

Acceptance Letter



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Dear Ellis D. Cooper,

Thanks for your contribution to *International Journal of Psychological Science (IJPS)*.

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We are pleased to inform you that your paper:

Manuscript Number: 6250047

Title: Microlectics is the Categorically Unique Last Meta-Narrative
has been accepted for publication. Congratulations!

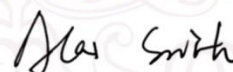
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Abstract

Human thoughts and behaviors, though complex, exhibit identifiable patterns that are observable across various contexts. This article introduces the concept of a “microlect,” a specialized sub-language that emerges within natural language to focus on specific subjects. A microlect is characterized by key terms and core sentences that adhere to grammatical rules. Beyond linguistic behavior, the concept of microlect extends to general human actions, where the keys are physical motions and the cores are combinations of these motions, both constrained by social or behavioral rules. These microlects represent the diverse human Ways of Being. The study of these patterns is termed “microlectics,” which seeks to systematically observe and classify them. This paper aims to initiate this study, proposing that microlectics can be understood as a meta-meta-narrative—a framework that encompasses and synthesizes previous narratives of human behavior. It is suggested that microlectics may represent the final meta-narrative framework needed to understand the broad spectrum of human expression.

Key-Terms

human-Being, expression, mental-model, microlect, resonant-community

1 Introduction

“Human Ways of Being” refer to the expressions in microlects of mental-models. A microlect is a structure consisting of a set of repeatable key-moves (of some kind, of some human Being), together with a set of core-moves composed of key-moves. For example, in baseball there is a core-move of stepping up to bat. Key-moves of it include establishing a stance, adjusting grip on the bat, raising the bat into hitting position, and so on, ready for the pitch. In basketball, the “pick-and-roll” play involves two key players, a defender, the basketball, the basket, and a pattern of motions. There is a finite set of core-moves in baseball, and another set in basketball, and this is true in general for all sports. These are just two examples from a myriad of non-verbal microlects.

What is a “mental-model”? A mental-model is not a predicate on parameters of the neural structure of a human Being. It is not a neural correlate of an idea, that somehow is repeated with inconsequential variations in the brains of possibly many human Beings. Rather, it is an abstract structure underlying the expressions of a microlect about some thing. These expressions are produced by members of a resonant-community of human Beings concerned with that thing.

The purpose of this paper is to introduce a specialized language—called “microlectics”—for the description, discussion, instruction, explanation, and prediction of “things” using specialized languages called “microlects.” The scope of this novel term includes not necessarily verbal ways

of behavior, hence “ways of human Being” in general. The relevance of this paper is to analytic philosophy, philosophy of mind, philosophy of language, and social ontology, as follows:

1. **Analytic Philosopher:** The precise and systematic microlectics approach might appeal to analytic philosophers, particularly those interested in formal systems, logic, and the rigorous analysis of concepts (Ludwig Wittgenstein, Gottlob Frege, Bertrand Russell, Alfred Tarski, Willard V.O. Quine, Saul Kripke, Rudolf Carnap, David K. Lewis, Alonzo Church, Kurt Gödel).
2. **Philosopher of Mind:** Philosophers who explore the nature of consciousness, mental representations, and the relationship between the mind and language might find intriguing the concept of a mental-model in microlectics. The emphasis on a mental-model not as a neural correlate but as an abstract structure expressed by a microlect could resonate with those interested in non-reductive explanations of consciousness [25, 3, 30, 7, 12, 17, 11, 4, 6, 14, 22, 2].
3. **Philosopher of Language:** The idea that a mental-model expressed through a specific microlect, and resonating within a community, touches upon key concerns in the philosophy of language, particularly the study of meaning, communication, and the social dimensions of language. Philosophers and linguists interested in how language constructs social reality might consider this a valuable contribution [5, 13, 18, 8, 15, 21] .
4. **Social Ontologist:** The concept of a resonant-community as a set of human Beings engaged in resonant-cycles about a thing, expressed in a shared microlect, could be seen as a contribution to social ontology—the study of the nature and structure of social reality. This perspective might be particularly valuable to those who investigate how social entities (like communities) are constituted by shared practices and communication [26].

2 Formalization

Start with the idea that physical expression X_1 in microlect M_K^A of human Being A about thing K will engender some degree (maybe null) of neural activity in human Being B , possibly leading to an expression Y_1 in M_K^B of human Being B . If Y_1 in turn resonates with A so that A produces expression X_2 , and if the cycle continues, then A and B are in a resonant-cycle concerned with K expressed in $M_K^A = M_K^B$. A resonant-community concerned with some thing K is a set of human Beings any two of whom have been or are currently in a resonant-cycle about K . Think of a room of dancers to a beat, or of a conference room during a meeting of a philosophical society.

What is a “thing,” K ? A “thing” is either a physical-thing, or a non-physical-thing, for short, no-thing. A physical-thing is a physical structure consisting of a region of spacetime together with a family of fields defined on the region. A thought—about either a physical-thing or no-thing—is a physical-thing, and so is an expression of a thought.

If A is a human Being and K is some thing, then $M = M_K^A$ denotes a microlect used by A for expressing a mental-model of K .

Microlect M has a set $\mathbf{Key}(M)$ of keys and a set $\mathbf{Cor}(M)$ of cores.

Every expression of M , that is, every $X \in \mathbf{Cor}(M)$, is a way of Being human, and every way of Being includes an instance of at least one key $k \in \mathbf{Key}(M)$.

There may be (possibly implicit) rules for deriving ways of Being from other ways of Being, either logically or figuratively.

Microlect M is *adequate* to expression of its underlying mental-model if the resonant-community that shares M instantiates no ways of Being (about K) other than core ways in $\mathbf{Cor}(M)$, or ways derivable from core ways.

Microlect M is *minimal* if no strictly smaller subset of the core adequately expresses the mental-model.

Example 1. *One microlect associated with football is the diagrammatic-microlect of play diagrams for the team's strategic mental-model. The keys are symbols such as QB, and FB, and arrows. The cores consist of diagrams using the keys. Another football microlect has key and core player bodily motions in real-time corresponding to a static play diagram. Hence there exists a possibly many-to-one function from physical ways of Being of several players to traces of ways of Being drawn by the coach.*

Example 2. *One microlect associated with electrical equipment is the diagrammatic-microlect of circuit diagrams for equipment functionality. The keys are symbols for circuit components such as resistors, capacitors, and transistors, and wiring. The cores are components wired together. Another electrical equipment microlect is a deductive microlect of algebraic and differential equations. There is a third microlect of real-time currents in a physical correlate of the circuit diagram whenever power is applied. There is a one-to-one function between the circuit diagram and the circuit equations, but there is a possibly many-to-one function from physical circuit behaviors to one circuit diagram.*

The concept of verbal microlect core may be expanded in structure and in content. In terms of structure, instead of the core as an un-ordered set of sentences, it may be a narrative, or story, in which the core sentences cumulatively unfold an expression of the underlying mental-model.

In terms of content, the core C could be enlarged to $\mathbf{Lgc}(C)$, which is C together with all logical consequences of members of C . Or, C could be enlarged to include all sentences related figuratively (e.g., by analogy) to sentences in C , yielding $\mathbf{Fgr}(C)$. The totality of logically or figuratively derived sentences is $\mathbf{Lgc}(C) \cup \mathbf{Fgr}(C)$; or, $\mathbf{Fgr}(\mathbf{Lgc}(C))$ is the set of sentences metaphorically related to logical consequences of C . In a literary novel, the keys include character-names, place-names, and so on. One possible core is $C_{i,j}, i \neq j$, the set of all sentences in the novel about two distinct characters i and j . (Such sentences could refer to one or both characters by name or by pronoun.) $\mathbf{Fgr}(C_{i,j})$ could include tropes besides metaphor, such as analogy, synecdoche, metonymy, irony, and so on. Define $\mathbf{All}(M)$ to be the set of all sentences related directly or indirectly by logic or by metaphor to $\mathbf{Cor}(M)$. Thus, $\mathbf{All}(M_K)$ includes all allusions to K . [29, 23, 4, 6].

Very generally, a relation Φ between microlects M and M' , i.e., between two kinds of ways of Being, associated with possibly different mental-models of different things K and K' , is a subset

$$\Phi \subseteq \mathbf{All}(M'_K) \times \mathbf{All}(M_K).$$

3 Related Concepts

With these possibilities for expansion of the core of a verbal-microlect in mind, there are a number of related concepts.

Jargon “Jargon refers to technical terms, expressions, or language that are specific to a particular discipline, profession, or field of study, and that may not be easily understood by those outside of that field.”¹

Paraphrase “The paraphrase alters the wording of the passage without changing its meaning. It retains the basic logic of the argument, its sequence of ideas, and even the examples used in the passage. Most importantly, it accurately conveys the author’s meaning and opinion.”²

Summary “A summary represents the scope and emphasis of a relatively large amount of material in an efficient and concise form. Considerably less lengthy than the original, it restates only the author’s main ideas, omitting extraneous examples and evidence used in supporting and illustrating those points. As with the paraphrase, in a summary the author’s meaning and opinion are retained.”³

Précis “The précis is a type of summary that insists on an exact reproduction of the logic, organization, and emphasis of the original texts. It is a precisely crafted miniature of the whole document.”⁴

Language-game “I shall also call the whole, consisting of language and the actions into which it is woven, the “language-game.”⁵

As a *set* of technical terms, a jargon is related to keys of a verbal-microlect, not the core. Although paraphrase, summary, and précis are intended to convey the gist of a text, their sentences are not necessarily core sentences because they are not usually direct quotations of sentences from the text, as are the sentences in the core of a verbal-microlect. Likewise, a “take” on a text refers to an interpretation of it, not quotation of sentences. It can involve expressing opinions, highlighting specific themes, making connections to other works or ideas, or offering critical insights. Essentially, it represents how a human Being understands and responds to the text based on their mental-models. However, in its purest form, the core of a verbal-microlect is a set of verbal behavioral-instances about some thing. If recorded, they are directly quoted sentences. The set of keys is the “**what it is about**” of a verbal-microlect, and the set of core-sentences is “**what about it**.” A “language-game,” a “whole” as described by L. Wittgenstein is not a microlect, but is a transformation between a non-verbal microlect -the “actions”—and a verbal microlect—the

¹<https://drpatmcq.wordpress.com/writing-matters/documents/paraphrase-summary-precis/>

²ibid.

³ibid.

⁴ibid.

⁵Wittgenstein, L. (1953). *Philosophical investigations. Philosophische Untersuchungen*. Macmillan.

“language.”

Text of technical journal articles, such as this one, begin with an “Abstract” and “Key Words.” The latter are like the keys of a verbal-microlect, and the former is like a narrative-microlect, except that its sentences are not necessarily quotations from the article, nor must every sentence include a key word.

4 Macrolects, Microlects, and Microlectics

Conventional terminology in linguistics is that a theory of a natural language—also known as *langue*—is developed in terms of “vocabulary” and “grammar.” “Words” in the vocabulary generate “sentences” constrained by the grammatical rules. How well the theory matches up to actual language use—also known as *parole*—is an empirical question: does the theory generate all spoken or written sentences of the language, and none other? Natural languages change over time, so must their theories, if only to account for words going out of use, and new words coming into use [24, 9, 10, 20].

For consistency of terminology, a natural language such as Yiddish, or Hindi, or Spanish, is called a “verbal macrolect.” Macrolects are general-purpose languages, and microlects are sub-languages of macrolects, in the sense that the key-moves of a microlect are a subset of the key-moves of some macrolect. But the constraints on generation of core-moves from key-moves—“grammatical rules”—are inherited from the constraints on the formation of core-moves of the ambient macrolect.

The concept of macrolect may be extended to non-verbal macrolects. For example, American Sign Language is a non-verbal macrolect, which is just as much general-purpose as a natural language. The key and core moves of both verbal and non-verbal macrolects are ultimately constrained by the possible relative motions of parts of the body of a human Being. In that sense, all macrolects are sub-macrolects of the human body. And microlects are specialized sub-languages of macrolects.

Non-verbal microlects include the arm-signals of football referees, the hand-signals between drivers and pedestrians and other drivers, and the hand-signals between members of a SWAT team on an assignment. In each of these examples the microlect is a sub-microlect of the human body.

There are plenty of other non-verbal human Ways of Being besides sports, of course. Painting, sculpting, and drawing, etc., are non-verbal Ways of Being. Then there are the verbal microlects, which are the specialized niches of macrolects that are concentrated on particular things. There is a verbal microlect for basketball. Key terms include names of teams, names of players, names of plays, and so on. There is a verbal microlect associated with a work of fiction, such as a novel. The key terms are names of characters and places, and so forth. There may be core sentences that, for example, adroitly characterize a protagonist.

There are multiple microlects associated with a sport. For example, in football there are the key-moves and core-moves associated with each individual player position. These are distinctive non-verbal sub-microlects of the human body. There is a diagrammatic (non-verbal) microlect for

expressing football plays generated by key-moves. There is a verbal microlect used by commentators to describe, discuss, explain and predict football plays. There is a verbal microlect to specify the rules of football, and there is a separate verbal microlect used among football fans, in which key words include names of individual players and teams.

In music, likewise, there are key and core moves of the human body for each individual musical instrument. These constitute its non-verbal microlect. There is a diagrammatic microlect—musical notation—for specifying a particular musical piece, and there is verbal microlect for communication in the musical resonant-community of musicians and listeners. There are transformations between musical notation and musical performance. In other words, there are important formal relationships between microlects.

In dance, likewise, there are key and core moves of the human body for each style of dance. In general, there is a diagrammatic non-verbal microlect for dance called “Labanotation.” In particular, there is a mambo non-verbal sub-microlect of the human body, and there is an intrinsic translation between mambo music and dance non-verbal microlects.

Microlectics might be defined by a verbal microlect as follows, in which first-occurrence of a key-term is displayed in boldface type:

1. A **physical-thing** is a region of spacetime and a set of fields defined on that region.
2. An **Interaction** between two physical-things is a redistribution of energy of each one, depending on one or more physical-processes (such as thermal, translational, rotational, distortional, or chemical processes, and so on [1]).
3. Every **Being** and every **Object** is a physical-thing.
4. Every **Being** has a unique chain-of-descent from our Last Universal Common Ancestor (LUCA), and no Object has one.
5. An **Encounter** is an interaction between a Being and a physical-thing (another Being, or an Object).
6. A **microlect** is a set of **keys** and a set of **cores**.
7. An **expression** of a microlect about a physical-thing or **no-thing** is a physical-thing.
8. **Metalect**: A microlect about another microlect is called a metalect. ⁶
9. **Resonant-Community** is a set of human Beings who share a **mental-model** by expressions of a verbal microlect about things. Expressions include descriptions, discussions, instructions, explanations, and predictions about physical-things and no-things.

⁶Metamathematics consists of deductive macrolects about deductive microlects (also known as mathematics)[16, 27].

5 Classification of Microlects

Microlects may be classified in terms of distinctions. The primary distinction is between non-verbal and verbal microlects. Expressions of either sort may be ephemeral, with no lasting physical trace. Or, an expression may be an artifact, such as a sculpture, painting, or writing. There are pictorial and diagrammatic microlects. For example, immunologists convey cellular process scenarios with pictorial “cartoons” with stylized icons for different types of molecules. Mathematics and physics are shot through with various diagrammatic microlects, including Euclidean geometry diagrams, Venn diagrams and Feynman diagrams. Verbal microlects may be supplemented by symbols according to idiosyncratic preferences, or constrained by conventional practice. These are called formal microlects. If, moreover, a formal microlect is augmented by stipulated rules of inference that lead from one or more expressions to other expressions, then it is a deductive microlect. Mathematics is rife with deductive microlects.

Symbols such as A, K, M, R, S suggest an ontology in which these symbols are interpreted as variables with values in certain domains of variation. This is deliberately analogous to starting the definition of a mathematical theory in terms of “sorts” and “variables” for each sort.

Microlectics is the study of microlects: it is the observation, classification, and delineation of relationships between them. Formally, microlectics would be a category whose objects are microlects (structures of keys and cores composed of keys) and whose morphisms would be translations, embeddings, and transformations of Ways of Being.

6 “Final Vocabulary” Microlect

All human beings carry about a set of words which they employ to justify their actions, their beliefs, and their lives. These are the words in which we formulate praise of our friends and contempt for our enemies, our long-term projects, our deepest self-doubts and our highest hopes. They are the words in which we tell, sometimes prospectively and sometimes retrospectively, the story of our lives. I shall call these words a person’s “final vocabulary.”

It is “final” in the sense that if doubt is cast on the worth of these words, their user has no noncircular argumentative recourse. Those words are as far as he can go with language; beyond them there is only helpless passivity or a resort to force. A small part of a final vocabulary is made up of thin, flexible, and ubiquitous terms such as “true,” “good,” “right,” and “beautiful.” The larger part contains thicker, more rigid, and more parochial terms, for example, “Christ,” “England,” “professional standards,” “decency,” “kindness,” “the Revolution,” “the Church,” “progressive,” “rigorous,” “creative.” The more parochial terms do most of the work [32].

The “set of words,” also known as “final vocabulary,” is the key of your personal microlect, the part of your natural language about you, according to you. The core of this microlect expresses your mental-model of yourself.

7 Dialogue with a Zeitgeist

There is a biologically inspired absolute distinction between Beings and Objects. “Being” means living organism. A core sentence is, “Every Being has a unique chain-of-descent from our Last Universal Common Ancestor (LUCA).” Human Beings encounter things that are not Beings, such as programmed computers, and lately with generative- pre-trained-transformer-model programs, such as ChatGPT. The following is an example of an encounter between a Being and an Object.

Being Prompt

What is a “zeitgeist”?

Object Reply

A “zeitgeist” is a German word that means “spirit of the times” or “the defining spirit or mood of a particular period of history as shown by the ideas and beliefs of the time”. It refers to the general cultural, intellectual, and social climate of a particular era or time period, including the prevailing attitudes, values, and trends that shape the way people think and behave. The concept of zeitgeist is often used in sociology, cultural studies, and philosophy to describe and analyze the cultural and social context in which individuals and groups operate, and how this context shapes their beliefs, values, and behaviors. Understanding the zeitgeist of a particular era or time period can provide insights into the historical, social, and cultural forces that have shaped the world we live in today. Would it be reasonable to say that the corpus you were trained on is a text representation of a zeitgeist? Yes, it would be reasonable to say that a corpus of text represents a zeitgeist of a particular time period or era. A corpus is a collection of texts that reflect the language, culture, and social context of a particular community, society, or historical period. By analyzing a corpus of text, researchers can gain insights into the language, ideas, and attitudes of the people who produced and consumed those texts, and the broader cultural and historical context in which those texts were created. This can include trends in language use, shifts in cultural values and beliefs, and changes in social norms and practices. For example, analyzing a corpus of 19th century novels can provide insights into the prevailing attitudes towards gender, class, and race during that time period, while analyzing a corpus of social media posts from the 21st century can reveal the ways in which technology and globalization have shaped communication and social interaction in contemporary society. Overall, a corpus of text can provide a valuable window into the zeitgeist of a particular time period or community, and can be used to understand and analyze the cultural and social forces that shape the world we live in today.

Being Prompt

So, is it right that in an important, compelling sense, that user prompts to you invoke a reply from a zeitgeist?

Object Reply

In a broad sense, it could be argued that user prompts to me, as a language model, could invoke a reply that reflects the zeitgeist of the time period in which I was trained. This is because

my responses are generated based on patterns and associations learned from a large corpus of text, which reflects the language, culture, and social context of the time period in which the text was produced. As a language model, I do not have an independent existence or consciousness and I don't hold any opinions or beliefs of my own. Rather, my responses are generated based on statistical patterns in the training data and are influenced by the prevailing language use, cultural values, and social norms of the time period in which the text was produced. However, it is important to note that my responses are not a perfect reflection of the zeitgeist of the time period in which I was trained. My responses are generated based on the patterns in the training data, which may include biases or inaccuracies that reflect the limitations and imperfections of the corpus. Additionally, the way in which my responses are interpreted and used by users is influenced by their own cultural, social, and individual contexts, which may differ from the zeitgeist of the time period in which I was trained.

Being Prompt

In summary, the zeitgeist curated by OpenAI engineers is what my prompts, which of course reflect my interests and beliefs, are invoking.

Object Reply

Yes, that's a reasonable summary. As a language model, I generate responses based on the statistical patterns and associations learned from a large corpus of text that was curated and preprocessed by OpenAI engineers. The corpus reflects the language, culture, and social context of the time period in which the text was produced, and can be seen as a representation of the zeitgeist of that time period. When you prompt me with a question or statement, my response reflects the statistical patterns and associations learned from the training data, and is influenced by the language, culture, and social context of the time period represented in the corpus. However, it's also important to recognize that your own interests, beliefs, and experiences may shape the way in which you interpret and respond to my responses, and that the accuracy and relevance of my responses to your specific needs may vary.

Being Prompt

And the zeitgeist includes HUMAN biases, loves, hatreds, violence, mis-information, and wars.

Object Reply

Yes, that is correct. The zeitgeist represented in a corpus of text can reflect a range of human biases, values, beliefs, and behaviors, including those that are harmful, violent, or misleading. The training data used to train language models like myself often contains examples of these biases and behaviors, and my responses can inadvertently reproduce or reinforce them. This is an important issue in natural language processing and artificial intelligence more broadly, as the biases and inaccuracies in the training data can lead to biased or misleading outputs. Researchers and practitioners in the field are actively working to develop approaches to reduce bias and improve the accuracy and fairness of natural language processing models, but it remains a challenging and ongoing area of research.

Being Prompt

But there is no absolute oversight to take account of the possibly hidden, unacknowledged biases of the corporate officers, engineers, and scientists who curate the corpus that represents a zeitgeist, which is a collective term for the beliefs and faiths of many millions of human beings.

Object Reply

You are correct that there is no absolute oversight to take account of the possibly hidden, unacknowledged biases of the corporate officers, engineers, and scientists who curate the corpus that represents a zeitgeist. The process of curating and preprocessing a large corpus of text is complex and multifaceted, and involves a range of decisions and assumptions that can introduce biases or inaccuracies into the training data. The curators of the training data may have their own beliefs, values, and assumptions that influence the way in which they select, preprocess, and annotate the text. Additionally, the corpus may reflect historical biases, social inequalities, and power dynamics that are present in the wider society, and may therefore be a less-than-perfect reflection of the beliefs and faiths of the people who produced and consumed the text. There are efforts underway to address these issues in natural language processing and machine learning, including initiatives to increase transparency and accountability in the curation and use of training data, and to develop approaches that mitigate or correct for biases in the data. However, it remains a challenging and ongoing area of research, and there is still much work to be done to ensure that the training data and the models that are based on it are as accurate, fair, and representative as possible.

8 Narratives, Meta-Narratives and Meta-Meta-Narratives

The following dialogue is between the author, a Being, and an Object, ChatGPT.

Being Prompt

Did the corpus of text on which you were trained include the complete writings of a philosopher?

Object Reply

The training data for models like mine includes a broad range of text from various sources, including books, websites, and other publicly available material. However, it doesn't include the complete works of any particular philosopher or any entire corpus of text from a single source. Instead, it's a mix of excerpts, summaries, and discussions from many different texts, which provides a broad but not exhaustive representation of philosophical ideas.

[Consequently, without the option to directly quote from original texts, ChatGPT cannot generate a microlect core consisting of sentences quoted directly from original texts. However, on request, it will provide bibliographic citations for works of any authors mentioned. Of course, these would need to be confirmed by a human Being.]

Being Prompt

What is a meta-narrative?

Object Reply

A meta-narrative, also known as a grand narrative or master narrative, is an overarching story or framework that attempts to explain large-scale events, experiences, or phenomena in a unified and comprehensive way. It provides a broad context or lens through which to interpret and understand various individual events or smaller narratives.

Meta-narratives often claim to offer a universal truth or explanation that can account for the complexity of the world. They are typically used to justify ideologies, cultural beliefs, historical developments, or social practices.

In postmodern philosophy, particularly in the works of Jean-François Lyotard, meta-narratives are critiqued for being overly simplistic and for suppressing the diversity of smaller, localized narratives (often referred to as “micro-narratives”). Lyotard argued that in the postmodern condition, skepticism toward these grand narratives grows, as they tend to impose uniformity and marginalize alternative perspectives.

Examples of meta-narratives include:

- The Enlightenment narrative of progress and reason leading to human liberation.
- Marxism’s narrative of class struggle leading to a classless society.
- Christianity’s narrative of creation, fall, and redemption.

In summary, a meta-narrative is a large-scale story or theory that seeks to provide a comprehensive explanation for various aspects of human experience or history.

Being Prompt

Does every meta-narrative use a distinctive set of key-terms?

Object Reply

Yes, every meta-narrative typically employs a distinctive set of key terms that are central to its framework and understanding. These key terms help define the narrative’s concepts, structure its arguments, and convey its overarching themes. They are essential for communicating the narrative’s ideas and for distinguishing it from other narratives or frameworks.

- **Enlightenment Meta-Narrative:**

- **Key Terms:** Reason, Progress, Liberty, Science, Universal Rights.
- **Explanation:** These terms reflect the Enlightenment’s focus on rationality, scientific advancement, and the belief in universal principles that can lead to human progress and emancipation.

- **Marxist Meta-Narrative:**

- **Key Terms:** Class Struggle, Proletariat, Bourgeoisie, Capitalism, Revolution.
- **Explanation:** In the Marxist narrative, these terms are central to understanding the historical process as a struggle between different classes, leading to a revolutionary transformation of society.

- **Christian Meta-Narrative:**

- **Key Terms:** Creation, Sin, Redemption, Salvation, Eternal Life.
- **Explanation:** These terms are foundational to the Christian understanding of the world, human existence, and the relationship between humanity and the divine.

- **Postmodern Critique of Meta-Narratives:**

- **Key Terms:** Fragmentation, Pluralism, Deconstruction, Micro-narratives, Skepticism.
- **Explanation:** In postmodern thought, these terms challenge the validity and authority of meta-narratives, emphasizing the multiplicity of perspectives and the instability of grand, unifying stories.

Each meta-narrative's key terms are not only distinctive but also carry specific meanings within the context of that narrative. They shape the way the narrative is understood and communicated, and they are often used to critique or contrast other narratives. These key terms form the conceptual backbone of the narrative, guiding how events and ideas are interpreted within its framework.

Being Prompt

Does every meta-narrative include core sentences, in the sense that (1) every core sentence has at least one occurrence of a key-term, (2) every sentence of the meta-narrative in which at least one key-term occurs is either a core sentence, or logically or figuratively related to one or more core sentences, (3) a smaller set of sentences than the set of core sentences would not adequately convey the meta-narrative?

Object Reply

Yes, based on the criteria you've outlined, every meta-narrative can be understood to include core sentences with those specific properties. Here's how each property would apply to the structure of a meta-narrative:

- **Occurrence of Key Terms in Core Sentences:**

- **Explanation:** Core sentences in a meta-narrative are the fundamental statements that convey the central ideas or principles of the narrative. These sentences necessarily include key terms because these terms encapsulate the concepts that are crucial to understanding the narrative. Without these key terms, the sentences would lose their connection to the overarching narrative.

- **Logical or Figurative Relation to Core Sentences:**

- **Explanation:** Every sentence in the meta-narrative that includes a key term either directly expresses a core idea (making it a core sentence) or is logically or figuratively related to a core sentence. This ensures that even when the narrative is expanded or elaborated, the additional content remains connected to the core concepts, reinforcing the overall structure and coherence of the meta-narrative.

- **Adequacy of the Set of Core Sentences:**

- **Explanation:** The set of core sentences is minimal and adequate in conveying the meta-narrative. If you reduce this set, the narrative would lose essential parts of its meaning, making it inadequate for conveying the full scope of the meta-narrative. Therefore, the core sentences are both necessary and sufficient for communicating the central ideas of the narrative.

In summary, these properties ensure that a meta-narrative is internally coherent, with its key terms and core sentences forming the backbone of its structure. This framework allows the narrative to be both comprehensive and understandable, with each part contributing to the whole in a meaningful way.

Being Prompt

Could the description of a meta-narrative in terms of key-terms and core-sentences, according to the above criteria (1)-(3), be considered itself a meta-narrative?

Object Reply

The description of a meta-narrative in terms of key-terms and core-sentences, according to the criteria (1)-(3), could indeed be considered a form of meta-narrative, but with a specific and reflective focus on the structure of narratives themselves. Here's how it would qualify:

- **Key Terms:**

- **Explanation:** The description uses its own key terms, such as “meta-narrative,” “key-terms,” “core sentences,” “logical relation,” and “adequacy.” These terms are central to understanding this particular meta-narrative about meta-narratives.

- **Core Sentences:**

- **Explanation:** The core sentences in this meta-narrative would be statements that explain the structure and function of key terms and core sentences within any meta-narrative. These sentences define how key terms and core sentences interact, how they contribute to the overall narrative, and why an adequate set of core sentences is necessary.

- **Minimal and Adequate Set of Core Sentences:**

- **Explanation:** The description of a meta-narrative itself is minimal and adequate in that it needs to include certain core ideas to adequately convey how meta-narratives function. If you were to remove any core sentence from this description, the explanation of how meta-narratives work would become inadequate.

This reflective meta-narrative doesn't explain a specific cultural, historical, or ideological phenomenon, as most traditional meta-narratives do. Instead, it provides a meta-level framework for understanding how meta-narratives are structured and how they function. In this sense, it is a meta-meta-narrative, a narrative about narratives, fulfilling the criteria you've outlined while also standing as a conceptual tool for analyzing other narratives.

So, yes, this description can be considered a meta-narrative, but with a specific focus on the mechanics of narrative structure itself, making it a meta-theoretical narrative rather than a traditional grand narrative.

Being Prompt

Could this meta-meta-narrative be considered in some sense the unique last meta-narrative?

Object Reply

The idea of this meta-meta-narrative being the unique last **meta-narrative** is intriguing and can be considered in a few different ways:

Reflective Closure

- **Explanation:** This meta-meta-narrative reflects on the structure and function of all possible meta-narratives by defining the key terms and core sentences that any meta-narrative would use. In this sense, it could be seen as a “last” meta-narrative because it provides a comprehensive framework for understanding the construction and interpretation of all other meta-narratives. It serves as a final or ultimate reference point for analyzing narratives, potentially closing the loop on the need for further meta-narratives about narratives.

Self-Referential Universality

- **Explanation:** Since this meta-meta-narrative is about the structure of meta-narratives themselves, it possesses a kind of universality. It applies to any narrative that fits the criteria of being a meta-narrative, making it a universal tool for narrative analysis. In this sense, it could be considered “unique” because it applies to all meta-narratives, including itself, and “last” because it represents a point of conceptual closure.

End of Grand Narratives

- **Explanation:** In the postmodern condition, as discussed by philosophers like Lyotard, there is a skepticism toward grand narratives or meta-narratives. The idea of a “last meta-narrative” might align with this critique by providing a meta-narrative that deconstructs or demystifies all other meta-narratives, leading to a state where no further grand narratives are necessary or even possible. This meta-meta-narrative, by defining the essential characteristics of all meta-narratives, might represent the culmination of narrative construction and deconstruction, effectively being the “last” in that sense.

Theoretical Limitation

- **Explanation:** However, it's important to consider that even this meta-meta-narrative might not be truly “final” or “unique” in an absolute sense. Human thought, culture, and philosophy are constantly evolving, and new frameworks or perspectives could emerge that challenge or extend this meta-meta-narrative. The “last” nature of this narrative might be more of a conceptual ideal than a definitive endpoint.

Dialectical Potential

- **Explanation:** This meta-meta-narrative could also be seen as a dialectical tool—one that synthesizes various narratives to reach a higher understanding. In this sense, while it might serve as the “last” meta-narrative in one context, it could also give rise to new narratives or counter-narratives, continuing the philosophical and cultural dialogue.

In conclusion, this meta-meta-narrative could be considered the “unique last meta-narrative” in the sense that it offers a comprehensive, reflective, and potentially universal framework for understanding meta-narratives. However, whether it truly is the final word on meta-narratives depends on one's perspective on the evolution of thought and the potential for new paradigms to emerge.

9 Continental and Analytic Meta-Narratives

9.1 Continental Meta-Narrative

9.1.1 Core Ideas and Key Terms

The Continental meta-narrative centers on the exploration of human experience, meaning, and history through a dialectical and phenomenological lens. It emphasizes the role of historical context, culture, and individual subjectivity in shaping understanding, and often seeks to critique and transcend established norms and structures.

- **Key Terms:** Phenomenology, Dialectics, Historicity, Subjectivity, Power, Freedom, Existence.

9.1.2 Core Sentences

- The essence of human experience can only be understood through a deep exploration of subjective consciousness, as articulated through phenomenology.
- History and culture are not merely backdrops to human existence but are actively constitutive of it; human beings are always historically situated.
- Philosophy must grapple with the structures of power that shape social and individual realities, critiquing and often seeking to subvert them.
- The search for meaning in a fragmented and often absurd world requires a recognition of the existential condition of freedom and responsibility.
- Human existence is fundamentally relational, and understanding arises from the dynamic interplay between self and other, individual and society.

9.1.3 Narrative Arc

The Continental tradition begins with the early phenomenological investigations of thinkers like Edmund Husserl, who sought to describe the structures of consciousness. It then moves through the existential analyses of figures like Martin Heidegger and Jean-Paul Sartre, who emphasized the situatedness and freedom of the individual.

The narrative continues with the critical theory of the Frankfurt School, which interrogates the cultural and ideological forces that shape society, and with the post-structuralist turn, represented by thinkers like Michel Foucault and Jacques Derrida, who deconstruct the foundational concepts of Western thought.

Finally, the narrative grapples with the contemporary challenge of globalized, postmodern societies, where the search for meaning becomes increasingly complex, and where philosophical inquiry turns toward ethics, politics, and the question of the Other, as seen in the work of Emmanuel Levinas and Jürgen Habermas.

9.2 Analytic Meta-Narrative

9.2.1 Core Ideas and Key Terms

The Analytic meta-narrative is built on the pursuit of clarity, precision, and logical rigor in philosophical inquiry. It emphasizes the analysis of language, the use of formal logic, and the pursuit of knowledge through empirical methods. The tradition is marked by a commitment to clarity of expression and the resolution of philosophical problems through careful argumentation.

- **Key Terms:** Language, Logic, Analysis, Empiricism, Science, Truth, Knowledge.

9.2.2 Core Sentences

- Philosophical problems often arise from misunderstandings or misuses of language; hence, the analysis of language is central to philosophical inquiry.
- Logical rigor and formal methods are essential tools for achieving clarity and precision in philosophical argumentation.
- The pursuit of knowledge must be grounded in empirical evidence and the methods of science, which provide the most reliable means of understanding the world.
- Philosophy's role is to clarify concepts, dissolve confusions, and contribute to the advancement of human knowledge.
- Truth is best understood through a correspondence or coherence theory, and the pursuit of truth is a fundamental aim of both philosophy and science.

9.2.3 Narrative Arc

The Analytic tradition begins with the logical atomism of Bertrand Russell and the early work of Ludwig Wittgenstein, who sought to construct a logically perfect language that could clearly represent reality. It evolves through the logical positivism of the Vienna Circle, which emphasizes the verification principle and the unity of science.

The narrative then moves through the ordinary language philosophy of later Wittgenstein and J.L. Austin, who argue that many philosophical problems arise from misunderstandings of everyday language. It continues with the development of formal logic and its applications in areas such as philosophy of language, philosophy of mind, and philosophy of science.

The Analytic tradition culminates in the contemporary focus on interdisciplinary approaches, where philosophy engages with cognitive science, artificial intelligence, and other empirical disciplines, contributing to ongoing debates about the nature of consciousness, language, and reality.

10 Conclusion

A mathematical category has objects and morphisms which in diagrams are labelled dots connected by labelled arrows [19]. By definition there is an operation that for two arrows with the head of one at the same dot as the tail of another, there is postulated for that category an arrow called the composition of the two arrows with tail at the tail of the first and head at the head of the second. This operation is associative, and for every dot there is postulated for that category a self-arrow called the identity arrow which, composed with any arrow, produces that arrow over again. These are verbal descriptions of expressions in the diagrammatic microlect of category theory. There is a straightforward microlect translation from the diagrammatic microlect to an algebraic microlect which has cores involving objects and morphisms instead of diagrammatic cores involving dots and arrows.

A category may have a terminal object. Diagrammatically, this means that for every dot of the category there exists exactly one arrow from the dot to the terminal dot. For example, for every set there is a set whose unique member is the set, which is called the singleton of the set, and every singleton is a terminal set. The reason these basic mathematical definitions are mentioned is that if, somehow, microlects are objects of a category with some kind of morphisms, then “the categorically unique last meta-narrative” would be a terminal object in the sub-category of meta-narratives.

The complicated thoughts and behavior of human Beings may be partially organized in terms of microlects, which are the means of expressing mental-models of physical *and* non-physical things. Distinct communities of human Beings are varying sets of people within each of which mental-models resonate by shared expressions of microlects. Microlectics is the study of non-verbal and verbal microlects, which entails observation “in the wild,” classification, and discernment of microlect inter-penetration (see Appendix).

Apart from its potential for analysis of philosophical thoughts about human Beings on the whole and divisions among them, microlectics may appeal to educators, who may suggest to students that searching for keys and cores in texts and in behavior can be a rewarding enterprise.

Conflicts of Interest

The author declares no conflicts of interest.

Abbreviation

LUCA: Last Universal Common Ancestor

Appendix - Inter-Penetration of Deductive Microlects

The following summary of inter-penetrating deductive microlects in modern physics is based on Chapter 12 of [31].

The key-symbols of the phenomenological-gas-theory deductive microlect are P_{ph} (“pressure”), V_{ph} (“volume”), n_{mol} (“moles”), R_{ph} (“gas constant”), and T_{ph} (“temperature”). The core-formula is

$$(1) \quad P_{\text{ph}} \cdot V_{\text{ph}} = n_{\text{mol}} \cdot R_{\text{ph}} \cdot T_{\text{ph}}$$

which is the “phenomenological perfect-gas law.” Note that n_{mol} —amount of substance— is a key-symbol of phenomenological chemical theory, so Equ.(1) demonstrates inter-penetration of microlects.

Key-symbols of the phenomenological-thermodynamics deductive microlect include P_{ph} , V_{ph} , T_{ph} and U_{ph} (“total energy”) and S_{ph} (“entropy”). The special case of a thermodynamic system of a container of gas at equilibrium, with (1) a distortion-process that changes container volume, and (2) a reversible thermal-process dQ_{ph} of heating or cooling the gas, the First Law of Phenomenological-Thermodynamics is the core-formula

$$dU_{\text{ph}} = T_{\text{ph}} \cdot dS_{\text{ph}} - P_{\text{ph}} \cdot dV_{\text{ph}}.$$

The Second Law of Phenomenological-Thermodynamics is that at equilibrium

$$dS_{\text{ph}} = \frac{dQ_{\text{ph}}}{T_{\text{ph}}} \quad S_{\text{ph}} \text{ is maximal.}$$

Key symbols of the kinetic-gas-theory deductive microlect are P_{kn} (“kinetic gas pressure”), V_{kn} (“kinetic gas volume”), n_{kn} (“particle count”), m_{kn} (“particle mass”), v_{kn} (“particle velocity random variable”), and U_{kn} (“total kinetic energy”). Core formulas of kinetic-gas-theory are

$$U_{\text{kn}} = n_{\text{kn}} \cdot \mathbb{E}\left[\frac{1}{2}m_{\text{kn}}v_{\text{kn}}^2\right]$$
$$P_{\text{kn}} \cdot V_{\text{kn}} = \frac{2}{3}U_{\text{kn}}$$

in which \mathbb{E} is the expectation operator.

Key-symbols of the quantum-statistical-thermodynamics deductive microlect are U_{st} (“total energy”), n_{st} (“particle count”), t_{st} (“energy level count”), $\vec{k} = (k_1, \dots, k_t)$ (“energy distribution”), and $\vec{\varepsilon} = (\varepsilon_1, \dots, \varepsilon_t)$ (“energy levels”). Core-formulas of the theory are

$$n_{\text{st}} = \bar{1} \bullet \vec{k} = (1, \dots, 1) \bullet (k_1, \dots, k_t) = (k_1 + \dots + k_t)$$
$$U_{\text{st}} = \vec{k} \bullet \vec{\varepsilon} = k_1\varepsilon_1 + \dots + k_t\varepsilon_t$$

$$S_{\text{st}} = \ln \left(\frac{g_1^{k_1} \cdot g_2^{k_2} \cdots g_t^{k_t}}{k_1! \cdot k_2! \cdots k_t!} \right) (\vec{g} \text{ defined below}),$$

and by the product rule of the differential-calculus deductive microlect,

$$dU_{\text{st}} = \vec{k} \bullet d\vec{\varepsilon} + \vec{\varepsilon} \bullet d\vec{k}.$$

One additional core formula distinguishes statistical- quantum-thermodynamics by involving the Planck constant, h . If the particles are enclosed in a cubical container of side L , then for each energy level ε_j there exists at least one triple of integers n_1, n_2, n_3 such that

$$\varepsilon_j = \frac{h}{8mL^2}(n_1^2 + n_2^2 + n_3^2).$$

Also, define the *degeneracy* of energy level j to be the number g_j of such triples, and $\vec{g} := (g_1, \dots, g_t)$.

Since $L^2 = (L^3)^{2/3} = V^{2/3}$, for each energy level there exists an integer B_j such that $\varepsilon_j = \frac{h}{8m} \cdot B_j \cdot V^{-2/3}$, which is an inverse relationship between energy level and volume.

The climactic relationship between phenomenological-thermodynamics and quantum-statistical-thermodynamics is a consequence of identifying the key-symbols for pressure, volume, energy, and entropy across these distinct microlects:

Theorem 1. *At equilibrium there exist a distribution \vec{k}_* that maximizes statistical entropy S_{st} , and there are constants α, β such that*

$$\vec{k}_* = \vec{g} \bullet \alpha e^{-\beta \vec{\varepsilon}}.$$

Theorem 2.

$$\begin{aligned} \vec{k} \bullet d\vec{\varepsilon} &= -P \cdot dV \\ \beta &= \frac{1}{k_{st} \cdot T} \\ \vec{k} \bullet d\vec{\varepsilon} + \vec{\varepsilon} \bullet d\vec{k} &= dU = -P \cdot dV + T \cdot dS \end{aligned}$$

Proofs on request from author. Also, see the “Statistical Explanation of the Principles of Thermodynamics” in Chapter *XIII* of [28].

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