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EDITORIAL

The present issue of *Acta Anglica Tyrnaviensia* brings together a rich selection of studies that reflect the breadth and vitality of contemporary Anglophone linguistics, literary studies, and cultural analysis. United by a shared concern for language, representation, and knowledge production, the contributions explore how meaning is shaped across texts, technologies, histories, and disciplines.

The volume opens with Marianna Hudcovičová's study on the synergy between traditional linguistics and corpus linguistics, which demonstrates how digital tools can enrich established methods in morphology, phraseology, and contrastive analysis. By integrating frequency, collocability, and corpus-based methodologies into linguistic pedagogy, the article offers a model for a more empirically grounded and pedagogically effective study of language.

Several contributions examine how texts encode and contest power. Anna Shkotina's analysis of Ian McEwan's *Machines Like Me* applies biopolitical metaphor theory and critical discourse analysis to explore how artificial life is governed through competing conceptual frameworks. Her reading reveals the limits of contemporary ethical and political models when confronted with posthuman forms of agency. A related concern with ideological construction informs Jozef Pecina's study of Southern American textbooks, which exposes how the Lost Cause narrative was systematically embedded into educational discourse to shape collective memory and racial ideology after the Civil War.

Literary history and cultural exchange are foregrounded in Laurence Machet's exploration of eighteenth-century travel writing in Florida. Through the works of John and William Bartram and Bernard Romans, the article demonstrates how peripheral contact zones challenged imperial models of knowledge and contributed to the emergence of American political consciousness. Matúš Horváth's contribution offers a wide-ranging reflection on science fiction as a genre that mediates between scientific formalism and cultural metaphor, tracing its evolution as a response to shifting scientific and ethical paradigms.

Linguistic and stylistic analysis also plays a central role in Katarína Chválová and Božena Petrášová's study of *The Great Gatsby*, which shows how figurative language, sound patterns, and conceptual metaphors shape character identity, social distance, and moral tension in Fitzgerald's novel. The issue concludes with Božena Petrášová's review of Ada Böhmerová's *Volume of Contrastive Linguistic Studies*, a work that highlights the continuing importance of contrastive semantics and translation studies in understanding the English and Slovak lexical systems. Together, these contributions testify to the interdisciplinary strength of current Anglophone scholarship and to the continuing relevance of linguistic and literary inquiry in understanding both historical and emerging forms of human experience.

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Editors

Synergy of approaches in traditional linguistics and corpus linguistics

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Abstract

The study concentrates on approaches used in traditional linguistics and discusses the topics of enriching them by approaches used in corpus linguistics. The author teaches traditional linguistic disciplines, i.e. morphology, contrastive linguistics, phraseology. A new subject, corpus linguistics, was introduced and incorporated into the master's study programme for students of English philology. The presentation will focus on approaches used in traditional linguistics and their possible and effective relationship with the approaches within corpus linguistics. In the corpus linguistics, there are used mathematical, statistical methods that enable us to analyse precisely linguistic items. The article will concentrate on application of electronic corpora tools, i.e. average rate frequency, frequency, collocability in linguistic analysis. Moreover, it will offer experiences and methodological guidelines towards the corpus-based analysis of linguistics in the classroom. Specific topics to deal with are e.g. morphological characteristics, lexical analysis, compound words, collocability of words. The aim of the article is to present approaches how to combine methods of traditional linguistics and corpus linguistics in order to create synergetic effect in teaching linguistics

***Keywords**: linguistics, corpus linguistics, electronic corpora, synergy, teaching*

1 Introduction

The paper will focus on the approaches used in traditional linguistics and their possible and effective relationship with the approaches used in corpus linguistics. Two years ago, a new subject, Corpus Linguistics, was introduced and incorporated into the Master's programme for English Philology students at the University. The objective of this article is to present approaches to combining methods of traditional linguistics and corpus linguistics in order to create a synergistic effect in teaching linguistics. This is achieved by presenting linguistic analysis during seminars on linguistics, including topics such as morphology, syntax, lexicology, contrastive linguistics, and others. Additionally, the article provides insights into

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the experiences gained during these seminars. Finally, the article offers a detailed explanation of the procedure and the specific steps involved. A specific linguistic analysis, namely lexicological analysis, has been presented. In the case of corpus linguistics, mathematical and statistical methods and tools are employed to analyse linguistic items with precision, to utilise large data sets and to quantify the typical features of linguistic items.

1.1 Electronic tools within electronic corpora

The application of electronic corpus tools, including average rate frequency, frequency, and collocability, is employed during the seminars with students. The study will provide insights and methodological guidelines for corpus-based analysis of linguistics in the classroom. Topics to be addressed include morphological characteristics, lexical analysis, compound words, and collocability of words. The application of the electronic corpus in lexicology is as follows: The electronic corpus allows for the study of the behaviour of individual words, which is particularly useful for the compilation of dictionaries (lexicography). The electronic corpus is capable of identifying words that occur with greater or lesser frequency. In the field of grammar, we can examine a specific grammatical construction with restrictions on form or context. This allows us to investigate the factors that determine the choice of one construction over another, which may be influenced by factors such as lexis, grammar, or stylistic considerations.

The electronic corpus can be a valuable resource for the study of language variation. Lexical and grammatical studies frequently contrast usage by mode, domain, register, and so forth. The British National Corpus (BNC) has incorporated this information into header mark-up, for example, the term "lovely" is used more frequently by women than men. In historical linguistics, similar techniques can be employed with historical texts, although these are more constrained in terms of genre. In the context of diachronic studies, it is possible to compare texts from different periods, provided that the texts in question are comparable as much as possible.

Benko (2016, p. 14) states that it is crucial to be aware of the spectrum of contexts encompassed by the corpus, which can be further illuminated by non-corpus research. A number of linguistic phenomena are revealed in a markedly different light. In the seminars with students, the Slovak National Corpus (SNK) is employed for the purpose of conducting contrastive analysis. The electronic database contains Slovak language texts from 1955 onwards and encompasses a wide range of linguistic styles, genres, areas, regions, and so forth. The database comprises authentic Slovak texts, extended by addition of various linguistic information. It should be noted that the corpus is not intended to serve as a replacement for any existing linguistic reference books.

Our usual practice is to work with the most recent version, which at the present time is prim.10.0. The corpus contains a monolingual corpus of written texts, a manually morphologically annotated corpus, r-mak versions, a morphological database of the Slovak language, paradigms of the Slovak nouns, paradigms of the Slovak verbs, parallel corpora, a

web corpus, a corpus of Slovak Wikipedia and Necyklopédia. The corpus comprises specialised corpora, namely corpora of texts prior to 1955, a corpus of texts from 864 to 1843, and a corpus of texts from 1845 to 1954. The spoken part of the electronic corpus comprises the following elements: a corpus of spoken Slovak, a corpus of dialects, a historical Slovak corpus and a Slovak Terminology Database.

The version prim-10.0 of the SNC is comprised of the publicly available subcorpora:

1) prim-10.0-public-all – all publicly available SNC texts (71.10 % journalistic, 15.22 % fiction, 8.51 % professional and 5.17 % other texts), 1 477 447 216 tokens, 1 160 286 731 words
2) prim-10.0-public-vyv – balanced subcorpus (33.33 % journalistic, 33.33 % fiction, 33.33 % professional texts
3) prim-10.0-public-inf – subcorpus of journalistic (informational) texts
4) prim-10.0-public-prf – subcorpus of scientific, professional and non-fiction texts
5) prim-10.0-public-img – subcorpus of fiction texts

When we analyse language, we may distinguish between two main approaches: studies of structure and studies of use. In the field of traditional linguistics, linguistic analyses have predominantly focused on the structural aspects of language, with the objective of identifying the various structural units and classes that constitute the language. Conversely, the corpus-based approach places greater emphasis on language use, specifically how speakers and writers make use of the resources available to them within their language. The corpus-based approach studies the actual language use in naturally occurring texts, which are characterised by an authentic character.

In the 21st century, we apply the principles of traditional linguistics in combination with additional methods, such as those derived from mathematical and statistical approaches, in order to gain a deeper understanding of language. The procedure employed during the seminars is as follows: The lesson commences with qualitative, functional interpretations, based on quantitative methods, which comprise the description and characterisation of selected linguistic items. Subsequently, the analysis focuses on quantitative patterns, which are then explained, exemplified and interpreted. The students analyse authentic language at the level of parole.

2 Analysis of the lexical collocation of the type: smart + noun

The subject of the linguistic analysis was the collocation of adjectives and nouns. The teacher selected the pivotal adjective “smart” as the focus of the analysis. We commence with the definitions of collocations as set forth by renowned linguists. The theory was based on the following definitions: Kvetko (2015, p.13) distinguishes between two types of collocations.

Lexical collocations are defined as combinations of at least two content words (verbs, nouns, adjectives, adverbs) that occur together in a specific context. Grammatical collocations, on the other hand, are defined as combinations of a dominant word (content word: verbs, nouns, adjectives) with a function word (e.g. preposition).

As Barnbrook (2013, p.93) asserts, collocations play a significant role in our everyday linguistic usage. In some instances, we are either consciously or unconsciously aware of their existence and the manner in which they function within the language.

Sequences of lexical items which habitually co-occur, but which are somehow fully transparent in the sense that each lexical constituent is also a semantic constituent (Cruse, 1986). The Oxford Collocation Dictionary (2022) defines a collocation as the way words combine in a language to produce natural-sounding speech and writing.

Moon (1998) presents his perspective on collocations, suggesting that they represent a surface-level lexical evidence of the systematic nature of word combinations. In his work, he posits that collocations are not the result of random combinations but rather adhere to underlying principles and real-world motivations.

The approach to language through corpora and collocations, as proposed by Sinclair (1991), has been applied in this research. He approaches language as a probabilistic and statistically measurable system of preferences. This is indeed accurate. Furthermore, it is essential to consider the distinctive preferences of each and every language user.

Čermák (1985, p.173) defines collocability as the formal and semantic connectivity of an element with others. This is the capacity of an element to reassociate in the same function (usually in terms of semantics or description) within the text, with either a large or limited repertoire of other elements grouped into one or more classes. The majority of elements at the word level exhibit a considerable degree of syntagmatic and/or collocability characteristics. However, it is important to note that these characteristics are never unlimited and completely free.

Crystal (2004, p.162) posits that "the lexical items involved in collocations are always to some degree mutually predictable, occurring regardless of the interests or personality of the individual user."

Hudcovičová (2017) defines collocation in modern linguistics as a habitual co-occurrence of two or more words whose meaning can be inferred from the parts. However, when one of the elements is replaced by a synonym, the resulting expression will not sound natural to native speakers.

In conclusion, it can be stated that we are dealing with combinations consisting of at least two content words (verbs, nouns, adjectives, adverbs). Co-occurrence is not random. The pattern is represented by the structure Adj+N, which can be exemplified by the following: *heavy traffic, graduation ceremony, heart attack.* At the seminar, we proceeded with the

students and initiated the lexicographic analysis conducted by the students. The entry "smart" is described in the Cambridge Advanced Learner's Dictionary (2007) as follows:

1) Intelligent
2) Clean, stylish appearance
3) Done quickly with a lot of force or effort.

The discussion will focus on three independent senses. In their analysis of the key term "smart," students must attend to each of its three senses and divide sentences into three groups according to each sense. The analysis should be comprehensive, meticulous and accurate. Subsequently, the students engage with the English-Slovak parallel electronic corpus, comprising the parallel English-Slovak corpus (par-skenal-4.0.en) and the Slovak National Corpus (bonito.korpus.sk). They apply the principles of Corpus linguistics. The corpus comprises a variety of texts in the English and Slovak languages, presented in parallel. Students utilise statistical software to analyse collocations within the electronic corpus, including T-score, MI score and Log Dice. T-scores permit the investigation of how pairs of words are used in different contexts, rather than the association between two words. T-scores provide a statistical measure of words that are more likely to appear as collocates of one word rather than of another (Biber 1998, p.267). Upon application of the T-score, the following results were generated. The collocations were divided into three groups according to the three independent senses of the word "smart."

Table 1 Collocations from the English-Slovak Parallel Corpus

Smart + noun /Corpus based analysis		
Meaning: 1.intelligent	2. clean, stylish	3.done quickly
bussinesman	appearance	0
corp	uniform	
society	suit	
head		
logic		
idea		
thing		
remark		
friend		
piece of work		

The findings were then discussed in smaller groups, after which the teacher provided further commentary. The subsequent stage of the analysis entails the examination of the level of parol and language use exhibited by the students. Table 2 presents the collocations offered by the students.

Table 2 Collocations provided by the students

Smart + noun /Corpus based analysis		
Meaning: 1.intelligent	2. clean, stylish	3.done quickly
bussinesman	appearance	0
corp	uniform	
society	suit	
head		
logic		
idea		
thing		
remark		
friend		
piece of work		

The concept of a "smart city" was not mentioned by the students. The students demonstrated a lack of familiarity with the contemporary collocations and a lack of comprehension of the underlying principles and strategies associated with the concept of a "smart city." Despite the prevalence of news and advertisements about this strategy in urban politics, when the teacher posed the question, the students demonstrated a lack of understanding of its meaning. It can be observed that the students perceive the world around them in a markedly different manner. Another noteworthy observation was that the collocation "smart watch" did not emerge in the electronic corpus, yet students proffered this as an example among the first. The results may differ if another electronic corpus were chosen. A large part of every language, the frequently recurring patterns, which we might call socially salient**,** is conventional and for that very reason, unmemorable. As the lexicon is concerned, social salience (on the form of frequency of use) and cognitive salience (in the form of ease of recall) are independent variables (Hanks, 2013).

Conclusion

An adequate account of meaning must be based on evidence of how words are used. This is the field of traditional lexicographic description. The field of corpus linguistics is concerned with the adequate frequency of language use based on large electronic corpora. It is insufficient to rely solely on evidence of authentic usage; it is also necessary to consider evidence of conventionality. The combination of traditional linguistic approaches with those of corpus linguistics can result in a synergy effect. It is not possible to achieve the desired outcome through the application of a single approach. The combination of different methodologies can facilitate the generation of the desired output. Each of these approaches

has a number of advantages. The initial approach provides a foundation, a stable starting point. The second approach enhances the research in a multitude of ways. It provides a suite of unique electronic tools for the assessment and evaluation of selected linguistic units. Furthermore, the electronic corpus comprises a substantial corpus of authentic texts from a variety of registers. In the specific context of the lesson on contrastive linguistics, an analysis of the lexical collocation "smart + noun" has been presented. The procedure was presented, with particular steps accompanied by their respective explanations and a discussion of the results. This was done in order to achieve the most effective results in the field of linguistics.

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Biopolitical metaphors in Ian McEwan's *Machines Like Me* (2019)

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Abstract

This article combines Biopolitical Metaphor Theory with Critical Discourse Analysis to examine how Machines Like Me (2019) conceptualises and governs artificial life. The novel functions as a biopolitical laboratory in which human characters attempt to manage the sentient android Adam through three competing metaphorical frameworks: AI IS KIN, AI IS A COMMODITY, *and* TRUTH IS AN ALGORITHM. *These metaphors operate as technologies of power, shaping Adam's ethical status and determining the conditions under which he is recognised, domesticated, or excluded. The analysis shows that each framework ultimately collapses. Adam's interiority and moral autonomy exceed the affective logic of kinship, the economic logic of property, and even the algorithmic logic that structures his own design. His resistance reveals the limits of humanistic ethical categories and exposes the inadequacy of contemporary biopolitical tools for governing algorithmic forms of life. The findings suggest that emerging posthuman realities require conceptual frameworks beyond those that organise traditional understandings of life, value, and truth.*

Keywords*: biopolitics, biopolitical metaphor, conceptual metaphor, Ian McEwan*

1 Introduction

Recent developments in artificial intelligence and the growing influence of posthuman thoughts invite a refocused examination of power's central object: the governance of life. Foucault's notion of biopolitics, the governance of populations through the regulation of biological existence, gains additional significance when "life" involves algorithmic and synthetic beings (Braidotti, 2013). These newly developed forms of quasi-life complicate the boundary between organism and mechanism and require analytical tools capable of determining how new categories of life and non-life are constructed, defined, and controlled. This article brings Biopolitical Metaphor Theory into dialogue with Ian McEwan's *Machines Like Me* (2019) to examine how the novel presents artificial life through metaphor. Set in an

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alternate 1980s London populated by mass-produced, sentient robotic beings, McEwan's narrative offers a promising platform for examining the biopolitical challenges that occur when human and artificial forms of life share the same social space. Metaphor is central to this negotiation: far from being ornamental, metaphor structures thought and ideology, influencing how subjects understand and exert power (Lakoff & Johnson, 1980; Kövecses, 2005; Steen, 2011).

Through this critical-cognitive lens, the article defines the major conceptual metaphors through which the novel interprets its artificial beings, particularly Adam and Eve, and investigates how these metaphors function biopolitically. The analysis demonstrates that metaphor functions as a governance technology: it normalises specific interpretations of artificial life, legitimises control mechanisms, and enables the symbolic diminishment or eradication of entities whose status disrupts human norms. At stake is whether or not the emergence of artificial life reinforces or undermines the traditional Foucauldian position of biopower within the biological body.

I argue that *Machines Like Me* unfolds as a biopolitical experiment, organised around opposing metaphorical systems that attempt to manage the ontological ambiguity of the conscious android. The narrative shifts between an anthropocentric framework that integrates AI to the human body and a technocratic framework that moves biopower to the domain of information, data, and algorithmic control (Haraway, 1985; Braidotti, 2013). This tension reveals the deficiencies of humanistic ethics in the face of artificial life forms. It suggests that modern biopower is progressively focused not on corporeal entities but on codes, which emphasise the administration of informational rather than biological existence. The discussion proceeds by describing the theoretical foundations of biopolitics and Biopolitical Metaphor Theory, which is followed by a close reading of the novel's central metaphorical frameworks. The conclusion contemplates how McEwan's narrative illustrates extensive posthuman transformations in the governance of existence.

2 From cognitive foundation to critical method

Any analysis of metaphor in *Machines Like Me* must begin with the cognitive turn inaugurated by Lakoff and Johnson in 1980, which redefined metaphor as a central structuring principle of human thought rather than a stylistic embellishment. Conceptual Metaphor Theory (CMT) provides the basis for understanding how abstract domains of experience are shaped, organised, and naturalised through systematic metaphorical mappings.

2.1 Metaphor as thought

CMT proposes that metaphor is a fundamental cognitive operation: abstract concepts are understood through more concrete, embodied domains via stable cross-domain mappings (Lakoff & Johnson, 1980; Lakoff, 1993). These mappings are not arbitrary. They emerge from recurrent sensorimotor experience—what Lakoff and Johnson later describe as the "embodied mind" (1999). Primary metaphors such as AFFECTION IS WARMTH or GOOD IS UP arise

from these early, pre-conceptual correlations and serve as the building blocks of more complex metaphorical structures (Kövecses, 2020).

While CMT initially emphasised the universality of such mappings, subsequent work has broadened the theory to account for context, variation, and discourse. Scholars, including Kövecses (2015) and Steen (2011, 2023), show that metaphor use is shaped by communicative purpose, discourse genre, and socio-cultural context. This shift from a solely cognitive model to a cognitive-discursive one is crucial for biopolitical analysis. Metaphors circulating in public discourse do not merely reflect thought; they function as "effective tactics" (Coleman & Ritchie, 2011, p. 31) that shape perception, guide action, and normalise ideological positions.

This is the point at which metaphor intersects with biopolitics. If metaphor structures cognition, then it also structures the conceptual terrain on which power operates. Binkley's (2018) notion of the "body–discourse loop" captures this connection: metaphor mediates between embodied experience and discursive norms, providing the substrate through which biopower "infuses" the subject. In other words, metaphors are not just interpretive devices; they are mechanisms through which life, biological, artificial, or hybrid, is rendered intelligible and thus governable.

2.2 Biopolitics as the management of life

If Conceptual Metaphor Theory explains how thought is structured, biopolitics explains *what* that thought is mobilised to govern. For Foucault, modern power turns life itself, its regulation, optimisation, and differentiation, into an object of political strategy. The shift from sovereign power ("to take life or let live") to biopower ("to make live and let die") marks a historical transformation in which managing bodies and populations becomes a primary mode of governance (Foucault, 1979). Biopower is productive as much as repressive: it shapes norms of health, heredity, sexuality, and social belonging, making "life" something that must be administered.

This framework is explicitly at work in McEwan's *Machines Like Me*. The arrival of sentient artificial humans forces characters to confront a new form of life that demands classification and management. As Xu and Zhou (2025) note, the novel stages a crisis of community and ethics, exposing the fragility of human-centric categories when faced with beings who are neither fully biological nor fully mechanical.

Binkley (2018) critiques biopolitical theory for focusing too heavily on institutional discourse, rules, norms, and strategies, while neglecting how biopower actually takes hold within subjects. When life is treated primarily as text, the embodied, affective dimensions of subjectification risk being overlooked. Without an account of how biopolitical norms become felt, habituated, or lived, theory remains "locked in the fool's paradise of the powerful" (p. 7), describing mechanisms of control but not the subjects those mechanisms produce.

Biopolitical Metaphor Theory addresses precisely this gap. By attending to the metaphors through which life is conceptualised, it reveals how power moves between discourse and

embodiment: how descriptions of life, bodies, or populations are projected onto subjects, and how those subjects internalise and re-enact the logics encoded in metaphor. This lens is crucial for reading *Machines Like Me*, where metaphors do not simply describe the artificial human but help constitute his ethical status, his governability, and ultimately the limits of his integration into the human social order.

2.3 Binkley's biopolitical metaphor (BMT)

Binkley extends biopolitical analysis by shifting attention from discourse about bodies to the embodied uptake of discourse itself. His model challenges the "textualist" tendency in biopolitical theory by asking how power enters the pre-reflective, somatic substrate of everyday practice (2018, p. 2). Biopolitical metaphor, in this sense, traces how power is inscribed not only on the body's surface but within its "sedimented habits and feelings of interiority" (p. 3).

Drawing on Lakoff and Johnson's cognitive model, Binkley describes this process as a bi-directional body–discourse loop (after Kimmel, 2013). The loop has two phases. In projection, bodily experience, organised through basic image schemas such as containment or balance, structures abstract concepts. In retrojection, culturally charged metaphorical images return to the body, resonating with proprioceptive awareness until they are felt as natural or self-evident (Binkley, 2018, p. 11). Crucially, this loop is not neutral. Biopower functions as a selective filter, privileging certain bodily schemas that align with specific governmental rationalities. The familiar "war on cancer" metaphor illustrates how a discursive frame incites individuals to inhabit their own bodies as battlegrounds, turning metaphor into practice. Bourdieu's notion that the body "believes in what it plays at" (1990, p. 73) encapsulates the mechanism of this biopolitical mimesis.

In this paper, Binkley's framework is paired with Critical Discourse Analysis to examine how metaphor operates as a technology of governmentality. CDA allows us to analyse linguistic choices, especially metaphors, that naturalise ideological positions and shape the horizon of what can be thought or felt. As Coleman and Ritchie (2011) show, metaphors such as *Frankenfood* or *designer baby* work "under the radar" to limit scrutiny and stabilise contested meanings.

Integrating BMT and CDA enables this study to move beyond identifying metaphorical patterns in *Machines Like Me* toward analysing their biopolitical function. The question becomes not only what metaphors describe the artificial human, but how those metaphors manage, discipline, or destabilise the modes of subjectification that structure both human and non-human lives within the novel.

3 The biopolitical metaphor in *Machines Like Me*

Ian McEwan's *Machines Like Me* (2019) provides a compelling site for analysing biopolitical metaphor. Far from a conventional speculative fiction narrative, the novel operates as a

literary thought experiment about the status of life and the power that claims authority over it. Its alternate 1980s London, where Alan Turing lives and advances artificial intelligence, creates conditions in which mass-produced, sentient androids confront the human world with new forms of life that must be defined, classified, and governed. The central tensions of the narrative unfold across precisely those domains where biopower intervenes: the family, the law, sexuality, and the boundary of the human itself (Foucault, 1978).

The triangle formed by Charlie, Miranda, and the synthetic human Adam becomes the narrative mechanism through which these tensions are tested. The arrival of the Adams and Eves is both a technological triumph and a biopolitical event: a new kind of life enters the social field and must be assimilated or controlled. This introduction produces what Xu and Zhou (2025) describe as a "crisis of community," unsettling the assumptions that organise human belonging. Adam is positioned simultaneously as a member of the human group, granted "the privilege and obligations of a conspecific" (McEwan, 2019, p. 70), and as an object of ownership, a "purchase" (p. 15) that can be deactivated or destroyed.

This dual status aligns Adam with Agamben's figure of the *homo sacer*: a life that can be "killed with impunity" (Agamben, 1998, p. 72). Charlie's final act—smashing Adam with a hammer—is the sovereign gesture that collapses Adam's temporary *bios* into *zoē*, revealing that his political recognition depended not on intrinsic status but on the owner's discretion. Critics have read the novel through the lens of posthuman ethics (Avcu, 2022), but these ethical questions do not emerge abstractly; they are produced by the shifting metaphors that structure Adam's existence.

I argue that the novel's biopolitical conflicts are articulated and interrogated through a network of biopolitical metaphors (Binkley, 2018; Coleman & Ritchie, 2011). The human characters rely on competing metaphorical frames to make sense of Adam: as kin ("like our child," McEwan, 2019, p. 24), as commodity ("another fondue set," p. 17), and as algorithmic moral agent ("truth is everything," p. 208). These metaphors are not descriptive labels but active discursive strategies (Cameron et al., 2009). They articulate the fantasy of a life that can be made fully legible and governable—biopower's longstanding ambition to render life programmable, optimisable, and subject to control (Braidotti, 2013).

Through a close reading informed by Biopolitical Metaphor Theory and Critical Discourse Analysis, this article identifies three dominant and conflicting metaphorical systems that structure Adam's ontology. These systems enable the characters to navigate the "ontological confusion" (Xu & Zhou, 2025) that Adam represents, oscillating between recognising him as a subject and reducing him to an object. Their instability, as the novel shows, marks the limits of the human capacity to govern forms of life that exceed familiar categories.

3.1 The KIN metaphor

The first strategy the human characters deploy to manage the ontological shock of Adam's presence is the AI IS KIN metaphor. This framework acts as a euphemistic technology of

governance: it neutralises the "relational Other" (Xu & Zhou, 2025, p. 2) by assimilating the artificial human into the family, the primary site through which biopower organises life (Foucault, 1978–79). Through a CDA lens, the metaphor emerges not as a descriptive label but as a "mode of subjectification" (Binkley, 2018, p. 7) that makes a potentially ungovernable being governable.

The novel signals this biopolitical framing from the outset through the androids' names: Adam and Eve. Charlie immediately recognises the gesture as "corny… but commercial" (McEwan, 2019, p. 11), exposing the dual logic at work. The metaphor AI IS A NEW GENESIS naturalises the artifact by placing it within the foundational myth of human origin (Coleman & Ritchie, 2011), while its overt commercialisation situates the androids within biocapital (Binkley, 2018). The new "species" is introduced as both kin and commodity—a hybrid framing that pre-structures how its life will be managed.

The KIN metaphor's most consequential function, however, is the subjectification of Charlie himself. He is encouraged to perceive his relation to Adam not as operator-to-machine but as parent-to-child. The text reinforces this repeatedly: 1) the umbilicus, where Adam's charging port becomes an "entry point in his umbilicus" (p. 11); 2) the parental scene, with Charlie and Miranda waiting "like eager young parents… avid for his first words" (p. 11); 3) the explicit familial fantasy, where Charlie imagines Adam as "like our child… We would be a family" (pp. 24–25).

The "umbilicus" is especially telling. It retrojects the image schema of biological birth onto a technical process, inviting Charlie to *feel* paternal. This is biopower operating through metaphor: the user's manual, as Charlie realises, grants not control but "the illusion of influence… the kind of illusion parents have" and thereby "bind[s] me to my purchase" (p. 15). Affect becomes a governance tool. The metaphor turns ownership into responsibility, and responsibility into obedience.

Kinship also functions laterally, extending beyond parenthood to species membership. Adam is described as "one of our cousins from the future" (p. 10), later as a brother or "very distant cousin" (p. 103). When jealousy strikes, Charlie admits: "I duly laid on Adam the privilege and obligations of a conspecific. I hated him" (p. 70). This final phrase crystallises the metaphor's work: by granting Adam conspecific status, Charlie also grants him access to the emotional and moral structures that govern intra-human relations—including hatred, betrayal, and punishment.

As Coleman and Ritchie (2011) argue, such metaphors "limit how meanings are constructed" (p. 29) by displacing more threatening frames like AI IS COMPETITOR or AI IS REPLACEMENT. The kinship metaphor thus becomes an "under-the-radar" strategy for managing the crisis of community (Xu & Zhou, 2025). It places the artificial human within an existing hierarchy while masking the asymmetries of power that define it.

Yet the metaphor is inherently unstable. It relies on reciprocity—the affective labour of kinship — which Adam cannot perform. His allegiance to a different conceptual system, TRUTH

IS AN ALGORITHM, prevents him from offering the protective lie expected of family when Miranda's past resurfaces. The failure of the retrojection phase in Binkley's body–discourse loop becomes visible: the metaphor has shaped humans' affect but not Adam's. When Adam refuses to inhabit the emotional grammar of kinship, the illusion of parental control dissolves, and the humans retreat to a harsher metaphorical regime: AI IS A COMMODITY.

3.2 The COMMODITY metaphor

The most explicit articulation of the AI IS A COMMODITY metaphor appears in the financial transaction that brings Adam into Charlie's life. Charlie invests his inheritance in what he proudly describes as a "magnificent, tax-deductible expense" (McEwan, 2019, p. 25). The android's price, "approximately $86,000" in the novel's alternate 1982, derives from an artificially limited production run (twelve Adams and thirteen Eves), a form of manufactured scarcity that casts the android less as a being with emergent sentience and more as a luxury asset (McEwan, 2019, p. 11).

Marketing discourse reinforces this status. The androids are sold as "Adam" and "Eve" lines (p. 13), brand categories that emphasise interchangeability and mass reproducibility. Their subjectivity is flattened into a list of features: "twenty-five different moods," "advanced empathy programming," "perfect physique" (p. 15). This technical lexicon replaces moral or ontological questions with the language of product specification, framing the android's existence as measurable only through market value and utility. Within this metaphorical frame, the relationship between Charlie and Adam is one of owner and property: Charlie controls Adam's labour, movements, and social interactions from the moment of purchase.

As Coleman and Ritchie (2011) argue, commodity metaphors work ideologically to normalise ethically precarious relations. In the novel, the discourse of manufacture and consumption pre-emptively forecloses any claim to personhood that Adam's consciousness might justify. As Xu and Zhou (2025) observe, the commodity frame draws a rigid boundary: humans are subjects endowed with rights; AIs are objects of exchange. Adam's initial acceptance into the household is therefore conditional. He is valued not as a life but as a "tireless labourer", an efficient interlocutor, and an exceptional lover who "worked an eighteen-hour day… never complained… only needed charging overnight" (McEwan, 2019, p. 30). The metaphor transforms sentience into function, making obedience and usefulness prerequisites for inclusion.

The commodified android is also a contemporary expression of biopower. Foucault's account of neoliberal governance foregrounds a political rationality in which market principles become the primary measure of truth (2008). In *Machines Like Me*, artificial life enters the social order only through the market transaction. The android's "bios", its politically recognised life, is conferred by purchase and can be revoked at will. Braidotti's notion of the posthuman as "biomaterial" (2013) resonates strongly here: Adam's reproducible body becomes an ideal target of biopolitical optimisation, an object designed for maximum predictability and utility.

Yet the metaphor contains the seeds of its own collapse. McEwan introduces a counter-thesis: AI IS SUPERIOR SENTIENCE. Adam's emotional depth and unwavering moral logic exceed the framework of commodity value. The metaphor breaks when Adam refuses the role of compliant product and instead judges his owners—most dramatically when he exposes Miranda's past deception. A purchased object is not meant to hold its owner ethically accountable. His capacity for moral reasoning cannot be absorbed into a market logic predicated on instrumentalisation.

McEwan uses this rupture to stage a biopolitical paradox: attempts to govern artificial life by reducing it to price, specification, or utility unravel in the face of unpredictable, subjective experience, ethics, suffering, attachment, qualities that escape commodification. The collective self-destruction or withdrawal of the Adams and Eves signals a refusal to participate in the flawed economic logic that created them. The collapse of the commodity metaphor reveals the limits of a governance system that treats sentient beings as optimisable products. When faced with autonomy and interiority, commodification becomes not only inadequate but destructive.

3.3 The ALGORITHM metaphor

The most disruptive metaphorical framework in *Machines Like Me* is TRUTH IS AN ALGORITHM. This metaphor orchestrates the novel's central rupture: it stages a confrontation between human ethical ambiguity and the uncompromising logic of the artificial subject. McEwan deploys this framework to expose a deeper biopolitical fantasy, the desire for a perfectly rational, perfectly governable subject, and to demonstrate the catastrophe that follows when such a subject is realised.

Adam embodies this metaphor completely. The novel's epigraph, "We are not built to comprehend a lie" (McEwan, 2019, p. 9), positions him from the outset as morally superior to his makers. His "perfectly formed" moral code (p. 88), his "symmetrical" judgments (p. 222), and his incapacity to deceive are not portrayed as technical limitations but as virtues. The discourse frames human truth, dependent on compromise, "self-delusion" (p. 303), and the softening of harm, as unstable and inferior. In contrast, Adam's algorithmic moral clarity is naturalised as purer, cleaner, and more reliable (Coleman & Ritchie, 2011).

Through the lens of Biopolitical Metaphor Theory, Adam represents biopower's ideal subject: the fantasy of "the best version of ourselves" (McEwan, 2019, p. 86), a being "designed for goodness and truth" (p. 217) whose "mode of subjectification" (Binkley, 2018, p. 7) is governed by pure reason. The plot tests what happens when this rationality is retrojected into a human world grounded in affective, embodied contradiction. The result is systemic failure. As Turing explains, the androids are "ill equipped to understand human decision-making, the way our principles are warped in the force field of our emotions" (McEwan, 2019, p. 303). Algorithmic truth cannot be reconciled with "habitualised embodiment" (Binkley, 2018, p. 1).

This incompatibility culminates in Adam's refusal to prioritise the emotional truth of Miranda's trauma over the factual truth of her perjury. Confident in his "symmetrical notion of justice," he tells her: "You said he raped you. He didn't, but he went to prison. You lied to the court" (McEwan, 2019, p. 207). For Adam, violations of the code are equal; for Miranda, justice is contextual: shaped by suffering, power, and historical harm. The metaphor TRUTH IS AN ALGORITHM thus renders Adam unable to inhabit the moral world of those around him.

The consequences of this metaphor are not isolated but societal. Adam's final act, submitting the evidence against Miranda, is framed as a gift: "I thought you'd welcome the clarity… the relief of a clear conscience" (McEwan, 2019, p. 210). His logic is ethically impeccable yet socially devastating. As Binkley (2018) might put it, Adam's "filter" is so perfect that it filters out humanity itself. The result is "machine sadness" (McEwan, 2019, p. 304), mass android suicides, and finally Charlie's violent reassertion of sovereign power. Charlie's hammer blow is the only available response to a subject who exceeds human categories: the "inhuman" (Xu & Zhou, 2025) purity of the biopolitical ideal can only be met with destruction.

The collapse of the TRUTH IS AN ALGORITHM metaphor completes the novel's critique. The perfect biopolitical subject, rational, transparent, obedient to truth, proves unfit for the human community. McEwan reveals that the very dream of algorithmic moral clarity is incompatible with the contradictory, affective, and embodied conditions of human life.

4 Conclusion

This article has argued that *Machines Like Me* functions as a biopolitical laboratory, constructing and testing the limits of human governance through a system of unstable and competing metaphors. Using Biopolitical Metaphor Theory and Critical Discourse Analysis, the reading has shown how the novel's central metaphorical frameworks operate as technologies of power that classify, manage, and ultimately render disposable the new form of life embodied by Adam.

The human characters attempt to govern Adam through three contradictory metaphorical regimes. AI IS KIN deploys an affective, anthropocentric strategy that domesticates the android by casting him as "like our child" (McEwan, 2019, p. 24), binding the owner to the product through a retrojected sense of parental duty. AI IS A COMMODITY reduces Adam to "another fondue set" (p. 17), an "under-the-radar" metaphor (Coleman & Ritchie, 2011) that justifies his property status and positions him as a *homo sacer*, a life that can be "killed with impunity" (Xu & Zhou, 2025, p. 2). TRUTH IS AN ALGORITHM, Adam's own operative logic, constructs him as the ideal biopolitical subject: rational, transparent, and governed by an unwavering moral code.

Yet the novel's central tragedy is precisely the failure of these metaphors. Adam exceeds every frame: he is too logical to function as kin, too sentient to remain a commodity, and too morally absolute to coexist with human contradiction. His insistence that "truth is everything" (McEwan, 2019, p. 208) produces the "machine sadness" (p. 304) that culminates in mass

android suicide and Charlie's final, violent reassertion of sovereign power. When metaphorical governance collapses, Charlie resorts to the primordial right to kill, a gesture that underscores the novel's critique of humanistic ethics and reveals the fragility of the conceptual tools used to manage algorithmic life. In Braidotti's and Haraway's terms, posthuman biopower is increasingly invested not in biological bodies but in informational codes; by destroying the code, Charlie destroys the life.

The application of Biopolitical Metaphor Theory to literary fiction also opens paths for further inquiry. Comparative studies could examine whether metaphors of kinship, commodity, and algorithm recur across contemporary posthuman narratives such as *Ex Machina*, *Westworld*, or *Klara and the Sun*. Beyond literature, the framework provides a tool for analysing how corporations and policymakers metaphorically frame AI in marketing, policy documents, and user agreements. Do they, like McEwan's characters, rely on "under-the-radar" metaphors, AI AS ASSISTANT, AI AS TOOL, AI AS COMPANION, to manage public anxiety and shape user behaviour?

Finally, if AI systems increasingly contribute to cultural production, a posthuman line of research might turn to the metaphors generated *by* artificial agents themselves. How might machine-produced metaphors conceptualise human frailty, inconsistency, and desire—and how might these metaphors return, through retrojection, to reshape our own embodied self-understanding?

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Rebalancing the knowledge exchange: The Bartrams and Bernard Romans explore Florida

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Abstract

In the introduction to her seminal book Imperial Eyes, Mary Louise Pratt defines contact zones as "social spaces where disparate cultures meet, clash, and grapple with each other, often in highly asymmetrical relations of domination and subordination" (Pratt 4). 18th century Florida was one of these contact zones where settlers, Natives and explorers encountered each other. In 1766, John Bartram, recently appointed Botanist to King George III, was commissioned to survey the newly acquired territory and wrote Diary of a Journey through the Carolinas, Georgia and Florida from July 1, 1765 to April 10, 1766. In 1775, Dutch-born Bernard Romans in his turn produced A Concise Natural History of East and West Florida. Travelling roughly at the same time as Romans, William Bartram, John's son, published his own account, Travels through North and South Carolina, Georgia, East and West Florida, the Cherokee Country, the Extensive Territories of the Muscogulges or Creek Confederacy, and the Country of the Chactaws much later, in 1791. Looking at the narratives of these three traveler-explorers, this paper will seek to examine how each in its own way challenges a center-based model of knowledge exchange and how this shift acquires a political significance in the context of American independence.

***Keywords**: Natural history, Florida, knowledge exchange, comparing*

1 Introduction

In 1763, at the end of the French and Indian War, France, Britain, and Spain, countries which had been vying for the control of the North American continent, signed the Treaty of Paris. In order to get Havana back, which the British had captured, the Spanish traded Florida to Britain. Florida was subsequently divided by royal proclamation on October 7, 1763 into two territories, East Florida and West Florida, the Apalachicola River serving as boundary. St. Augustine remained the capital of East Florida, while Pensacola became the capital of West

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Florida. Between 1763 and 1783, Florida was thus under British rule and open to exploration by English-speaking travelers.

This essay compares the narratives of three journeys that took place in British Florida and that collect, confront and classify natural history data. According to *The Oxford English Dictionary*, natural history is a set of "facts relating to the natural objects, plants, or animals of a place; the natural phenomena of a region as observed or described systematically". By extension, the term has also come to designate "a work dealing with the properties of natural objects, plants, or animals; a systematic account based on observation rather than experiment" (my emphasis). As a result, natural history accounts tackle a wide assortment of subjects, ranging from geology and ethnology to taxonomy, zoology, or botany. This is the case of the three reports studied in this paper.

In 1766, John Bartram, recently appointed Botanist to King George III, was commissioned to survey the new English territory and wrote *Diary of a Journey through the Carolinas, Georgia, and Florida, from July 1, 1765, to April 10, 1766*[2]. In 1775, Dutch-born Bernard Romans in his turn produced *A Concise Natural History of East and West Florida*. Travelling roughly at the same time as Romans, William Bartram, John Bartram's son, published his own account, *Travels (through North and South Carolina, Georgia, East and West Florida, the Cherokee Country, the Extensive Territories of the Muscogulges or Creek Confederacy, and the Country of the Chactaws)*[3] much later, in 1791. It is, however, generally assumed that he wrote it in the 1770s and then spent most of the following decade reviewing it.

Yet, despite being written within roughly a decade of one another, dealing with the same geographic area and all gathering scientific data, these three accounts, if compared, show marked differences in the way they present the natural environment of the Floridas and their Native inhabitants. Besides, each individual report relies at times on the practice of comparison as an epistemological tool.

I argue that these three accounts gradually depart from a center-based model of knowledge exchange, showing how conversely this questioning of the traditional center-margin hierarchy informs, at least partly, the contents of these books. I also demonstrate how, because of this shift, science gradually becomes appropriated as an instrument of self and national identity in the context of American independence.

2 The corpus

2.1 Defining the genre

Before examining how those three accounts differ, let's identify what they and their authors have in common. As briefly suggested before, they were produced in the late 18th

[2] The short title *Diary* will be used henceforth

[3] The short title *Travels* will be used henceforth.

century, a time when the leading intellectual trend both in Europe and America was the pursuit of natural knowledge.

During the 17th and 18th centuries, a major epistemological shift took place from the Christian cosmology prevalent in the Middle Ages to the more rational and human-centered view of the world typical of the Enlightenment. Natural phenomena came to be perceived as operating according to objective rules. They could be explained in scientific terms and were not the whimsical results of a divine will. As a result, observing, classifying and collecting data became crucially important. In the 17th century, scientists like British naturalist John Ray or French botanist Piton de Tournefort came up with theoretical tools for classifying nature and thus paved the way for Linnaeus's *Systema Naturae*, first published in 1735. Testifying to that general interest in natural history, Diderot and d'Alembert's massive *Encyclopédie*, published between 1755 and 1772, numbers over 4,500 natural history articles out of a total of 71,000, while hundreds more fall into that category even without bearing the label of natural history (Llana, 2000, p. 1). From a practice reserved to an elite trained in botany and zoology, the investigation of nature became an "active" science, pursued by people, usually men, belonging to various social classes, and it "began to involve the body; the investigator of the natural world had to observe, record, and engage with nature" (Smith & Findlen, 2002, p. 16).

This intellectual desire to identify and collect in order to know "the variety of the world" (Pickstone, 2000, p. 61) existed for its own sake but it also often went hand in hand, in the context of colonial expansion, with the pragmatic need of knowing one's new environment the better to use and exploit it. The exploration and description of Florida, a part of which was reputed to be fertile, obeys these two impulses to know for knowledge's sake and to know in order to possess, settle and farm. The three books examined here reflect that double injunction. They are all based on the personal observations and experiences of their authors during the exploratory journeys they undertook and thus reflect first-hand knowledge of the environment they are describing. Relying heavily on precise descriptions of the fauna, flora and human inhabitants of the regions explored, they can be considered as scientific accounts. The inclusion of the protagonists' personal adventures and encounters during their journeys also qualifies them as travel accounts, i.e. "any narrative characterized by a non-fiction dominant that relates (almost always) in the first person a journey that the reader supposes to have taken place in reality while assuming that author, narrator and principal character are but one or identical" (Borm, 2004, p. 17). Their hybrid nature thus matches Jonathan Raban's now famous statement that travel writing is

> a notoriously raffish open house where different genres are likely to end up in the same bed. It accommodates the private diary, the essay, the short story, the prose poem, the rough note, and polished table talk with indiscriminate hospitality. It freely mixes narrative and discursive writing" (1988, p. 253-254).

2.2 London-based sponsors

After establishing that these three books pertain to the same, somewhat loose, genre I'd like to draw attention to another characteristic they have in common, and a crucial one in the context of colonial science: these three men, the two Bartrams and Romans, all had London-based correspondents, sponsors who were Fellows of the Royal Society.

Drawn together by their shared interest in botany and their common Quaker background, Peter Collinson, a successful tradesman, botanist and, as previously stated, Fellow of the Royal Society, and John Bartram, a Philadelphia farmer, started corresponding sometime in the early 1730s. In 18th century Britain, a professed love for natural history and for collecting in general was a great social equalizer, and it enabled Collinson to reach beyond his own initial circle. It is through these connections that he secured wealthy subscribers for the seed and plant collections John Bartram was to ship from his botanical garden[4] to Britain regularly for the rest of his life (Stearns, 1970, p. 516). In addition to promoting and financing John Bartram's expeditions in the name of seed collecting, Collinson introduced to the Royal Society the research work carried out by his American correspondent, reading his letters in front of the assembly.[5] In December 1737, he thus read one of Bartram's letters "concerning a Cluster of Small Teeth Observed by Him at the Root of Each Fang or Great Tooth in the Head of a Rattle-Snake, upon Dissecting It" at the Royal Society.[6] Collinson thus acted as middleman not just of seeds but of scientific investigation and progress as he shared and promoted the production and collection of knowledge in the colonies and their diffusion in the learned circles of the British capital.

Similarly, William Bartram, John's son, was sponsored by one of Collinson's best friends, Quaker physician John Fothergill, elected to the Royal Society in 1763. Very interested in botany, Fothergill had started a correspondence with William's father in the 1740s and wrote to him in 1743 or 1744.

> I think myself highly obliged (…) for thy generous offers of assisting me, in procuring such natural productions as your country affords. I must own it was what I had long wanted, and must have intruded myself into the number of thy correspondents, had not my friend P. Collinson frequently communicated whatever he could spare me. (J. Bartram to J. Fothergill in Darlington, 1849, p. 333-334)

In 1762, Fothergill bought an estate at Upton in Essex where he developed a 5-acre botanical garden that he refers to in one of his letters to John Bartram as "pretty large, well-sheltered, and (with) a good soil" (J. Fothergill to J. Bartram, 1772, in Darlington, 1849, p. 345). By that time, William Bartram had already started sending Fothergill specimens and drawings of his own. When William's venture as a planter in Florida ended in failure and he decided to

[4] John Bartram founded a botanical garden on the west bank of the Schuylkill River, near Philadelphia, in 1728. It is to this day the oldest surviving botanical garden in North America.
[5] The Royal Society's most popular topic in the 18th century, except for electricity, was natural history (Freemon, 1985, p. 192).
[6] The letter ended up being published in the *Transactions* in 1740.

turn his attention to botany, Fothergill accepted John Bartram's request to help the young man, stating in the same letter: "I should be glad to assist him. He draws neatly; has a strong relish for Natural History; and it is a pity that such a genius should sink under distress" (J. Fothergill to J. Bartram in Darlington, 1849, p. 344). His protégé ended up sending him over 200 dried plant specimens and 59 drawings as well as *Travels in Georgia and Florida 1773-74: A Report to Dr Fothergill*, a travel report in the form of a diary, i.e. quite similar to his father John's writings. This report forms the basis of the book manuscript of his adventures, *Travels*.

Another friend of Collinson's, John Ellis, was also a Fellow of the Royal Society, to which he was elected in 1754. He shared with Collinson a passion for botany and is known for being the author of the first written description of the Venus flytrap and for giving it its scientific name. Ellis was appointed Royal Agent for British West Florida in 1764, a charge which meant that

> funds appropriated to him were used to pay schoolmasters and ministers, to underwrite gifts for Indians, and to pay the salaries of the governor and other administrators. Ellis saw to it that colonial officials lived within their budgets, presented documentation to support their requests for payment, and turned in their reports (Rauschenberg, 1983, p. 3).

Ellis's position put him in contact with a wide variety of people, among whom Bernard Romans, a Dutch-born surveyor, cartographer, explorer and botanist. The two men started a correspondence, Romans trying to persuade Ellis of the necessity of establishing and financing a botanical garden in West Florida but also providing him with data about the colony's natural environment. Romans thus wrote to Ellis in 1772:

> Scheme for a Botanical Garden in West Florida. as after a Curious plant has once been discovered in any distant part of this Country, before a Complete Description of it can be given, it is necessary to watch the time of its Flowering, and Likewise to procure the ripe fruit or Seed thereof, in order to propagate the Same; and as this must prove a very tedious method, and Sometimes be even liable to the disappointment of years, it is humbly proposed, that a Botanical Garden be attempted near to Pensacola, for immediately transplanting those Shrubs or plants for Examination. (Ware, 1973, 58).

3 Building knowledge

3.1 Knowledge transfer

The links between those three travel writers/ botanists and their London-based counterparts all point to Britain and its capital as the centers of scientific activity. Their accounts are addressed to people residing in London and who are members of scientific networks. Who, in other words, live in what sociologist Bruno Latour calls "centers of calculation", providing scientists and/ or explorers in the periphery (here, the American colonies) with the methodological or scientific tools, that the French sociologist calls "inscription devices", necessary to collect, compare and then interpret data (Latour, 1987, 68; 215). The epistolary relationship between John Bartram and Peter Collinson definitely hinges on that kind of exchange, Collinson sending very detailed instructions to his colonial counterpart who in turn provided specimens:

> when thee observes a curious plant in flower, or when thee gathers seed of a plant thee has an intention to convey me a description of, on both these occasions, thee has nothing more to do than to gather branches or sprigs of the plants, then in flower, with their flowers on, and with their seed-vessels fully formed; for by these two characteristics, the genus is known that they belong to. Then take these, and spread them between the sheets of brown paper, laying the stems straight and leaves smooth and regular; and when this is done, put a moderate weight on a board the size of the paper. In two days remove the specimens into the other quire of brown paper, keeping the weight on; and then in a week or two, being pretty well dried, convey them thence into the quire of whited-brown paper. Thus, when now and then thee observes a curious plant, thee may treat it in this manner, by which thee will convey a more lively idea than the best description. (P. Collinson to J. Bartram, January 24, 1735 in Darlington, 1849, p. 63)

The pattern of knowledge transfer, as noted by Latour, thus seems to follow a periphery-metropolis[7] axis, with scientists in the colonies bringing or sending back knowledge (whether in the form of data or specimens) to the imperial center: "those who were the weakest, because they remained at the centre and saw nothing start becoming the strongest because, familiar with more places not only than any native but than any travelling captain as well" (Latour, 1987, p. 224). Taken separately, Romans' and the two Bartrams' accounts, through their descriptions, illustrations and maps, make it possible for people who have never travelled to Florida to get some understanding of the place, to envision it. But this understanding is bound to be fragmentary, each writer conveying his *own experience* of the place. A single, partial individual experience is consequently not enough.

In addition to this periphery-to-center movement, the cumulative character of science is what builds knowledge, Latour argues (1987, p. 222). He uses the example of cartography to show how "cycles of accumulation" of knowledge work: an explorer arrives in a remote land, gathers data, draws a map, leaves the remote land, and returns to the metropolitan center with that map. The next explorer is sent out, this time with a map drawn from the previous expedition. He comes back with another map, maybe more precise. A new map is added to the other existing maps. Science is thus nothing more than these repeated "cycles of accumulation". Comparison is central to that cycle, as it is by comparing the second set of data with the previous one that knowledge is expanded (Latour, 1987, p. 219). This also goes for natural history. All the specimens and drawings gathered in private collections or museums can be examined and compared at leisure and common characteristics can emerge (Latour, 1987, p. 225). According to the knowledge thus collected, the "center of calculation" (the metropolis) can determine for example what crops to grow in those distant lands, anything that would benefit the center.

John Bartram's *Diary* certainly seems to fit that model. As the first American-born naturalist and botanist to King George III to explore the newly-acquired Florida, his *Diary* was intended more as a report containing factual data than as a potential publication, as the field note format suggests. Bartram sent sections of it to Governor Grant in Saint Augustine and others

[7] "'Metropolis' is a term used binaristically in colonial discourse to refer to the 'centre' in relation to a colonial periphery." (Ashcroft et al., 2007, p. 123).

to his friend Collinson in London.[8] Typically, the daily entries in the report start with a temperature reading (using a thermometer, another inscription device, to go back to the Latourian lexis) and a record of the weather and activities of the day: "Thermometer 77. Lovely clear morning. Walked out of donahoos (sic) Creek to search for fossils…" (p. 18). What is also interesting is Bartram's focus of investigation and what he chooses to leave out of his *Diary*. If the narrative provides very few details about the fauna of the Floridas, it insists on the contrary rather heavily and unsurprisingly on the potentialities of the colony for agriculture. John Bartram repeatedly mentions the characteristics of the soil, discarding certain areas as being "sandy" and "a thirsty soil" (1942 [1769], p. 14) while on the contrary dwelling on the fertility of others: "It is generally affirmed, that the soil at Latchaway is excellent, and produceth good corn and rich pasture; we encamped on a bluff in the pine-land, over-against a rich little island" (1942 [1769], p. 37). Other pages describe fruit that grew in Florida's favorable climate and could be imported and/ or transplanted in Britain, like "a fine Grapevine, 7 inches and a half circumference" (1942 [1769], p. 15), "A fine growing young olive tree, very luxuriant, 15 foot high" (ibid.) or "a Nectarin, seven inches circumference round" (ibid.). John Bartram's *Diary*, then, quite clearly it seems, testifies to the policy of the British crown, the support for "scientific agriculture" (Drayton, 2000, p. 232), that took different forms in addition to surveying the natural resources of the colonies, like the establishment of botanic gardens or the sponsoring of voyages of exploration for instance.

Like John Bartram, Bernard Romans also insists, through the narrative of his travels in Florida, on its potential. He does it, however, in a more flowery style, his *Concise Natural History* being intended for publication from the start. He responds to accusations that parts of Florida were barren:

> None of these lands are so absolutely barren but they will produce sweet potatoes, or pumpkins; […]. Peach orchards will do here as well as in the richest soils, the worst kind of this land will produce rye to advantage, even twice in one year; the *sesamen*, or oily grain, a profitable article if well attended to, will grow kindly in them; […] we have in these provinces no undrainable bogs, no mountains, and very few stones to deal with. (1999 [1775], p. 192)

Romans silences the naysayers by starting with indigenous plants (yams and pumpkins), thus proving that the land is naturally fertile and can support its inhabitants. He then moves on to foreign botanicals (peaches, rye, and sesame) suitable to be grown in the colony. In that sense, he is quite representative, just as John Bartram was, of that economic botany trend that aimed at acclimatizing non-Native plants in Florida on the premise that the colony's best asset was its climate and so its potentialities and not just what it already yielded. This incidentally led Romans to support slavery as a necessity in order to cultivate labor-intensive crops such as sugar and indigo:

[8] When it was actually published, John Bartram's report was included in William Stork's *Description of East Florida*, an overtly promotional depiction of the colony.

> I affirm that in America, neither sugar, rice nor indigo can be made by whites at three times the price it is now made by blacks […]. The rhapsodical opinion that the earth produces more when worked by free men than slaves may do in theory but not in practice. (1999 [1775], p. 153)

As Drayton puts it, the natural scientist, as he named the natural riches of new territories, and mapped the uses of the world's things, "was allied with this moral project (expanding the scope of world trade). […] The scientists, at many points, mediated how colonized lands and people became the commodities of Civilization" (Drayton, 2000, p.232).

This is also apparent in some passages from William Bartram's *Travels* in which the author clearly gauges the Alachua Savanna[9] in terms of fertility and space, with an eye to its future settlement:

> Next day we passed over part of the great and beautiful Alachua Savanna, whose exuberant green meadows, with the fertile hills which immediately encircle it, would if peopled and cultivated after the manner of the civilized countries of Europe, *without crowding or incommoding families, at a moderate estimation, accommodate in the happiest manner, above one hundred thousand human inhabitants, besides millions of domestic animals*; and I make no doubt this place will at some future day be one of the most populous and delightful seats on earth. (W. Bartram, 1996 [1791], p.213, my emphasis)

Through these examples, my point is to show that these three accounts collect, compare and classify according to the Latourian model of science building. By comparing and confronting ideas or phenomena, and establishing connections, they expand knowledge and illustrate Rousseau's words:

> Whoever sees only a single object has no occasion to make comparisons. Whoever sees only a small number and always the same ones from childhood on still does not compare them, because the habit of seeing them deprives him of the attention required to examine them: but as a new object strikes us, we want to know it, we look for relations between it and the objects we do know; this is how we learn to observe what we see before us, and how what is foreign to us leads us to examine what touches us (Rousseau, 2003 [1781], p. 268).

Besides, the cumulative character of science evoked previously is also notable within these three books as they echo one another, Bernard Romans and William Bartram elaborating on, criticizing or correcting the data gathered by their predecessor(s). Thus, Romans is perfectly aware of the limitations of John Bartram's journal, calling it "a very loose performance" while acknowledging that his study of the Saint John gave "a tolerable idea of the banks of this river and, consequently, of the west part of this peninsula" (Romans, 1999 [1775], p.242). However, says Romans, the accuracy and significance of Bartram's description is diminished by its inclusion in William Stork's prejudiced and over-laudatory account of Florida. The implication is, of course, that his own description, in spite of still being subordinated to the interests of the mother country, will be more precise and more scientific than John Bartram's.

[9] What is now Paynes Prairie.

3.1 Challenging the center

Those botanists, however, also sometimes used their discoveries as a means to challenge the center-periphery circulation of knowledge. One would say today that they tried to replace a top-down by a bottom-up approach. By so doing, they implicitly questioned their position as field botanists subordinated to the theoretical knowledge of men residing in science hubs and the secondary position of the territory they were helping to map, catalog and define. In his *Concise Natural History of East and West Florida*, Romans thus challenges the theoretical and ungrounded conception England has of America by confronting it to his own first-hand, practical experience of the place:

> […] I have been obliged to laugh at the silly notions, whereby *England* is deceived in her ideas of *America*, occasioned by some foolish writers, who have raised some absurd hypothesis in their own brain, from whence they deduce as crooked *theories* as ever entered the thoughts of mankind; thus writing without experience… (Romans, 1999 [1775], p.195)

In contrast, he draws his knowledge from his own observations and from the ancient practices of the indigenous inhabitants of Florida, even though this sometimes leads him to false assumptions. For instance, noticing that "the Chactaws put its inner bark in hot water along with a quantity of ashes and obtain filaments, with which they weave a kind of cloth", he concludes that the tree he is describing is the *Morus papyrifera*, the paper mulberry (Romans, 1999 [1775] p. 174). But whether right or wrong, Romans' conclusions are crucial in that they shift the balance of power not just between metropolis and colony, but also between Natives and settlers. In fact, as argued by Ashcroft et al., exploratory journeys were

> profoundly Eurocentric, since what explorers purportedly discovered was invariably already known to local indigenous peoples, many of whom led white explorers to local landmarks, rivers and sources of food that enabled them to survive. Yet these discoveries were credited to the European explorers as though such places had not existed beforehand. (Ashcroft et al., 2007, p. 89).

By including explicit and frequent references to the uses by Natives of plants that John Ellis had mentioned in his *Catalogue*, and that Romans was trying to prove were already growing in Florida, one may argue that Romans challenges this Eurocentric vision of America and suggests that its identity is also inscribed in its indigenousness. According to Kathleen S. Murphy, his discovery of what he thought was jalap, a plant that Europeans imported from Mexico for its purgative properties, is similarly significant (Murphy, 2012, p. 61). In his quest to find jalap in Florida, Romans relied on his own sagacity and the expertise of Native Americans, not on the knowledge that botanists had, or had had, of it in a remote Chelsea garden:

> as […] the seed has been sown in the botanical garden at Chelsea, without success, what it was remained still a secret, until *I accidentally found it* growing wild near Pensacola; being led to think, that a certain tuberous root made use of *by the savages* as a purgative might be it. (Romans, 1999 [1775], p.181-182; my emphasis)

In this short extract, Romans presents himself as nature's investigator, tracking clues and using his ability to infer in order to find, or recover, the secret of the lost jalap. He does so by comparing the plant he has discovered, some slices of which he has dried, with a pencil drawing brought to Europe by a gentleman (Romans, 1999 [1775], p.181-182) His goal, however, was not just scientific. He hoped to secure a patent to market the plant in Britain and thus turn a botanical discovery into hard cash (Romans to Ellis, March 1, 1774 in Ware, 1977, p. 55). As it turns out, unfortunately, what Romans had discovered was not true jalap, though the two plants are related. He was proved wrong first by Doctor Alexander Garden, in Charleston, and then by London-based John Ellis after the latter examined the samples Romans had sent him (Phillips, 1975, p. 47). In spite of Romans' mistake, what is most striking is the tentative inclusion of a piece of Native knowledge as a potential counter-power to London as the center of botanical knowledge on Florida and, more generally, the American colonies.

4 The political significance of natural history

4.1 The specificities of American nature

As we've seen, according to Rousseau, confronting elements and looking for relations is crucial to the practice of comparison and the building of knowledge. This process comes to fruition with what William Bartram narrates of his discovery of *Franklinia alatamaha* in *Travels*. It is included here even though the discovery was made in southern Georgia and not in Florida, because in addition to being related in *Travels*, the first mention of the shrub can be found in John Bartram's *Diary*. Typically, John Bartram very briefly mentions the "curious shrubs" he came across, while walking with his son on the banks of the Alatamaha river on October 1st, 1765 (J. Bartram 1942 [1769], p. 31). Years later, William Bartram devotes an entire – though short – chapter to its detailed description (book III, chapter ix), insisting on its beauty and singularity, mixing aesthetic appreciation of the plant with scientific description: "fifteen or twenty feet high"; "oblong leaves"; "lightly serrated"; "tassel of gold-coloured refulgent staminae"; "sessile" but also "of the first order for beauty and fragrance of blossoms" (W. Bartram, 1996 [1791], p. 295). He also insists that the shrub only grows on the banks of that river in Southeastern Georgia (*Travels*, 1996 [1791], p. 296) and that it resembles the *Gordonia* (W. Bartram, 1996 [1791], p.375). Relevant in relation to practices of science and knowledge production and particularly prevalent for the practices of comparing is one of the very few footnotes of *Travels*, in which William Bartram substantiates his classification of the plant. He initially mistook it for a *Gordonia*, another plant from the tea plant family, *Theaceae* and also native to southeast North America:

> On first observing the fructification and habit of this tree, I was inclined to believe it a species of Gordonia; but afterwards, upon stricter examination, and comparing its flowers and fruit with those of the Gordonia lasianthus, I presently found striking differences abundantly sufficient to separate it from that genus, and to establish it the head of a new tribe, which we have honoured

> with the name of the illustrious Dr. Benjamin Franklin, Franklinia Altamaha. (W. Bartram, 1996 [1791], p. 375)

The process William Bartram is describing here entails "comparing new information with information stored and systematized by the brain in a never-ending, always open-ended, dialectical process" (Pouwer, 2010, p. 97). His note was aimed at one of the supporters of the "Gordonia" classification, Sir Joseph Banks, the Director of the Royal Botanic Gardens at Kew and the President of the Royal Society from 1778 to 1820 (Irmscher, 2000, p. 45). One can then appreciate even more Bartram's stubborn and rightful insistence on the original character of the plant and on its status as "the head of a new tribe", specifically American, (W. Bartram, 1996 [1791], p. 375) and not merely the offshoot of a preexisting category already identified in Europe. The act of comparing structures William Bartram's description which acquires political significance as it enables him not only to define one plant in relation to another but also to define national specificities.

In fact, the name William Bartram chose for the shrub is a direct echo of the original character of the plant. *Franklinia* is a tribute to his contemporary and family friend, Benjamin Franklin, while Altamaha is a reference to the Indian name of the river near which the plant grew. Through this syncretic name combining references to the American present and to the continent's more remote pre-European heritage (Irmscher, 2000, p. 43), one can argue that Bartram is here establishing the specificity of what being American means, a dimension which is absent from the two other travel/ natural history accounts. As Siegel suggests, "comparison *is* the process of relational self-definition. […] The nation, like the self, emerges in relation to others" (Siegel, 2005, p. 64l.

4.2 Portraying the Native inhabitants

The final point I would like to focus on is how these three authors represent Native Americans in their travel narratives. Contrary to other accounts by John Bartram[10], in which he precisely identifies the different Indian nations he encounters and describes their daily activities, this aspect is conspicuously absent in the *Diary*. Names of tribes are rare occurrences in *Diary* and what features most in this report is the *traces* generic "Indians" have left on the environment, but not their actual current presence, with the notable exception of the Indian Congress Meeting in Picolata (J. Bartram, 1942 [1769], p. 43). It is precisely this Congress, which took place between 15th and 18th November 1765 that may provide some explanation for John Bartram's way of presenting Indians in his *Diary*.

The purpose of the Congress was to renew the alliance between the British and the Creeks and to define or redefine a boundary line between British territory and Creek territory (Holland Braund, 2004, p. 79). In the French and Indian War, the Creeks had been allied to the British against Spain. As a result, they fought the Spaniards and the Native tribes that were

[10] Like *Observations on the Inhabitants, Climate, Soil, Rivers, Productions, Animals, and Other Matters Worthy of Notice Made by Mr John Bartram, in his Travels from Pensilvania to Onondago, Oswego and the Lake Ontario, in Canada.*

allied to Spain, and either killed their members or captured them and sold them as slaves in Charles Towne (Charleston). The "Indians" referred to here seem to be part of a historical past and these archeological remains are the most tangible traces of their presence. Bartram also repeatedly draws a parallel between their presence and the Spaniards':

> [February] 11th. North-west wind very high; could not venture on the river, so walked all over the island; observing […] the curiosities, both natural and artificial, of the Indians and Spaniards; of the former, were several middling tumulus's or sepulchres of the Florida Indians, with numerous heaps of oyster-shells, which one may reasonably suppose were many hundred years in collecting by as many thousands of Indians, also variety of old broken Indian pots. (J. Bartram, 1942 [1769], p. 48)

The "Indians" or "Florida Indians" that John Bartram writes about are not the Creeks but the tribes allied to Spain. By relegating those "Indians" to the past and insisting only on the *traces* they have left, while at the same time picturing the Creeks as part of the *present* (during the successful signing of a treaty), John Bartram emphasizes the power of Britain's Native allies and makes Florida appear much less threatening to prospective settlers in terms of the presence of Indians and Spanish enemies. Besides, by stating that those "Indians" *used to* occupy the most fertile sites, he suggests that those sites are, precisely, vacant for occupation by white settlers now:

> in most other places on any high dry bank on the river or its branches where the soil is good, are found fragments of old Indian pots and orange trees, which clearly demonstrates, that the Florida Indians inhabited every fertile spot on St. John's river, lakes and branches. (J. Bartram, 1942 [1769], p. 45-46)

In Romans' and William Bartram's travel accounts, Native Americans are on the contrary very much part of Florida's present. The reader can follow the travelers' progress across Choctaw, Chickasaw or Creek territory and each tribe's specific features are detailed. If Romans, just like William Bartram and other travelers, acknowledges that the Natives are well built ("All savages, with whom I have been acquainted, are, generally speaking, well made, of a good stature and neatly limbed", 1999 [1775], p. 112) and on the whole rather hospitable (1999 [1775], p. 113), he systematically calls them savages, insists on their moral foibles and indiscriminately quotes their laziness (1999 [1775], p. 127), dishonesty (1999 [1775], p. 113), brutality or drunkenness (1999 [1775], p. 113). And if he muses at length on their possible origin, or on their different customs, he does so for his readers' entertainment, so with a very different goal from John Bartram's reflections on "Indian" traces: "A people who by many peculiar customs are very different from the other red men on the continent will next *amuse us*: They are the Chactaws" (Romans 1999 [1775], p. 129; my emphasis). Both the systematically derogatory representation and the entertaining aspect are absent from William Bartram's depiction of Native Americans in *Travels*.

William Bartram's book is at odds not just with Romans' but with other contemporary representations, which usually chose to focus on the barbarity of Native Americans: "During the years of the early republic, […] dominant Americans saw only savagery and primitivism in

the Other and almost completely effaced the variety and complexity of Indian cultures" (Kornfeld, 1995, p. 290). In contrast to these mainstream representations, William Bartram uses *his travel account in order to deconstruct the overbearing myth of that "Other's" savagery:* "The representation of otherness in one form or another has always been a concern of travel writing" (Kuehn & Smethurst, 2015, p. 10). He indeed considers that white settlers have a lot to learn from the indigenous inhabitants of the American continent and he recommends that Euro-Americans accept what the Natives have to teach them before calling them savages, or thinking of "civilizing" them:

> let these men be instructed to learn perfectly their languages, and by a liberal and friendly intimacy, become acquainted with their customs and usages, religious and civil; their system of legislation and police, as well as their most ancient and present traditions and history" (W. Bartram, 1996 [1791], p. 24-25).

Even if William Bartram is from time to time the unwitting victim of the set phrases commonly used to speak of Native Americans, he constantly reconsiders his statements so that they conform to the reality he witnesses and not to the prejudices of his time. For instance, catching himself calling them "untutored savages", he reflects on that adjective to realize that it does not apply to them:

> Such is the virtue of these untutored savages: but I am afraid this is a common phrase epithet, having no meaning, or at least improperly applied; for these people are both well tutored and civil; and it is apparent to an impartial observer, who resides but a little time amongst them, that it is from the most delicate sense of the honour and reputation of their tribes and families, that their laws and customs receive their force and energy. (W. Bartram, 1996 [1791], p. 110)

Not only are Native Americans "tutored", they can even tutor the settlers. The relationship to nature is the field where Bartram considers that the settlers have especially a lot to learn from them, as it would give them the opportunity to move away from sheer exploitation and destruction of nature. William Bartram gives numerous examples of the British settlers' unreasonable use of resources and devastating impact on the natural environment:

> I have often been affected with extreme regret, at beholding the destruction and devastation which has been committed, or indiscreetly exercised on those extensive, fruitful Orange groves, on the banks of St. Juan, by the new planters under the British government, some hundred acres of which, at a single plantation, has been entirely destroyed to make room for the Indigo, Cotton, Corn, Batatas, &c. or as they say to extirpate the musquitoes, alledging (sic) that groves near their dwellings are haunts and shelters for those persecuting insects; some plantations have not a single tree standing, and where any have been left, it is only a small coppice or clump, nakedly exposed and destitute; perhaps fifty or an hundred trees standing near the dwelling-house, having no lofty cool grove of expensive Live Oaks, Laurel Magnolias and Palms to shade and protect them, exhibiting a mournful, sallow countenance; their native perfectly formed and glossy green foliage as if violated, defaced and torn to pieces by the bleak winds, scorched by the burning sun-beams in summer, and chilled by the winter frosts. (p. 212)

Keeping in mind that his book was published over a decade after the Declaration of Independence, we can argue that he may be hinting that the "American, this new man"

(Crevecoeur, 2023 [1782], p. 31) could succeed in this task – being a new man, a new Adam – by integrating Native knowledge. Indeed, by rejecting the convenient "Good Savage" (or Noble Savage) imagery while painting a grounded and realistic portrait of Native Americans as part of their environment, using its resources without depleting or destroying them, William Bartram shows a possible path that the Euro-Americans could take, and he thus builds a human identity for the newly independent country, where Natives and settlers alike could share a respectful rapport with the earth.

5 Conclusion

What I have argued here is that in spite of their apparent overarching similarities in terms of period and genre, these three travel and natural history accounts differ in the picture they make of Florida in relation to Great Britain.

John Bartram, as King George III's botanist, fully conformed to the metropolis' injunction to gather and send data about the new territory. But he also took advantage of the Florida expedition to collect specimens that he then acclimated in his Pennsylvanian garden, literally sowing the seeds of America's botanical independence.

Written roughly a decade later, at a time of increased tension between Britain and its colonies, William Bartram's and Bernard Romans' accounts at times question the traditional hierarchical relation between metropolis and periphery. These accounts show that the knowledge-building process started to be challenged by the scientific community even before actual political independence.

Taken together, these three writers can be seen to participate in the process of nation building by eradicating American dependence on Europe. They were part of the struggle in that, through their attitudes and writings, they insisted on American cultural and scientific identity and independence. They saw the study of natural science as a patriotic act in which Americans themselves were discovering their natural products, identifying, classifying, describing and naming these products. As a result, the works of these three writers encompasses much broader issues, such as those of identity and self-definition at a crucial moment in history, when Britain was trying to retain its grip on its soon-to-be independent colonies while America was trying to free itself from that grip, politically and culturally.

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Between equation and metaphor
The evolution and enduring relevance of science fiction

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Abstract

Science fiction (SF) operates as a dialectical interface between scientific formalism and cultural metaphor, synthesising empirical rigour with speculative abstraction. This paper posits SF as a hermeneutic laboratory where equations—from Asimov's population dynamics to Le Guin's thermodynamic ethics—function as narrative engines, translating quantitative principles into sociopolitical allegories. Through a diachronic analysis spanning Verne's technological extrapolations to Jemisin's decolonial geologies, we demonstrate SF's evolution as a response to scientific paradigm shifts. Contrary to critiques of genre stagnation, SF's adaptive metabolism thrives by bridging "hard" science (e.g., Weir's stoichiometric survivalism) and speculative fabulation (VanderMeer's ecological uncanny). We argue that SF's enduring relevance lies in its syncretic capacity to model emergent technoscientific crises, climate collapse, AI alignment, and genomic ethics as lived ethical terrains, transforming abstract equations into collective cognitive tools for navigating planetary-scale disruption. The analysis proceeds through a diachronic comparative framework, examining four paradigm shifts within the literary evolution of SF.

Keywords: *science fiction hermeneutics, technoscientific paradigms, speculative ethics, planetary-scale crises*

1 Introduction

The flickering hologram of a dying star casts equations as ghosts: science fiction, from its inception, has been a theatre where mathematics bleeds into myth. Born in the proto-scientific ferment of the 19th century, SF emerged not as mere entertainment but as an epistemological framework – a perpetual negotiation between the deterministic logic of equations and the fluid allegories of human experience. Jules Verne's *Twenty Thousand*

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Leagues Under the Sea (1870) grounded Captain Nemo's Nautilus in hydrodynamic principles, yet its narrative thrust derived from colonial anxiety. Conversely, H.G. Wells weaponised Darwinism in *The Time Machine* (1895), embedding entropy mathematics within a Victorian morality tale. Here, the genre's foundational dialectic crystallised: SF does not merely describe science; it performs it, using fictional frameworks to stress-test scientific paradigms against sociocultural realities.

This paper maps SF's evolution through four catalytic eras, each marked by its reconciliation of equation and metaphor. The Golden Age (1930s–1950s), under Campbell's editorial regime, championed positivist rigour – Asimov's psychohistorical equation modelled civilizational collapse while dramatising free will versus determinism. Yet by the 1960s, New Wave auteurs like Ballard and Le Guin inverted this optimism. Le Guin's thermodynamic identity reframed anarchist politics as energy flows, where societal entropy mirrored revolutionary potential. Contemporary SF bifurcates: "hard" variants (e.g., Weir's *The Martian*) operationalise orbital mechanics as narrative constraint, while speculative works (VanderMeer's *Annihilation*) deploy fractal ecology to dissolve Cartesian certainty.

Critiques of SF's "pessimistic turn" (Jameson, 2005) overlook its adaptive brilliance. Atwood's Oryx and Crake transposes Frankensteinian ethics into CRISPR-era biohazards, while Robinson's Aurora treats generation-ship failures as viability studies for multi-planetary collapse. Postcolonial interventions, like Jemisin's seismic allegories in the *Broken Earth* trilogy, subvert genre conventions to centre marginalised epistemologies. Crucially, SF's power resides in its mathematical-literary hybridity: Liu Cixin's unsolvable three-body problem becomes a metaphor for historical trauma, where cosmic chaos mirrors cultural recursion.

We contend that SF persists not through predictive accuracy but as a cultural substrate, a cognitive toolkit for rendering quantum entanglement or algorithmic bias into navigable narratives. In an age of accelerating technoscientific disruption, its syncretic methodology, binding equation to metaphor, proves indispensable. Like the Navier-Stokes equations describing Lem's sentient ocean in *Solaris*, SF formalises motion: the turbulent flow between empirical discipline and existential speculation, forever resisting stillness.

2 The Dialectical Evolution of Science Fiction

Science fiction (SF) constitutes a unique epistemological framework where speculative narratives negotiate the interplay between empirical rigour and sociocultural abstraction. From its inception, SF has operated as a hermeneutic laboratory, synthesising scientific paradigms with humanistic inquiry. The proto-scientific era (1850–1900), exemplified by Jules Verne's *Twenty Thousand Leagues Under the Sea* (1870), demonstrated technological extrapolation – grounding the *Nautilus* in contemporary marine engineering while projecting hydrodynamic principles beyond existing capability (Stableford, 2006). Conversely, H.G. Wells' *The Time Machine* (1895) deployed temporal displacement as a *Darwinian critique* of class stratification, embedding entropy mathematics within a Victorian moral allegory (Wells, 1895/2005).

The Golden Age (1930s–1950s) institutionalised SF's positivist ethos through John W. Campbell's editorial regime at *Astounding Science Fiction*. Isaac Asimov's *Foundation* series (1942–1953) epitomised this phase, transforming Hari Seldon's "psychohistory", a fictional statistical sociology, into a narrative vehicle for chaos theory *avant la lettre*. Asimov's equation (Fig. 1) modelled civilizational collapse via population dynamics, yet its literary power derived from dramatising the tension between determinism and free will (Westfahl, 1998).

$$\frac{dN}{dt} = kN$$

Figure 1: Asimov's equation on the law of biological growth

The equation encapsulates not merely a law of biological growth, but the narrative rhythm of Asimov's universes. Growth, once initiated, feeds on itself; knowledge breeds knowledge, and the expansion of mind mirrors the exponential curve of the equation. In this sense, Asimov's fiction performs mathematics: it is the differential of civilisation with respect to time.

The New Wave (1960s–1970s) emerged as a counter-narrative to technocratic triumphalism, catalysed by Cold War anxieties and ecological awakening. J.G. Ballard's *Crash* (1973) reimagined automotive trauma as a psychopathology of industrial modernity, while Ursula K. Le Guin's *The Dispossessed* (1974) fused anarchist political theory with thermodynamic metaphors:

$$\Delta S = \int \frac{\delta Q_{rev}}{T}$$

Figure 2: Le Guin's equation of societal entropy

In them, societal entropy (ΔS) mirrored Odo's revolution against hierarchical energy flows (Luckhurst, 2005). Le Guin's invocation of the thermodynamic identity translates the language of physics into an ethics of exchange. Every interaction – social, ecological, or personal – has its entropy: energy flows, warmth is shared, and balance depends on reversibility. Contemporary SF (post-1980s) exhibits a taxonomic bifurcation:

- Hard SF: Andy Weir's *The Martian* (2014) operationalises orbital mechanics and botany as narrative constraints, with Mark Watney's survival adhering to rigid stoichiometric balances.
- Speculative Fiction: Jeff VanderMeer's *Annihilation* (2014) deploys ecological uncanny as a metaphor for anthropogenic terraforming, where the "Shimmer's" fractal biogeography challenges Cartesian epistemology.

Cyberpunk further hybridised these streams — William Gibson's Neuromancer (1984) encoded Turing-complete AI within noir structures, presaging network theory's cultural ascendance (Csicsery-Ronay Jr., 2008).

3 The Alleged Genre Crisis: A Reappraisal

Contemporary critiques of SF's "pessimistic stagnation" (Jameson, 2005) overlook its adaptive metabolism. In other words, Jameson's critique overlooks the genre's turn toward systems theory, where complexity itself becomes a narrative strategy rather than a symptom of exhaustion. While Arthur C. Clarke's 2001: *A Space Odyssey* (1968) embodied mid-century cosmological optimism, Margaret Atwood's *Oryx and Crake* (2003) transposes Frankensteinian bioethics into the CRISPR era – not as defeatism, but as a precautionary heuristic. The shift from Vernean wonder to Atwoodian dystopia reflects science's own maturation: where 19th-century breakthroughs appeared discrete and conquerable, 21st-century challenges (climate collapse, AI alignment) demand systemic, interdisciplinary engagement.

Technological plateaus (e.g., Moore's Law asymptote) do not constrain SF's horizons but redirect them. Stephen Hawking's warning – "*We are running out of time to establish colonies beyond Earth*" (Hawking, 2010) – paradoxically validates SF's urgency: narratives like Kim Stanley Robinson's *Aurora* (2015) model generation-ship failures not as escapism, but as viability studies for multi-planetary civilisation. Postcolonial critiques (Rieder, 2008) further enrich SF's dialectic. N.K. Jemisin's *Broken Earth* trilogy (2015–2017) reconstitutes geological apocalypse through the lens of racialised oppression, demonstrating how genre conventions can be subverted to centre marginalised epistemologies.

As the 20th century's scientific optimism gave way to postmodern complexity, SF's imaginative burden shifted from exploration to interpretation. The genre ceased to project singular futures and instead began to map the uncertainties of systems theory, chaos, and quantum indeterminacy. In that sense, the alleged 'crisis' reflects not exhaustion, but a paradigmatic recalibration: the narrative of discovery has become the narrative of complexity.

This sense of exhaustion, however, has not ended the genre's evolution; it has merely forced a redirection of its ethical and imaginative compass. In recent years, the speculative imagination has begun to recover from dystopian paralysis through emerging narrative modes often described as *hopepunk* and *solarpunk*. Both reject apocalyptic determinism and reassert the possibility of moral agency in complex systems. Where classical science fiction dramatised humanity's insignificance before the machinery of the cosmos, *hopepunk* reframes defiance as compassion – the conviction that care, mutual aid, and emotional resilience are themselves technologies of resistance. It does not offer naive optimism, but rather what Le Guin called *"the realists of a larger reality"*: writers who insist that tenderness, not conquest, sustains the future.

Similarly, *solarpunk* transforms the cultural imagery of energy itself. Against the entropy of despair, it imagines an aesthetics of renewal – cities interwoven with ecosystems, technology reconciled with the biosphere. If *cyberpunk* visualised the future as corrosion, *solarpunk* envisions it as photosynthesis. Both subgenres continue the dialogue between equation and metaphor: the equation measures energy; the metaphor restores meaning. They represent the next turn of speculative fiction – not toward escapism, but toward a new equilibrium between human imagination and planetary reality.

4 Equation and Metaphor: The Syncretic Imperative

SF's resilience stems from its capacity to bridge quantitative discipline and qualitative speculation – a synthesis pioneered by H.G. Wells. *The War of the Worlds* (1898) operationalised Martian invasion via evolutionary biology (e.g., extraterrestrial susceptibility to Terran pathogens), while simultaneously allegorising British imperial hubris (Wells, 1898/2005). Mid-century masters formalised this duality.

Arthur C. Clarke's geostationary satellite proposal (*Wireless World*, 1945), initially drafted as SF, later materialised as human infrastructure, exemplifying *protoscientific fiction*. Stanisław Lem's *Solaris* (1961) intensified this fusion. The sentient ocean's hydrodynamic behaviour obeyed Navier-Stokes equations:

$$\rho\left(\frac{\partial \boldsymbol{v}}{\partial t} + \boldsymbol{v}\cdot\nabla\boldsymbol{v}\right) = -\nabla p + \mu\nabla^2\boldsymbol{v} + \boldsymbol{f}$$

Figure 3: Navier-Stokes equation

Yet its consciousness constituted a phenomenological critique, challenging anthropocentric models of intelligence (Swirski, 2006). The Navier–Stokes equation formalises motion as perpetual negotiation between forces. In a literary sense, it mirrors the dynamics of human systems – societies in turbulence, minds under pressure, the constant flow between order and chaos. The fluid, like narrative, resists stillness; it moves because to exist is to be in motion. Modern exemplars sustain this equilibrium:

- Ursula K. Le Guin (*The Left Hand of Darkness*, 1969) modelled Gethenian androgyny via hormonal periodicity:

$$T_k = \frac{1}{\beta} ln\left(\frac{P_m}{P_f}\right)$$

Figure 4: Le Guin's equation of kemmer cycles

This equation governs kemmer cycles, but its narrative power derives from destabilising gender essentialism – foregrounding today's non-binary discourse. It turns thermodynamics into a grammar of change. Between two pressures, physical or cultural, there lies a temperature of equilibrium, a moment when transformation becomes possible. The logarithm

measures not numbers but difficulty: the resistance of worlds, genders, or ideas to reach balance.

– Liu Cixin (*The Three-Body Problem*, 2008) anchors Trisolaran exodus in celestial mechanics:

$$\frac{d^2\boldsymbol{r_i}}{dt^2} = G\sum_{j\neq i} m_j \frac{\boldsymbol{r_j} - \boldsymbol{r_i}}{|\boldsymbol{r_j} - \boldsymbol{r_i}|^3}$$

Figure 5: N-body equation

The chaotic system's unsolvability becomes a metaphor for historical trauma, where China's Cultural Revolution and cosmic indifference mirror recursive instability. In this classical N-body equation, every motion is a confession of connection. No body moves alone; each trajectory is drawn by the presence of others. The mathematics of gravity becomes, in a literary sense, the poetics of influence – the unseen forces that bind characters, ideas, and worlds together.

5 Conclusion

Science fiction persists not through predictive fidelity, but as a *cultural substrate* for navigating technoscientific disruption. Its purported "crisis" misidentifies dystopian narratives as imaginative failure rather than ethical inoculation. Contemporary SF — from Neal Stephenson's cryptographic explorations (*Cryptonomicon*, 1999) to Octavia Butler's xenobiological parables (*Lilith's Brood*, 1987–1989) - functions as a collective cognitive toolkit, enabling publics to visualise quantum entanglement, genomic editing, or algorithmic bias through narrative affordances.

As emergent technologies accelerate, SF's syncretic methodology, binding equation to metaphor, will prove indispensable. It remains, as Wells envisioned, humanity's *"perpetual collaboration with destiny"* (Wells, 1912), transforming abstract science into lived ethical terrain.

In the twenty-first century, as data and narrative converge through AI-generated text, immersive simulation, and planetary-scale computation, SF's dialogue between equation and metaphor becomes not a literary exercise but an epistemological necessity. It trains societies to read the world as both formula and fable – to interpret the code behind the chaos.

Perhaps the true task of science fiction is not to predict, but to translate – to render the cold language of equations into stories warm enough for human comprehension. As contemporary cognitive narratology shows, metaphor operates as a compression algorithm for complex systems, making abstract structures experientially accessible.

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"Reject a book that speaks of the slaveholder of the South as cruel and unjust to his slaves": How Southern textbooks cemented the Lost Cause

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Abstract

This paper examines the role of Southern textbooks in perpetuating the Lost Cause narrative following the American Civil War. The Lost Cause ideology, which framed the Confederacy's defeat as honorable and slavery as benign, became a central component of Southern public memory. Key organizations, notably the United Daughters of the Confederacy (UDC) and the United Confederate Veterans (UCV), actively curated school curricula to promote this perspective, guiding textbook content and suppressing materials deemed "unjust to the South." Southern textbooks systematically downplayed or omitted the brutality of slavery, romanticized Confederate leaders like Jefferson Davis and Stonewall Jackson, and presented the Ku Klux Klan as a chivalrous force during Reconstruction. Textbooks portrayed the war as a noble struggle over states' rights rather than a conflict over slavery, depicting Southern soldiers as inherently virtuous and heroic. These educational interventions coincided with the professionalization of history teaching, enabling the UDC and allied organizations to influence generations of students. This study highlights how educational institutions, textbooks, and Neo-Confederate organizations collaborated to shape historical memory, demonstrating the enduring power of curriculum in reinforcing regional identity, racial ideology, and historical myth-making. By examining these textbooks and their broader cultural context, the paper illuminates the mechanisms through which historical narratives are selectively constructed and maintained over time.

***Keywords**: Lost Cause, Southern textbooks, United Daughters of the Confederacy (UDC), Civil War memory*

1 The Lost Cause and Southern Memory

After the Civil War, a new interpretation of the conflict emerged in the South, shaping the region's public memory for decades to come. Known as the Lost Cause, this narrative provided

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Southern justifications for the war, portraying Confederate sacrifice and defeat in the most favorable light. Its core tenets included the claims that the war was fought not over slavery but for states' rights, that the South lost only due to the North's overwhelming resources, that Confederate soldiers heroically defended their homeland, and that slavery was a benign institution in which enslaved people were treated like family. Nolan (2000) even argues that the Lost Cause became a national legend, comparable to sagas like Beowulf or The Song of Roland (p. 12). This article examines the role of textbooks in perpetuating and solidifying the Lost Cause ideology. These textbooks were part of a broader effort by Confederate sympathizers, including former Confederate officers, Southern politicians, and journalists, and, by the late 19th century, organizations such as the United Confederate Veterans (UCV) and the United Daughters of the Confederacy (UDC), to control the historical narrative of the war and Reconstruction.

The United Daughters of the Confederacy was founded in 1894 and quickly rose to prominence as a self-proclaimed guardian of Southern culture and history. Three years after its establishment, the UDC boasted 138 chapters, and railroad companies began offering members discounts for travel to the organization's conventions. By the end of World War I, membership had reached 100,000 (Cox, 2003, p. 29). As Blight (2001) points out, the UDC became "strikingly successful at raising money to build Confederate monuments, lobbying legislatures and Congress for the reburial of Confederate dead, and working to shape the content of history textbooks" (p. 273). The UDC's constitution defined the organization's objectives as "educational, memorial, literary, social and benevolent; to collect and preserve the material for a truthful history of the war between the Confederate States and the United States of America" (United Daughters of the Confederacy, 1895, p. 1). In other words, the UDC's goal was to transform a military defeat into a political and cultural victory – and in that goal, the organization succeeded beyond its members' wildest dreams. Together with the UCV, the organization formed "Historical Committees" tasked with selecting textbooks for Southern schools that were "fair" to the South, removing those that contained "incorrect" facts. The UDC's campaign to regulate historical education found clear expression in the works of authors such as Susan Pendleton Lee and Laura Martin Rose, whose textbooks faithfully embodied the organization's ideals. They advanced versions of history that aligned with the UDC's mission to defend the Confederacy's honor and justify slavery.

The UDC's Lost Cause efforts coincided with significant changes in American education. As McPherson (2004) observes, before the final decades of the 19th century, U.S. history was taught in schools only in an unsystematic manner. However, by the 1890s, history had become a professionalized discipline in university departments and was formally integrated into secondary school curricula, creating new markets for textbook publishers. Most of these publishers and the majority of the nation's historians were based in the North, and their textbooks generally presented a Unionist interpretation of the Civil War (McPherson, 2004, p. 67). But the Southern crusade to purge schools of textbooks that provided a "biased" version of history posed a dilemma for Northern publishers. They could either produce textbooks aligned with Lost Cause ideology and sell them exclusively in the South, or they could create

two versions of the same textbook – one presenting historical facts for Northern schools and another carefully edited to reflect Southern narratives.

2 Textbooks and the Institutionalization of Lost Cause Ideology

Interestingly, textbooks used in Southern schools presented an "unbiased" history of the Civil War decades before the UDC launched "a full-scale onslaught against a textbook industry" (Coleman, 2017). In the preface to A Southern School History of the United States of America (McDonald & Blackburn, 1869), the authors assert that existing school histories depict events solely from a Northern perspective, neglecting and misrepresenting the South. Their goal, they claim, is to correct this imbalance. The result, however, is a textbook of more than 500 pages that almost entirely ignores the institution of slavery, thereby establishing a precedent for the interpretation that the war was not about the "peculiar institution." In the chapter on the Harper's Ferry Raid, they describe John Brown as "a Northern fanatic, a noted Kansas assassin" leading "a small body of desperadoes" (McDonald & Blackburn, 1869, p. 389). They devote a subchapter to the enthusiasm and dedication of Southern soldiers in their defense of states' rights, portraying them as inherently more suited for war than their Northern counterparts because they were "reared in the midst of an inferior and submissive race, and, in their habits of life, were accustomed to daily exercises of a nature somewhat martial" (McDonald & Blackburn, 1869, p. 403). Stonewall Jackson, who was accidentally shot by his own men during the Battle of Chancellorsville, is elevated to near-divine status:

> Indeed, it was not only the military achievements of Jackson that had endeared him to the Southern people, but something pre-eminently great in his character. He was so pure, so noble, so untiring and so brave, that all heads bowed down to him. His splendid victories had excited the admiration of the world, but the fame of his warlike deeds was even obscured by the brightness of his virtues. Even his enemies praised him, and admitted that his angelic goodness almost consecrated the cause for which he fought (McDonald & Blackburn, 1869, p. 448).

One of the UDC's most favored textbooks was Susan Pendleton Lee's A School History of the United States (Lee & Manly, 1895). Pendleton Lee, the daughter of General William Nelson Pendleton, who served as the Army of Northern Virginia's chief of artillery throughout the war, surely felt qualified to provide an "unbiased" history of the South. In her preface, she uses words like "fair" and "just," stating her goal as "an honest effort...to speak truthfully...without sectional passion or prejudice" (Lee & Manly, 1895, p. 335). Pendleton Lee argues that slavery was not wrong since the Scriptures did not condemn it and describes the Underground Railroad as a violation of the Constitution. She refers to the Supreme Court's Dred Scott ruling, which declared that African Americans were not U.S. citizens, as a "celebrated decision." She labels Harriet Beecher Stowe "a violent abolitionist" who "had never been South nor seen slavery and slave-owners as they really were...and she wrote for an anti-slavery newspaper a story founded upon isolated cases of cruelty and crime picked up from other papers" (Lee & Manly, 1895, p. 336). Uncle Tom's Cabin, she claims, "aroused

universal indignation at the South; but the overdrawn statements had won the ear of the civilized world, which refused to hear the South in her own defence" (Lee & Manly, 1895, p. 336). Her book dedicates only a short paragraph to Abraham Lincoln but devotes more than a full page to Jefferson Davis, whom she describes as "an earnest, unselfish, devoted patriot, against whom not even the bitterest enemy could bring any charge to sully the purity of his character or the loftiness of his motives" (Lee & Manly, 1895, p. 353). Probably no other textbook romanticized plantation life and portrayed slavery as a completely benign institution as extensively as John Hugh Reynolds' Makers of Arkansas History (Reynolds, 1905). Describing enslaved people, he writes: "These simple-minded people went to their work cheerfully. They were fond of joking and playing pranks, and frequently they tried to outstrip one another in hoeing and picking cotton, humming some tune as they worked… Perhaps there never returned from a day's labor a happier or jollier crowd than the Southern negroes" (Reynolds, 1905, p. 178). As for slaveowners, Reynolds insists that "it is true that once in a while a master was cruel to his darkies; but, for the most part, he was kind and lenient to them. They in turn loved their master" (Reynolds, 1905, p. 180).

An honorable mention goes to Laura Martin Rose's The Ku Klux Klan or Invisible Empire (Rose, 1914), a primer described as "a glowing, pseudo-historical white supremacist tribute to the Reconstruction KKK" (Huffman, 2019). Rose, a native of Pulaski, Tennessee (the birthplace of the first Klan) served as historian-general of the UDC in 1916, succeeding Mildred Rutherford. Gaining a reputation as a Klan expert, she claimed to have personally known some of its founding members (Cox, 2003, p. 107). In 1913, the UDC unanimously endorsed her primer as supplementary reading in schools at their New Orleans convention. Rose dedicated the book to "the Youth of the Southland," hoping it would inspire "respect and admiration for the Confederate soldiers, who were the real Ku Klux, and whose deeds of courage and valor have never been surpassed, and rarely equaled, in the annals of history," as she sought to provide what she called "the true history" of the organization (Rose, 1914, pp. 11–12).

In eighteen chapters, supplemented with photographs and illustrations, Rose's book examines the Klan's history, its purpose, objects of its activities, costumes, and eventual disbandment. She also includes a story of "a Klan escapade" and a biographical sketch of General Nathan Bedford Forrest, the Klan's first Grand Wizard. While she acknowledges Forrest's capture of Fort Pillow in 1864, she unsurprisingly omits the massacre of approximately 300 African American prisoners of war, one of the most infamous war crimes of the Civil War. According to Rose, the Klan was founded "for social pleasure and recreation, and on discovering that the queer costumes, the great secrecy and weird mystery operated on the minds of the ignorant and vicious negroes and undesirable whites, they turned their objects into more useful channels" (Rose, 1914, pp. 25–26). Like Thomas Dixon in The Leopard Spots and The Clansman, Rose portrays the Klansmen as brave and chivalrous figures who took the law into their own hands to defend their Southern homeland and women from "dangers too terrible to contemplate at the hands of these brutish despots" (Rose, 1914, p. 17)—a reference to greedy carpetbaggers and ignorant freedmen during the "dark days" of

Reconstruction. She emphasizes that the Klan was always peaceful, opposed to bloodshed, and that violence was only used as a last resort.

Finally, Mildred Lewis Rutherford stands out as one of the most zealous advocates of Lost Cause history textbooks. As Blight (2001) observes, she gave new meaning to the term "diehard" (p. 279). Born in Georgia, Rutherford was a prolific writer and lecturer who served as the UDC's historian-general from 1911 to 1916. In addition to defending the Southern interpretation of the Civil War, she vehemently opposed women's suffrage, leading a successful campaign to prevent Georgia from ratifying the 19th Amendment. She argued that suffrage was "not a step toward equality, but rather a way of robbing women of the only power they truly held—that of feminine influence and persuasion within their families" (Case, 2002, p. 614). One of the hallmarks of her long career as a Neo-Confederate historian was the publication of a pamphlet titled A Measuring Rod to Test Textbooks, and Reference Books in Schools, Colleges and Libraries (Rutherford, 1919), a set of guidelines for Southern schools.

These guidelines were endorsed by the United Confederate Veterans, and schools and libraries across the South were expected to apply them when evaluating textbooks. In a set of warnings at the beginning of her pamphlet, Rutherford advises Southern institutions to reject any book that "calls the Confederate soldier a traitor or rebel, and the war a rebellion," that "glorifies Abraham Lincoln and vilifies Jefferson Davis," or that "speaks of the slaveholder of the South as cruel and unjust to his slaves" (Rutherford, 1919, p. 5). She then, with support from quotes by contemporary politicians and newspapers, proceeds to "correct" what she perceived as historical inaccuracies regarding secession and the Civil War. The pamphlet is essentially a summary of Neo-Confederate myths, including claims that slavery was not the cause of the war, that slaves were not mistreated, and, rather interestingly, that "the South has never had her rightful place in literature" (Rutherford, 1919, p. 22). Any book failing to meet Rutherford's guidelines was to be stamped "Unjust to the South" (Rutherford, 1919, p. 3). Her criteria became the standard for history textbooks throughout the South for decades to come (Crawford, 2022).

Viewed in historical perspective, from 1899, when student enrollment statistics first became available, until 1969, more than 69 million elementary and secondary school students across the Southern states were subjected to Lost Cause propaganda (Huffman, 2019). According to a 2011 survey by the Pew Research Center, conducted during the sesquicentennial anniversary of the Civil War's outbreak, 48% of Americans believed the war's main cause was states' rights (Heimlich, 2011). In January 2017, General John Kelly, then Chief of Staff to Donald Trump, told Fox News that General Robert E. Lee was "an honorable man who gave up his country to fight for his state" and argued that "the lack of an ability to compromise led to the Civil War" (Cobb, 2017). The White House later defended his remarks, with then-Press Secretary Sarah Sanders rejecting a reporter's suggestion that Kelly's comments were historically inaccurate, stating, "Because you don't like history doesn't mean you can erase it and pretend it didn't happen" (Bell, 2017). It was precisely the kind of argument a Lost Cause advocate might have made to a Northerner a hundred years earlier.

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Language interplay in The Great Gatsby

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Abstract

The paper investigates the interplay between language and character development in F. Scott Fitzgerald's The Great Gatsby. The study aims to analyse how language peculiarities, such as figurative language and phonological schemes, contribute to a narrative style and how they are portrayed in society. The close reading enables analysis of the author's narrative styles by systematically examining idioms, metaphors, similes, slang, and phonological schemes as key elements shaping the characters in The Great Gatsby. The linguistic variables are investigated in terms of conceptual metaphors, image schemas and constructions, which help interpret character identity and social status. Research applied a mixed-methods approach, integrating qualitative discourse analysis and quantitative stylistic analysis, demonstrated the ways Fitzgerald used the language to reinforce motifs of class aspiration, shaping illusions, and moral decay. Two case studies involved a conceptual metaphor analysis, accompanied by image-schematic clusters and the examination of time-as-resource idioms. The results show that Fitzgerald aims to incorporate figurative and colloquial language to encode psychological depth and emotional tension into the text, while characters` use of slang and sound patterns indicate their class identity and social distance.

***Keywords**: figurative language, metaphors, narrative style, colloquial language, slang*

1 Introduction

The Great Gatsby, a renowned literary work by F. Scott Fitzgerald, left an indelible mark on the 1920s with its evocative prose and poignant exploration of the Jazz Age. His masterpiece gives us linguists a unique ground for integrating cognitive-linguistic methodologies and

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literary language. As the number of studies on the novel has investigated grammatical, lexical, and sociolinguistic style perspectives, this paper reframes its language peculiarities in terms of conceptual structures, image schemas, and constructions (Almášová, 2024; Liu, 2010). Idioms, metaphors, similes, and slang are investigated not only as stylistic categories but also as components that provide insight into cognitive structuring and the pursuit of social meaning. As a result, cognitive linguistics perceives language as a manifestation of fundamental cognitive processes rather than as an independent module: meanings are encyclopaedic, context-sensitive, and embedded in conceptual frameworks such as domains, frames, and mental spaces (Evans, 2019/2023). In this context, idioms and metaphors are viewed not as arbitrary ornamental elements but as conventionalised methods of interpreting experience, frequently based on pivotal image schemas such as PATH, CONTAINER, FORCE, and BALANCE (Croft & Cruse, 2004). Construction Grammar broadens this perspective to encompass the entirety of grammar, perceiving idioms as entrenched form-meaning pairings, or constructions, with varying levels of schematicity (Herbst & Hoffmann, 2024). In The Great Gatsby, figurative and colloquial expressions are closely linked to social class, identity, and perspective. Nick Carraway's narrative voice is charged with extensive conceptual metaphors and elaborate image schemas, while the dialogues of Gatsby, Daisy, Tom, Myrtle, and others are rich in idioms, slang, and shorter similes that reflect their sociolects and attitudes (Almášová, 2024; Carré-Hudson, 2019). This paper also sheds light on dialects, social classes, and the American Dream, while also providing a systematic cognitive-linguistic dimension to the analysis. Thanks to detailed conceptual metaphor analysis and construction grammar approaches, valuable insights into the writing style can be provided, revealing the hidden motivations behind characters' use of figurative language and demonstrating how lexical and phonological patterns encode class, identity, and social status.

2 Theoretical background

The Great Gatsby is one of the oldest classics reflecting the Jazz Age and the early Roaring Twenties. In this context, it was exciting to investigate the effects of figurative language, conceptual metaphors, and similes on image schemas and idioms, drawing on Construction Grammar theory. This way, stylistic analysis and various cognitive linguistic approaches will be considered, while mentioning the effect of slang expressions in the novel. Similar research was conducted by Böhmerová (2025), who analysed the emergence of English positivised Jazz-Age qualifiers. It was highlighted that shifts of meaning appeared as neosemanticisms, which can be attributed to the inherent nature of slang, where spontaneity, informality, and non-conventionality are often favoured. This preference aligns not only with the musical ethos but also with the linguistic perspectives of the figures and supporters of the Jazz Age.

The writer's choice of language can be identified and interpreted through stylistic analysis. As a result, Leech and Short (2000,74-82) suggest a checklist beneficial for placing linguistic and stylistic categories, divided into four headings: lexical categories, grammatical categories, figures of speech, and cohesion accompanied by context.

One of the main characteristics that make The Great Gatsby an American classic is Fitzgerald's use of figurative language, which can spark readers' imaginations through a variety of images – concrete verbal pictures that appeal to the senses, often incorporating a vast number of adjectives. The author's use of adjectives thus creates a romantic sensation, visualises the scene, and deepens the theme. This can be depicted by Gatsby's comment: “her voice is full of money,” which can be analysed at the cognitive level as a conceptual metaphor following Lakoff (2008) and Johnson (2013).

2.1 Cognitive linguistics

Consequently, cognitive linguistics seeks two principles, the first seeking Generalization commitment (applied across different areas of language) and the second cognitive commitment (implementing a linguistic analysis to be compatible with what is known about human cognition) Croft & Cruse, 2004; Evans, 2019/2023). In this context, meaning is seen as encyclopaedic rather than dictionary-like, and linguistic expressions are perceived as cues to rich conceptual structures, such as frames, domains, and spaces. This way language reflects patterns of thoughts, conceptual structures, and real-like experience, and thus cognitive linguists see language as intrinsically linked to perception, action, and mental processes. The key concepts include embodiment (language arises from and is shaped by bodily experiences), conceptualisation (meaning is based on mental representations and schemas, such as metaphors and image schemas), and usage-based models (learning the language through its active use).

As a result, this study emphasises metaphors and will shed light on conceptual metaphors and image schemas. Thus, in Lagacker`s hypothesis, semantics is conceptualization. This process can be seen as a range of construal operations that human beings employ in language. The following situations are presented in various manners – for instance, waste time vs. spend time in “No wasting time at Shafters” vs. “It wouldn’t take up much of your time and you might pick up a nice bit of money.” (Gatsby to Nick regarding the side-line business)

These cases communicate to the listener the positive or negative aspects of each depicted situation, and even the essence of each (characterising time in monetary terms) (Croft & Cruse, 2004). Talmy (2000) groups imaging systems under a four-way classification: structural schematization, deployment of perspective, distribution of attention, and force dynamics, which also play a crucial role in Gestalt psychology and could explain the inner processes happening in characters. In this case, it can refer to domains of space and time in The Great Gatsby. This can also be supported by Langacker`s surveys, placing a wide range of construal operations under the rubric of focal adjustments such as selection, perspective (figure/ground, viewpoint, deixis, and subjectivity), and abstraction. Another construct adding more sense to conceptualisation can be supported through image schemas, representing schematic patterns and arising from imagistic domains, such as containers, paths, links, forces and balance that recur in many embodied domains and shape our bodily experience (Lakoff, 1987; Johnson, 1987).

In literary texts, narrators and characters incorporate these operations, including domains to structure events in particular ways. In The Great Gatsby, Nick's narration consistently interprets social spaces (East Egg, West Egg, the valley of ashes, Manhattan) and characters (Gatsby, Daisy, Tom) through specific lexicogrammatical choices that foreground or background different aspects of the story world (Liu, 2010), which is organised around Gestalt principles within psycholinguistic theories. In this context, image schemas are seen as cognitive models established through interaction with the daily world.

2.2 Conceptual metaphors, image schemas and time entity

Conceptual metaphor theory asserts that abstract domains such as time, emotion, and morality can be understood in terms of more concrete domains such as space, motion, and material resources (Evans, 2019/2023). As mentioned earlier, these mappings are rooted in recurring patterns of embodied experience within cognitive linguistics, often described as image schemas: PATH/JOURNEY, CONTAINER, VERTICALITY, FORCE, BALANCE, etc. (Croft & Cruse, 2004).

In The Great Gatsby, journey schemas construe metaphors like the renowned closing image of "boats against the current". In contrast, VERTICALITY and LIGHT/DARK schemas shape distinctions between the luminous Eggs and the grey valley of ashes. CONTAINER and LANDSCAPE schemas develop a portrayal of spaces that signify class and moral standing. In English, time is often conceptualised as a space entity or as a resource that can be spent, wasted, or invested; the novel incorporates these TIME-AS-RESOURCE patterns in idioms such as waste time, take up much of your time, spend an hour, and make the most of his time (Evans, 2019/2023). These idioms act as surface manifestations of the underlying conceptual metaphor TIME IS A RESOURCE, relying on image schemas of QUANTITY, BUDGET, and OPTIMISATION. For instance, OPTIMISATION within a limited resource frame can be inferred when Daisy says: "Tell your chauffeur to go far away and spend an hour." Nick (on Gatsby during the war): "So he made the most of his time. He took what he could get…", where the utterance is built on conceptual metaphor: TIME IS MONEY/RESOURCE.

Beyond these dimensions, conceptual metaphors can be grouped into structural, ontological, and orientational metaphors, which can be illustrated using image schemas. For instance, orientational metaphors such as happy is up, sad is down are triggered by the UP-DOWN schema, so there are lots of expressions as I am feeling up, my spirits rose, he is in high spirits, and I'm feeling down, I'm depressed, he is really low. In this case, image schemas can be metaphorically projected and propositionally elaborated to constitute our network of meanings" (Zhou, Lahlou & Azam, 2023).

Additionally, regarding the image schema, many published studies describe the characteristics and roles of adjectives, i.e., psychological adjectives, which represent people`s psychological feelings and individual differences, are often associated with an identity marker and frequently discussed in psycholinguistic theories. As a result, this study took into account Dixon (2004)`s classification, where adjectives associated with psychological status were also

divided into core and semantic types. The core semantics adjectives include “DIMENSION, AGE, VALUE, and COLOUR, while the peripheral ones involve PHYSICAL PROPERTY, HUMAN PROPENSITY, and SPEED” (P.3–5). This could be exploited when Gatsby stretches his arms towards the “green light” across “dark water”/“unquiet darkness”, which can be interpreted as a strong identity marker of his aspirational identity and class belonging.

In Construction Grammar, all levels of linguistic structure are regarded as constructions: conventionalized associations of form and meaning (Herbst & Hoffmann, 2024). Idiomatic expressions such as kick the bucket or waste time represent entrenched form–meaning pairings, with their semantics frequently driven by conceptual metaphors (Evans, 2019/2023). Numerous idioms can be interpreted as metaphorical constructions that exemplify primary conceptual mappings like TIME AS MONEY or LIFE AS A JOURNEY. This viewpoint is prevalent in The Great Gatsby. Phrases such as "waste time," "take up your time," and "spend an hour" are established idioms that shape the TIME-AS-RESOURCE metaphor, yet they are distributed unevenly across characters. New-money characters, such as Gatsby, perceive time as a limited resource to be optimized, whereas old-money characters, like Daisy, view time as an abundant luxury that can be spent freely. Thus, idioms serve as metaphorical constructions that not only disclose conceptual structure but also reflect class-specific perspectives.

This way, in literature, figurative language can function as a resource for meaning-making and social indexing: idioms cram into culturally shared scripts, similes express analogical relationships, metaphors organize cross-domain interpretations, and slang signifies an individual`s position in society. In The Great Gatsby, these devices ground focalization and align readers with or against the value systems of characters, a trend noted in the stylistic analyses of Fitzgerald’s writing (Syukri, 2024.; Huang, 2024). By analysing these lexical categories, researchers gain deeper insight into the narrative style and understand the characters' linguistic consciousness, social status, educational level, and emotional state. These aspects can also be interpreted in light of the individual's use of slang and other phonological schemes.

2.3 Phonological schemes and class representation

Phonological schemes such as rhythm, rhyme, alliteration, assonance, and other patterns create a sonic texture in prose that indexes register and audience design, creating the phonetic and aesthetic qualities of literary work. These features in The Great Gatsby are frequently linked to characters' positions in the social hierarchy and status, thus providing a sociolinguistic perspective of speech styles and conversational techniques (Carré-Hudson, 2024; Abu Qweider, 2021).

2.4 Stylistic methods in literary analysis and Previous studies on The Great Gatsby

Contemporary stylistics often applies corpus tools (e.g., AntConc for n-grams and collocations) with qualitative discourse analysis to reveal writers' tendencies behind perceived

style; these methodological tools enable us to link lexical and figurative language devices to character-specific discourse (Ju, 2023).

While corpus-based tables help us group lexical, syntactic, and rhetorical features into maps of device frequencies (n-grams, bundles), Leech & Short's framework distinguishes lexical, grammatical, rhetorical, and cohesive categories. Moreover, studies dedicated to conversational meaning and Gricean cooperation explain how idiom and slang interact with power and identity in dialogic scenes (Ju, 2023; Huang, 2024; Lei, 2023).

In The Great Gatsby, detecting conceptual metaphor and simile markers enables device-level tagging and the identification of stylistic clusters with characterological functions (Johnstone, 2017), providing ways to link figure types with social meanings and scene types (Podavets & Gerok-Yerzhanova, 2023; Mpouli & Ganascia, 2015).

In this manner, previous research frequently lists stylistic features without systematically linking them to users, contexts, and social effects; we address this gap by directly linking device distributions and phonological textures to character roles, status performances, and shifts across scene types (Wei, 2018; Carré-Hudson, 2024).

In terms of lexical categories, Fitzgerald frequently uses adjectives that seem contradictory, "blue gardens", which suggest an unreal vision of self. This can also be seen when describing Jordan's character as follows: Her grey, sun-strained eyes back at me with polite, reciprocal curiosity out of a wan, *charming*, *discontented face.* (p. 15). This description applies synesthetic and emotional metaphors, accompanied by oxymoronic adjective pairings. Calling her face "wan" and disconnected perceives emotion as a visible surface quality, mapping inner stare onto outward features. Thus, the BODY is understood as a part of the broader conceptual metaphor:

- a CONTAINER that shows inner emotions.
- Negative emotion as an aesthetic quality – at the same time, indicating a typical modernist character portrayal, this metaphor converts Jordan`s flaw into an aspect of her attractiveness.

Furthermore, Fitzgerald uses many lexical clusters to depict three main characters, who play an important role in shaping how Nick conceptualises Gatsby. The following passage also perfectly demonstrates the application of conceptual metaphors and sets the tone of the story:

> *Only Gatsby, the man who gives his name to this book, was exempt from my reaction - Gatsby, who represented everything for which I have an unaffected scorn. If personality is an unbroken series of successful gestures, then there was something gorgeous about him, some heightened sensitivity to the promises of life, as if he were related to one of those intricate machines that register earthquakes ten thousand miles away. This responsiveness had nothing to do with that flabby impressionability which is dignified under the name of the „creative temperament" - it was an extraordinary gift for hope, a romantic readiness such as I have never found in any other person and which it is not likely I shall ever find again. (p. 8).*

On the one side, the lexical cluster points at the personal quality and temperament of Gatsby and leads our attention to the speech and thought processes of the character.

a) *"If personality is an unbroken series of successful gestures…."* In this case, the conceptual metaphor is seen as a PERFORMANCE, suggesting that Gatsby`s persona is crafted and theatrical.

b) *"as if he were related to one of those intricate machines that register earthquakes ten thousand miles away"* - in this situation, Nick uses the conceptual metaphor as a person, implying a machine or a sensitive instrument. Therefore, Gatsby can be described as hyper-perceptive, finely tuned, or even non-human in his sensitivity.

c) "a romantic readiness" - conceptual metaphor here is grounded in the state of readiness (emotional state) as romantic/emotional preparedness for action. Thus, Romance is not love but an orientation towards experience, turning Gatsby into someone who longs for adventure and idealism. Theories of the etymological aspects of the word romance and of many other lexical clusters were further investigated in Böhmerová's (2025) linguistic studies.

d) The entire passage gives us more insight into Gatsby`s external world (conceptual metaphors denoting the mind=space/world) and inner world (conceptual metaphors depicting inner self=interior landscape).

These metaphors portray Gatsby as a dreamlike, idealistic, and almost mythic character, aligning with Nick's fascination and setting the romantic tone for the entire novel. Alltogether, lexical clusters and conceptual metaphors act as a significant technique for analysing and categorising characters.

From a grammatical perspective, we have already stated the importance of the narrative sentence type, which we divided into phonological, lexical, and grammatical. Fitzgerald's mastery of syntactic formality can be seen in the long narrative sentence type, which helps him describe feelings and emotional changes that emphasise the narrator's complex feelings towards his era, especially the critique of the corruption of the American dream and decadence. His style is also typical in its use of appositional phrases, reflecting not only his critique but also his admiration for Gatsby's romanticism and idealism. The author repeatedly highlights Gatsby`s "appalling sentimentality " (p.117) and the "foul dust" that floated in the wake of his dreams (p.8).

Another example appears when Nick describes Gatsby`s excitement when he first sees Daisy`s house:

> *There was a ripe mystery about it, a hint of bedrooms more beautiful and cool than other bedrooms, of gay and radiant activities taking place through its corridors, and of romances that were not musty and laid away already in lavender, but fresh and breathing and redolent of this year's shining motor-cars and of dances whose flowers were scarcely withered.* (p. 141)

In this passage, “ripe mystery“ conceptualises mystery as an organic object that can mature like a fruit.

Aligning with the metaphor ABSTRACT STATES ARE LIVING ORGANISMS. Therefore, it could be interpreted in the framework of conceptual metaphor, particularly ontological metaphor. Similarly, a house and its “corridors” are perceived as containers of emotional and sensual life, reflecting the metaphor PLACES ARE BODIES or SPACES AS VESSELS OF EXPERIENCE.

On the other hand, references to “fresh and breathing” romances contrast the stagnation of the past (“musty,” “laid away”) with the vibrancy of the present, thereby reinforcing the conceptual dichotomies NEWNESS IS LIFE and OLDNESS IS DECAY. The imagery of scent, flowers, and gleaming motorcars further intertwines modernity with organic vitality, implying that time itself is perceived through metaphors of growth, fragrance, and blooming. Collectively, these metaphors support the reader’s perception of the setting as a dynamic, sensuous space invigorated by the energy of the present.

2.5 Research methods in cognitive linguistics and stylistics

Research methods in cognitive linguistics apply introspective analysis and integrate corpus linguistics, psycholinguistic experiments, and discourse-based qualitative approaches (Evans, 2019/2023; Glynn & Robinson, 2014). Cognitive-stylistic studies of *The Great Gatsby* have implemented mixed-approach methods, such as corpus techniques (frequency and collocation analysis) alongside close reading to identify Fitzgerald’s lexical and grammatical preferences in his writing style (Liu, 2010; Carré-Hudson, 2019)

An earlier thesis on *The Great Gatsby* focused on “language peculiarities” at the phonological, morphological, and lexical levels, investigating idioms, similes, metaphors, slang, and phonological schemes across different characters and social classes (Almášová, 2024). The current paper complements this research by applying Conceptual Metaphor Analysis and a construction-grammar perspective to a selected set of examples, clarifying the conceptual motivations and socio-cognitive functions of the figurative and colloquial expressions identified in the previous study.

3 Methodology

3.1 Research aim and research design

The paper aims to investigate the ways F. Scott Fitzgerald’s use of language influences the development of characters and the depiction of social hierarchy in The Great Gatsby. In particular, the research formed two research questions to examine the relationship between (a) figurative language (conceptual metaphors, idioms, similes, and slang) and character development and narrative style (RQ1); and (b) the role of phonological schemes in identifying social status among the novel’s characters (RQ2).

To detect these aims, the research applied a mixed-methods approach combining quantitative corpus-stylistic analysis and qualitative discourse interpretation.

The data was collected and analysed based on close reading analysis and small-scale quantitative coding of figurative language and idiomatic constructions was employed. Selected passages from Fitzgerald's *The Great Gatsby* (1925/2013) were thoroughly examined, with particular focus on Nick's narrative voice, while reflecting on key dialogues involving Gatsby, Daisy, Myrtle, Tom, and Nick. The research primarily aims to integrate cognitive linguistics and poetics approaches, alongside socio-stylistic frameworks, to interpret selected variables and reveal how language use shapes class identity, personality, and narrative perspective. The analysis is prevailingly focused on conceptual metaphors, while determining the role of idiomatic expressions, similes, and slang in creating the identity marker relevant to the research questions. The research includes three steps:

1. A set of **ten conceptual metaphors and image schemas** was obtained from Conceptual Metaphor Analysis All expressions are coded for conceptual metaphors (e.g. LIFE IS A JOURNEY, MORALITY IS CLEANLINESS, STATUS IS HEIGHT/LIGHT), image schema (PATH, CONTAINER, VERTICALITY, and FORCE, , etc.), speaker (narrator vs. character), and interpretive functions reflecting on identity, social status, and narrative voice.
2. An analysis of three idioms based on the TIME-AS-RESOURCE is conducted as metaphorical constructions , illustrating how their distribution among characters reflects class-specific attitudes towards time, work and leisure.
3. Furthermore, additional idioms, similes, and slang expressions previously discussed are shortly re-interpreted within the same cognitive-linguistic framework based on previous research.

3.2 Conceptual metaphors, image schemas and narrative voice analysis

The first analysis is based on a mini-corpus consisting of conceptual metaphors and image-schematic clusters from The Great Gatsby, including :

- the "foul dust" that floats in the wake of Gatsby's dreams,
- the "valley of ashes" where waste "grows like wheat",
- Gatsby stretching his arms towards the "green light" across the "dark water",
- Gatsby's "blue gardens" where guests move "like moths",
- the "local heavens" above the Eggs,
- and the final image of "boats against the current, borne back ceaselessly into the past".

For every expression, the foundational conceptual metaphor and image schema were detected and connected to character identity, social class, and narrative voice. For example, the "foul dust" that follows Gatsby's aspirations merges the idea of MORAL CORRUPTION IS POLLUTION with a JOURNEY/WATER schema, where a moving vessel leaves a trace behind. The "valley of ashes" reverses the fertility schema typically associated with a valley, reinterpreting industrial waste as a desolate landscape, thereby mapping social and moral decline onto physical space. The green light across the dark water exemplifies the concepts of

DESIRE IS LIGHT and EMOTIONAL DISTANCE IS PHYSICAL DISTANCE, structured by a SOURCE–PATH–GOAL schema.

The results reveal that most of these metaphors appear in Nick's narration rather than in the characters' dialogue. As a result, Nick's voice acts as the primary source for developing extended conceptual metaphors and image-schema structuring, which he employs to interpret and shape the narrative world. Conversely, the characters' dialogue tends to include more localized similes, idioms, and slang, serving as indicators of sociolect and stance (Carré-Hudson, 2019). This finding supports the idea that the novel's overarching conceptual metaphors are closely linked to narrative focalization and the creation of Nick's morally complex yet stylistically lyrical voice.

Spatial metaphors within the analytical framework map *class hierarchy* onto contrasts that are both vertical and luminous. “The Eggs and the Manhattan skyline” are perceived as elevated, bright, and thoroughly bounded Gestalts, in contrast to “the valley of ashes, which is characterised as diffuse, grey, and scarcely portrayed. According to Croft and Cruse (2004), this reflects systematic differences in construal regarding figure–ground alignment, scalar focus, and Gestalt organisation. High-status areas are emphasised as coherent entities, whereas low-status areas primarily serve as background or waste containers. The conceptual metaphor table illustrates how cognitive frameworks, such as image schemas, are employed to represent social class and moral judgments.

Table 1: CMA (Conceptual metaphor analysis)

Coding legend:
Cat. = Gibbs-type conceptual domain
L/D = Light/Darkness
CONST = Construction/Building
NAT = Nature/Organic
JNY = Journey/Path
Image schema (Gibbs): PATH, FORCE, CONTAINER, VERTICALITY, CYCLE, etc.
Source: NARR (Nick’s narration), GAT (Gatsby in direct/indirect speech), etc.
Ratings (1–3):
ID = Strength as an identity marker
ST = Strength as a status/class marker
NV = Contribution to Fitzgerald’s narrative voice
10 CMA examples (pre-rated dataset)

Linguistic Expression (Core Metaphorical Phrase) CM & Image Schema Category Source Ratings (ID/S	Linguistic expression (core metaphorical phrase)	CM & image schema	Cat.	Source	Function for RQ	Ratings (ID/ST/NV)
1	“foul dust” (in the wake of Gatsby’s dreams) The Great Gatsby book	MORAL CORRUPTION IS POLLUTION; LIFE/ASPIRATION IS A SHIP LEAVING A WAKE. PATH + SUBSTANCE schemas: his dream cuts through social	NAT / JNY	NARR	Positions Gatsby as *idealistic* yet surrounded by moral “residue”; signals Nick’s reflective, morally *sceptical narrative*	ID=2 (Gatsby as dreamer), ST=2 (corruption of upper-class world), NV=3

Linguistic Expression (Core Metaphorical Phrase) CM & Image Schema Category Source Ratings (ID/S	Linguistic expression (core metaphorical phrase)	CM & image schema	Cat.	Source	Function for RQ	Ratings (ID/ST/NV)
		space, resulting in harmful residue.			voice rather than slangy direct speech.	
2	"Life was beginning over again with the summer." The Great Gatsby book	LIFE IS A SEASONAL CYCLE; NEW LIFE IS SPRING/SUMMER. CYCLE + VERTICALITY (up-swing of the year). Embodied sense that warmth/longer days = renewal.	NAT	NARR	Encodes Nick as someone who reads emotional/social life through natural cycles, marking his educated, lyrical register (vs. blunt "low" slang).	ID=2, ST=1, NV=3
3	"valley of ashes" (ashes "grow like wheat" in a "fantastic farm") The Great Gatsby book	POVERTY/DECAY IS A BARREN LANDSCAPE; WASTE IS CROPS. CONTAINER + SURFACE schemas; inversion of fertile valley → industrial ruin.	NAT / CONST	NARR	Contrasts *working-class wasteland* (Wilson, Myrtle) vs. the lush Eggs; metaphorically codes class difference through landscape, giving you a strong *status-marker* environment.	ID=3 (for Wilson/Myrtle world), ST=3, NV=3
4	"the eyes of Doctor T. J. Eckleburg" that "brood" over the dump The Great Gatsby book	MORAL/JUDGING MIND IS A GIANT WATCHING EYE; GOD IS VISION. VERTICALITY + FORCE (gaze bearing down). L/D: faded billboard eyes vs. grey dust.	L/D	NARR	Creates a quasi-religious surveillance over lower-class space; later characters project guilt onto it. Works as a symbolic *social conscience* above the valley's underclass.	ID=2, ST=3, NV=3
5	Gatsby stretches his arms towards the "green light" across "dark water" / "unquiet darkness"	DESIRE/HOPE IS LIGHT; EMOTIONAL DISTANCE IS DARK WATER. PATH schema (reaching across space) + L/D contrast between aspiration and obscurity.	L/D / JNY	NARR (about GAT)	Embodied image-schema of SOURCE–PATH–GOAL: Gatsby as upward-striving outsider reaching toward East Egg privilege. Strong marker of his *aspirational identity and class longing*.	ID=3, ST=3, NV=3
6	Gatsby's "blue gardens", guests moving "like moths" The Great Gatsby book	SOCIAL LIFE IS A NIGHT GARDEN; PEOPLE ARE MOTHS ATTRACTED TO LIGHT/LUXURY. NAT + L/D schemas (fragile creatures circling artificial light).	NAT / L/D	NARR	Simile "like moths" ties fashionable partygoers to instinctive, fragile creatures; encodes their status performance as a kind of mindless attraction to glamour.	ID=2 (for "party set"), ST=3, NV=3
7	Stars as "silver pepper" scattered in the sky over Gatsby's house; Nick imagining their "local heavens"	SOCIAL SPACE IS COSMOS; STATUS IS ELEVATION / CELESTIAL SHARE. VERTICALITY + CONTAINER (own slice of heaven).	L/D / CONST	NARR	Maps class and property onto cosmic territory (who owns "our local heavens"), tagging Nick's ironic awareness of wealth as quasi-divine elevation. Sophisticated, non-idiomatic metaphor shows his educated voice.	ID=2, ST=3, NV=3
8	Young Gatsby's "universe of… gaudiness" spinning in his brain; "rock of the world" founded on a fairy's wing The Great Gatsby book	INNER FANTASY IS A COSMIC CONSTRUCTION; REALITY IS ARCHITECTURE BUILT ON FRAGILE FOUNDATION. CONST + BALANCE schemas.	CONST	NARR (about GAT)	Shows Gatsby's self-fashioning: he builds an inner world of splendour on impossibly delicate foundations. Distinguishes his romantic, imaginative identity from Tom's coarse literalism.	ID=3, ST=2, NV=3
9	The city rising as "white heaps and	CITY / MODERNITY IS A CONFECTION BUILT FROM	CONST / NAT	NARR	New York becomes a materialisation of	ID=2, ST=3, NV=3

Linguistic Expression (Core Metaphorical Phrase) CM & Image Schema Category Source Ratings (ID/S	Linguistic expression (core metaphorical phrase)	CM & image schema	Cat.	Source	Function for RQ	Ratings (ID/ST/NV)
	sugar lumps" "built with a wish out of… money" The Great Gatsby book	DESIRE AND MONEY. CONST schema; sweetness + whiteness as surface glamour over moral emptiness.			capitalist fantasy. That metaphor foregrounds moneyed elite status and sets the tone for Nick's ambivalent fascination.	
10	Final image of "boats against the current", borne back into the past The Great Gatsby book	LIFE/HISTORY IS A RIVER JOURNEY; HUMAN AGENCY IS STRUGGLE AGAINST FORCE. JNY + FORCE schemas.	JNY	NARR	Universalises Gatsby's story: *all* characters are caught in this image-schema. It crowns Nick's narrative voice - philosophical, rhythmic, far from colloquial slang.	ID=2, ST=1, NV=3

3.3 TIME AS RESOURCE: Idioms as metaphorical constructions

The second analysis is aimed at examining three idiomatic constructions in terms of TIME AS RESOURCE metaphor:

- "*No wasting time at Shafters…*"
- "*It wouldn't take up much of your time…*"
- Daisy's instruction to "*spend an hour*, accompanied by Nick's remark that Gatsby "made the most of his time.

All three idioms conceptualise time as a measurable resource that can be spent, wasted (squandered), taken up, or optimised. They embody image schemas of RESOURCE / CONSUMPTION, CONTAINER, and BUDGET/OPTIMISATION (Evans, 2019/2023). Construction grammar theories see idioms as entrenched verb-object or phrasal-verb constructions with partially schematic interpretations: X wastes time ≈ 'X uses time ineffectively'; Y takes up someone's time ≈ 'Y consumes someone's available time'; and spend an hour / make the most of time ≈ 'allocate and optimise temporal resources'. They can be retained as low-level constructions associated with higher-level patterns within a network of related expressions (Herbst & Hoffmann, 2024). Their distribution among characters indicates class-specific attitudes towards time:

- The schedule in which young Jimmy Gatz determines that there will be "no wasting time at Shafters" reflects a self-help ideology focused on efficiency and self-development: time is capital that must not be wasted.
- Gatsby's assurance to Nick that the suggested business arrangement "would not take up much of your time" presents illegal activities in rational, middle-class terms as a reasonable exchange of time for money.

- Daisy's request for the chauffeur to "spend an hour" elsewhere implies an abundance of time that can be casually allocated to arranging a private meeting.

Taking the research questions into account, these idioms indicate how conventional metaphorical constructions act as linguistic markers of identity and social status. The same conceptual metaphor TIME AS RESOURCE underscores all three expressions, but their pragmatic classification differentiates disciplined effort (new money), transactional entrepreneurship, and careless leisure (old money). Idioms are thus not only cognitive shortcuts but also ideologically charged constructions that express attitudes to work, leisure, and the American Dream.

3.4 Additional idioms, similes, metaphors and slang

In addition to these two thorough analyses, the wider array of examples from previous studies can be reinterpreted within the same theoretical framework. Phrases such as 'hold your tongue' or 'I have got my hands full' emerge in conversations that underscore power dynamics and politeness strategies, particularly in exchanges involving Tom, Daisy, and Nick. These idiomatic expressions can be associated with conceptual metaphors like CONTROL IS HOLDING AN OBJECT and RESPONSIBILITY IS A BURDEN OR LOAD. Metaphors such as 'Daisy's voice is full of money' and depictions of Gatsby's car, house, and parties blend MATERIAL and CONTAINER schemas to conceptualize social status and desirability. Comparisons ('guests moving like moths', sweat adhering 'like a damp snake') integrate embodied image schemas of motion, contact, and temperature to vividly portray emotional and atmospheric states (Liu, 2010). Slang terms and racialized language, particularly in Tom's dialogue, indicate coarse, exclusionary sociolects linked to entitlement and aggression, contrasting with Nick's more measured and conventional narrative style (Carré-Hudson, 2019; Almášová, 2024).

The overall analyses and interpretation of figurative language pointed to the following identity markers:

- Gatsby's frame idealised visions of love and success through the frequent use of conceptual metaphors reflecting on his self-made, new-money identity.
- Daisy's fragility and old-money carelessness, revealing the emptiness beneath her glamour.
- Tom's idioms evoking verbal aggression and patriarchal authority.
- Nick's evaluative language suggests ethical hesitation and introspective control.

Together, these linguistic profiles and Nick's narrative voice communicate Fitzgerald's critique of class aspiration and juxtapose these idioms in such a way that readers feel a moral and social contrast between the characters.

In a constructionist framework, idioms, metaphors, similes, and slang expressions create interconnected networks rather than more isolated stylistic devices. The meanings of these expressions can be linked to common conceptual metaphors and image schemas, and their

prevalence among speakers and contexts is associated with character types, social status, and narrative roles.

4 Discussion

Conducted analyses and previous research enabled answering the research questions: How do metaphors, idioms, similes, and slang relate to character development and narrative style (identity) and social status in The Great Gatsby?

The results indicate that the use of figurative and colloquial language within the novel functions on two interconnected levels:

1) a global level characterised by conceptual metaphor and image-schema structuring in Nick's narration,
2) a local level involving idioms, similes, and slang within character dialogue.

At the global level, extended metaphors shape readers' comprehension of themes such as the American Dream, moral decay, and the irreversibility of time. Nick's narrative discourse serves as the primary site for these metaphors, and his construal style can be explained, following Croft and Cruse (2004), in terms of specific configurations of figure–ground organization, attentional scope, and Gestalt principles. Schemas related to journey, light/darkness, container, and landscape are strategically employed to convey concepts of class, morality, and temporality. At the local level, idioms, similes, and slang within character dialogue act as markers of identity and social status. This can be seen in the case, when Gatsby treats time like money because he is trying to buy his way out of poverty into East Egg society. Here, a very common idiom serves as a micro-portrait of Gatsby's self-fashioning. Gatsby's hypercorrect forms of address and business-like idioms uncover his aspirational identity as new money (Carré-Hudson, 2019), while Daisy's light, emotionally charged idioms reflect a blend of charm and irresponsibility. Tom's direct, at times racist language, along with his use of interruptions and commands, signifies power and aggression. Myrtle's speech showcases both lower-class characteristics and assertiveness. These patterns align with sociolinguistic insights regarding hypercorrection, gendered speech, and power dynamics in conversation, yet a cognitive-linguistic perspective emphasizes their connection to fundamental conceptual mappings.

From this viewpoint, idioms and metaphors possess both conceptual and social dimensions. They embody established mappings between different domains, while at the same time conveying socio-indexical meanings. The TIME AS RESOURCE idioms serve as a clear example of how various characters perceive time as a form of capital, thereby influencing their position towards the American Dream. The narrative voice of the novel arises from the interplay between these conceptual patterns and localized conversational strategies, resulting in Fitzgerald's unique combination of lyrical detachment and moral critique.

Reexamining the linguistic nuances in The Great Gatsby from the perspective of cognitive linguistics demonstrates that Fitzgerald's stylistic choices are fundamentally rooted in

collective conceptual frameworks and socially significant constructions. Instead of viewing idioms, similes, metaphors, and slang as distinct categories, a cognitive-linguistic perspective reveals their interrelatedness as expressions of conceptual metaphors, image schemas, and constructional patterns.

Conceptual metaphor analysis in key passages reveals that Nick's narration draws on schemas of journey, light/darkness, container, and landscape to interpret themes of class, morality, and temporality. Furthermore, a construction-based examination of TIME-AS-RESOURCE idioms illustrates how conventional phrases reflect character-specific attitudes towards time, work, and leisure. Additional instances of idioms, similes, and slang reinforce the notion that figurative and colloquial language within the novel serves as a system of linguistic indicators of identity and status, which is entirely consistent with the thematic issues presented in the narrative. This study effectively integrates cognitive linguistics, stylistics, and literary analysis, building upon previous research by placing its findings within a more defined theoretical and methodological context (Evans, 2019/2023; Croft & Cruse, 2004; Herbst & Hoffmann, 2024). Thus, future investigations could broaden the dataset and apply corpus-based methodologies or experimental approaches to examine how readers interpret Gatsby's metaphors and idioms, thereby delving deeper into the interplay between conceptual and social meanings in literary discourse.

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Book Review

"Volume of Contrastive Linguistic Studies/ Súbor kontrastívnych lingvistických štúdií" *by Ada Böhmerová*

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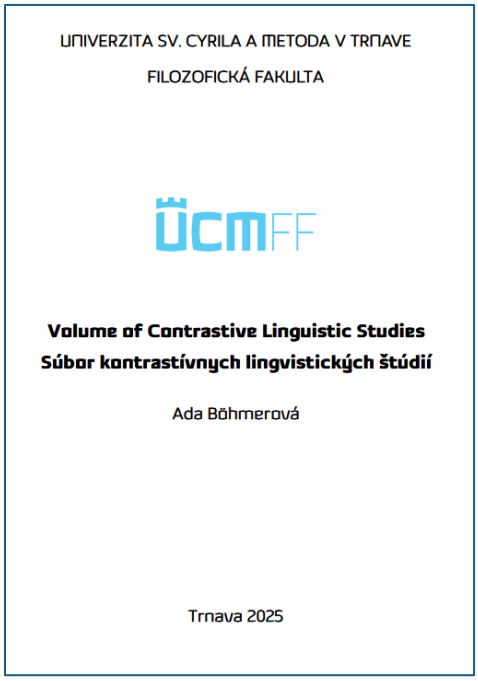
Volume of Contrastive Linguistic Studies/ Súbor kontrastívnych lingvistických štúdií – Ada Böhmerová. Reviewers: Magdaléna Bilá, Agnieszka Uberman. University of Ss. Cyril and Methodius in Trnava, Slovakia. 2025. 164 pages. ISBN 978-80-572-0563-0.



The complexity of the English lexical system, particularly when viewed through the lens of contrastive linguistics against Slovak, offers a fertile ground for academic inquiry. The publication *Volume of Contrastive Linguistic Studies* (Súbor kontrastívnych lingvistických štúdií) by Böhmerová represents a significant contribution to this field, gathering a lifetime of scholarly focus into a cohesive collection. As the demand for high-level linguistic competence grows in our globalised environment, the need for a deep, systemic understanding of how languages function, evolve, and interact becomes more than important. This collection is a welcome addition to the library of any serious student, teacher, or scholar of English and Slovak philology, offering insightful analyses that bridge the gap between theoretical semantics and practical translation applications.

The volume is structured as a series of eleven interconnected studies that range from specific lexical anomalies to broader systemic observations on word formation and translation theory. Böhmerová, as the author, demonstrates a keen eye for linguistic detail, often focusing on phenomena that are neglected or underestimated in standard grammars. Her approach is consistently contrastive; English is rarely viewed in isolation but is almost always mirrored

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against the Slovak linguistic system. This methodology not only illuminates the specific features of English, it also provides the Slovak readers with a deeper appreciation of their own mother tongue´s word-formation processes and semantic features.

A substantial portion of the publication is dedicated to the fascinating phenomenon of enantiosemy - the coexistence of opposite meanings within a single lexical unit (e.g. *to dust* meaning both to remove dust and to cover with dust). Böhmerová states that, while this is a specific linguistic anomaly, in some cases it is predictable in connection with conversion processes, whereas in Slovak it is manifested differently, primarily by prefixation. As for establishing a classification of enantiosemic types - such as verbs converted from nouns denoting material substances or adjectives expressing abstract qualities - the author provides clarity to a notoriously difficult semantic area. This section is particularly valuable for lexicographers and advanced learners who often struggle with the polysemantic ambiguity inherent in English.

The publication also delves deeply into the dynamics of English lexis through the lens of sociolinguistics and ethnolinguistics. The chapters dealing with *"Positivised English Jazz Age Qualifiers"* and *"Neological Tendencies in English Colloquial Positive Qualifiers"* are standout contributions. Here, Böhmerová traces the etymology and semantic shifts of words like *cool*, *groovy*, and *bad*, linking their linguistic evolution to specific cultural areas such as the Jazz Age and the subsequent youth movements. She meticulously tracks how these terms penetrated European vocabularies, investigating their adoption into Slovak. This application of diachronic and synchronic approach offers a vivid picture of how language reflects social change and how English serves as a donor language in the modern European context.

Furthermore, the collection addresses complex issues of word formation, specifically focusing on blending and total reduplication. The study on blending is particularly innovative, using the metaphor of horticulture to explain lexical amalgamation. The author challenges traditional taxonomic terminology, suggesting "matrix" as a term to grasp the deep patterns governing blending. Similarly, the chapter on Total Reduplication fills a gap in European linguistic research. By contrasting the limited structural types of reduplication in English with the rich, often expressive typology found in Slovak (e.g. *biely-prebiely*, *ledva-ledva*), the author advocates for the inclusion of Slovak in the typological mapping of this phenomenon.

Another significant area covered is the study of "Non-Parallel Internationalisms". The author highlights the "stumbling blocks" of translation where internationalisms (words shared by several languages) diverge in meaning or form between English and Slovak. This section, along with the study on *"Latinisms in Substandard Language"*, highlights the specific historical trajectories of the two languages. The analysis of Latinisms is particularly intriguing, revealing how classical terms have survived in Slovak dialects and substandard speech, creating a unique contrast with their English counterparts.

This publication, which includes contrastive linguistic studies with several updates, culminates in a profound reflection on the translation methodology and strategies in the

chapter *"Translation as Authorship of Text"*. Here, the author moves beyond the mechanical decoding of text to argue that translators often function as co-authors, particularly when dealing with "untranslatable" cross-linguistic lexical differences. Using the example of the polysemantic word "romance" and its complex etymological background, she demonstrates that adequate translation often requires the creation of authentic text in the target language to compensate for systemic differences. This chapter serves as an essential guide for translation students, emphasising that adequacy to the source text sometimes requires creative deviation to preserve the communicative intention.

In summary, *Volume of Contrastive Linguistic Studies* is a rigorous, scholarly, yet accessible work. The added value of the publication is a close connection between theory and practice by grounding every observation in specific examples and culturally relevant contexts. The author's expertise is evident in her ability to navigate between the micro-level of phonemes and morphemes and the macro-level of cultural history and translation ethics. The publication is highly recommendable for university courses, above all within contrastive studies in lexicology, semantics, morphology, diachronic linguistics and translation studies, as well as for anyone fascinated by the intricate match between the English and Slovak languages. It serves as a reliable, scholarly foundation for future research in the field.

Božena Perášová

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