to declare.

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ДИНАМІКА ІДЕНТИЧНОСТІ У РОМАНІСТИЦІ ФРЕДЕРІКА БЕГБЕДЕ: СИНЕРГЕТИЧНИЙ АНАЛІЗ

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Рукопис надійшов 15.04.2025; отримано після рецензування 14.06.2025; опубліковано online 1.08.2025.

Анотація

У статті досліджується концепт ідентичності в автофікційній та автобіографічній романістиці Фредеріка Бегбеде крізь призму синергетики, самоорганізованих систем та мета-метафори. Аналізуючи твори письменника, включно з трилогіями про Марка Марроньє та Октава Паранго, а також його автобіографічні тексти, розглядається, як процеси самоорганізації та взаємодія різноманітних соціальних, культурних і психологічних чинників визначають формування та еволюцію ідентичності персонажів. Застосування синергетичного підходу дає змогу виявити механізми становлення особистості через систему атракторів (цілей, цінностей, прагнень) і репелерів (кризових подій, руйнівних чинників), що демонструє динаміку самоідентифікації протагоністів в умовах сучасних соціокультурних змін.

Мета-метафори у творах Фредеріка Бегбеде відіграють важливу роль у конструюванні смислових пластів, передаючи складні аспекти індивідуальної та колективної самоідентифікації. Наприклад, арешт у *«Французькому романі»* символізує усвідомлення власного минулого, гребля в *«Греблі проти Атлантичного океану»* віддзеркалює боротьбу з руйнівними природними тенденціями, Вавилонська вежа у *«Вікнах у світ»* репрезентує глобалізацію, а храм в *«Ідеаль»* ілюструє релігійну кризу та пошук сенсу. Крім того, мета-метафора слугує способом художньої трансформації біографічного досвіду, перетворюючи особисті переживання автора на універсальні моделі осмислення ідентичності.

Результати дослідження показують, що автофікційні та автобіографічні твори Фредеріка Бегбеде являють собою складні багатопланові системи, в яких особистий досвід автора поєднується з постмодерністськими стратегіями письма. Його протагоністи функціонують як динамічні системи, що піддаються трансформаціям під впливом соціальних, культурних і психологічних чинників. Дослідження підкреслює значущість самоорганізованих систем і мета-метафор у моделюванні ідентичності та відкриває нові перспективи для аналізу постмодерністської романістики, показуючи, як література віддзеркалює процеси самовизначення особистості у світі, що змінюється.

Ключові слова: ідентичність, синергетика, самоорганізовані системи, дискурс, мета-метафора, Фредерік Бегбеде, автофікційна/автобіографічна романістика.

Декларація про конфлікт інтересів

Автор заявляє про відсутність конфлікту інтересів або фінансової підтримки цієї роботи.

Cognition, communication, discourse, 2025, 30, 117-124

<https://periodicals.karazin.ua/cognitiondiscourse>

<https://doi.org/10.26565/2218-2926-2025-30-08>

Received April 23, 2025; accepted June 19, 2025; published online August 1, 2025.

МОВНО-СПЕЦИФІЧНІ ЗАСОБИ АКТУАЛІЗАЦІЇ КОГНІТИВНО-ПРАГМАТИЧНОГО ПОТЕНЦІАЛУ ОЦІНКИ

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Для цитування: Приходько, Г. (2025). Мовно-специфічні засоби актуалізації когнітивно-прагматичного потенціалу оцінки. *Cognition, communication, discourse*, 30, 117-124. doi.org/10.26565/2218-2926-2025-30-08

Анотація

Оцінка охоплює в мові широкий та великий спектр мовних одиниць різних рівнів, студіювання яких є актуальним в сучасній лінгвістиці. Це зумовлено тим, що взаємозв'язок між семантичними та прагматичними аспектами мовлення став однією з ключових проблем мовознавства. У цьому контексті оцінка постає як мовне відображення позамовної реальності. Мовна система, трансформуючи реальність, структурує її наново, надаючи імена об'єктам навколишнього світу. У процесі розвитку мови оцінка, реалізуючись у відкритій формі, поступово оформлюється в мовні одиниці – афікси, лексеми та окремі висловлювання. Метою даної статті є аналіз мовноспецифічних засобів реалізації прагмакогнітивного потенціалу оцінки.

Наразі залишаються недостатньо дослідженими механізми виникнення оцінної лексики та чинники, що забезпечують здатність слова виражати певне оцінне ставлення. Адже саме оцінне слово несе повний обсяг як денотативного, так і позаденотативного змісту. Усі слова з оцінним змістом можна умовно поділити на: а) раціонально-оцінні, в яких домінує логічне осмислення; б) емоційно-оцінні, що передають почуття, зумовлені соціальним сприйняттям об'єкта. Проте чітке розмежування цих типів ускладнюється, оскільки емоційні реакції зазвичай супроводжуються раціональними судженнями. Оцінне значення розглядається як різновид когнітивної інформації, що передається через семантику слова і відображає когнітивну структуру відповідного концепту в його дефініції. Воно функціонує як семантичний макрокомпонент, який входить до прагматичної зони значення і реалізується в словниковому тлумаченні. Різноманітність форм оцінного значення, що структурують лексичну семантику, ілюструє складну природу ціннісного сприйняття світу та взаємодію когнітивних і емоційних чинників у процесі пізнання. Оцінне значення є концептуальною основою конкретних оцінок та пов'язаних з нею емоцій на лексичному рівні. Воно виступає складним когнітивно-прагматичним феноменом.

Ключові слова: оцінка, значення, прагмакогнітивний, потенціал, семантика, денотативний, позаденотативний.

1. Вступ

Оцінка в мові та мовленні охоплює широкий спектр одиниць різних рівнів, дослідження яких є надзвичайно актуальним сучасним етапом розвитку лінгвістики. Адже співвідношення й взаємодія семантики і прагматики стали однією з центральних проблем мовознавства.

Водночас ціннісна орієнтація сприяла становленню та розвитку цілої низки напрямків не лише в мовознавстві, а й у комп'ютерних науках, генній інженерії та інших галузях, що свідчить про міцну міждисциплінарність когнітивної парадигми.

Значення оцінки стає особливо очевидним через прагматичний аналіз моделей світів, що формуються в свідомості комунікантів (Mendoza & Masegosa, 2014). Отже, потрібно враховувати властивості когнітивних моделей у філогенезі, онтогенезі та соціогенезі, оскільки соціально-економічні, політичні, духовні та етнокультурні фактори детермінують оцінку.

Окрім когнітивної, діяльність з оцінювання є й прагматичною: впливаючи на ціннісні орієнтації адресата, вона спрямовує його активність. Семантичні й прагматичні компоненти в оцінці нероздільні – вони взаємодіють у процесі і вираження власного значення лексичної одиниці, і в умовах комунікативного контексту, сприйнятті мовної компетенції слухача, ставленні мовця до висловленого й його впливі на адресата (Foolen, 2023, pp. 21-31).

Оцінка є сутністю мовної презентації реальності – мова відбиває, переструктурує світ, називає й наділяє об'єкти іменами (Космеда, Халіман, 2011). В еволюційній перспективі оцінювання проявляється спочатку явно, а згодом – формується в мовні одиниці: афікси, слова, висловлювання.

Важливо зазначити, що оцінка нерідко невідчутна в лексичних одиницях: вони не лише називають явища, а й оцінюють їх. Цей процес номінації є, зазвичай, опосередкованим, часто прихованим і латентним, бо пов'язаний з розумінням об'єкта оточуючої дійсності номінатором.

Мовні способи вираження оцінки розрізняються: лексичні (Roth, 2013), засоби можуть містити явну оцінну семантику (експліцитна оцінка) (Kosmeda & Kovtun, 2024, pp. 165-183) або генерувати оцінку завдяки контексту (перед- чи післятексту).

Мета запропонованої статті полягає в тому, щоб розглянути мовноспецифічні засоби вираження прагмакогнітивного потенціалу оцінки.

Проблеми щодо оцінної лексики і сьогодні залишаються актуальними та дискусійними. Незважаючи на це, інтерес не згасає через велику практичну й теоретичну значущість: розуміння того, як слова несуть денотативну, так і позаденотативну інформацію, є важливим і вирішальним для дослідження зв'язку мови з суспільством, функцій мови та мовлення. Проте ще недостатньо вивчені закономірності появи оцінних слів і чинники, які дозволяють слову передати певне ставлення.

Особливо визначними для прагматичних досліджень є так звані марковані лексичні одиниці – слова, які крім денотативної семантики мають емотивний або оцінний складник (Foolen, 2016, pp. 473-490). Такі “прагматичні слова” включають когніопрагмеми, а саме семантичні одиниці, які відображають ставлення мовця до позначуваного явища або об'єкта і мають ціннісний характер. Цей факт підтверджує **актуальність** вивчення оцінної лексики особливо в контексті зростаючого інтересу до зв'язків семантики та прагматики.

2. Методика і матеріал дослідження

Методи та прийоми аналізу, застосовані в цій розвідці, визначаються поставленими завданнями, матеріалом, теоретичною спрямованістю роботи та мають комплексний характер. Вони інтегрують положення когнітивної теорії та теорії прагматики. Для аналізу семантичної структури лексем було застосовано метод дефініційного аналізу. Широко застосовується описовий метод, під яким ми розуміємо сукупність дослідницьких прийомів, що дозволяють рухатися від конкретних спостережень до узагальнення та висновків;

елементи лінгвістичної статистики, що дозволяють виявити місце та роль оцінного складника в семантиці лексеми.

Матеріал дослідження склав близько 12 000 лексичних одиниць, відібраних методом суцільної вибірки з Longman Dictionary of the English Language (Longman, 1991), з наступною перевіркою за декількома іншими тлумачними словниками.

Критерії добору матеріалу. Перший критерій – наявність оцінної номінації, що експлікується:

- а) слова з негативно-оцінними семами (з позначкою derogatory, contemptuous, ironical тощо), наприклад: *ballad-monger, poetaster, brat, dabbler, gas-bag*;
- б) слова з позитивною оцінкою (humorous, facetious, poetic), наприклад: *casque, bide, avaut*;
- в) наявність оцінної семи безпосередньо в дефініції (при словах використовується good або bad), наприклад: *calf, rake, toad*;
- г) маркер “guilty of”, що виражає негативну оцінку (наприклад: *hypocrite, cad, turncoat, renegade, goal-bird*);
- д) семи надмірності (too much, exorbitant), які можуть бути й негативними, й позитивними (наприклад: *exactor, flatterer, gourmet, exquisite*).

Другим критерієм добору стали екстралінгвальні (ситуативні та невербальні) чинники, які також впливають на формування оцінки. Якщо оцінна конотація – це лінгвальний фактор, то мовленнєва ситуація визначається як процес виникнення оцінки, а контекст розглядається як наслідок, якщо фіксує оцінку в конкретному висловленні.

3. Види оцінного значення

Усі слова з оцінною семантикою можна умовно розділити на:

- а) розумово-оцінні, оцінка яких спирається більше на розум, ніж на почуття; б) емоційно-оцінні, що передають відчуття, викликані об’єктом (Baider & Cislaru, 2014, pp. 1-20). Однак чітка межа між ними є умовною: більшість таких слів містить як розумовий, так і емоційний аспект.

Оцінне значення трактується як різновид когнітивної інформації, що міститься в семантиці слова та відтворює у його дефініції концептуальну структуру. Сам процес оцінювання являє собою психічну діяльність, що охоплює два автономні виміри – розумовий та емоційний. Це явище носить переважно суб’єктивний характер і може відбуватись як свідомо контрольований розумовий акт.

Когнітивне оцінювання результатів діяльності є основою емоційної реакції, що виступає провідним компонентом емоційного досвіду (Díaz & Prinz, 2023). Вважається, що витоки оцінної діяльності пов’язані з емоційною формою сприйняття реальності – найдавнішою формою відображення суб’єктно-об’єктних відносин.

Загальновідомо, що пізнання починається із безпосереднього сенсорного контакту суб’єкта з навколишнім середовищем і завершується формуванням ідеального образу дійсності, заснованого на попередньому чуттєвому досвіді (Krysanova & Shevchenko, 2021, p. 359). Емоції, у цьому контексті, не репрезентують реальні об’єкти чи явища безпосередньо, а передають їхню відповідність потребам людини (Lachlan, 2019).

Оцінне значення розглядається як вид когнітивної інформації, що міститься в семантиці слова та реконструює в дефініції поняття когнітивну структуру концепту, вираженого цим словом. Оцінювання слід розуміти як психічний акт, діяльність двох автономних сфер психіки – розуму та почуттів, що значною мірою є суб’єктивною і здійснюється як довільно усвідомлена, коли ми керуємося розумом, а не почуттями. Когнітивне оцінювання результатів діяльності складає провідний компонент структури емоцій, що відображає головне в загальній реакції.

Особливість емоцій полягає в тому, що вони є одночасно і об’єктом мовного відображення, і засобом цього відображення. Як справедливо зауважив Kövecses (Kövecses,

2014, pp. 15-28), у основі будь-якої емоції лежить певна оцінка, а отже, кожне емоційне переживання є наслідком певного виду оцінювання. Отже, можна говорити про оцінне підґрунтя емоцій.

Водночас емоція може стати основою для реалізації оцінки. Це свідчить про взаємозалежність емоцій та оцінки, яка має причинно-наслідковий характер. З одного боку, оцінка – це думка про цінність об'єкта, з іншого – емоція є переживанням цієї думки. Емоційна складова, таким чином, є невід'ємною частиною мовної модальності.

Оскільки мова завжди передбачає елемент раціональності, розмежування емоційного та логічного аспектів у мовленні є лише умовним. Проте новітні дослідження доводять наявність емоційного типу мислення, що відокремлюється від раціонального як окрема складова інтелекту (Foolen, 2012, pp. 347-368). Оцінка та емоція можуть комбінуватися в межах одного мовного значення, нашаровуватись або перехрещуватись, що дозволяє виділити три типи оцінного значення:

- Раціональне – базується на логічному аналізі властивостей об'єкта, спирається на знання, узус, життєвий досвід мовного колективу;
- Емоційне – виражає емоційне ставлення мовця, оцінює на основі суб'єктивного сприйняття, приписуючи об'єктові певні характеристики;
- Емоційно-раціональне – синтезує когнітивні судження з емоційним переживанням, утворюючи єдине психо-семантичне ціле.

Попри те, що об'єкт і суб'єкт оцінки зазвичай збігаються, підстави емоційної та раціональної оцінки можуть не збігатися, що яскраво ілюструють різновиди комічного ефекту. Мова завжди передбачає раціональний аспект, а тому розмежування раціонального та чисто емоційного в мові є умовним. Однак, останні дані деяких наукових досліджень довели правомірність виділення емоційного типу мислення, відокремлення емоційного та раціонального як різних сфер інтелекту (Foolen, 2012, pp. 347-368). Крім того, параметри оцінки та емоції в семантиці мовних одиниць можуть комбінуватися: перехрещуватися, нашаровуватися один на одного (Krysanova & Shevchenko, 2022). Отже, це може бути компромісним вирішенням питання про співвідношення раціонального і емоційного в мові, що дозволяє виділити такі типи оцінного значення: раціональне, емоційне, емоційно-раціональне.

Ця типологія піднімає ще одне ключове питання – місце оцінного значення в структурі семантики слова. Через неоднорідність оцінного компонента, його взаємодія з іншими семантичними елементами також різна.

У лінгвістиці існує кілька моделей семантичної структури слова. Більшість з них визнають поділ на ядерну (основну, денотативну) та периферійну (конотативну) зони. Згідно з цією парадигмою: предметно-логічне значення (денотативне) описує об'єктивну реальність і відповідає концептуальному або когнітивному значенню; конотативне значення додає до основного змісту емоційно-оцінні відтінки.

Багато слів в англійській мові мають лише денотативне значення й тому вважаються нейтральними – вони не виражають ставлення мовця (наприклад, *dog, lion, red, wooden*). Але в живому мовленні, особливо в художніх і розмовних стилях, ці слова можуть набувати додаткових емоційних або стилістичних забарвлень, залежно від контексту.

Окрім того, існують лексеми зі сталим емоційним або стилістичним забарвленням, які активно використовуються для вираження оцінки. Вони містять чітко виражений оцінний компонент, що обмежує можливість їхнього використання в інших значеннях. Такі одиниці демонструють розмаїття форм вияву суб'єктивного фактора в мові

У контексті когнітивно-прагматичного підходу важливим є аналіз стилістичного значення, адже воно розкриває суб'єктивне ставлення мовця до референта. Емоційне забарвлення слова виникає завдяки наявності оцінного елементу, який у поєднанні з емоційним компонентом відтворює національно-культурну специфіку суб'єкта оцінювання.

Оцінний складник стилістичного значення включає позитивну чи негативну оцінку. Позитивні оцінки зазвичай виражаються через схвальні, пестливі або жартівливі лексеми, а негативні – через глузливі, зневажливі, лайливі тощо. Ці відтінки можуть бути мало помітними або змінюватися залежно від історичного періоду й мовного контексту.

Хоча оцінний компонент традиційно вважається частиною конотації (Gowerdowskiy, 2002, р. 52), сучасні уявлення про його складну структуру (розподіл на емоційний та раціональний аспекти) дозволяють стверджувати, що: деякі слова мають оцінне значення як частину денотативної структури, інші – як компонент конотації, а в деяких випадках ці типи поєднуються, утворюючи емоційно-раціональне оцінне значення, яке одночасно належить до обох сфер.

Узагальнюючи викладене, можна визначити оцінне значення як макрокомпонент семантичної структури слова, що належить до прагматичної зони і реалізується через тлумачення, тобто проявляється в семантичному просторі. Розмаїття типів оцінного значення, які формують внутрішню організацію лексичних одиниць, відображає багатшаровість ціннісного сприйняття реальності та складний взаємозв'язок між емоційними і раціональними аспектами пізнавального процесу.

4. Оцінна лексика

Переходячи до безпосереднього аналізу оцінної лексики, варто зазначити, що дослідження вибірки обсягом 12000 слів засвідчило: 8620 лексем (72%) мають у своїй семантичній структурі негативно-оцінні семи. Водночас 3380 слів (28%) виявляють позитивну оцінність. Такий розподіл ще раз підтверджує неоднорідність оцінного шару лексики. Подібне співвідношення також може слугувати додатковим аргументом на користь твердження, що в мовному досвіді колективу негативні явища фіксуються частіше, ніж позитивні.

На рівні лексики оцінка об'єктів дійсності формується, зокрема, завдяки дериваційним процесам. Оцінність постає не лише як смисловий відтінок у значенні слова, а як складова частина його семантичної структури, здатна змінювати або уточнювати загальне значення. Таким чином, аксіологічну деривацію можна розглядати як окремий різновид семантичної деривації, що виступає одним із механізмів поповнення словникового складу мови оцінною лексикою.

Аналіз мовних засобів, що беруть участь в актуалізації оцінного потенціалу саме на лексичному рівні, дозволяє простежити певний механізм її реалізації у вигляді низки структурних схем, властивих лексичі.

Найпростішим способом реалізації оцінки є саме слово, повнозначна лексема. Це передусім слова-оцінки (денотат дорівнює оцінці), наприклад: *good*, *bad*, *nice*, *ugly* тощо, а також інші непохідні й похідні слова, що містять оцінку.

Непохідні слова – це твірна основа для творення похідних, тобто дериватів з оцінним значенням. У масиві вибірки нараховується біля 8 360 простих слів, тобто 76% від зазначеної кількості. До них можна віднести умовно розкладні й нерозкладні на синхронному рівні морфологічні структури слова, наприклад: *sycophant* – лакуза, підлабузник; *perjurer* – клятвопорушник (умовно розкладні) і *parasite* – паразит, дармоїд; *cipher* – нікчема (нерозкладні).

Серед непохідних слів 2165 – іменники, з яких лише 758 стали твірною основою для похідних слів з оцінним значенням, що вноситься з допомогою суфіксації, наприклад: *bribe* – *briber* – хабарник; *perfidy* – *perfidious* – віроломний; *fool* – *foolish* – дурний; *spite* – *spiteful* – злосливий; *lass* – *lassie* – любка (дівчина), любка.

У масиві вибірки нами відмічено 532 прості іменники, що стали твірними основами для префіксальних дериватів з оцінним значенням, наприклад: *fool* – *be-fool* – дурити, обдурювати; *enemy* – *arch-enemy* – заклятий ворог, сатана; *friend* – *be-friend* – ставитися по-дружньому.

В якості твірних основ для творення похідних шляхом префіксації здатні служити прості іменники, семантична структура яких містить потенційні семи оцінки: *repute* – *disrepute* – неслава, страм; *fame* – *defame* – оббріхувати, неславити.

У масиві вибірки зареєстровано 4951 простий прикметник, з яких 2118 із них служать основою для суфіксального творення похідних, що містять оцінку. Наприклад: *dolt* – *doltish* – тупий, розумово обмежений; *idle* – *idleness* – лінощі, неробство; *gentle* – *gentlehood* – шляхетність, люб'язність; знатність. Префіксальних дериватів з оцінним значенням, утворених від простих прикметникових основ, нами виявлено 1075, наприклад: *fine* – *superfine* – надзвичайно вишуканий; *licit* – *illicit* – незаконний.

У прикметникових, як і в іменникових дериватах з оцінним значенням твірні основи здебільшого вже містять потенційні оцінні семи, як-от: *equal* – *unequal* – нерівний; *typical* – *atypical* – нетиповий; *worn* – *well-worn* – зношений, заяложений, поношений.

Простих дієслів у масиві дібраного матеріалу – 1244. З них 526 служать основою для творення похідних з оцінним значенням шляхом суфіксації, наприклад: *abhor* – *abhorrence* – відраз; *trick* – *trickster* – дурисвіт, обманщик; *confide* – *confidence* – довіра. Лише 348 дієслів служать основою для творення похідних з оцінним значенням шляхом префіксації: *lie* – *belie* – оббрехати, знеславити; викривати; *abuse* – *disabuse* – виводити з оман.

У більшості випадків твірними основами префіксальних дериватів є прості дієслова, семантична структура яких містить потенційні семи оцінки, наприклад: *trust* – *distrust* – підозрювати, не довіряти; *deed* – *misdeed* – злочин, злодійство; *lighten* – *enlighten* – просвіщати.

Таким чином, з 8360 простих слів лише 5387 служать основою для творення похідних з оцінним значенням. Це є свідченням того, що в чималій кількості випадків оцінка описуваних явищ та подій виражається простими словами.

Найбільша кількість прикметників у масиві вибірки пояснюється тим, що ад'єктиви, будучи ознаковими, предикатними словами, які передають сигніфікативний зміст, мають найвищий оцінний потенціал тому, що оцінність є перш за все характеристикою прикметників як класу слів, де знаки “+” чи “–” властиві семантиці самого слова чи індуковані в контексті.

На відміну від простих слів, похідні не лише називають окремі дії, предмети чи явища, а й виражають їхній зв'язок з іншими об'єктами або процесами. Завдяки цьому виникає можливість поєднати нову інформацію з уже відомою, осмислювати незнайоме через знайоме. Розуміння похідних слів у зв'язку з подвійним характером їх референції (до світу і до мовної системи) передбачає обов'язкове звернення до значення відповідної первинної основи.

5. Висновки

У дослідженні вихідним положенням є те, що формування оцінного значення в словотворчому процесі пов'язане з виявленням семантичних зв'язків між дериватом та його складовими елементами. Проведений аналіз типів таких зв'язків дозволяє припустити, що їх можна умовно згрупувати у дві основні категорії, які відображають напрямок семантичної взаємодії: від твірної основи до дериваційного елемента або навпаки – від дериваційного елемента до твірної основи.

Оцінне значення є концептуальною основою конкретних оцінок та пов'язаних з нею емоцій, на лексичному рівні. Воно виступає складним когнітивно-прагматичним феноменом. Оцінне значення, як один із прагматичних компонентів семантики слова, виконує функцію носія когнітивної інформації, а саме відображає уявлення суб'єкта про цінність об'єкта для нього та містить емоційне навантаження, що виявляється у ставленні до об'єкта оцінювання. Це зумовлює виокремлення трьох основних типів оцінного значення: раціонального, емоційного та емоційно-раціонального.

Запропонована методика та результати цієї розвідки відкривають *перспективи подальших досліджень* емотивної лексики для деталізації окремих типів оцінного значення на матеріалі однієї мови та в порівняльному напрямку.

Декларація про конфлікт інтересів

Автор заявляє про відсутність конфлікту інтересів або фінансової підтримки цієї роботи.

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LANGUAGE-SPECIFIC MEANS OF ACTUALIZATION OF COGNITIVE-PRAGMATIC POTENTIAL OF EVALUATION

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Received April 23, 2025; accepted June 19, 2025; published online August 1, 2025.

Article citation: Prihodko, G. (2025). Language-specific means of actualization of cognitive-pragmatic potential of evaluation. *Cognition, communication, discourse*, 30, 117-124. doi.org/10.26565/2218-2926-2025-30-08 (in Ukrainian).

Abstract

Evaluation covers a wide range of linguistic units across various levels of language structure, the study of which is of particular relevance at the current stage of linguistic inquiry, because the correlation and interaction of semantics and pragmatics have become one of the central issues within contemporary linguistic theory. Evaluation constitutes the essence of linguistic presentation of extralinguistic reality. Language dissects reality, restructures it, and then assigns labels to its constituent elements. Throughout the evolution of the linguistic system, evaluation—manifesting itself in explicit form—has crystallized into specific linguistic units such as affixes, lexemes, and particular syntactic constructions. The present article aims to examine language-specific mechanisms for conveying the pragma-cognitive potential of evaluative meaning.

To date, the regularities underlying the emergence of evaluative vocabulary remain insufficiently investigated; particularly, the factors enabling the expression of evaluative attitudes toward referents through lexical means, as it is the word that conveys the entirety of both denotative and extradenotative content. All lexemes containing evaluative meaning can be categorized into: a) mental-evaluative, in which the evaluation comes not from the heart, but from the mind; b) emotional-evaluative, indicating feelings, usually aroused by objects that are socially appraised in a particular way. However, it must be acknowledged that a clear distinction between mental-evaluative and emotional-evaluative vocabulary is not always easily delineated, as affective expressions often incorporate an underlying cognitive appraisal. Evaluative meaning functions as a specific type of cognitive information transmitted through lexical semantics and encapsulates within the definition of a concept the cognitive framework associated with the corresponding linguistic expression. It is regarded as a macrocomponent of a word's semantic structure, situated within the pragmatic domain *and* rendered explicit through interpretive mechanisms, i.e., within the realm of semantics. The diversity of evaluative meanings embedded in lexical structures reflects the multifaceted value-oriented perception of reality, as well as the complex interplay between evaluative and affective dimensions in the cognitive process. At the lexical level, evaluative meaning constitutes the conceptual foundation for both specific judgments and the emotions associated with them. It is best understood as a complex cognitive-pragmatic construct.

Keywords: *evaluation, meaning, pragma-cognitive, potential, semantics, denotative, extradenotative.*

Declaration of competing interest

The author has no conflict of interest or funding support to declare.

GUIDELINES FOR CONTRIBUTORS

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An abstract is a brief, comprehensive summary of the contents of the article; it allows readers to survey the contents of an article quickly. The abstract should normally be a single paragraph *between 200 and 250 words* (minimum 1800 signs, key words included). A good abstract is accurate, coherent and readable, clear and concise. It uses verbs rather than their noun equivalents and the active rather than the passive voice; uses the present tense to describe conclusions drawn or results with continuing applicability; uses the past tense to describe specific variables manipulated or outcomes measured. An abstract for *a theory-oriented paper* should describe: how the theory or model works and/or the principles on which it is based; what phenomena the theory or model accounts for; and its linkages to empirical results. An abstract for a *methodological*

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The body of a manuscript opens with an introduction that presents the specific problem under study and describes the research strategy. The structure of the introduction should necessarily comprise the author's *aims / tasks / objectives (bold, italics)*, the *subject-matter* and the *material* of the study.

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State hypotheses and objectives, their correspondence to research. The statement of the hypothesis should logically follow on from your literature review and you may want to make an explicit link between the variables you are manipulating or measuring in your study and previous research. The present tense is used to state your hypotheses and objectives.

Sections and subsections of the paper. Divide your article into clearly defined sections. Any labeled sections / subsection should be numbered (i.e., 2. or 2.1, 2.2 if necessary) and given a brief heading marked in bold (Times New Roman, 12 without full stops at the end). Each heading should appear on its own separate line.

A good paragraph should contain at least the following four elements: transition, topic sentence, specific evidence and analysis, and a brief concluding sentence. A transition sentence acts as a transition from one idea to the next. A topic sentence tells the reader what you will be discussing in the paragraph. Specific evidence and analysis support your claims that provide a deeper level of detail than your topic sentence. A concluding sentence tells the reader how and why this information supports the paper's thesis.

2. Method

The Method section describes in detail how the study was conducted, including conceptual and operational definitions of the variables used in the study. It also permits experienced investigators to replicate the study. This section will often be broken down into subsections

In the method section of the paper you should use the past tense since you are describing what you did; for example, e.g. *An experiment was performed...*, *The participants were instructed to ...*.

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This section describes but does not explain your results; it provides the reader with a factual account of your findings. You can, however, draw attention to specific trends or data that you think are important. Your aim in your Results section is to make your results as comprehensible as possible for your readers.

Authors should refer in the text to all tables and figures used and explain what the readers should look for when using the table or figure. Focus only on the important point the readers should draw from them, and leave the details for the readers to examine on their own. Each table and figure must be intelligible without reference to the text, so be sure to include an explanation of every abbreviation (except the standard statistical symbols and abbreviations).

Give titles to all tables and figures, number all tables sequentially as you refer to them in the text (Table 1, Table 2, etc.), likewise for figures (Figure 1, Figure 2, etc.).

4. Discussion

If necessary an article may have more sections and subsections.

All examples are italicized. One word or word-combination examples are given within the body of a paragraph.

Sentence or textual examples, preferably numbered through the article, are given in separate paragraphs in italics (their source is given straight) with indentation 1,0 cm for the whole paragraph and separated from the previous / following text by one blank line. Example:

- (1) *"I'm Prendergast," said the newcomer. "Have some port?"*
"Thank you, I'd love to." (Waugh, 1980, p. 46)

5. Conclusions

This section simply states what the researcher thinks the data mean, and, as such, should relate directly back to the problem/question stated in the introduction. By looking at only the Introduction and Conclusions sections, a reader should have a good idea of what the researcher has investigated and discovered even though the specific details of how the work was done would not be known. After moving from general to specific information in the introduction and body paragraphs, your conclusion should restate the main points of your argument.

Conclusions should finish up with an overview of future possible research.

6. Notes (if necessary)

should be numbered consecutively in the text (super scripts^{1,2,3}) and grouped together at the end of the paper.

Acknowledgments (not obligatory and not numbered paragraph). Identify grants or other financial support (and the source, if appropriate) for your study. Next, acknowledge colleagues who assisted in conducting the study or critiquing the manuscript. End this paragraph with thanks for personal assistance, such as in manuscript preparation.

7. References in APA-6 style, including **Sources for illustrations**, are not numbered.

8. Declaration of competing interest

At the end of the article, the author includes the following statement:

The author(s) is/are familiar with the conflict of interest statement.
 The author(s) confirm(s) that the article has not been previously published in any form, including in other languages.
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TEXT FORMAT

All materials should be Times New Roman, 12, font 1; indentation 1,0 cm, margins: left – 2 cm., right – 2 cm., top & bottom – 2.5 cm. The first lines in all sections and after Fig.s and tables are not indented.

Manuscripts may be submitted as email attachments in Microsoft Word (file marked “author’s name.doc/docx”) to the e-mail: cognition.discourse.journal@karazin.ua. If special symbols are used their fonts should be sent separately.

Contributions should be in English, may include multilanguage examples. Spelling should be either British or American English consistently throughout the paper. If not written by a native speaker of English it is advisable to have the paper checked by a native speaker.

Footnotes should be avoided.

In-text citations. The journal uses APA-6 format ([APA style](#)). If you are directly quoting from a work and the author is not named in a signal phrase, you will need to include the author, year of publication, and the page number for the reference: (Pocheptsov, 1976, p. 15; Leech, 1985, pp. 373-4).

If the quotation includes the author's last name, it is simply followed by the date of publication in parentheses; if no last name is mentioned in the text it is given in parentheses. For example: According to Jones (2005), “Students often had difficulty using Gerunds and Infinitives, especially when it was their first time” (p. 156). Or “Students often had difficulty...” (Jones, 2005, p. 156).

If you cite a work of two to five authors (use ‘&’ within parentheses; use ‘and’ outside parentheses):

a) Becker and Seligman’s (1996) findings contradicted this result. This result was later contradicted (Becker & Seligman, 1996). Mind no comma before & in citing two authors!

(b) Medvec, Madey, and Gilovich (1995) examined a group of Olympic medalists. Or medalists were examined in (Medvec, Madey, & Gilovich, 1995) (Mind a comma before & in citing three to five authors in parenthesis!) A subsequent citation would appear as (Medvec et al., 1995).

In case of six or more authors, cite only the last name of the first author, followed by “et al.” and the year of publication: Barakat et al. (1995) attempted to ...

APA-6

In-Text and Parenthetical Citation Examples

Quote with author’s name in text
 Quote with author’s name in reference
 Paraphrasing with author’s name in text
 Paraphrasing author’s name in reference
 No author – give title of work abbreviated to first major word
Italics for books & journals, “quotation marks” for articles & web pages
 Citing entire website – put URL
 Quote from website – use paragraph number
 More than one author with same last name
 Source has more than one author in text
 Source has more than one author in reference
 Citing more than one work
 Citing more than one work by same author published in the same year

Smith (2019) states that, “...” (p. 112).
 This is quoted as, “...” (Smith, 2019, pp. 112-4).
 Smith (2019) stated these facts, too.
 This fact has been stated (Smith, 2019).
 This book is true (*Long*, 2019).
 This article is true (“Long,” 2019).
 This has evidence (www.pubmed.gov).
 According to, “...” (Smith, 2019, para. 4).
 P. L. Smith (2018) and J. M. Smith (2019)
 Smith and Lee agree that (2019)
 This is agreed upon (Smith & Long, 2019).
 We all agree (Smith, 2019; Lee, 2018).
 We all agree (Smith, 2019a, 2019b, 2019c)
 Smith (2019a) believes
 It has been reported ... (Smith, 2019c)

The quotations longer than three lines should constitute a separate block, indented 1.0 cm paragraph(s), single spaced, font 12 pts, italics, with no quotation marks, e.g., Kövecses (2018, p. 133) writes:

In sum, the intratextual use of conceptual metaphor does not necessarily produce metaphorically homogenous discourse. In most cases, a variety of different conceptual metaphors is used in particular media and other texts.....

For such quotations their author may be cited in a parenthesis below, not italicized, e.g.:

In sum, the intratextual use of conceptual metaphor does not necessarily produce metaphorically homogenous discourse. In most cases, a variety of different conceptual metaphors is used in particular media and other texts. This is a natural phenomenon, given the nature of conceptual metaphors as based on the general structure of concepts (i.e., that the concepts have various aspects and we use the conceptual metaphors to comprehend those aspects). (Kövecses, 2018, p. 133).

Quotation marks. Single quotation marks should be used for the translation of non-English words, e.g., *cogito* ‘I think’.

Double quotation marks should be used in all other cases, i.e., direct quotations in running text.

Please always use rounded quotation marks (“. . .”) not "straight" ones.

Dashes. Spaced EM dashes (long English dashes) are used as parenthetical dashes (“text — text”). Please do not use double hyphens (--).

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A long dash (EM dash, —) without spaces on the left or right in English texts might set off a phrase at the end of a sentence—like this one. Or, EM dashes may set off a phrase midsentence—a technique that really draws a reader’s attention—as they do in this sentence.

Italics should be used for:

- Words, phrases, and sentences treated as linguistic examples
- Foreign-language expressions
- Titles of books, published documents, newspapers, and journals
- Drawing attention to key terms in a discussion at first mention only. Thereafter, these terms should be set straight.
- Emphasizing a word or phrase in a quotation indicating [*emphasis mine* – N.N.]

Bold or **underlining** may be used sparingly to draw attention to a particular linguistic feature within numbered examples (not in the running text).

Please keep the use of italics and boldface type to an absolute minimum. CAPITAL LETTERS and SMALL CAPS should not be used for emphasis.

Punctuation. Please use a serial comma (an Oxford comma or a Harvard comma) placed immediately before the coordinating conjunction (and or or) in a series of three or more terms as in “France, Italy, and Spain” (with the serial comma), but “France or Spain” (two terms only).

Put a comma before ‘which’ to introduce attributive clauses (“Tom’s book, which he spent ten years writing, is now a best seller.”). Do not use a comma to introduce questions and prepositional phrases (“in which”).

Abbreviations. List of Common Latin Abbreviations for APA Style

Abbreviation	Meaning	Used inside of parentheses only
cf.	“compare” or “consult” (to contrast information)	Never put a comma after “...in (cf. Zeller & Williams, 2007)”.
e.g.,	“for example,” (<i>exempli</i>)	Always put a comma after: “Some studies (e.g., Macmillan, 2009)...”

	<i>gratia</i>)	
etc.	“and so on” / “and so forth”	Put a comma before if used to end a list of at least two other items: “(chemistry, math, etc.). In other cases do not use a comma “(biology etc.)”.
i.e.,	“that is,” (<i>id est</i> ; specific clarification)	Always put a comma after: “(i.e., first, second, or third)”
vs.	“versus”	Put a full stop after: “(low vs. high)”, do not italicize.
ibid.	“ <i>ibidem</i> ” for citations	Not used in APA to refer again to the last source previously referenced. Instead give each citation using author names as usual.

References (Times New Roman 12, bold, caps, not numbered)

A reference list (usually about 30 authors, preferably of the last decade) must comprise all the references cited in the text of your paper, listed in alphabetical order at the end of the paper and not numbered. Each reference in the reference list needs to contain all of the bibliographic information from its source (referencing style APA-6). In each new item, its first line is aligned right, other lines (if any) are indented 1,0 cm. Please make your URL and DOI active.

For materials in Latin:

Books (authored work) & e-books:

Langacker, R.W. (2008). *Cognitive grammar: A basic introduction*. New York, NY: Oxford University Press.

Chandler, D. (1998). Semiotics for beginners. Retrieved September, 1, 2018, from

<http://www.users.aber.ac.uk/dgc/Documents/S4B>

Book chapter:

Mind that editors' first names are cited before their family names, without a comma before “&” for two editors. In case of three or more editors, there is a comma before “&”.

Haybron, D. M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 17–43). New York, NY: Guilford Press.

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Journal articles:

Peterson, T. (2017). Problematizing mirativity. *Review of Cognitive Linguistics*, 15(2), 312-342.

<https://doi.org/10.1075/rcl.15.2.02pet>

On-line newspaper article:

Brody, J. F. (2007, December 11). Mental reserves keep brain agile. *The New York Times*. Retrieved from <http://www.nytimes.com>

Several volumes in a multivolume work:

Koch, S. (Ed.). (1959-1963). *Psychology: A study of science* (Vols. 1–6). New York, NY: McGraw-Hill.

Reference book:

VandenBos, G. H. (Ed.). (2007). *APA dictionary of psychology*. Washington, DC: American Psychological Association.

Print journal article. Article titles use sentence style capitalization, i.e., capitalize the first word of the title and subtitle (after a colon, if there is one), and any proper nouns (names). Journal/magazine and newspaper titles use headline style capitalization, i.e., capitalize each significant word but not articles and prepositions. In the year field for reference type Article in press enter the words: (in press). Mind a comma before “&” to cite more than one authors!

Wilson, S., Spies-Butcher, B., & Stebbing, A. (2009). Targets and taxes: Explaining the welfare orientations of the Australian public. *Social Policy & Administration*, 43, 508-525. <https://doi.org/10.1037/arc0000014>

Fennimore, D. L. (1981). American neoclassical furniture and its European antecedents. *American Art Journal*, 13(4), 49-65. Retrieved from <http://www.jstor.org>

Webpage, with author but no date:

Flesch, R. (n.d.). *How to write plain English*. Retrieved October 3, 2017, from http://www.mang.canterbury.ac.nz/writing_guide/writing/flesch.shtml

Webpage with corporate author (an organisation or group):

New Zealand Government. (2008). *Digital strategy*. Retrieved April 12, 2009, from <http://www.digitalstrategy.govt.nz/>

Dissertation. Print/Hardcopy format

Knight, A. (2001). *Exercise and osteoarthritis of the knee* (Unpublished master's dissertation). Auckland University of Technology, Auckland, New Zealand.

Thesis or dissertation, online from an institutional repository or a website

Thomas, R. (2009). *The making of a journalist* (Doctoral thesis, Auckland University of Technology, Auckland, New Zealand). Retrieved from <http://hdl.handle.net/10292/466>

Conference paper in regularly published proceedings, retrieved online:

Houzel, S., Collins, J. H., & Lent, R. (2008). The basic nonuniformity of the cerebral cortex. *Proceedings of the National Academy of Sciences*, 105, 12593-12598. <https://doi.org/10.1073/pnas.0805417105>

Film/movie

Scorsese, M. (Producer), & Lonergan, K. (Writer/Director). (2000). *You can count on me* [Motion picture]. United States: Paramount Pictures.

Blog post:

Author, A.A. (2019, December 12). Title of post [Description of form]. Retrieved from <http://www.xxxx>

For more details go to:

APA 6 Publication Manual <https://apastyle.apa.org/6th-edition-resources>

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For materials in languages other than English:

The in-text citation and reference should use the English translation of the materials and mention their original language. As a rule, recent periodicals, dissertations, etc. in languages other than English supply the English translations on their official cites.

Examples. In-text: (Martynyuk, 2020).

References

Martynyuk, A. P. (2020). The problem of meaning-making in communication. *The Journal of V.N. Karazin Kharkiv National University. Series: Foreign Philology. Methods of Foreign Language Teaching*, 91, 27-41. <https://doi.org/10.26565/2227-8877-2020-91-04> (in Ukrainian).

Мартинюк, А. П. (2020). Проблема смислотворення в комунікації. *Вісник Харківського національного університету імені В.Н. Каразіна. Серія "Іноземна філологія. Методика викладання іноземних мов"*, 91, 27-41. <https://doi.org/10.26565/2227-8877-2020-91-04>

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Sources for illustrations (bald, not numbered)

All textual examples cited in the article should have full bibliographic information about their sources listed in alphabetical order and not numbered (citation style APA-6).

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Когніція, комунікація, дискурс
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електронний журнал, 2025, # 30.

English, Ukrainian, and multilanguages

Англійською, українською та іншими
мовами

Computer version Y.D. Deviatova

Оригинал-макет Є. Д. Дев'ятова

6, Svobody sq., Kharkiv, 61022, Ukraine
V. N. Karazin Kharkiv National University, tel. +380-705-24-32
Certificate of a publishing company
ДК No 3367 from 13.01.09

Майдан Свободи, 6, м. Харків, 61022, Україна
Харківський національний університет імені В. Н. Каразіна, тел. +380-705-24-32
Свідоцтво суб'єкта видавничої справи
ДК №3367 від 13.01.09