



Stylistics and Specialized Translation: Interpreting Meaning in the Age of Artificial Intelligence

Stylistique et traduction spécialisée : interpréter le sens à l'ère de l'intelligence artificielle

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Abstract: This study highlights the limitations of artificial intelligence in specialized translation within literary criticism, particularly in capturing stylistic nuances and implicit meanings that the human translator processes intuitively and creatively, considering the translator as a creative agent. It proposes a model that combines machine-based processing with psychological-stylistic reading, calling for a redefinition of the translator as a cultural and psychological interpreter, and emphasizing the importance of dual awareness of both technology and humanity.

Keywords: Interpreting Meaning, Psychology, Specialized Translation, Stylistics, Technology.

Résumé: Cette étude met en lumière les limites de l'intelligence artificielle dans la traduction spécialisée en critique littéraire, notamment en ce qui concerne la perception des nuances stylistiques et des significations implicites que le traducteur humain traite de manière intuitive et créative, en considérant ce dernier comme un agent créatif. Elle propose un modèle différentiel combinant le traitement automatique et la lecture stylistique-psychologique, appelant à redéfinir le rôle du traducteur en tant qu'interprète culturel et psychologique, et souligne l'importance d'une conscience double, à la fois technologique et humaine.

Mots-clés : Interprétation du sens, Psychologie, Stylistique, Technologie, Traduction spécialisée.



The expanding role of artificial intelligence in specialized translation has brought about a significant shift in literary criticism, particularly as this field, since the calls of modern linguists such as Ferdinand de Saussure, Georges Mounin, and Jonathan Culler, has become more closely linked to fields that demand accuracy, like medicine, law, or science-based fields. Nonetheless, the increasing dependence on AI-driven tools brings up important doubts about how well they can understand the nuanced meanings that language carries, especially those psycho-stylistic dimensions that are often deeply rooted in culture and shaped by individual expression.

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Contemporary stylistic studies, understood as an approach that investigates the relationship between linguistic procedures, disciplinary applications, and the psychological structure of the trans-individual self, no longer consider style as merely aesthetic. Instead, style becomes a psychological imprint rooted in individual, social, cultural, and even geographical dimensions. With the emergence of structuralism, traditional stylistics—once grounded in rhetorical, psychological, and sociological interpretations—evolved into a discipline engaging linguistic, cognitive, and anthropological structures. The advent of neural machine translation has reopened this debate by questioning the extent to which automated systems can approximate the interpretive depth achieved by human translators.

This paper examines the boundaries between human and machine interpretation, emphasizing the role of the translator not simply as a linguistic mediator but as a cultural and psychological interpreter. Drawing upon stylistic methodology and cognitive approaches to translation, the study aims to clarify the evolving function of the human translator in the age of automation. Rather than opposing human and machine, it investigates the conditions under which both can coexist within specialized translation environments.

Although artificial intelligence operates through precise epistemological mechanisms, and its tools have advanced considerably in handling syntactic structures, terminology, and multilingual knowledge transfer—a persistent limitation lies in its inability to fully interpret implicit meanings and stylistic or emotional subtleties. Translation, therefore, cannot be reduced to mechanical processing, as it inherently relies on the translator's intuition, cultural background, and psychological sensitivity. This complexity becomes even more pronounced in literary criticism and in the interpretation of creative or theoretical texts through specialized methodologies.

From this perspective emerges the central question of the study:

To what extent can artificial intelligence genuinely assist – or approximate– the human translator's ability to grasp the stylistic and psychological depth of specialized critical terminology and texts?

Based on this central issue, the present study seeks to explore a set of hypotheses that may help clarify the complex relationship between human cognitive ability and artificial intelligence mechanisms. These hypotheses are grounded in the dialectic between the technical processing of texts and the creative intuition and psychological sensitivity of the human translator. This is framed within a theoretical approach that combines stylistics as a psychological interpretative method and translation studies across multiple dimensions. The main hypotheses of this research are as follows:

- The limited capacity of AI to process implicit and stylistic meanings.
- The human translator's intuitive and psychological interpretation of texts.
- The interpretive value of stylistics as a psychological reading framework.

- The effectiveness of hybrid models combining machine processing with human post-editing.
- The evolving role of the translator in technologically mediated environments.

This study adopts a comparative analytical methodology that draws upon the interdisciplinary intersections between stylistics, translation studies, and emerging technologies. It aims to construct a critical perspective that integrates human and technical dimensions in the processing of specialized texts. To achieve this, the research is structured around three interrelated axes:

- **Stylistics:** examines the notion of stylistics within literary criticism and outlines its psychological and cognitive foundations as a linguistic-psychological framework. Rather than treating stylistics as a surface-level expressive practice, this axis positions it as an analytical methodology grounded in the psychological structures underlying linguistic behaviour, highlighting the mental, cultural, and cognitive forces that shape stylistic expression in specialized texts.
- **Artificial Intelligence and Translation Technologies,** focusing on the broader role of AI in translation, with particular attention to its mechanisms and challenges in specialized contexts.
- **Specialized Translation and AI Stylistics,** which addresses the integration of stylistic analysis into post-editing and redefines the translator's role within automated systems, emphasizing the psychological and cultural positioning of the human translator.

This study adopts a comparative analytical methodology that draws upon the interdisciplinary intersections between stylistics, translation studies, and emerging technologies. It aims to construct a critical perspective that integrates the human and technical dimensions in the processing of specialized texts. To achieve this objective, the study is structured around three interrelated axes, each addressing a key aspect of the complex relationship between artificial intelligence and translation from both stylistic and critical standpoints.

In the first axis, titled “Stylistics: Concept and Methodology”, we examine the notion of stylistics within literary criticism, followed by an exploration of the foundational principles of stylistic analysis as an interpretive approach grounded in psychological and cognitive insights.

The second axis, “Artificial Intelligence and Translation Technologies”, focuses on the role of AI in the translation process more broadly, with a dedicated section on the mechanisms and challenges of AI in specialized translation contexts.

Finally, the third axis, “Specialized Translation and AI Stylistics”, addresses the integration of stylistic analysis into post-editing phases and redefines the translator's role in light of automated processing, emphasizing the psychological and cultural positioning of the human translator within this evolving landscape.

1. Title Stylistics in Literary Criticism: Foundations and Methodological Approaches

1.1. Towards a Systematic Foundation for Stylistics in Literary Criticism

Stylistics emerged in the early twentieth century as an attempt to reconsider the relationship between language and expression. Language was no longer approached merely as a syntactic, rhetorical, or morphological system, but rather as a psychological effect, shaped by both subjective and objective experiences—psychological and social alike. Charles Bally paved the way for this perspective, stating that «the exposition of these principles also aims to place within its psychological framework the field of research I have named stylistics» (BALLY, 1926 : 12). Thus, stylistics becomes, at its core, a psychological reading of language—one that does not simply describe the formal aspects of discourse, but seeks to uncover its deeper motivations, its subjective expressions, and its psychological and neural manifestations.

If we deepen our understanding of stylistics through its psychological dimension, we move beyond style as a mere set of procedural tools or raw material for this method. Contemporary researchers have worked to consolidate this orientation within stylistics, especially those who followed in the footsteps of Charles Bally, who is considered a founding figure of an approach that is structural in nature and methodological in scope, rather than simply a theoretical current. In this context, stylistics transcends the traditional notion of style and the external aesthetic rhetoric of the text, positioning style instead as an essential component in the construction of meaning. Based on this premise, stylistics becomes intertwined with cognitive sciences and psychoanalysis in its aim to understand the roles of memory, individual consciousness, and emotional involvement in shaping the production and reception of texts, as well as the formation of specialized language. Within this framework, language is no longer a mere formal medium but a dynamic space in which meaning plays a decisive role.

Without delving too deeply into technicalities, it can be said that the structure of style lies primarily in the procedural modes of artistic linguistic usage and their manifestations in rhetoric and linguistic deployment. This includes studying the aesthetic dimensions of language in its grammatical, rhetorical, morphological, and semantic aspects. However, stylistics goes further by probing the inner psychological structures and their multiple relations with the general framework of language. In this sense, style becomes a raw material upon which the stylistic method operates. Thus, here we can say the stylistics emerges as a procedural methodology that transcends rigid categorizations, drawing upon various linguistic paradigms to engage with language's interaction with emotional representations, psychological patterns, and subjective undercurrents embedded in discourse—whether statistical, functional, or cognitive. This orientation finds strong support in recent scholarship, such as Claudia (2023), who affirms:

The rhetorical-stylistic perspective has been largely neglected or even ignored by research on language and emotion. Although undoubtedly partial, this perspective offers a vantage point for understanding the interface between language and emotions because speakers shape their identities in ongoing speech through their stylistic choices. (Claudia, 2023 : 606)

Hence, this conception reinforces our view of stylistics not merely as readings of stylistic transformations on the linguistic and rhetorical levels, but as a fundamental methodology based on the psychological dimension. Any study within the stylistic framework must rely on this dimension; otherwise, it would be an analysis of style outside the bounds of the stylistic method. Charles Bally clearly understood the essential axes on which Ferdinand de Saussure focused in his courses, linking linguistic structure to three key elements: the physiological, the physical, and the psychological – the latter also relating to the psychological imprint and its connection to both the individual and society.

Many recent studies in the field of linguistics – relying on certain English translations and French research – have attempted to sever the connection between psychology and linguistics, in an effort to completely isolate linguistic inquiry. However, they have overlooked the fact that Saussure himself opened the field of linguistic study to the historical dimension when he addressed both diachronic linguistics and geographical linguistics. This has made modern studies extremely cautious when dealing with this essential axis. For example, in one article, Anna Gladkova explores the link between linguistics and emotion, stating that «linguists study words and expressions that people use to convey their emotions. Despite not being identical, these two foci of studies are closely related» (Gladkova, 2023 : 85) Her phrase “not being identical” reflects the cautious approach adopted by several studies – an approach that may have, to some extent, altered the true dimensions that Saussure and his students originally worked on.

Our fundamental perspective in restoring the stylistic method in literary criticism to its essential foundations – grounded in the psychological framework – brings this methodology back to the proper path of genuine stylistic analysis. In this framework, style, with all its linguistic, rhetorical, morphological, lexical, and phonetic tools, becomes the raw material of the method. It deals with the actual performance of both the creative writer and the critic within the expansive world of language.

Consequently, the general psychological framework allows stylistics to move beyond mere textual description and to enter the realm of cognitive and emotional understanding. From this perspective, semiotic signs themselves become psychological signifiers—not merely tools for conveying meaning, but more specifically, precise texts and terminologies that reflect the internal states of the creator in the case of literary texts, or of the critic in the case of scientific critical texts governed by accuracy and experimentation. This transformation can be realized by reestablishing the connection between stylistics and the various branches of psychology, thereby allowing this approach to emerge as a rich and fruitful analytical methodology. In this light, the stylistic act becomes an intersection between intention, perception, and linguistic embodiment. It is within this convergence that we can begin to comprehend the broader vision of stylistics – one that invites us to move beyond conscious dimensions and to reflect on the unconscious aspects of stylistic choices, along with the social implications they carries in all their manifestations. Ultimately, this perspective enables us to define the general framework of the stylistic method and to rediscover its original mission: to understand how language shapes the human mind – and how, in turn, the human mind shapes language.

1.2. Theoretical and Methodological Foundations of the Stylistic Approach

Based on the previous concepts and the methodological structure we have outlined for stylistics – fields that focuses on revealing the psychological dimensions through language – we can now turn to the theoretical and methodological grounds that give this approach its coherence. These foundations emerge not as abstract rules, but as part of a knowledge system that keeps the method internally consistent and responsive to the nature of literary expression. Stylistics does not simply describe linguistic or rhetorical features. Rather, it aims to reinterpret them within a living structure – one that responds to how stylistic tools operate in connection with the psychological depth of the writer. At this point, we come to the conclusion that style cannot be separated from its meanings, or language from its communicative space. Rather, language becomes the space in which inner experience takes shape, where linguistic choices carry the imprint of both emotion and knowledge. At the heart of this approach lies the relationship between the signifier and the signified, between the concept and the sound image—since the structure of language in the literary text is not isolated, but rather a space within which psychological tensions, aesthetic choices, and the social reality embedded in the subjectivity of the writer—transcending their individuality—are reflected. In this sense, stylistics emerges as a cross-disciplinary method – drawing from structural linguistics (as in Saussure's work on the linguistic sign), while extending into psychological realms, as developed by Charles Bally and others who emphasized the expressive and affective power of language.

In this study, stylistics is defined as a psychological framework of linguistic analysis that explores how inner experience is transformed into expression through language. It does not examine style as an external or formal feature, but as an internal process shaped by emotion, cognition, and cultural memory. Stylistics, in this sense, investigates the psychological forces that drive lexical, syntactic, and rhetorical choices in literary discourse. It is therefore distinct from functional, statistical, or cognitive branches of style studies, which focus on external structures rather than inner dynamics. This definition positions stylistics as an interpretive method rooted in the expressive psychology of the subject.

Methodologically, stylistic analysis engages with multiple linguistic levels – phonological, morphological, lexical, syntactic, and rhetorical – but it focuses primarily on the relationship between language and its actual applications; that is, the process of lexical and syntactic choices in conjunction with the formal and technical demands of poetic or narrative structures. In this context, style is no longer merely a linguistic phenomenon, but a human gesture – a form of presence. Concepts such as deviation, repetition, and semantic tension are not treated mechanically, but are read as signals of deeper psychological and social dynamics – what we might call the “stylistic unconscious”. Thus, stylistics is not merely a functional, statistical, or cognitive study of language; rather, it is a precise scientific and methodological inquiry grounded in the psychological space of linguistic expression. This form of expression opens the way for a deeper reading of both the human subject and literature—one in which method becomes embedded in an understanding that treats language as a living field of continuously moving themes, characters shaped by history and desire, and terms that actively participate in the production of precise scientific and critical language. From this point, and in order to deepen our understanding of stylistics from a psycho-critical perspective, it becomes essential to define a set of key methodological terms. These concepts form the foundation of the method we aim to articulate critically and apply in contrast to specialized

translation. This is a framework that views style not merely as a linguistic construct, but as a psychological and expressive process rooted in the life of the subject, in their social presence, and in their cultural memory:

1. Stylistic Unconscious

This term refers to the unconscious psychological dimensions that guide an author's stylistic choices. These are manifested through deviations, repetitions, or unusual syntactic structures, serving as indirect expressions of inner tensions or repressed drives.

Charles Bally linked intelligence to language as both a system and a function, emphasizing that a substantial part of linguistic structure operates beyond conscious awareness. He insightfully observed that

We almost never think about the countless mental representations our mind must associate and combine for even the simplest sentence we utter. It is unconsciously that we choose in conversation the words that seem most comprehensible and expressive, and unconsciously that we sometimes create new words, prompted by obscure analogies. (Bally, 1926 : 36).

This perspective aligns with Ferdinand de Saussure's characterization of language as "multiform and heterogonous" (De Saussure, 1931 : 25) suggesting that the stylistic surface of a text may reflect deeper mental dynamics governed by complex and often unconscious systems that shape linguistic expression and stylistic formation.

2. Transindividual Stylistic

This term denotes a style that transcends individual expression to take shape within a shared linguistic space, carrying the imprint of collective memory, cultural heritage, and communal discursive patterns.

3. Psychological structure of the Text

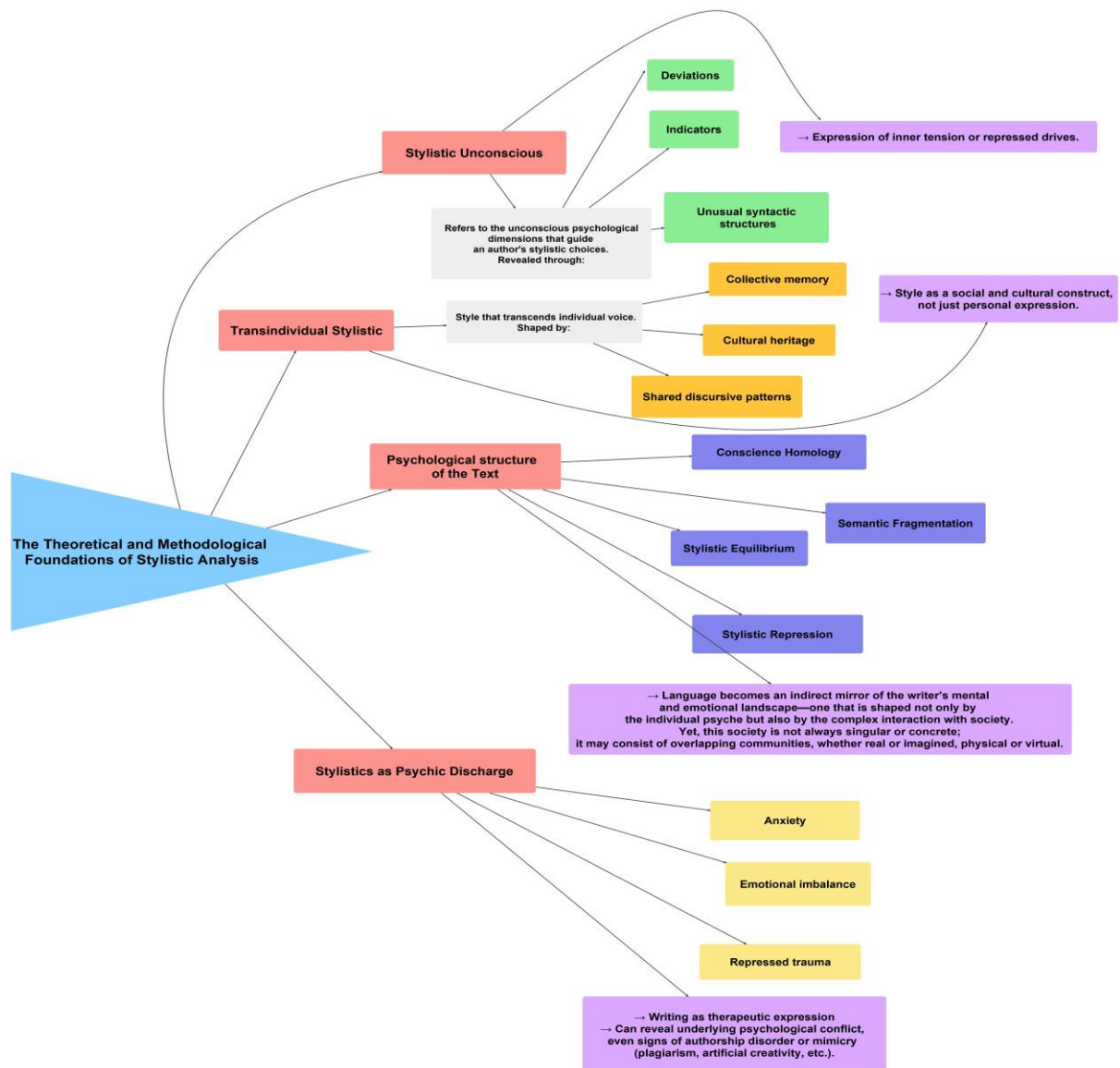
The psychological structure of the literary text is built upon four central mechanisms, each representing interwoven layers of tension, regulation, repression, and ethical orientation. The first is what we call **Conscience Homology**—an ethical or aesthetic framework that emerges through the writer's stylistic choices under the influence of the superego. In this case, language functions as a form of internal supervision, guiding the discourse toward coherence and conscious control. The second is **Semantic Fragmentation**, which refers to inner tensions and repressed emotional impulses manifested through visible stylistic deviations or disruptions in linguistic consistency. This phenomenon reflects the presence of the id within the text. Third, we encounter **Stylistic Equilibrium**, which represents the intervention of the ego as a balancing force that regulates the stylistic rhythm and restores harmony to the discursive structure. Finally, we arrive at the term **stylistic repression**, a concept that refers to the transformations of psychological disturbance, where repression manifests through segments marked by silence, ambiguity, and sudden or unexplained tension. In such instances, language becomes a set of indicators for figurative expression, one that departs from direct or explicit language.

4. Stylistics as Psychic Discharge

This term refers to the role of stylistics, within this framework, as an analytical tool for identifying psychological tensions and emotional disturbances as they manifest in stylistic structures. Here, writing becomes a channel for releasing pain, anxiety, or trauma. Stylistics reappropriates the aesthetic function of literary form and transforms it into a means of therapeutic detection. It resonates with key concepts from Freudian psychoanalysis – particularly the mechanism of repression – as these repressed elements resurfaces through linguistic deviation, expressive excess or stylistic dispersal.

Within this perspective, stylistic analysis may also uncover latent psychological disorders in individuals obsessively engaged with writing, in those who adopt the appearance of authorship without genuine experience, or in cases of literary plagiarism. In such texts, stylistic inconsistencies, exaggerated emotional tone, and unstable syntactic constructions may serve as symptomatic traces of inner conflict masked by the illusion of creative authority.

Figure 1 : Stylistic Analysis Methodology



2. Artificial Intelligence and Translation Technologies

2.1 The Contribution of Artificial Intelligence to the Development of Translation Processes

Artificial intelligence has recently become a vital domain with significant influence across multiple fields of human activity. In recent years, it has experienced rapid development that has significantly contributed to the field of translation. AI, as a scientific necessity—often both auxiliary and central—has contributed to accelerating, improving, and refining the accuracy of translation. This has led to a wide expansion in its use across various domains, whether in literary translation, technical translation, or scientific translation. Accordingly, modern systems—such as Neural Machine Translation models—have relied on algorithms in the field of learning that are capable of analyzing the linguistic structure of texts and predicting potential translations according to both pattern and context. This allows for results that are more accurate and flexible compared to traditional or earlier forms of machine translation.

Accordingly, we find that this contribution does not stop at the scientific dimension alone, but also calls for a re-evaluation of the notions of translator and translation. The relationship between the source text and the target text is now governed by computational data embedded within technical programs that rely on scientific, mathematical, and algorithmic operations. Here lies the ability of artificial intelligence systems to construct their stylistic options in an orderly and precise manner within linguistic and statistical domains. In the realm of ideas, entirely different standards apply. Thus, while artificial intelligence helps enhance the efficiency of our translation, it also prompts us to reflect on what we have long recognized and engaged with regarding the meaning of meaning, the value of accuracy, and the possibility of terminological equivalence. It encourages us to bring modern critical thinking into the way we build translated and parallel texts. This shows how important it is to adopt a hybrid method — one that balances the technical power of algorithms with the human depth of stylistic sensitivity.

However successful machine translation programs might be in the performance of discrete translation tasks, it by no means follows that they have fulfilled the responsibility of a translator. Gaps between the linguistic form of the training data and linguistic meaning (whether relative to the external referents invoked by referentialists or the internal mental structures invoked by internalists) ensure that machine translation programs will lack the requisite level of natural language understanding and fail to secure the trust of human users. In any case, human intervention remains an indispensable component in machine translation, in the form of pre-editing and post-editing. (Chen, 2024 : 2317)

In light of all the above, the contribution of artificial intelligence to the field of translation represents a genuine qualitative leap. Its technologies not only accelerate the process but also open new horizons for understanding and reconstructing text, making AI an indispensable cognitive partner in the future of translation.

2.2 AI in Specialized Translation: Prospects and Challenges

Specialized translation—particularly when it involves critical or literary texts enhanced by artificial intelligence—has emerged as a dynamic field that significantly contributes to the accelerating flow of knowledge. AI has established its presence in ways that can no longer

be ignored. The nature of translation work has transformed, and its pace has intensified. Thanks to the development of advanced tools and programs that now align with the translator's workflow from the very first stages, practitioners have been able to move beyond rigid, formulaic approaches and explore a wider range of linguistic formulations, conceptual research, terminological excavation, and even the creation of culturally and semantically equivalent terms. These tools also facilitate meaningful engagement with expressions carrying a high cognitive and cultural load, adapting flexibly to the conceptual frameworks of different societies. Among the most prominent tools are DeepL and the latest versions of Google Translate, enhanced by neural translation algorithms capable of producing increasingly nuanced interpretations—some of which attempt what could be described as a “psychological reading.” These programs now act as intelligent companions in the translation process—not replacing the translator, but participating in the early stages of text exploration, helping to test and shape the raw material of meaning.

DeepL Pro, for example, offers contextual recognition beyond conventional norms, especially when used by a skilled translator who frames input clearly. However, these tools still fall short for specialized and literary language, which requires precision, fluency, and attention to classical rhetoric. Modern platforms like ChatGPT complement this by enabling dialogue, interaction, and nuanced engagement with stylistic intent. They facilitate deeper understanding of terms, their cultural and intellectual dimensions, and can even assist in reconfiguring terminology within broader interpretive frameworks.

When examining and investigating the applications and programs of artificial intelligence—particularly in the field of specialized translation within literary and critical studies—it becomes essential to highlight the role of AI in analyzing the conceptual and epistemological development of criticism, as well as the effectiveness of these programs in tracing sources of linguistic knowledge. In this context, when translators are faced with terms that carry philosophical and intellectual weight, AI tools play a significant role in exploring the methods and modalities of translating—and even interpreting—such complex concepts. This enables not only comparative analysis but also a deeper understanding of how theoretical and cultural frameworks shape meaning in each case. Furthermore, by analyzing parallel corpora or suggesting alternative formulations, tools such as ChatGPT and DeepL provide a critical starting point for reconstructing specialized terms within a parallel philosophical and cultural framework in the target language. Used with critical awareness, these tools become intellectually enabling—they do not replace the translator, but instead serve as catalysts for cognitive accuracy and interpretive depth, particularly when navigating the complexity of critical language.

This applied dimension was clearly manifested in my personal experience translating the term “langage” as used by Ferdinand de Saussure. We find that some Arab translators have placed it within a narrow scope, translating it either as “language” or “speech.” However, after reading the entirety of the theory in its original French context, I was able to introduce a process of deeper comparative and interpretive reflection. The critical discussion made possible by intelligent tools also helped me, where it became clear that “langage”, in Saussure's thought, goes beyond “langue”. The first term, “langage”, refers to a broader structure that includes expression in its various signs and manifestations. It also encompasses comprehension, culture, subjectivity, and society. In this context, artificial intelligence played an important role in my work, both in the process of discussion and in highlighting this aspect and supporting the translation I proposed for this term—

contributing to the development of our perspective and understanding of Ferdinand de Saussure's linguistic theory. This ultimately led to a more accurate and scientifically faithful translation, where the term "linguistic structure" became the one that preserves the true conceptual meaning. Through this work, I concluded that the translator cannot be merely a conveyor of synonyms, but rather an understanding, conscious, and interpretive agent, working in collaboration with artificial intelligence, which cannot serve as a substitute in the field of literary criticism, but can be a means to expand understanding and deepen reading.

Thus, in light of what artificial intelligence can offer in terms of services, it opens up new possibilities within the field of comparative linguistics. It is now capable of going beyond synchronous translation by generating equivalent translations across a wide array of lexical and structural choices—even to the extent of entering the realm of dialectal variation within the same language. In this context, one may recall the following assertion:

The theory of translation is concerned with a certain type of relation between languages and is consequently a branch of Comparative Linguistics. From the point of view of translation theory the distinction between synchronic and diachronic comparison is irrelevant. Translation equivalences may be set up, and translations performed, between any pair of languages or dialects—'related' or 'unrelated' and with any kind of spatial, temporal, social or other relationship between them. (Catford, 1978 : 20)

3. Specialized Translation and the Stylistics of Artificial Intelligence

3.1 The Psychological Framework and Artificial Intelligence in the Digital Translation Phase

Before examining the integration of stylistic analysis into post-editing, it is necessary to clarify what is meant by "specialized translation." This type of translation concerns texts produced within specific scientific, technical, or theoretical fields, where meaning is shaped not only by linguistic structures but also by the conceptual, psychological, and cultural frameworks of the domain. Unlike general translation, it requires domain expertise, mastery of terminology, and the ability to interpret the cognitive and stylistic dynamics of expert discourse. Specialized translation is therefore an interpretive and intellectual task, not a mechanical transfer of lexical equivalents.

With this distinction established, we can now examine how recent developments in artificial intelligence have reshaped the practice of specialized translation—particularly through the emergence of post-editing, where stylistic and psychological dimensions have become central. The rise of AI-assisted translation introduces new dynamics that extend far beyond mechanical substitution and intersect directly with the conceptual and psychological complexity of specialized discourse.

Artificial intelligence tools have gone beyond merely providing purely mechanical translations. They now also suggest a range of stylistic alternatives, some of which may align — or conflict — with the psychological structure of the source text. This places a renewed responsibility on the translator: to grasp both the psychological and cognitive atmosphere of the text and to rephrase it in the target language — not by relying solely on the machine, but by engaging with it critically, cognitively, and sensorially. Translation

therefore evolves into a negotiation between algorithmic intelligence and human understanding, emphasizing the subtle interplay of meaning, culture, and cognition.

The role of the human and professional translator in the digital translation era is undergoing a significant scientific and practical shift. This shift is reflected in the translator's evolving function—not merely as a producer of meaning, but as a conscious mediator between machine-generated output and its intended communicative goals. In addition to its linguistic proficiency, this new algorithmic knowledge requires psychological readings that interact with the intellectual and cultural structure of language—especially when it delves into working with expansive texts that contain diverse variables of stylistic. On the other hand, we find that artificial intelligence—despite its rapid growth and remarkable technological advancement—has shown great capacity in analyzing various linguistic systems, understanding their internal structures, and producing translations that are both accurate and technically precise. Yet, there remains a crucial dimension that must not be overlooked: the psychological dimension. AI systems often fail to perceive the conscious emotional undercurrents that flow between words, and even within specialized terminologies. The production of scientific or critical terminology does not emerge in isolation; it is shaped by a world of ideas drawn from lived social, philosophical, intellectual, and even economic experiences. For this reason, the emotional dimension remains essential to specialized translation, and to any genuine act of understanding or interpreting complex texts. This dimension becomes especially apparent in machine translation approaches based on stored datasets and large-scale parallel corpora, which frequently bypass deeper linguistic and psychological understanding. As Bowker and Buitrago Ciro explain:

The fundamental idea behind corpus-based approaches - sometimes referred to as data-driven approaches - is that, instead of being based on linguistic rules, translation is based on a very large database of examples of texts that have been translated by professional human translators. [...] The machine translation system can consult this resource, known as a parallel corpus, to determine how a particular word, phrase, or sentence has been translated in the past, and then use this information to propose a translation for the new text that is to be translated. (2019 : 42)

While this model proves productive in handling repetitive or technical content, it faces clear limitations when dealing with texts requiring affective understanding, metaphorical insight, or cultural adaptation—domains inherently tied to human cognition and conscious sensitivity. Indeed, a major shortcoming of machine translation lies in its inability to process ambiguous texts that demand inferential reasoning and anticipatory insight, particularly when interpreting complex linguistic relationships in critical theories.

These limitations underscore the critical role of the human translator, whose psychological and interpretive engagement is essential for capturing the nuances of complex theoretical texts.

Stylistics, for instance, still presents a conceptual challenge when translating theoretical terminology open to multiple interpretations. Neural networks, operating solely on statistical patterns, lack intuitive sensitivity to context and the communicative intentions embedded in the text. This is precisely where the professional human translator excels—through psychological and interpretive engagement. Accurate understanding of theoretical

frameworks remains essential to translate specialized terms reliably. Divergent translations by critics often fragment literary criticism, as core terms serve as entry points to theoretical meaning. When translation fails here, it directly triggers a crisis of comprehension. Although digital translation has created a parallel space for discussion, it still struggles with this specialized category of terminology.

When we speak of stylistics—which naturally falls within a psychological framework—we begin to grasp the specific complexity of specialized translation, as well as the mechanized dimension of parallel digital processing. No matter how accurate digital translation may be in rendering content or terminology, it inevitably remains in need of human support. The origin of critical theories lies in the intellectual experience of each researcher, shaped by personal psychological, cognitive, and even neurological conditions—dimensions that machine-stored data and parallel corpora are not designed to process. These automated systems, despite their analytical power, fall short when it comes to capturing the human equivalence embedded in the nuanced fabric of lived intellectual experience.

For instance, the French term (*la méthode*) in linguistic studies often refers to the comprehensive methodological framework or scientific method guiding research and determining levels of analysis and interpretation. In contrast, (*méthode*) alone is usually rendered as “method” or “procedure,” referring to a specific technique or practical approach, without implying the broader theoretical framework. This distinction is often overlooked in literal or automated translations, leading to significant confusion between the scientific method, methodology, plan, and technique, which underscore the necessity of a specialized translator to ensure conceptual and psychological accuracy.

3. 2 Towards a Redefinition of the Translator’s Role in Light of Automated Stylistic Processing

Automated stylistic processing has come to play a substantial role in critical research and in shaping the stylistic choices handled by the specialized translator. In light of this growing influence, it has become necessary to reconsider the translator’s role, especially as they increasingly engage with artificial intelligence—particularly in stylistic analysis, which now produces structures that are fundamentally distinct from those shaped by human expression. Human-generated stylistics is deeply connected to a psychological framework that naturally gives rise to stylistic alternatives, whereas AI offers outputs derived from different mechanisms—structures that may reflect the psychological imprints of the programmers and systems that generated them. The translator now operates within multiple layers of automated interpretation and linguistic construction. This raises essential questions: Should we reconceptualize style under the weight of technological advancement, giving the machine greater authority in defining stylistic frameworks? Or should style be redefined as a product of the world of ideas alone—detached from technological influence yet shaped by human intentionality?

A forward-looking perspective on the notion of the specialized translator—and on stylistics as a critical system grounded in psychological structures—may provide us with a meaningful anticipation of future shifts in this field. In the near future, it may no longer be possible to identify the author through the stylistic fabric of a text, even though style has traditionally

been the central marker for tracing the author's intellectual and philosophical orientation. At the same time, this trajectory compels us to rethink our understanding of contemporary critical methodologies. Since the foundational works of Ferdinand de Saussure, there has been a tendency to position literature—and its accompanying critical discourses—within the domain of scientific inquiry, governed by evidence and experimentation. As one scholar noted, Ferdinand de Saussure, "together with his great contemporaries, Emile Durkheim in sociology and Sigmund Freud in psychology, he helped to set the study of human behaviour on a new footing" (CULLERr, 1976: 07) This foundational shift gradually led to the unification of methodological frameworks across various schools of analysis: stylistic, semiotic, deconstructive, historical, psychological, and sociological. The goal has been to establish general rules and rigorous methodologies for critical inquiry. Such aspirations have been echoed in recent scholarship, particularly in efforts to propose unified models of analysis—such as Lucien Goldmann's genetic structuralism.

Specialized language shapes a scientific space inseparable from stylistics, which provides contextual meaning to terminology. Terms gain significance not only through lexical or functional definitions but through their psychological and cultural frameworks. Stylistics thus functions as an analytical method uncovering deeper cognitive and cultural layers in critical discourse. In modern contexts, advanced AI supports the generation of stylistic patterns under human guidance, while specialized translation relies on the translator's psychological insight and expansive knowledge, bridging individual subjectivity with broader scientific and cultural understanding.

Style is no longer confined to the classical view that situates it within the framework of individual expression. With the advent of structuralism, stylistic methodology, and genetic structuralism, the focus has shifted toward an intersubjective conception of style—one that transcends individual self and, in many cases, even surpasses the writer's own awareness. This evolution in understanding can also be applied to specialized translation, which becomes not merely a precise transfer of terminology with its intellectual and cultural weight, but also an interpretive act in which the translator relies on a critical and stylistic understanding of the text. Within this scientific framework, digital translation functions as a vital support mechanism, offering tools that assist in deconstructing and navigating stylistic complexities. However, despite its significance in this domain, full reliance on such tools may hinder intellectual production and lead to unforeseen errors. The translator's interaction with these technologies must therefore remain anchored in the distinct capacities of human cognition, conscious scholarly awareness, and interpretive depth.

Conclusion

Through this concise study, which sought to explore the conceptual and methodological intersections between artificial intelligence and the human translator in the domain of specialized translation, we have shown that, despite its remarkable technical evolution and algorithmic precision, artificial intelligence remains inherently limited in capturing the psychological dimension—particularly within the stylistic framework rooted in critical discourse. As previously demonstrated, translation is not a mere lexical or semantic correspondence; it is a dynamic interpretive act embedded in the active self, with all its fragmented, individual, and trans-individual dimensions. We have argued that stylistics is not simply a tool for linguistic description, nor should it be reduced—as it often is in the

Arab critical tradition—to a form of expressive stylistics. Rather, it is a cognitive and psychological framework capable of revealing the deep architecture of meaning, an architecture that current AI systems can only partially simulate. Through the concepts we have developed in our approach to stylistic analysis—conscience homology, semantic fragmentation, stylistic discharge, and stylistic unconscious—we proposed a new reading of style, not as a surface technique, but as a psychological trace shaped within the very core of inner conflict and its linguistic manifestations.

The main findings of this study can be summarized as follows :

- As part of the findings of this study, we have situated the concept of stylistic methodology within a psychological framework (as developed by Charles Bally), going beyond the branches that serve stylistics merely as tools rather than as intrinsic aspects of stylistic analysis. This approach highlights how stylistic analysis can capture not only linguistic form but also the cognitive and affective dimensions of the source text, offering a more authentic and functional tool for specialized translation.
- Despite the rapid expansion of artificial intelligence, it remains in a formative structural phase and continues to exhibit certain limitations in processing the intuitive psychological imprint that lies at the heart of the stylistic methodology—particularly in critical texts shaped by inferential reasoning, cultural depth, and interpretive complexity.
- The role of the human translator remains indispensable today—not merely in transmitting meaning, but in reconstructing the epistemological and emotional horizon of the text.
- A hybrid model, combining AI tools with the psychological and stylistic insight of the human translator, constitutes the most promising path forward.
- There is an urgent need to redefine the translator as a hermeneutic agent who stands at the intersection of technology and thought—where technology is no longer a mere external aid, but a central epistemological actor in our current moment.
- Specialized translation must be understood not as a purely terminological transfer, but as a layered interpretive practice that demands an awareness of stylistic form, conceptual precision, and the psychological and cultural frameworks embedded in the discourse of a specific field. The specialized translator is, therefore, not a technician of language, but a mediator of disciplinary memory—one who reactivates the knowledge structure of a field through the stylistic and affective logic of the target language.

Ultimately, this study calls for a renewed vision of translation: one that transcends the binary of "human versus machine" and opens instead toward a dialogic space—where algorithmic logic and human consciousness interact creatively, and where meaning is not simply transferred, but co-constructed in the shared territory between code and cognition.

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