研究論文

On Transdisciplinarity: A Perspective from EMI Research

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Introduction

For the past ten years, I have been engaged in a project focused on English Medium Instruction (EMI), both in practice and theory, alongside an international team of professors from Japan, Taiwan, and Vietnam. This diverse group includes specialists from various disciplines such as linguistics, economics, political science, law, and engineering. The interdisciplinary interaction in the classroom, stemming from the combination of these different fields, has significantly enhanced students' cross-cultural awareness. Using English as a Lingua Franca, they work on projects from their unique linguistic and cultural perspectives, enriching the educational experience.

This interaction primarily occurs in a classroom setting that employs the COIL (Collaborative Online International Learning) method. Here, the emphasis is on cross-cultural experiences and fostering disciplinary understanding through online activities. The challenging years of the COVID-19 pandemic have revealed that online interaction not only creates a stimulating educational environment for students but also promotes interdisciplinary dialogue among professors from diverse fields.

Reflecting on this interdisciplinary connection with my research colleagues, I encountered the concept of "transdisciplinarity." While **inter-**disciplinary work emphasizes the individuality of each academic field, **trans-**disciplinary work transcends these boundaries, creating a new category of scholarship. This timely discovery coincided with my growing interest in a type of inference called abduction, which I have posited as essential in utterance interpretation in language communication. Abductive reasoning, not limited to language contexts, is a practical and commonly used method for forming hypotheses from observed data to find solutions across various scenarios.

Thus, this paper has emerged from my decade-long engagement with EMI and the interdisciplinary interaction with my fellow researchers, facilitated by online discussions. It places special emphasis on two “strategies” that TRANSCEND

disciplinary boundaries: abductive inference and metaphor. I will argue that these strategies have not been given fair consideration in Western-style epistemology.[1]

Abduction

Consider the process a doctor follows to diagnose a patient, for instance. Diagnosis is fundamentally an exercise in abductive reasoning, where a hypothesis is generated based on observations such as palpation and patient complaints.[2] For instance, if a patient reports fatigue, high fever, persistent cough, and muscle pains, a doctor might diagnose the flu. However, another doctor might consider the same symptoms indicative of coronavirus. This process can be represented as: (1) If X (Disease), then Y (Symptoms); (2) Y (Symptoms); (3) Therefore, X (Disease).

As you can see, this process is not strictly logical; it is an example of the fallacy known as "affirming the consequent." Unlike deduction ((1) If X, then Y; (2) X; (3) Therefore, Y), which ensures the truth of the conclusion if the premises are correct, abduction generates only a hypothesis. Hence, it is termed “hypothesis-generating inference” or “reverse-deduction.” [3] My argument here is that this type of inference is prevalent not only in medical diagnosis but also in various other aspects of human affairs, including utterance interpretation.

As a hypothesis-generating strategy, abduction can serve as a transdisciplinary tool, applicable and necessary across every area of academic interest. This realization led me to reconsider the deductive process and the rational reasoning that accompanies it: a strong skepticism of deduction that guarantees truthfulness and encourages "scientific" thinking and practices.

Transdisciplinarity

In the latter half of the 1970s, as a university student specializing in linguistics, particularly modern linguistics as pioneered by Noam Chomsky,[4] I witnessed the field’s heyday. This period was marked by a proliferation of competing theories and frameworks that captured academic attention. It is no exaggeration to say that any serious discussion in linguistics had to begin with Chomsky’s ideas.

However, a significant shift occurred during my graduate studies. George Lakoff, a prominent linguist and notable opponent of Chomsky, delivered a lecture in 1981 at Kobe University, which I had the fortunate opportunity to attend. At the time, Lakoff was an advocate of "generative semantics," emphasizing the importance of semantics in generative grammar. For instance, he argued that a lexical item like "kill" could be decomposed into "cause X to die." Naturally, attendees expected Lakoff to elaborate on this semantic approach, which sharply contrasted with Chomsky’s exclusion of

meaning from grammatical studies.

Contrary to our expectations, Lakoff started talking about the concept of "conceptual metaphors" such as "TIME IS MONEY," "IDEAS ARE OBJECTS," and "LINGUISTIC EXPRESSIONS ARE CONTAINERS." This sudden shift left us mystified, as we anticipated a discussion on grammar. It later became clear that Lakoff was at that time in the process of co-authoring the groundbreaking book *Metaphors We Live By* with Mark Johnson.[5] His focus on metaphors signaled not a mere shift in interest but a profound paradigm shift. Lakoff's lecture, initially perplexing, was actually a deliberate move to challenge the Cartesian framework championed by Chomsky and, more broadly, the Western philosophical tradition dating back to Plato and Socrates.

Over time, I came to understand that Lakoff's lecture was not a capricious deviation from grammar, but an ambitious attempt to instigate a paradigm shift in both linguistics and the broader realm of academic thought. This shift questioned long-held assumptions in Western academia that were often taken for granted but not empirically proven. As we will explore later, metaphorical thinking is also a fundamental aspect of transdisciplinarity, another focus of attention in this paper.

The Role of Inference in Pragmatics

In pragmatics, we are interested in the meaning of an utterance in each context. This is where a hearer's inference is integral to understanding the "true" meaning intended by a speaker in a given situation, there tends to be no definitive rule that guarantees the final interpretation. Instead, we generally rely on contextual information, encyclopedic knowledge, and shared assumptions with our interlocutors — all the chaotic elements — to arrive at "the" message, whose appropriateness is not 100% guaranteed. Essentially, guesswork is predominantly at play.

Philosopher Paul Grice is renowned for bringing order to this chaos of meaning by proposing a set of maxims that guide our inferential processes in deciphering the intended meaning of our conversational partners.[6] These maxims, known as Quantity, Quality, Relation, and Manner, serve as basic norms in verbal interactions. Their blatant violation, or "flouting," prompts our inferential search for meaning within a context. However, despite this structured approach, the path to the final interpretation — the ultimate message — remains elusive and operates within a "black box."

This is where Sperber and Wilson's theoretical framework of relevance comes into play.[7] Relevance Theory, as it is known, posits that our inferential process operates in a way that guarantees "optimal" relevance. Optimal relevance is achieved by balancing

the amount of "reward (R) " against the "effort (E)" required to process information. This balance is encapsulated in a simple formula: R/E. For instance, consider the similar statements "It is raining outside (A)" and "It is raining outside, and there is grass on the lawn (B)" in the context of "If it is raining, I will stay at home." Both statements lead to the conclusion "I will stay at home." Therefore, since the reward is the same, (A) is more relevant than (B), as (B) requires *extra effort* to process the additional information about the grass on the lawn.

This explanation, grounded in the notion of efficiency, provides a clear and rational approach to pragmatic interpretation, often obscured by the noise of real-life situations.

Relevance: Rationality & Efficiency

Sperber and Wilson's theoretical framework emphasizes both rationality and efficiency to elucidate the inferential processes involved in utterance interpretation. They argue that every utterance is inherently "unique," as it is always embedded within a specific context where conversational participants engage verbally or non-verbally. This variability in context inevitably leads to variations in interpretation. For instance, a simple statement like "I will be in Edinburgh tomorrow" can convey completely different messages depending on the context it is uttered. If a friend in Edinburgh asks you to join her for dinner the next day, this statement can imply agreement: "Yes, I can join you, as I happen to be in Edinburgh." Conversely, if the same request comes from a friend in London, it may imply refusal: "I'm sorry, I can't join you., as I happen to be away in Edinburgh." [8]

Based on such observations, Sperber and Wilson conclude that a code model of communication is untenable. In a code model, each situation would be matched to a corresponding meaning through a set of predefined rules. That means, we need a specific code that matches one context to its corresponding interpretation. As we can easily predict that this approach would necessitate an impractical number of codes to account for an infinite number of possible real-life situations, making it an implausible framework for communication. Consequently, Sperber and Wilson dismiss the code model and advocate for a cognitive approach to communication.

This is where their concept of "optimal relevance" becomes crucial. According to Sperber and Wilson, utterance interpretation should be guided not by fixed codes but by cognitive processes that maximize relevance in a given context. Relevance Theory thus addresses two significant issues: it dispels the "black box" mystery of Gricean pragmatics and also eliminates the need for an unfeasible matching process of codes. In essence, Relevance Theory resolves these challenges by providing a more coherent

and practical framework for understanding communication, effectively "killing two birds with one stone."

The Metaphysical Trap

However, herein lies what I term a Western "metaphysical trap." In their effort to adhere to the Western academic tradition, perhaps unconsciously, Sperber and Wilson begin to rely on a deductive mode of thought. This mode of reasoning, where two related premises lead to an irrefutable conclusion, can be illustrated as follows: [9]

Premise 1: If it rains, I will stay at home.
Premise 2: It is raining.
Conclusion: I will stay at home.

This formal syllogism is said to constitute the very foundation of Western thought, leading in turn to what is perceived as the defining characteristic of scientific truth.[10]

While this logical process lends an appearance of rationality and "scientific" rigor to inferential processes, it ultimately leads back to the one-to-one matching model that a code-based communication approach advocates and which Sperber and Wilson seek to avoid at all costs. If the premises are correct, a given utterance invariably results in an "irrefutable" conclusion. For example, a conversational exchange such as:

Question: Is George a good sailor?
Response: All the English are good sailors.[11]

must invariably lead the hearer to the conclusion, through deduction, that George is a good sailor. Wilson and Sperber refer to this interpretation as "implicature."

In the Gricean tradition, however, implicature is defined as "defeasible" or "cancelable," meaning you can deny it any time, as it is only an inference made by the hearer and not explicitly stated by the speaker.[12] For instance, if a speaker says, "It would be a shame if something happened to this beautiful picture," and the hearer is likely to interpret this as a *threat*, this interpretation is what is normally considered an implicature.[13] If the hearer later accuses the speaker of making a threat, the speaker can deny it by saying, "Oh, you misunderstood me. I did not threaten you at all." Thus, the implicature is cancelable.

In contrast, the implicature that "George is a good sailor," based on the previous example, is not cancelable because it is a logical conclusion that is derived from sound assumptions.

The question then arises: why have Sperber and Wilson, despite their determination to distance themselves from the rigidity of the one-to-one matching model, ended up reverting to it? This is the dilemma whose origin I wish to explore in this paper—a dilemma I also refer to as the "metaphysical trap."

The Persistence of Metaphysical Trap

This "metaphysical trap" exemplifies how a strong adherence to finding one definitive answer has become ingrained, particularly among those working within Western academia. This seemingly unconscious inclination towards seeking absolute truth through a deductive process, which promises one correct answer, is often taken for granted. This fixation on rationality and efficiency, which accompanies the longing for truth, as discussed in the preceding section, overlooks the fact that many aspects of real life and human affairs defy such straightforward logic.

To illustrate this further within the context of Relevance Theory, Sperber and Wilson argue that the response B below achieves "optimal" relevance by conveying an *indefinite* array of "weak" implicatures in addition to the most salient message of “No, I don’t drive a Mercedes”:

A: Do you drive a Mercedes?
B: I don’t drive any expensive cars.[14]

The inferential process leading to "No, I don’t drive a Mercedes" involves A’s guesswork based on the common knowledge that "a Mercedes is an expensive car." While B could have simply responded with "No," this periphrastic response is considered by Sperber and Wilson to compensate for the *increased* processing effort by generating weaker implicatures, such as "A Volkswagen is also an expensive car," "Those who drive expensive cars must be wealthy," or "Our mutual friend Tom drives a Mercedes, and he is perceived as a snob," and so forth, extending indefinitely. In essence, the additional information conveyed through these weaker implicatures justifies the increased processing effort.[15]

However, this explanation (perhaps conveniently) overlooks a crucial aspect: the importance of interpersonal relations in conversational exchanges.[16] By focusing predominantly on the transmission of information, it neglects the personal nuances often present in intimate interactions. For instance, the response might also be interpreted as implying, "Do you think I am the type of person who flaunts wealth? No, I am definitely not." This example highlights how an overemphasis on efficiency and rationality, brought about by deductive processes, can lead to a disregard for the human factors that significantly influence communication.

The Linguistic Instinct: I-Language over E-language

In this connection, I would like to remind you of Steven Pinker, who is well-known for advocating the existence of what he terms the "linguistic instinct." [17] This concept posits that a uniquely human characteristic is deeply embedded in our brains, and that this instinct is innate to humans. Regardless of the specific language an individual acquires later in life, this instinct exists in the brain as the essence of our language faculty, universally shared by all human beings.

What does it mean to assert that our language faculty is *embedded* in our brain from the beginning? The innateness hypothesis, as it is called, was first proposed by Noam Chomsky in the late 1950s when he initiated his generative enterprise. The ultimate goal of this enterprise is to elucidate what this innate language capacity entails, where it resides, and how it operates. Chomsky also refers to this concept as "Universal Grammar," which he describes as "the genetically determined language faculty". [18] Interestingly, this revolutionary idea is again rooted in the longstanding Western philosophical tradition of the mind-body dichotomy that leads to rationality and efficiency. Chomsky has openly acknowledged that his linguistic endeavor is Cartesian in nature.[19]

In his attempt to clarify Universal Grammar, Chomsky distinguishes between "E-language" and "I-language." E-language, which stands for "externalized language," refers to "the actual or potential speech events (perhaps along with some account of their context of use or semantic content)," with grammar being "a collection of descriptive statements concerning the E-language".[20] In contrast, I-language, or "internalized language," is defined as "an element of the mind of the person who knows the language, acquired by the learner, and used by the speaker-hearer".[21]

At one point, Chomsky interestingly refers to E-language as a "dubious" concept, describing it as "not real-world objects but are artificial, somewhat arbitrary".[22] In contrast, I-language, defined as the steady state of knowledge, is "a real element of particular mind/brains, aspects of the physical world, where we understand mental states and representations to be physically encoded in some manner".[23] In other words, what we can perceive with our senses (i.e., language phenomena) is not considered real, whereas something abstract, supposedly found in our brain (i.e., the language faculty), is deemed real. This may seem like an absurd notion, at least to a researcher like myself who does not share the Western intellectual tradition. This divergence in perspectives is something I will explore further in the following sections.

The Greek Influence on Western Thought

How can we justify the perplexing assertion that what we perceive with our

auditory and visual senses—namely, linguistic sounds and symbols—is not "real," while an abstract construct such as the innate language faculty, or Universal Grammar, is considered "real"? It is particularly striking given that the precise location of this purported faculty in the brain has yet to be identified. This perspective suggests a profound skepticism towards human sensory experiences, privileging abstract conceptualizations over tangible phenomena.[24]

Surprisingly, this form of reasoning has deep historical roots tracing back to the ancient Greeks, who are often credited with pioneering the use of the definite article to represent abstract concepts.[25] For instance, while the adjective "good" can describe a specific object, the emergence of the term "the Good" signifies an abstract generalization encompassing all good things. The definite article thus facilitates the conceptualization of "the Good" as an existing entity, despite its imperceptibility through sensory experience.

In this manner, the Greeks prioritized mental constructs—those that are abstract—over sensory perceptions. This shift underscored a preference for systematic reasoning over empirical sensory data, a notion encapsulated in what could be described as the triumph of mind over body[26], and handed down for millenniums as what I call a metaphysical trap.[27]

Democritus articulates this dichotomy succinctly: "Of knowledge there are two forms, one legitimate, one bastard. To the bastard belong all this group: sight, hearing, smell, taste, touch. The other is legitimate, and separate from that".[28] This perspective underscores the primacy of pure abstraction, emphasizing the human capacity for conceptualization over sensory input. This emphasis on abstraction has profound implications, ultimately paving the way for the scientific revolution as we understand it today.

Viewed through this lens, Chomsky's seemingly "absurd" assertion of the primacy of I-language (the mental faculty) over E-language (bodily senses) becomes more comprehensible. Indeed, it aligns precisely with the Western intellectual tradition that has its roots in ancient Greek philosophy. Chomsky's emphasis on the internalized, abstract aspects of language, as opposed to the externalized, sensory manifestations, reflects a continuity with the Greek prioritization of mental over empirical knowledge. This perspective not only situates Chomsky's ideas within a historical continuum but also highlights the enduring influence of Greek thought on contemporary Western epistemology.

Fiction: Hypothetical but Almighty?

While acknowledging the enduring persuasiveness of this philosophical thesis, the notion of a disembodied mind, i.e., the concept of mind that is severed from our senses, with its abstract language faculty, remains merely a working "hypothesis". It has never been substantiated by concrete evidence. This concept, essentially a high-grade fiction, originated in antiquity, subjected to rigorous scrutiny by successive generations of intellectuals, and has been handed down to the present day. However, *fiction remains fiction*, and *a hypothesis is still a hypothesis*, which can be disproven by a single piece of contradictory evidence. Why does it persist in popularity?

The answer lies in its role as a powerful catalyst for scientific inquiry, driving forward research that has led to the revolutions and innovations we benefit from today.

However, this does not imply that the hypothesis has been definitively proven, as there remain aspects that elude scientific explanation. What we are observing can be, and probably is, merely the visible portion of a larger phenomenon—akin to the tip of an iceberg—that lends itself to scientific interpretation, though we must acknowledge the substantial body of evidence before us. Nonetheless, there are underlying complexities that evade the scope of scientific inquiry. Confronted with these challenging scenarios, scientists often resort to the Latin phrase *ceteris paribus*, meaning "all other things being equal." This phrase serves as a convenient tool to dismiss ostensibly random *anomalies* that do not conform to their theoretical frameworks. They justify this by asserting that they are dealing with an *idealized* universe, where the cosmos itself is an abstraction that permits mathematical idealization.[29]

Indeed, this is evident in the approach taken by Sperber and Wilson when encountering examples that defy their straightforward efficiency formula of R/E, as discussed in the preceding section. Their concept of optimal relevance incorporates the caveat *ceteris paribus* to account for ideal cases while excluding what they consider to be inconvenient exceptions.

It is always intriguing to observe how scientific studies often appear omnipotent when addressing various complex phenomena, offering tidy solutions and providing a strong foundation for further application, even if minor adjustments are occasionally required. This perceived infallibility is a natural consequence of selecting ideal cases that are conducive to mathematical formulations while *excluding* those that are not. Thus, success seems almost assured from the outset. However, this process can be seen as inherently circular, as it consistently leads to definitive answers by design.

Narrative Thinking

Having said this, it is noteworthy that, as Fletcher points out, narrative thinking predates philosophical thinking, which also originated in the West.[30] Furthermore, it is intriguing that metaphysical thinking, in its quest for truth, prioritizes the beauty of logic above all else, leading to the notion that law embodies beauty and beauty equates to justice. However, upon closer examination, this chain of logic reveals itself to be a form of narrative, the very construct that metaphysics strives to exclude from its framework.

Linguistic and Patterning Instinct

Noam Chomsky hypothesizes that humans possess an innate grammar embedded in their brains, possibly in the form of abstract syntactic rules that can generate an infinite number of sentences, regardless of the specific language ultimately acquired. Steven Pinker summarizes this notion as the "Linguistic Instinct." [31]

In contrast, Jeremy Lent proposes that it is the "Patterning Instinct" that makes us uniquely human, asserting that this capacity allows humans to incessantly construct patterns of meaning in all aspects of life.[32] Unlike Chomsky's exclusively linguistic focus, this instinct encompasses symbolic thought, including *language, myth, art*, and *religion*—a complex web of human experience.

Similarly, Angus Fletcher describes human brains as "Narrative Machinery" emphasizing that our innate storythinking skills have shaped us through artworks such as *myths, plays, novels*, and *films*.[33]

As I have noted elsewhere, communication activities—whether linguistic or non-linguistic—particularly those conveying implicit messages, necessitate a narrative for appropriate interpretation.[34] By "narrative," I do not refer to a conventional story beginning with "Once upon a time" and ending with "and they lived happily ever after." Instead, I mean a fragment of information that aids the hearer in discerning the speaker's intended message. For instance, a magazine cover painted black with the title "What is Evil" typically leads us to associate evil with the color black. Herein lies our "narrative": one that involves the association of evil with black. This "narrative," although a small part of a larger information framework, can evoke an indefinite number of associative meanings and episodes shared and agreed upon by most community members. I term this type of fragmentary information a "silent narrative," as it does not explicitly articulate itself but rather serves as a trigger to initiate our search for meaning or the speaker's intention, which is exactly what pragmatics tries to identify.

My concept of the "silent narrative" aligns perfectly with Fletcher's hypothesis of humans as "narrative machinery." Fletcher's interest in the "gray cells in our brain that are crucial in figuring out a cause or solution to the observed phenomenon" closely mirrors the abductive process. The term "gray cells" inevitably reminds us of Agatha Christie's Hercule Poirot, who frequently refers to his "gray matter" when solving mysteries.[35] Poirot's method, contrary to the frequent mention of "deduction" by Sherlock Holmes as well as Poirot himself, is fundamentally rooted in "abduction."

Abduction Revisited

Now we are back to *abduction*, which I mentioned at the outset of this paper. For our storythinking, or my "silent narrative" to start operating, this inferential process is a must. Like an excellent detective such as Sherlock Holmes or Hercule Poirot, we have to rely on this inference to make a "creative" leap from a set of observed phenomena to its possible cause. In language use, a phenomenon is an utterance, and its cause an intended message.

Perhaps a good example from Agatha Christie is in order: A man was murdered. Not only did this man use a young woman as a model for his portrait paintings, but he was also intimately involved with her. Meanwhile, it was rumored that he had a troubled relationship with his wife. Furthermore, a witness who overheard a conversation between the couple just before the murder testified that the wife said, *"How could you do something so cruel?"* This statement became the decisive factor leading to the wife's arrest on suspicion of killing her husband. However, Poirot's inference (which is nothing more than abduction, not deduction!) was different. The words "How could you do something so cruel?" did not mean "How could you do something so cruel *to me, your wife* (like asking for a divorce)?" Rather, it was the wife's rebuke to her husband in response to his statement that once the painting was finished, he would no longer need the young woman and would discard her.[36] With the remark in mind, we set out on a small project to construct a story in our minds to explain the *reasons* or *causes* behind the same statement (phenomenon). This is precisely where storythinking comes into play, and this process involved here is abduction itself. Remember, abduction does not guarantee one absolute truth, as seen in the story above: one conclusion (by police) was wrong, and the other (by Poirot) was correct. The point here is that abduction prevails and is indispensable for storythinking, a uniquely human faculty that distinguishes us from the rest of sentient beings. Maybe we are equipped with a "storythinking instinct" along with a strong abductive orientation that leads us to the reasons or causes of "stories" or "narratives."

Metaphorical Understanding

Let us return to metaphors like 'TIME IS MONEY,' which Lakoff abruptly (so it

seemed to me) put on the linguistic agenda. When we reflect on it, however, we realize how much we rely on metaphors to understand the world. For instance, Heraclitus compared the universe to fire and water to illustrate that everything is momentary and constantly in flux. This instantly reminds us of a famous line by Kamono Chomei: "The flow of the river is ceaseless, and yet the water is never the same. Bubbles floating in the pools disappear and form without remaining for long." Here, he compares the passage of time to the flow of water in a river, showing how moments come and go like bubbles that form and disappear. In this way, a metaphor, by referring to something concrete, appeals to our senses to facilitate our understanding of abstract concepts.

Furthermore, fundamental metaphors (or core metaphors as Lent calls them), such as "life is a JOURNEY along a PATH" or "HIGH is better than LOW," not only help us understand the world but also "forge the values that ultimately drive people's actions". As I pointed out earlier, "a hypothesis remains a hypothesis" and "fiction is fiction"; similarly, a metaphor is a metaphor, not reality. After all, no one seriously tries to prove that the universe is literally made of fire and water.[37]

Nevertheless, once a metaphor fits within an overarching chain of thought, such as "mind is legitimate while body is bastard," leading to "an abstract idea is real while concrete things are fictional," and then to "mind as a reflection of the universe that runs on fixed laws that are amenable to the beautiful symmetry of natural laws," which can be reduced to mathematics, it can profoundly influence our perception and understanding, ultimately culminating in a form of philosophy. This thought process provides a rough sketch of what happened to Western philosophers, leading them to defeat other philosophical ideas and form the "metaphysical trap" that I pointed out earlier. But we should remember it ALL started from a metaphorical understanding/description of the world.

It should be noted in passing that we are told to add empirical evidence to prove the systematic process of logic, i.e., abstraction of truth, as scientific methodologies warn us. It was thanks to Aristotle, who did not completely reject human senses, that we have had this clever synthesis of logic and empiricism. Undoubtedly, scientific breakthroughs have owed their success to this synthesis, while it has also led us to an ideological trap. Ironically, the priority of logic, i.e., the mind-over-body fiction (or myth), has yet to be proven by any empirical evidence. It is just that we have been successful in the *ceteris paribus* world to which this fiction conveniently applies.

Despite the "trap" we are likely to fall into if we do not take precautions, however, metaphorical thinking itself helps facilitate our grasp of ideas, especially those that

are new or completely alien to us. This is exactly how we feel—alienated—so much so that we try to avoid the ideas, like when experts from different disciplines discuss issues, often discovering later that they are addressing the same concepts from different angles, using different terms and notions. Having said this, metaphorical thinking is precisely what is needed in transdisciplinary communication among researchers and their students. Moreover, it reminds us of the need to return to and rely more on our senses to understand the issues in question. In other words, we need the embodied understanding that Lakoff proposed decades ago in opposition to radical abstractionism bounded by the metaphysical trap.

Conclusion

Chomsky's groundbreaking theory of generative grammar captivated many aspiring linguists, including myself. However, this initial enthusiasm soon gave way to a persistent doubt: why am I doing this in the first place? This skepticism grew louder when I encountered Chomsky's explicit assertion that I-language is real, which I previously referred to as "absurd." In retrospect, I realize that this discomfort stemmed from my lack of alignment with the underlying assumptions of Western thought—the persistent belief that logic, abstract concepts, timelessness, and mathematical precision lead to Truth.

Furthermore, I found myself thinking in concrete terms, a perspective more in line with Asian thought, which views the world as dynamic and constantly in flux. It is interesting to note that Philosopher Hajime Kida once said: "The collective self-deception of past Japanese philosophers of science, who uncritically accepted Western thought, has become laughable." And he confessed that it was only after turning 50 that he could express this openly and clearly.[38] This is indeed a symbolic recollection of a Japanese researcher in the humanities, deeply immersed in the metaphysical trap that still prevails in academia across the globe.[39] I hope this paper can make a modest contribution to how we perceive various disciplines, including linguistics, while also drawing attention to specific cognitive tools—such as abduction and metaphor—that can transcend disciplinary boundaries.

Footnotes

* *The EMI team that I lead consists of professors from Japan, Taiwan, and Vietnam. Our primary objective is to exchange ideas on implementing EMI in countries where the native language is not closely related to English, such as Japanese, Chinese and Vietnamese. By doing so, we aim to foster theoretical development in these linguistic environments.*

1. A word of caution: This paper does not elaborate on the definition of transdisciplinarity. Instead, it focuses on specific strategies (abduction and metaphor) to question assumptions inherent in Western-style disciplines,

including linguistics. I should add that I am deeply in agreement with the idea and practice of transdisciplinarity, which stems from anti-mechanistic thinking and anti-reductionism. This will become clearer as you read on. For details on transdisciplinarity, see Nicolescu (2009).

2. Peirce (1998:106 *et passim*).
3. Yonemori (2007).
4. Chomsky (1957) and Chomsky (1965).
5. Lakoff & Johnson (1980).
6. Grice (1989).
7. Sperber & Wilson (1986/95). Also Wilson & Sperber (1994:94-95).
8. This example is also from Wilson & Sperber (1994:88-89).
9. Wilson & Sperber (1994: 92-93).
10. Lent (2017:190).
11. Wilson & Sperber (1994:98).
12. Grice (1989).
13. This example is from Steven Pinker on Ted Talk
    https://www.ted.com/talks/steven_pinker_what_our_language_habits_reveal?subtitle=en&trigger=30s
14. Sperber & Wilson & Sperber (1986/95:194).
15. Wilson & Sperber (1994:99).
16. The term "interpersonal relations" used here is closely related to the concept of "Politeness." For further details, see Brown and Levison (1987).
17. Pinker (1994).
18. Chomsky (1986:3).
19. Chomsky (1986).
20. Chomsky (1986:20).
21. Chomsky (1986:22).
22. Chomsky (1986:26).
23. Chomsky (1986:26).
24. Lent (2017:100).
25. Lent (2027:260).
26. Lent (2017:185).
27. Although "metaphysical trap" is what I coined, see Lent (2017) for historical details.
28. Cited in Lent (2017:187).
29. Lent (2017:469).
30. Fletcher (2023:24).
31. Pinker (1994).
32. Lent (2017:61).
33. Fletcher (2023:13).

34. Yamamoto (2023 : 13 *et passim.*).
35. Fletcher (2023:79).
36. Agatha Christie's *Five Little Pigs*.
37. Lent (2017:31).
38. Kida (2007:38).
39. Lent (2017: 255) points out a similar episode, where a linguist, by starting to write a paper on Whorfianism (i.e., language relativity) for prestigious journal might have compromised his career.

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