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Literature and the Mindbrain: Neurohermeneutics and the Centrality of Emotions in Reading and Literary Studies

ABSTRACT: Recent research confirms that emotions are central to the experience of reading and understanding texts. Philosophical hermeneutics, particularly Gadamer's concept of *Bildung*, shows how emotional and historical pre-understandings shape interpretation as a transformative encounter. This perspective resonates with the most recent cognitive and educational studies, which highlight how reading fosters both critical and emotional development. A dialogic pedagogy grounded in *Bildung* forms readers who are historically aware, emotionally engaged, and critically reflective. This integrated perspective moves toward a neurohermeneutic model of literary literacy, in which embodiment, simulation, and emotional resonance redefine the act of understanding. Reflecting on neuroscience and neuroaesthetics, and in dialogue with *Mind the Text!* by Gambino and Pulvirenti, the essay integrates the concept of the Default Mode Network and elaborates a neurohermeneutic framework that weaves together the contributions of Iser and Fludernik's narratology. Literature thus emerges as a biocultural tool: embodied simulation, ontological metaphors, and enculturation are closely linked to narratological questions. This approach highlights how literary texts promote empathy, ethical reflection, and cognitive flexibility, thereby reinforcing the formative urgency of literary education.

KEYWORDS: *Bildung*; Neurohermeneutic; literature; reading; empathy.

1. Literature as *Bildung*: The Basis for Human Development

In an era increasingly shaped by utilitarian logics and epistemic reductionism, a renewed urgency emerges to restore literature to the centre of human development (*Bildung*). Literature offers aesthetic experience and a vital space for ethical elaboration, self-reflection, and cultivating our shared humanity. The current situation of literary studies being reduced to an ancillary or secondary field in many curricula has already been foreseen in the past decades, and it goes with the simplification of an other-directed society. Already in the Nineties, a claim came from political philosophy and classical literature: Martha Nussbaum, whose work in the *Law and Literature* field and in political philosophy – particularly in her studies *Love's Knowledge: Essays on Philosophy and Literature* and *Poetic Justice: The Literary Imagination and Public Life* – literary imagination's ethical and epistemic significance. In this context, literature be-

comes a crucial counterbalance to the cognitive dogmatism often found in legal reasoning. Nussbaum argues that literary narrative reintroduces attention to particularity, restoring the appropriate weight of complexity in a world increasingly prone to simplification and flattening human behaviour and subjectivity. It relocates legal judgment within a more nuanced and objective dimension and allows her to name the «simpathetical» effect of reading¹.

Nussbaum – renowned for her scholarship on emotions, particularly political emotions – asserts that what renders literature useful to philosophy is exactly its distance from abstract reasoning, specifically its capacity to evoke and construct worlds through emotionally charged narrative. In this view, she decisively inverts Plato’s classical condemnation of literature as mimetic deception, instead calling upon literature as a privileged site of knowledge. According to Nussbaum, literature is more trustworthy and less «deceptively seductive», precisely because it succeeds in representing «some of our most deeply rooted views of what has importance»². The force Nussbaum evokes here is that of dramatic representation, the performative staging that allows readers to inhabit the perspectives of others imaginatively. This imaginative identification, she suggests, gradually refines moral judgment, enabling individuals to transcend visceral reactions such as disgust, open themselves to what initially appears alien or opposed to their values, and connect to deeper emotional thinking.

However, recently, literature has been considered more as a “product” of “language culture” or of political or commercial intent. It is also crucial to consider how the so-called “linguistic turn”, while opening valuable perspectives on the textuality and discursiveness of literature, has sometimes contributed to sidelining the experiential, embodied, and affective dimensions of reading. This theoretical framework often prioritised semiotic systems over readers’ cognitive and emotional engagement, thereby limiting the scope of literary interpretation to abstract constructs and structural paradigms. Such an approach created academic and pedagogical distance from literature and reading as lived experience. While these philosophical reflections underscore the formative power of literature, recent advances in neuroscience provide an empirical counterpart, revealing how bodily and emotional responses are central to the act of reading itself.

¹ Nussbaum 1995, p. 92.

² Nussbaum 1990, p. 29.

2. Tracing the Path from Critical Understanding to Emotional Understanding: Hermeneutics, Literature and Emancipation

Eighteenth-century musical theory of the emotions does not imply that one expresses oneself in music, but that music expresses something – namely emotions – which in their turn, are to make an impression. We find the same thing in aesthetics with, say, Sulzer (1765): Expression is not to be understood primarily as an expression of one's own feelings, but as an expression that arouses feelings³.

The core issue in literary studies has always been to comprehend better the “message” of the text. Contemporary philosophers working within the hermeneutic tradition articulate the notion of interpretive success in various ways. However, despite this plurality of formulations, such success is almost invariably characterised as inherently edifying or at least educative. Among the most influential voices in this discourse is Hans-Georg Gadamer, whose influential work *Truth and Method* draws a profound connection between the act of understanding and the philosophical tradition of education as *Bildung*. Rooted in Weimar classicism and subsequently shaped by nineteenth-century German romanticism and historicism, *Bildung* denotes a process of personal and cultural formation that transcends the mere accumulation of knowledge or technical expertise: *Bildung* refers to the formative process through which an individual cultivates themselves intellectually, morally, and aesthetically by engaging with tradition, history, and culture. It is not mere education or training, but a reflective integration of experience and inherited meaning⁴. *Bildung* encompasses the individual's holistic development through rigorous intellectual engagement, particularly within the arts and humanities, and rich, diverse lived experience. In this framework, interpretive understanding does not merely yield insight into external objects of inquiry but functions as a transformative event. Through interpretation, we learn about a given subject matter and ourselves, others, and the broader world to which we belong. Understanding becomes an educative process in the most profound sense: one that cultivates self-awareness, empathy, and a more expansive mode of being-in-the-world, which connects with the aesthetic experience. In this process, emotion is a Form of openness to the “other” and involves self-transcendence (*Selbstüber-schreitung*) and openness. Experiences like enthusiasm are forms of deep involvement with the object, allowing for a “hermeneutics of affinity” rather

³ Gadamer 2004, pp. 503-504.

⁴ Gadamer 2004, pp. 128-129.

than detachment. This is decisive for aesthetic understanding and hermeneutics in general: «Our experience of the aesthetic too is a mode of self-understanding. Self-understanding always occurs through understanding something other than the self, and includes the unity and integrity of the other»⁵.

Bildung can even be understood in this direction as a formative dimension of affectivity, and the ability to perceive and respond emotionally – what Gadamer calls *Takt*, or “hermeneutical tact” – is not a spontaneous talent but the result of cultivation. This affective sense allows one to navigate the aesthetic, historical, and linguistic fields with refined judgment.

All these issues has been investigated in the last decades mostly from a didactics of literature point of view, or from an educational, pedagogic or even sociological point of view, fragmenting the reading experience as partial being in the world or as documentary experience, whereas reading, literary disciplines, creative writing, interpretation, and artistic creation can and must reclaim their place in human thought, assuming not only an additional function, but perhaps more appropriately, restoring their original role within the human *Bildung*, emphasising their transdisciplinary nature and expressive capacity of the self beyond categories. In this direction, the recent discoveries in neurocognitive studies have offered an essential basis to contemporary literary discourse. In this sense, the philosophical concept of *Bildung* can evolve into a neurocognitive model, where emotional and embodied dimensions are no longer ancillary but become constitutive of interpretive and ethical growth.

Indeed, literature and the didactics of literature and reading have a role, if intended as a unique product of thought, in today’s so exalted critical literacy, where “critical” has precisely to do with heuristic and inferential faculties as the basis for an assertive and emancipated stance in judging life matters. Soares and Wood, in their 2010 article *A Critical Literacy Perspective for Teaching and Learning Social Studies*, already offer a definition functional to the educational environment: «The term critical literacy describes a pedagogical approach to reading that focuses on the political, sociocultural, historical, and economic forces that shape young students’ lives»⁶. This has been applied and studied the most in teaching and learning studies to develop a level of teaching that constantly encourages students to go beyond their worldview helps avoid conformity of thought and recognising dissonances, which includes a constructive practice of reading texts that does not rely solely on exegesis but

⁵ Gadamer 2004, p. 83.

⁶ Soares and Wood 2010, p. 487.

instead promotes multifocal approaches, situating the text within the context of reading and not only of production, recognising polysemy, and discerning different points of view. The aim was to open discussions around macro- and micro-social relationships represented in the text, while also opening up to extra-textual issues connected to the themes discussed or the characteristics of aesthetic narration and the production of autonomous opinions (see e.g. Cervetti, Pardales, and Damico and the studies based on their political stance towards literary education as empowering of adolescents⁷), without straying too far from a text-based approach.

Moreover, Critical Literacy and Literary Literacy – particularly Poetic Literacy – have been investigated in connection with creative reading and writing⁸, stimulating creativity and autonomous action. Thus, Critical literacy employs reading books to raise issues requiring students to reflect and make distinctions on various aspects of life, including social inequities and the status quo. However, it has been seen as imperative that critical literacy does not ignore the discussion of the “quality” of the book, but rather highlights the value of ambiguous, polysemic, and experimental texts, in the direction of Gadamerian *Vieldeutigkeit*. In terms of these guidelines, the intrinsic quality of a book has been noted as directly proportional to its educational effectiveness. This quality is object of literary criticism, and can be also judged through the “density” of the text again recalling Gadamerian issues: it has indeed proven instrumental to the definition of literature in the academic German classrooms to notice the correspondence between “Dichtung” (Poetry, Fiction, Literature) and “Dicht” (dense, thick), which always opens to the recognition of the beauty, the verticality, the polysemy (*Vieldeutigkeit*) as markers of literariness, which also gives strength to all the theories about re-reading, creative reading and collaborative reading.

However, while current Critical literacy studies provide a vital framework for empowering readers to engage actively and reflexively with texts, focusing on sociocultural, historical, and ideological forces, they often remain anchored in discursive and sociopolitical dimensions. To fully grasp the cognitive, emotional, and embodied experiences that literature fosters, it becomes necessary to move beyond the purely critical or interpretative paradigms. Recent scholarship has increasingly emphasised that emotions are integral to the processes of reading and textual interpretation. Pekrun (2022) demonstrates that emotions affect not only comprehension and memory but also motivation, conceptual

⁷ See Cervetti, Pardales, Damico 2001.

⁸ See Del Zoppo 2019.

change, and the reader's epistemic engagement, thus challenging traditional cognitivist models of reading⁹. Different emotional states, such as curiosity or confusion, can facilitate or inhibit learning outcomes depending on their nature and intensity. Similarly, Afzali highlights the central role of emotional engagement in literary reading, suggesting that affective resonance enables deeper interpretative practices and fosters dialogic negotiation of meaning¹⁰. Both perspectives illustrate that reading is a dynamic interplay of cognitive, affective, and social processes, rather than a disembodied intellectual exercise. Integrating these insights provides a compelling basis for rethinking critical literacy through a neurohermeneutic lens attentive to the embodied and emotional dimensions of literary experience.

The latest advances in cognitive science and neuroscience offer powerful tools for rethinking literary engagement, not as a detached exercise in ideological analysis but as an immersive, biocultural, and affective process. In this light, the emerging field of neurohermeneutics proposes an interdisciplinary reconfiguration of literary studies, grounding reading experiences in embodied simulation, neural mechanisms, and the affective dynamics of cognition. This approach does not dismiss critical literacy's emancipatory goals. Still, it complements them by exploring how literature shapes, challenges, and transforms readers at a cognitive and emotional level, reinstating literature's central role in human *Bildung* and cultural evolution.

3. Developments in Neurocognitive literary studies in short: the last decades.

The 1990s saw a shift towards considering art as an expression of the “mind-brain”, revealing cognitive processes in aesthetic experiences such as viewing artworks¹¹ and reading literature¹². This new perspective became particularly evident in exploring how individuals perceive visual art and engage with literature. Neurobiologist Semir Zeki and cognitive scientist Mark Turner were pivotal figures in this shift. Zeki introduced the field of neuroaesthetics, offering groundbreaking insights into the neural basis of visual art perception. His major works – *Inner Vision: An Exploration of Art and the Brain* and *Splendours and Miseries of the Brain* – shed light on how our brains process artistic stimuli and underscore the importance of understanding neurocognitive activity's re-

⁹ Pekrun 2022.

¹⁰ Afzali 2013.

¹¹ Zeki 1999.

¹² Turner 1998.

ceptive and responsive nature in aesthetic engagement¹³. In the same decade, Turner proposed that human cognition is fundamentally narrative in structure. In *The Literary Mind*, he argued that storytelling is not confined to literature but is the foundation of all human thought. Turner's theory dissolves the distinction between everyday reasoning and the imaginative processes traditionally associated with literature, suggesting that the exact cognitive mechanisms drive both. This view positioned literature not as an object of passive appreciation but as a key to unlocking the processes of human cognition¹⁴.

These developments contributed to a growing awareness that the arts are not separate from biology or culture but are embedded within a biocultural framework. It became increasingly clear that aesthetic phenomena could not be fully understood without accounting for the complex interrelations among brain activity, the body, emotions, environment, culture, society, and history. Scholars have increasingly sought interdisciplinary connections between literary studies, anthropology, philosophy, linguistics, poetics, art history, psychology, biology, and cognitive neuroscience. The study of art thus began to shift towards a transdisciplinary model that merges the humanities with neurocognitive science. Despite resistance from some traditionalists who feared the dilution of disciplinary identity or a lack of adequate expertise across fields, humanists and scientists began engaging with this transdisciplinary territory. On the scientific side, research expanded to include the creation and perception of art, the role of the brain-body interface, and the neural markers accompanying aesthetic experience.

This paradigm shift was greatly enabled by advances in neuroimaging technologies, which allowed researchers to observe changes in brain activity, measured through blood flow, in response to various cognitive and aesthetic tasks. These tools facilitated the search for neural correlates, linking specific brain regions to mental functions or responses.

A particularly influential discovery in this context was mirror neurons, first identified in 1992 by Giacomo Rizzolatti and his team in Parma. These neurons, which activate when performing an action and observing the same action in others, sparked wide-ranging interest. Neuroscientist Vittorio Gallese built on this discovery to propose a transformative theory of motor cognition, which views cognitive processes as fundamentally embodied and rooted in sensorimotor experiences¹⁵. Gallese's embodied simulation theory has been

¹³ Zeki 1999, Zeki 2009.

¹⁴ Turner 1998.

¹⁵ Gallese 2000, Gallese 2016.

especially impactful in studying aesthetic experience. Rooted in the concept of the “embodied mind” – a philosophical idea introduced by Francisco Varela, Evan Thompson, and Eleanor Rosch in *The Embodied Mind* – this approach emphasises that cognition arises through bodily perception and environmental interaction. Here, knowledge and aesthetic engagement are not merely intellectual but are enacted through physical experience and agency¹⁶. Researchers analysing how readers engage with literary texts argue that reading is not a purely abstract cognitive process but a deeply embodied experience. So, when readers encounter descriptions of actions, emotions, or physical sensations in a text, their neural and sensorimotor systems activate in ways that mirror those experiences. This aligns with studies showing that reading action-related words or sentences stimulates the motor cortex and that literary engagement involves cognitive and bodily responses.

Gallese and art historian David Freedberg also applied this framework to empirical research on art perception. Their studies demonstrated that viewers respond empathically to artworks through embodied simulation, experiencing visual forms and the emotional and intentional dimensions conveyed by the art. Their findings, published in works such as *Motion, Emotion and Empathy in Aesthetic Experience*¹⁷ in 2007 and a 2012 article in «Frontiers in Human Neuroscience», offer strong support for the role of the body and sensorimotor systems in aesthetic empathy¹⁸.

This transdisciplinary shift has led to a profound rethinking of how we understand the mind, the brain, and their cultural expressions. Integrating cognitive neuroscience with the humanities is not a reduction of the arts to biology, but rather a recognition of their shared roots in human cognition’s embodied, narrative, and social nature. Indeed, it cannot be forgotten that as early as 1996, almost a decade before the widespread turn towards cognitive approaches to narrative, Monika Fludernik proposed a significant shift in narratology with the publication of *Towards a ‘Natural’ Narratology*. In this work, she emphasises the connection between experientiality and embodiment, arguing that narrative fundamentally arises from embodied human experience. She clearly states, «the feature that is... most basic to experientiality is embodiment»¹⁹, highlighting that the very foundation of what makes a narrative meaningful is its grounding in bodily, lived experience. From this perspective, Fludernik de-

¹⁶ Varela et al. 1992.

¹⁷ Gallese & Friedberg 2007.

¹⁸ Gallese & Friedberg 2012.

¹⁹ Fludernik 1996, p. 30.

finest narrative as a «quasi-mimetic evocation of real-life experience»²⁰, which mimics and structures how we perceive and make sense of the world around us. To support her view, she identifies four key cognitive categories that underlie different types of narrative situations: The “telling” mode, where a story is mediated by either a first-person narrator or an omniscient authorial voice; The “experiencing” mode, in which a character’s inner life is conveyed through internal focalisation within third-person narration; The “reflecting” mode, representing a meta-narrative level of commentary or self-awareness within the text; The “viewing” mode, where the narrative consciousness emerges from the reader’s projection of subjectivity onto the story.

Through this framework, Fludernik had already moved away from traditional literary models and towards a narratology rooted in natural cognitive processes, arguing that narrative is not an artificial construct but a fundamental mode of human understanding, deeply embodied and shaped by the ways we live, feel, and interact with the world.

4. The Use of Neurohermeneutics for Literary Criticism: contrasting the side-shift of literature for human *Bildung*

Recent hermeneutic theories, particularly those inspired by Gadamer, reaffirm that understanding is never a purely cognitive act, but is deeply intertwined with emotion, tradition, and pre-understanding. Gadamer’s notion of *Bildung* – the formative process of becoming aware of one’s historicity – emphasised that every interpretation is rooted in a pre-existing horizon of meaning shaped by emotional and cultural experiences. In this view, reading a text is not merely decoding information but a transformative encounter that challenges and reshapes the reader’s prior assumptions. Emotion is not an ancillary effect but an intrinsic part of the interpretative process, enabling the reader to enter into a genuine dialogue with the text. As readers engage with literature, their affective openness becomes crucial to the fusion of horizons that allows for the emergence of new understanding. Thus, as mentioned above, *Bildung* involves critical awareness and emotional receptivity as fundamental conditions of interpretive growth.

All these literary, neurocognitive, and neuroaesthetics elaborations nowadays find a rich and engaging response in the volume *Mind the Text! Neurohermeneutics for Suspicious Readers*, published in 2024 by Renata Gambino and Grazia Pulvirenti, stands at the intersection of the above-mentioned positions,

²⁰ Fludernik 1996, p. 12.

considering this narratological point of view: literary studies, neuroscience, and cognitive sciences. The authors also propose a transdisciplinary approach to literary analysis and interpretation.

In this era of crisis for literature, the neurohermeneutic perspective represents an apt rebalancing of the tendency. It reasserts, with contemporary scientific language and stance, the value of reading as a cognitive and emotional process and reinstates the role of literature as a cultural practice capable of shaping thought and ethical awareness. There is a pressing need to restore literary reading and interpretation as core activities in higher education curricula to renew academic discourse and inform and enrich pedagogical approaches in secondary education. We can only revitalise literature's role in society by grounding future teachers and literature scholars in these interdisciplinary frameworks.

The significance of this approach extends beyond interdisciplinary curiosity; it offers a profound reconfiguration of how literary texts are understood concerning human cognition. Traditional literary criticism has often focused on historical, structural, or ideological readings of texts, prioritising external frameworks of interpretation, where, *instead*, focusing on the reader's cognitive and emotional engagement, exploring how literary language interacts with neural mechanisms such as perception, memory, and emotion processing can revive the meaning of literary education also for contemporary scholars. This perspective resonates with ongoing developments in cognitive literary studies. It also resonates with the most urgent issues about the effective role of literature in shaping criticism and conscience of the impoverishment of relationships and experiences, which has encouraged the spread of languages and conventions that affirm fictitious realities and manipulations, making it increasingly difficult, especially for the most vulnerable people, to practice assertive communication. On the web and social networks, we often encounter communication that lacks depth, is dehumanising, and is further hindered by the gradual weakening of heuristic and inferential faculties among participants. Where, when and how have we lost these faculties? How is it possible to restore the human mind? This cannot be understood or investigated without a contrasting concept, which must be cognitive and historically contemporaneous.

Mind the text! It is structured into eight chapters, each dedicated to a central aspect of the relationship between literature and the mind. The methodological foundations of neurohermeneutics are linked to emphasising the importance of embodied simulation, by which the authors also tackle reading literacy and the reading experiences, because one of the book's key arguments

is the opposition between fast and slow reading. While the former is geared towards rapid information acquisition, the latter is proposed as a more suitable strategy for aesthetic appreciation and imaginative immersion. The authors contend that literary texts are designed to resist immediate comprehension, compelling the reader to dwell on ambiguities and stylistic details that enrich the reading experience. Gambino and Pulvirenti's book is linked to these social and ethical questions, because one of the book's most innovative contributions is its insistence on literature as an experience (also: a didactic experience and a research experience) rather than merely an object of interpretation: literature should be understood in terms of its effect on the human mind, recalling the most profound meaning of *Bildung* - both as a challenge to cognitive patterns and as a source of aesthetic pleasure that deeply engages neural structures.

As already stated in the present article this methodological shift can be particularly relevant in the also in the contemporary academic landscape, where the intersection of humanities and sciences is gaining increasing traction, following the recognition that in an era of complex global challenges, interdisciplinary collaboration between the so-called hard and soft sciences is essential to fostering holistic methodologies.

5. Ontological metaphors and Embodied Simulation as theoretical frames in *Mind the Text!*

The concept of ontological metaphor refers to a cognitive and linguistic device where abstract concepts are framed in terms of physical entities or substances, allowing for a more concrete understanding of intangible ideas. In *Mind the Text! In Neurohermeneutics for Suspicious Readers*, the authors employ ontological metaphors to bridge the gap between literary interpretation and cognitive science. They explore how metaphors shape the reader's conceptualisation of the mindbrain. Additionally, the book examines how ontological metaphors function in literature to create embodied experiences in readers, influencing their reception and interpretation of texts. By analysing metaphorical manipulation, as seen in *Jinnistan* and *The Curious Case of Benjamin Button*, the authors illustrate how literature subverts conventional ontological categories to challenge societal norms. This neurohermeneutic approach highlights the profound impact of metaphors on cognition and meaning-making in literary texts.

In *Mind the Text!*, the authors also employ the concept of embodied simulation, which originates from cognitive neuroscience, as illustrated above. Embodied simulation suggests that when individuals perceive actions, emotions, or sensory experiences in others, their brain activates corresponding neural

circuits as if they were performing or experiencing the same action. This mechanism underlies empathy, language processing, and the aesthetic experience of art and literature and, therefore, can be, the authors posit, an instrument for literary hermeneutics. By stating this, the authors challenge traditional notions of literary interpretation as purely symbolic or conceptual, proposing that texts elicit embodied responses that shape comprehension and affective engagement. This approach redefines reading as an immersive, interactive process where meaning emerges from the interplay between textual structures and the reader's sensorimotor and emotional faculties.

Furthermore, the neurohermeneutic model presented in *Mind the Text!* Connects embodied simulation to aesthetic experience, and the authors argue that literature, like visual art, engages the body's perception-action systems. This suggests that our appreciation of literary style, rhythm, and narrative flow is rooted in the exact embodied mechanisms that enable us to perceive and interpret the world around us. The act of reading becomes an experiential, multi-sensory phenomenon, reinforcing the idea that literature is not only understood but also physically felt. So, the study bridges the gap between cognitive science and literary studies, emphasising the role of the body in meaning-making and deepening the significance of interpretative "gaps" and reception studies, as presented by Wolfgang Iser in his pivotal works on reading: *Der Akt des Lesens* and *Das Fiktive und das Imaginäre*²¹.

6. Gestalt Theory and Enculturation in *Mind the Text!*

The Gestalt theory, developed in early 20th-century psychology, posits that human perception is structured according to patterns and wholes rather than isolated elements. It emphasises that the mind organises sensory input into meaningful forms, following proximity, similarity, and closure principles. In *Mind the Text!*, the authors refer to Gestalt theory about frame and script theory, discussing how cognitive structures influence literary interpretation. They argue that every reading experience is shaped by schematic mental models, which provide a framework for meaning-making. These models, derived from individual and collective past experiences, allow readers to anticipate narrative developments and engage in the hermeneutic process. The authors highlight how literature can disrupt these cognitive schemas, creating unexpected interpretations and new perspectives. Integrating Gestalt theory with neurohermeneutics emphasises the interplay between perception, cognition,

²¹ Iser 1976, 1991.

and textual reception, demonstrating that meaning emerges from dynamic reader-text interactions.

Another very effective argumentative tool is the concept of enculturation. It refers to how individuals acquire and internalise cultural norms, values, and cognitive frameworks through interaction with their social and environmental context. This notion, central to anthropology and cognitive science, highlights the reciprocal influence between human cognition and cultural structures. Enculturation shapes people's thinking, perceiving, and interpreting the world, integrating biological and cultural dimensions in a continuous meaning-making process. The authors here employ enculturation to explain how literature, as a cultural artefact, both reflects and influences cognitive processes. They argue that the embodied mind shapes literary texts and, in turn, affects readers' cognition, emotions, and imagination. The reference studies demonstrate that literature and the arts reflect cultural frameworks and contribute to shaping them. Through narration and poetic language, literature encodes values, beliefs, and cognitive schemas that influence how individuals and societies construct their worldviews.

They maintain that this process is integral to human evolution and social cohesion. Thus, the authors reinforce the idea that narration is fundamental to human thought and interaction: reading activates embodied cognition, triggering interoceptive, exteroceptive, and proprioceptive processes that align with our lived experiences; literature is deeply intertwined with human perception, memory, and imagination. So, the strong statement here is that literature fundamentally shapes human cognition and culture, making it, again, with neuroscientific proof, an essential foundation for human interaction. It is not merely a form of artistic expression but a biocultural tool that actively engages the human mind, influencing thought processes, emotions, and meaning-making. So, drawing on cognitive and neuroscientific research, the book highlights, with contemporary scientific language, and thus on a new and necessary level of communication, how literature functions as an experiential model for interpreting reality, constructing self-identity, and navigating social interactions.

7. Imagination and emotions: a political issue. Case studies in *Mind the Text!*

These theoretical foundations gain concrete form in a series of literary case studies, where the emotional and cognitive mechanisms discussed above are tested through close reading and textual analysis.

In *Mind the Text! In Neurohermeneutics for Suspicious Readers*, the authors

employ a series of case studies to demonstrate how literature can shape ethical perspectives by stimulating the imagination and offering counterfactual scenarios. These analyses highlight the transformative power of reading, encouraging readers to reflect critically and envision alternatives to the dominant ideological frameworks of their time.

Heinrich von Kleist's *Penthesilea* is a compelling case study analysed through cognitive dissonance and narrative frame collision. The play's unconventional structure, oscillating between the frames of battle and hunt, generates psychological tension in the reader. The authors argue that this deliberate structural ambiguity forces the audience into an active interpretative stance, triggering high levels of embodied simulation. The play collides with the expected duel narrative frame and the script of a Parforce hunt, a ritualised form of aristocratic power. In *Penthesilea*, the reader experiences disorientation and frustration due to the clash between the expected duel narrative and the unpredictable violence of the protagonist. This emotional response compels a reconsideration of power, gender, and agency. By disrupting reader expectations, Kleist invites a reconsideration of power dynamics, gender roles, and violence. The authors argue that this clash forces readers to question implicit structures of dominance, offering an ethical reflection on war, sovereignty, and human aggression.

Similarly, *Puss in Boots* by Ludwig Tieck elicits surprise and amusement through its subversion of conventions. This leads to critical reflection on storytelling structures and their ideological underpinnings, creating a hybrid narrative that parodies and deconstructs fairy tale structures. The case study illustrates how Tieck manipulates literary tropes to critique societal norms, revealing hidden ideological biases within seemingly innocent narratives and highlighting how the text engages in metanarrative play and reader manipulation, forcing the reader to question narrative conventions. Irony, self-referential elements, and fragmented storytelling align with cognitive principles of expectation violation, engaging the brain's predictive coding mechanisms.

In the case analysis of *Adis and Dahy* (1786) by Christoph Martin Wieland, the core issue is Wieland's manipulation of ontological metaphors to challenge cultural prejudices, particularly regarding age and wisdom. By reversing conventional assumptions—valuing old age over youth—Wieland invites readers to reconsider the fabricated nature of social hierarchies and their ethical implications. Similar to the *Jinnistan's* tale is *The Curious Case of Benjamin Button* (1922) by F. Scott Fitzgerald. Like *Jinnistan*, Fitzgerald's story challenges linear perceptions of life by presenting a protagonist who ages in reverse. This

narrative experiment forces readers to rethink notions of progress, identity, and mortality, demonstrating literature's ability to offer alternative cognitive models that disrupt conventional wisdom.

8. Goethe and the Meta-Representation of Imagination

One of the book's most significant case studies concerns the analysis of the *Gloomy Gallery* and *The Hall of the Knights, Dimly Lit* scenes in *Faust II* by Johann Wolfgang von Goethe. The authors argue that Goethe meta-represents the imaginative process. These passages encourage readers to construct counterfactual worlds, reinforcing that literature is an ethical and cognitive laboratory for testing alternative realities and perspectives.

As suspicious readers, we scrutinise the metaphorical significance that Goethe assigns to the portrayal of clouds in his work and reflect on the dynamic oxymoron inherent to this boundless space, simultaneously empty yet pregnant with "all Forms of Life". This representation raises the fundamental question expressed by Merleau-Ponty and then reformulated by Thompson: "What is the mode or manner in which form appears to mind, and what is the epistemological origin of this mode of givenness?" (Thompson, 2007, p. 81)²².

In their analysis of Goethe's *Faust II*, Gambino and Pulvirenti offer a sophisticated interpretation of the *Gloomy Gallery* and *Hall of the Knights* scenes as a meta-literary representation of the imaginative process underlying the mental reception of artworks. Goethe constructs a two-phase model of imagination: first, in the *Gloomy Gallery*, Faust descends into the Realm of the Mothers—a timeless, spaceless domain of pure potentiality, where forms exist in a latent, pre-noetic state. Here, Goethe dismantles all cognitive categories, evoking a chaotic cloud-like space where "all the Forms of Life / float round," suggesting imagination as a dynamic, embodied process of "Formation" and "Transformation." The tripod and glowing key become image schemas anchoring this metaphysical descent. In the second phase, the *Hall of the Knights*, imagination moves towards perceptual actualisation: Helen and Paris emerge not as fixed ideals, but through fragmented audience responses, reflecting the subjective construction of beauty. Goethe thereby enacts the reader's own role in aesthetic reception, where meaning is not delivered but co-created through mental imagery, affect, and memory. By aligning poetic representation with neuroscientific theories of embodied simulation, the authors reveal how Goethe antic-

²² Gambino and Pulvirenti 2024, p. 120.

ipates a modern, enactive view of imagination – as the ever-emerging interplay of language, perception, and embodied experience.

9. Imagination and Ethical Reflection

The emotions elicited by the literary works analysed in *Mind the Text!* play a crucial role in reshaping the reader's perspective, demonstrating how literature can be a transformative tool for cognitive and ethical change. It is emphasised that emotional engagement fosters embodied simulation, enabling readers to experience the feelings and struggles of characters as if they were their own. In Christoph Martin Wieland's *Adis and Daby*, one of the tales in *Jinnistan* as well as in Fitzgerald's *The Curious Case of Benjamin Button*, the emotional response stems from the uncanny inversion of ageing, forcing readers to confront their assumptions about wisdom, youth, and societal values. Faust II, in contrast, evokes awe and introspection, as Goethe's imaginative landscapes guide readers into a self-reflective engagement with the creative process.

These emotional triggers facilitate cognitive flexibility, helping readers break free from rigid ideological perspectives. By experiencing empathy, discomfort, or wonder, they are encouraged to question existing societal norms and explore ethical alternatives to the current world. The book thus also enters psychosocial territories as the ethical possible role of literary imagination, precisely as it is used in cognitive-behavioural interventions in imaginative reappraisal, helping individuals visualise peaceful resolutions and empathise with diverse perspectives. Individuals can simulate emotional experiences beyond their own by engaging in fictional worlds, fostering ethical reflection and social cohesion. Similarly, the book tackles the knowledge that violent ideation often arises from rigid, binary thinking and a lack of alternative narratives, which literary imagination can create and consolidate.

10. The Foregrounding Assessment Matrix (FAM 2.0).

The authors of *Mind the Text!* Presents empirical evidence from neuroscience to support the claim that highly foregrounded texts activate distinct neural pathways. This part of the book is also a precise in-the-state-of-the-art positioning, which needs a little specific contextualisation to be appreciated: in the last decades, much literary and Theory of Mind research aimed at defining which kind of texts elicit more direct or deeper both emotional and thought-shifting responses. Starting from mirror neurons theory, many researchers in the last twenty years have conducted experiments using different kinds of texts, also

trying to distinguish reactions based on reading informative texts (such as essays and articles) or “popular texts” or “literary fiction”, as well as linearising the author-reader relation, thus provoking negative response in the scientific research due to the uncertainty of the concept used, as Duncan et al. synthesised in an article provocatively named *Why is Martha Nussbaum Right*:

Invoking Roland Barthes’ argumentative distinction between “readerly” and “writerly” texts, which in its historical context provided the battle-cry for champions of the subversive roman nouveau (Barthes, 3-6), they define “literary fiction” in terms of its power to “defamiliarize” readers, «unsettle their expectations», and force them to «search for meanings among a spectrum of possible meanings» (Kidd & Castano, 377). Not only would such a definition, carried to its logical terminus, confine the most significant rewards of reading fiction to an intellectual elite with a taste for the avant-garde, it also would exclude a vast body of fiction of undeniable merit (or even greatness) which nonetheless positions the reader as a “subject” to be entertained as well as intellectually stimulated. Indeed, it seems fair to ask to what extent the texts chosen as examples of “literary fiction” were more entertaining in the conventional sense than the concept of “writerly” fiction would suggest. Conversely, the extent to which the “popular” texts chosen were purely formula-driven and devoid of serious human interest²³.

Gambino and Pulvirenti propose to tackle this aporia mainly through a literary approach. First of all, they choose the side of cognitive poetics, basing principally on Miall & Kuiken’s theories. These theories analyse a sort of literary mechanism engaging the elsewhere called default mode network (DMN)²⁴, a brain system associated with self-referential thought and mental stimulation, and that «When perception becomes deautomatised, a reader employs the feelings that have been evoked to find or to create a context in which the defamiliarised aspects of the story can be located»²⁵. Through this choice, they underline how literary foregrounding is not just a textual feature but a neural phenomenon that shapes the reader’s experience. Then, to operationalise their approach, the authors introduce the «Foregrounding Assessment Matrix (FAM 2.0)», an analytical tool designed to measure the density of stylistic and rhetorical complexity in a text.

²³ Duncan, Bess-Montgomery, Osinubi 2017, p. 252.

²⁴ See Gambino and Pulvirenti 2024, pp. 48-50 and the theories about DMN: Calabrese 2023, p. 321.

²⁵ See Miall & Kuiken, 1994, p. 392..

The term foregrounding refers to the effect of actualisation, introduced by Paul Garvin [...] as an English translation of Mukarovsky's Czech term *aktualisace* [...]. It appears closely linked to Rosenblatt's second level of text understanding (interpretation) in Geoffrey Leech's linguistic poetry theory [...] Foregrounding slows down the reading process, activating sensorimotor circuits [...], potentially prompting a more complex meaningmaking process as well as stronger aesthetic pleasure [...] Drawing back to Iser's theory about the reading act, gaps and omissions in the text may also be considered foregrounded elements that prompt readers to extend their process of constructing meaning beyond the typical referential frame of the text²⁶.

This matrix provides a structured way to identify areas of high cognitive load where the text demands a heightened level of reader engagement due to its poetic language, narrative ambiguity, or unexpected stylistic shifts.

The FAM 2.0 consists of multiple levels of analysis:

Phonological Level: Identifies sound patterns such as alliteration, assonance, and rhythm that create a perceptual effect on the reader.

Syntactic Level: Analyses sentence structures, inversions, and discontinuities that slow comprehension and require deeper processing.

Semantic Level: Examines metaphorical language, irony, and polysemy that invite multiple interpretations.

Narrative Level: Focuses on disruptions in plot structure, shifts in perspective, and non-linearity that challenge reader expectations.

According to Gambino and Pulvirenti by following the FAM 2.0, readers can be made aware of the foregrounding elements in the text – i.e. the extent to which a text resists automatic reading (connected to the the above mentioned DMN) and compels active interpretation and, most important as it closes the circle, provoke heightened emotional response in reading: «foregrounding is not merely an aesthetic feature; it is a cognitive mechanism that forces the reader to reprocess language, engage deeper with meaning, and experience heightened emotional responses»²⁷.

11. Conclusions: Literature and Emotions

Literature's role in shaping minds and culture is more crucial today than ever, particularly from a social and ethical perspective. It counterbalances in an era

²⁶ Gambino and Pulvirenti 2024, p. 49

²⁷ Gambino and Pulvirenti 2024, p. 112.

of misinformation, ideological polarisation, and diminishing attention spans by fostering critical thinking, empathy, and nuanced understanding. It is, of course, a nonlinear reasoning, as literature as a discipline has been shaping cultures for the ages, contributing as an *entelechia* of culture itself and, more importantly, as a direction for human souls. This role, recently vacillating even in academic circles, must be recovered. Today's reduction of literature as ancillary or functional to "learn" foreign languages and culture, can be reversed also through the recognition of the power of literary narratives to shape minds and to "embody" different cultures and *Weltanschauungen*, to let readers feel the impossible, and therefore push the mind towards unexpected levels of thinking, keeping in mind that telling and writing stories are not merely entertainment acts but essential structures through which we define values, relationships, and social cohesion. As a result of this consciousness and the interdisciplinary trajectory here outlined, it becomes increasingly evident that emotions are not peripheral epiphenomena in reading, but foundational elements of aesthetic and cognitive engagement. Neuroscientific findings on embodied simulation, affective resonance, and neural mirroring confirm what philosophical hermeneutics had long intuited: that understanding unfolds through the body, sensation, and the emotional openness of the reader. Within this paradigm, literature is no longer viewed as a mere object of symbolic analysis but as a bio-cultural practice capable of shaping ethical awareness, empathy, and cognitive flexibility. Thus, the neurohermeneutic approach also reinstates the central role of emotions in *Bildung* by revealing reading as a transformative, multi-sensory event that fosters human development. Moreover, by integrating hard scientific evidence with hermeneutic tradition, this model communicates with the contemporary concept of science to reclaim literature's power to touch, change, and educate through emotion as much as thought.

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