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A Philosophical Framework for Analyzing Educational Discourse: The Role of the Elementary Proposition

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Abstract

This paper examines the concept of elementary propositions within the philosophy of language and reinterprets their relevance for contemporary educational and social-science research. The aim of the study is to demonstrate how the structural features of propositions—such as compositionality, structurality, and intentionality—provide a conceptual framework for analyzing meaning-making in instructional communication and social discourse. The paper employs philosophical analysis as its primary method, using classical theories of propositional form as an analytical lens to explore how meaning is expressed, interpreted, and negotiated in teaching, curriculum design, and institutional communication. The findings show that propositional clarity influences learner comprehension, supports effective instructional design, and reveals how cultural and ideological meanings are embedded in public communication. The study contributes to education and social science by offering a theoretical model that links linguistic structure with practical concerns in pedagogy, discourse analysis, and the representation of knowledge.

Keywords : meaning-making, instructional communication, discourse analysis, curriculum structure, linguistic representation, social interpretation, cognitive processing, communication clarity

1. Introduction

The notion of elementary propositions constitutes a pivotal concept in the philosophy of language. Bertrand Russell once remarked that “all sound philosophy should begin with the analysis of propositions” (Russell 1919), and any attempt to define elementary propositions must therefore investigate their nature, with propositional unity emerging as the central focus of inquiry.

As a classical philosophical problem, the unity of the proposition can be traced back to Plato's early discussion in the **Sophist**, and it has since been accorded systematic treatment within the analytic tradition.

What exactly constitutes the unity of the proposition remains an unresolved question on which no scholarly consensus has yet emerged. Although Frege and Russell converge in their views regarding the category and role of propositions—both maintaining that propositions represent abstract entities—their respective conceptions of unity diverge. Wittgenstein, breaking with tradition, innovatively characterizes the proposition as a "linguistic entity," redefining its object as a linguistic entity. Within his framework, the problem of the unity of elementary propositions is transposed into an investigation of the representational form and content of propositions.

An inquiry into the unity of the proposition reveals three fundamental properties of elementary propositions: compositionality, structural integrity, and intentionality. As the basic unit through which cognitive subjects represent the world, the properties of elementary propositions manifest a unity that integrates two distinct yet interdependent dimensions: content and form: on the one hand, their constituents and structure originate in the mapping of the empirical world, and their completeness is exhibited through compositionality and structural integrity; on the formal plane, the unity of elementary propositions depends upon intentionality, and the realization of their referential relations is grounded in the a priori intentionality of the cognitive subject.

While elementary preposition have been traditionally examined within analytical philosophy, their structural features have direct relevance for contemporary research in education and social science. In classroom communication, curriculum design, and social discourse is constructed through linguistic units that connects objects, properties, and states of affairs are precisely the relationships articulated in classical propositional theory. By integrating elementary propositions as foundational meaning bearing structures, this research links philosophy analysis with practical concerns in teaching, learning, discourse analysis and social communication. This interdisciplinary orientation aligns this research with the aims of EJSER, which emphasizes contribution at the intersection of language, education, and social science.

2. Frege, Russell on the Unity of Elementary Propositions

Gottlob Frege, Bertrand Russell, and the early Ludwig Wittgenstein are representative figures in the study of the problem of the proposition. Frege and Russell converge in their views regarding the category and the role of propositions, holding that propositions represent abstract entities; yet, with respect to the question of propositional unity, their understandings diverge. In response to the corresponding positions of Frege and Russell, the early Wittgenstein offers a distinct perspective.

2.1 Frege on the Unity of Elementary Propositions

The unity of the proposition bears upon the problem of meaning, and the problem of meaning lies at the core of the philosophy of language. Frege's understanding of propositional unity is intimately bound up with his theory of meaning.

At the stage of the naïve theory of meaning, the referential theory faces difficulties in accounting for propositional unity, so the unity of the proposition remains effectively unexplained. According to the referential theory, the reference relation is a direct relation between a linguistic expression and an object; the meaning of an expression is simply the object it denotes. A sentence is an arrangement of, for instance, names of individuals and names of properties, yet such an arrangement possesses no unity and cannot be used to assert anything; if a verb is introduced, one is confronted with "Bradley's regress" (see Lycan 1999). In other words, at this stage the referential theory finds itself in a predicament with respect to the problem of the unity of the proposition.

Starting from his theory of meaning, Frege offers an account of the unity of the proposition that diverges from the naïve referential theory. In response to "Frege's puzzles," i.e., the cluster of issues surrounding the problem of the proposition, Frege proposes the theory of Sinn and Bedeutung (see Klement 2002) and explicitly distinguishes Sinn from Bedeutung. Sinn is the mode of presentation of an object, and it is Sinn that determines Bedeutung (see Frege 1997, pp. 151–171). This means that an expression is not directly linked to an external referent; rather, it refers to the object only via its Sinn. "Sinn" constitutes the path through which Bedeutung is reached (see Chen Jiaying 2022, p. 67), and within Frege's framework this referential relation is descriptivist in character (see Du Shihong 2024, p. 303). Such a referential relation is complex, exhibits manifest structural features, and proves pivotal to clarifying the problem of propositional unity.

According to Frege, the unity of judgment and assertion reflects the unity of the proposition. Within Frege's system, the referential relation is a structural relation, "such a relation obtains among words, expressions, and sentences" (see Frege 1997). The Sinn (sense) of a name is its mode of presentation; the Bedeutung (reference) of a name is the object thereby singled out. A proposition is the Sinn (sense) of a declarative sentence—that is, a thought; the Bedeutung (reference) of a proposition is its truth-value. The thought expressed by a proposition can be grasped, judged, or asserted. Frege states: "The thought itself cannot be perceived by the senses, but it is clothed in the perceptible garb of the sentence, and thereby we are able to apprehend it" (see Frege 1997, p. 328). Assertion is the outward manifestation of judgment; to make an assertion is to give outward expression to this inner state. Frege points out that an assertoric sentence must distinguish two components: "content" and "assertion." The content is the thought; a thought can be expressed without asserting its truth. An assertoric sentence is the tight union of these two components—content and assertion (see Frege 1997). Frege remarks that it is through the assertoric sentence that we express an affirmation of the True.

Frege's assertion stroke " ⊢" embodies a structural correlation of reference relation, and this structural correlation is the key to Frege's account of the unity of the proposition. Frege states, to make a judgment is, by means of a thought, to refer to the reference of the sentence, to proceed "from sense to reference," and to assert the content of the sentence as true or false; the components of the proposition are obtained through the decomposition of the act of assertion. Frege remarks: "The parts of a thought are obtained by decomposing the thought as a whole" (cf. Frege, 1979, p. 253). "Not all parts of a thought are complete; at least one part must be 'unsaturated' or predicative, otherwise the parts could not be combined… Combination requires two elements, a subject and a

predicate" (cf. Frege, 1951, pp. 168–180). The subject stands for an object, and the object is saturated; the predicate expresses a concept, and the concept is unsaturated. In accordance with the two aspects under which the unity of the proposition is examined, Frege's understanding of the unity of the proposition is as follows; consider *example (1):*

(1) The stone is hard.

In *example (1),* "hard" is an unsaturated concept, a characterization of some object that possesses the property "hard." When the stone functions as the object and is connected with the concept, there is expressed a complete thought: "— the stone is hard," that is, the content of the proposition, whose truth or falsity has not yet been asserted.

The assertion stroke "⊢" indicates that a judgment has been made: " ⊢ the stone is hard," whereby the content of the sentence is asserted to be true or false. The stone has a reference and is indeed hard, so the propositional sentence "the stone is hard" is true. Its logical form is written "ƒ(x)," where "x" is the object, or subject, "the stone," and "ƒ( )" is the concept, or predicate, "hard." "ƒ(x)" expresses the complete propositional sentence "the stone is hard."

A diagram of example (1) is now given as follows:

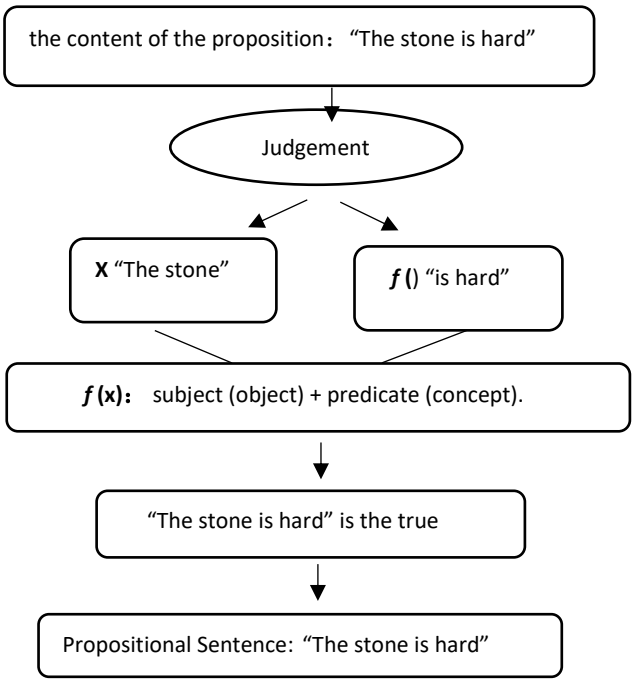

Figure 1. Frege's Understanding of the Unity of the Elementary Proposition

Under Frege's conception of the proposition, the assertion sign exhibits the structural connection between the sense and the reference of the proposition. It is precisely by means of this structural property of the referential relation that Frege clarifies how the constituents of a propositional sentence form a unified whole, represent the world, and possess truth conditions. Frege's account of propositional unity is

foundational and richly original. With respect to the problem of the unity of the primitive proposition, Russell, however, adopts a different standpoint; in his view, the problem admits of another solution.

2.2 Russell on the Unity of Elementary Propositions

Compared with Frege, Russell addresses the problem of propositional unity through "On Denoting." "On Denoting" is one of the intellectual sources in the development of the philosophy of language; Russell re-examines the relation between natural language and logic, while, during the same period, Meinong's concept of subsistence contains internal contradictions that the theory itself cannot resolve (see Sun Jingyi, 2013), and Russell offers a critique of this. Frege's theory of proper names also failed to persuade Russell. Consequently, "Russell's seminal ideas in 'On Denoting' arise within the intellectual context constituted by his reflection on the relation between natural language and logic, by his critique of Meinong's concept of subsistence and the attendant paradoxes, and by his critique of Frege's theory of proper names." (See Du Shihong, 2024b, p. 113).

Starting from his theory of definite descriptions, Russell maintains that the propositional function is pivotal to explaining the unity of a proposition. At the beginning of the twentieth century, physics was in the ascendant (cf. Wu Guosheng 2000); inspired by these physical ideas, Russell, while preserving certain features of the British empiricist tradition, gradually developed the doctrine of logical atomism and adopted an epistemological stance. Russell insists that logical analysis is a crucial method of philosophical analysis and that philosophers must uncover an ideal language—an ideal language that possesses an atomic and molecular structure, is capable of describing the world, and is immune to the misleading surface structures of natural language. In "On Denoting" Russell advances his theory of definite descriptions, within which the propositional function figures as a central concept.

A propositional function is a propositional expression; "it contains a variable x, and when a value is assigned to x the expression expresses a definite proposition" (cf. Russell and Whitehead 1950). This is Whitehead and Russell's definition of a propositional function. Russell employs "C(x)" to denote a propositional function, that is, "(x) + predicate". Unlike Frege's propositional function "f(x)", Russell's propositional function is intended to show that "the relation between sense and reference is not merely linguistic; a logical connection must be traceable therein" (cf. Du Shihong 2024b, p. 121).

Russell states that a sentence which expresses a proposition is a meaningful sentence; the logical form of a sentence is precisely the logical form of the proposition expressed by that sentence. In accordance with the two aspects under which the unity of a proposition is investigated, Russell's understanding of the unity of a proposition is as follows; consider *example (2):*

(2) The teacher of Alexander the Great is a philosopher.

By means of logical-atomical analysis, the logical structure of the sentence is analyzed; its symbolic expression is as follows,

Logical expression:

$$\exists x(Fx \,\&\, \forall y(Fy \rightarrow y = x) \,\&\, Gx)$$

The natural sentence and its logically regimented expression possess identical meaning; the logical formula may be read as three simple propositions:

1. *There exists at least one person who is the teacher of Alexander the Great;*
2. *There exists at most one person who is the teacher of Alexander the Great;*
3. *That very person is a philosopher.*

These simple propositions form a structurally integrated whole whose components are logically interrelated; the structure expresses a content endowed with significance and is intelligible to us. The proposition conveys:

"*There is at least one and at most one person who is the teacher of Alexander the Great, and everyone who is the teacher of Alexander the Great is a philosopher*."

Among "the natural sentence", "the logical expression", and "the propositional expression", their semantic content is the same. The natural sentence and its propositional expression share the same predicate, namely "… is a philosopher."

The grammatical subject of the natural sentence is "the teacher of Alexander the Great." In its logical form, this subject corresponds to the subject-term (x) of the propositional expression:

(x): "there is at least one and at most one person who is the teacher of Alexander the Great, and everyone who is the teacher of Alexander the Great,"

while the predicate is "… is a philosopher." Combining subject and predicate, we obtain "(x) + predicate":

(x): "there is at least one and at most one person who is the teacher of Alexander the Great, and everyone who is the teacher of Alexander the Great,"

predicate: "… is a philosopher."

"(x) + predicate": "There exists at least one and at most one individual who is Alexander the Great's teacher, and every individual who is Alexander the Great's teacher is a philosopher." This forms a meaning-bearing structure that expresses a propositional content.

In accordance with the logical relations among its components, the truth-value of the entire statement is determined, and the result of this determination is a unified proposition.

It is worth noting that, within Russell's epistemological framework, there are two ways of acquiring knowledge: "acquaintance" and "description." In natural language,

the minimal unit for stating knowledge is the assertoric sentence; in general, Assertoric sentences concern macroscopic objects, and each of them determines its referent through the construction of a definite description.

"In language, there is no direct way to designate any ultimate simple existent …" (cf. Chen Jiaying 2022, p. 89). For Russell, "composite entities must ultimately be accounted for in terms of logical atoms and their constructions" (ibid., p. 89). Hence, even "this cup" is a composite object and cannot be apprehended through acquaintance. In everyday linguistic expression, the subjects of atomic propositions are originally specified by the construction of definite descriptions.

In Frege's propositional function, the relation of reference runs from Sinn (sense) to the object, and from Gedanke (thought) to the truth-value. By contrast, in Russell's propositional function C(x), what is at issue is the value taken by x: if the value of x is true, then x satisfies the descriptive property and the sentence is true; if the value of x is false, the sentence is false. See Figure 1.

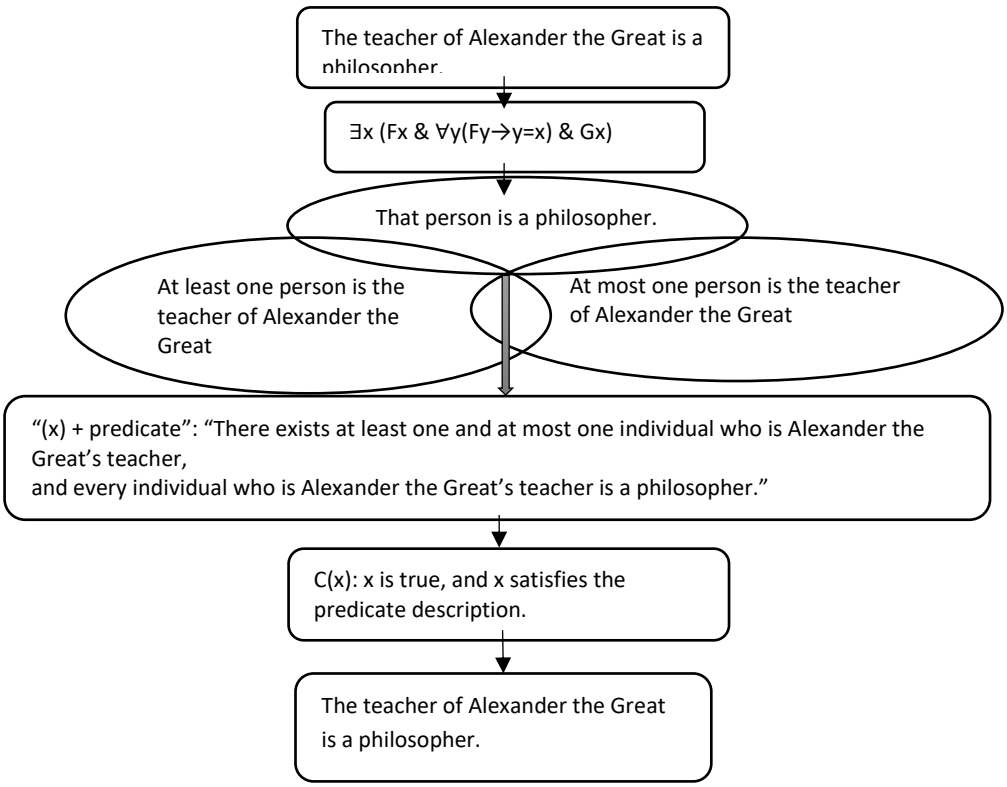

Figure 2: Russell's Understanding of the Unity of the Elementary Proposition

3. The Problem of the Unity of the Proposition in Wittgenstein's Early Philosophy

In contrast to Frege and Russell, Wittgenstein pursued a more penetrating inquiry into the problem of propositional unity. He maintains that what a proposition represents is a linguistic-pictorial entity (cf. Wittgenstein 2021). Wittgenstein's understanding of the unity of elementary propositions focuses on an investigation of the form and the content of representation, thereby sustaining the worldview and the view of language articulated in the *_Tractatus Logico-Philosophicus_*.

Wittgenstein espouses a factual ontology: he holds that the world is the totality of facts, not of objects. The world is the totality of facts; a fact is an existing state of affairs, and objects constitute states of affairs (cf. Wittgenstein 2020). Objects present themselves within facts, which necessarily involves representation. Wittgenstein states that the world is represented through thought, and thought is manifested in meaningful propositions. Both thought and proposition can serve as a picture of a fact. "World, thought, and language share a common logical form; the three are isomorphic" (cf. Wittgenstein 2020, p. 10).

Wittgenstein maintains that an elementary proposition is the organic unity of content and form. In everyday life, people are constantly thinking—whether it be something as small as wondering what a given flower looks like, or as grand as asking what the world is. To answer the question "What is the world?" requires language; without language we cannot say what the world is. Thought achieves expression through language, and facts are presented through language.

With respect to the content-side of propositional unity, Wittgenstein's picture-theory of language is at issue. Wittgenstein states: "A proposition is a picture of reality. A proposition is a model of reality as we imagine it (4.01)." A thought finds its expression in a proposition; a significant proposition is a thought. A thought is a logical picture of a fact. The picture of the world is language. The fundamental unit of language is the elementary proposition; the fundamental unit of the world is the state of affairs. An elementary proposition is composed of names, and a state of affairs is composed of objects. An elementary proposition depicts a state of affairs; a state of affairs is a possible fact, while a fact is an actually existing state of affairs. If the state of affairs exists, the elementary proposition is true; if the state of affairs does not exist, the elementary proposition is false. The truth or falsity of an elementary proposition is determined by the actual circumstances of the world. The entire logical space is constituted by states of affairs, and the facts within this logical space constitute the world (4.01; 3.1; 4; 3). [1]

In a proposition, states of affairs are tentatively combined. Different names represent distinct objects and are logically concatenated with one another, thereby presenting

[1] At the end of each paragraph in this section, all citations drawn from Wittgenstein, L., 2021, Tractatus Logico-Philosophicus, London: Anthem Press, are provided in a unified parenthetical reference.

a state of affairs like a dynamic picture. Only when a proposition is logically articulated is it a picture of a state of affairs. To understand a proposition is to know the situation it depicts; one understands it without any further explanation of its meaning. Wittgenstein states that, in order to say that p is true or false, one must specify the circumstances under which I call p true, and this stipulation thereby determines the sense of the proposition. The content of a proposition is a picture of a possible fact; it is the content of a proposition that has sense (4.0311; 4.032; 4.063).

The formal aspect of propositional unity is connected with Wittgenstein's context-principle: "Only the proposition has sense; only in the context of a proposition has a name meaning" (3.3). An elementary proposition is a concatenation of names; within a complete sentence, words are not "independent parts that compose a whole," but rather common characteristic marks of different types of sentences, so that they can occur only within sentences. Every part of a proposition that represents meaning is an expression; the proposition itself is an expression. An expression is a common characteristic mark of a class of propositions; it is presented by means of a variable, whose values are the propositions that contain the expression. If one replaces a constituent of a proposition by a propositional variable, one obtains a class of propositions whose values are all derived from that proposition. The proposition is the function in which the expression is contained, and an elementary proposition is the function of names written in the form "fx" (3.3; 4.22; 3.31; 3.311; 3.313; 3.318; 4.24).

Form shows itself in the proposition; form cannot be expressed by means of a proposition. The proposition is the logical form of reality made manifest. A proposition endowed with sense expresses a content in a determinate manner; the determinate mode of combination among the constituents of the proposition is its structure. The possibility of structure is form. Form embodies essential properties, and essential properties are those properties that a proposition cannot lack if it is to express its sense. A constituent of a proposition can be combined with some other constituent in a particular mode of combination, and it can also be combined with yet another constituent in another mode of combination; constituents of a proposition are always situated within the manifold possibilities of combination with other constituents, caught in a network of possibilities (4.121; 2.033; 3.34).

The elementary proposition is the organic unity of form and content. In accordance with these two aspects of the investigation into the unity of the proposition, Wittgenstein's understanding of propositional unity is as follows; consider *example (3):*

(3) The stone is white.

The aspect of the proposition's content. In *example (3)*, the proposition articulates a content in a determinate manner: the name "stone" is employed to designate the stone, and "white" functions as an adjective; the two stand in a specific configurational relation and, in accordance with logical syntax, constitute the proposition "the stone

is white." This proposition depicts a state of affairs and occupies a locus in logical space; it must be a possibly existent state. The accordance or discordance of the proposition with the possibility of the state of affairs' existence or non-existence constitutes the proposition's sense. "The elementary proposition asserts the existence of a state of affairs (4.21)"; if the elementary proposition is true, the state of affairs exists; if the elementary proposition is false, the state of affairs does not exist. The truth-conditions of the elementary proposition signify the possibility of the state of affairs' existence and non-existence. (4.2; 4.21; 4.25)

The formal aspect of the proposition. "Stone" and "white" are constituents shared by different types of sentences and can be represented by the variables "…stone…" and "…white…"; to write out the variables is to present the series of the whole sentence. If it is written as "R(stone, y)", it is a propositional variable whose values are all sentences formed by combining "stone" with a certain monadic predicate; likewise, by replacing "stone" with a variable, "R(x, white)" yields all sentences composed of "white" together with other names. The expression of a formal concept is a propositional variable in which only the constant is a specific characteristic, rather than the functional expressions of Frege and Russell. If one continues to replace every propositional constituent with a variable until every sign that has been given a meaning has been exchanged for a variable, one arrives at a logical prototype "R(x, y)". The general form of a proposition is: things are thus-and-so, "The general form of a proposition is a variable (4.53)". (3.315; 4.5)

Looking back at *example (3),* if it is examined within different languages, the two aforementioned aspects of the elementary proposition become even more evident. Different languages employ different symbols to represent "stone," and this is arbitrary. Yet the possibilities of combination between "stone" and "white" remain identical across these languages. The constituents of a sentence are always situated within the possibilities of their combination with other constituents, enmeshed in a network of possibilities. The elementary proposition itself is an organic unity of form and content.

Frege, Russell, and the early Wittgenstein's differing understandings of the unity of the elementary proposition are as shown in the following table:

Elementary Proposition	Category	Constituent	Unity
Frege	abstract entity	subject + predicate	$\vdash f(x)$
Russell	abstract entity	（x） + predicate	$C(x)$
the early Wittgenstein	Linguistic entity	…name…name…	R (x, y)

Table 1. A Comprehensive Overview of Frege's, Russell's, and Wittgenstein's Understandings of Propositional Unity

Table 1 presents, in summary form, the differing conceptions held by Frege, Russell, and the early Wittgenstein regarding the category of the proposition, the constituents of the proposition, and the unity of the proposition, focusing on an investigation conducted from two aspects. The nature of the elementary proposition is thereby clarified through an examination of the two aspects mentioned above.

4. The Nature of the elementary propositions

In accordance with Frege's, Russell's, and the early Wittgenstein's investigations into the unity of the proposition, the elementary proposition brings to light three properties: compositionality, structurality, and intentionality.

First, the compositionality of the elementary proposition concerns the identification of its constituents. Frege points out that the identification of what an object signifies focuses on the mode of presentation of the object; the sense determines the reference. For example, "Aristotle" refers to the historical individual Aristotle by means of the modes of presentation "'the pupil of Plato,' 'the teacher of Alexander the Great,' and 'the author of the Categories.'" From the standpoint of the notation of an ideal language, Frege indicates that the constituents of an elementary proposition are a subject-term and a predicate-term: the subject-term stands for the object, and a particular mode of presentation of this object exhibits only one aspect of the object.

In contrast to Frege, Russell's way of denoting objects is intimately bound up with his epistemological position: Russell holds that there are two routes for the designation of an object—acquaintance and description—and that the two routes can ultimately be fused into one (cf. Du Shihong & Shi Jinhong, 2025). For "complex entities must in the end be explained by logical atoms and their constructions" (cf. Chen Jiaying, 2022, p. 89). In other words, to speak of a certain cup is to describe it. In the ideal case, an elementary proposition presents a single property-description of the object represented by the subject-term; yet this does not imply that the object can be exhaustively described by one elementary proposition alone.

Wittgenstein offers a different conception. He advances the Picture Theory, stating that names stand in a one-to-one correspondence with objects: in an elementary proposition a name represents an object, i.e., a name signifies an object. An object is always an object that stands within some possibility of constituting a state of affairs; a name is likewise always a name that stands within some possibility of constituting an elementary proposition. The reference of a name is fixed by its logically syntactic employment. Regarding the formulation of an elementary proposition and its constituents, Wittgenstein does not make an explicit assertion; nevertheless, in accordance with his conception of the proposition, an elementary proposition is first and foremost directed at a certain object, and what is essential is the relation between the object and its property.

Second, the structural dimension of the elementary proposition consists in predicating a property of an object; the components of the proposition form a

structure that articulates meaning. From Frege's perspective, the initial focus falls upon the object. In Frege's geometrical example of a triangle, the three lines a, b, and c intersect at a single common point. If this point is designated 'fi', then the intersection of median a and median b is one mode of presentation of that common intersection point fi (the object); the intersection of median b and median c is another mode of presentation of that same common intersection point fi (the object). The name that bears the object is the subject; attached to the subject is the predicate, and the predicate is the concept under which the object falls. The combination of subject and predicate constitutes a structure that expresses meaning: "subject (object) + predicate (concept)." Its logical notation is "f(x)," where "x" is the object, i.e., the subject, and "f( )" is the concept, i.e., the predicate. The structure of the elementary propositional sentence is thus expressed as: f(x): subject (object) + predicate (concept).

Unlike Frege, Russell's primary focus is on the content of the proposition: the concept is presented first, and from this it is subsequently determined that this is a presentation of a concept of some object x. The value of the object x is obtained as the result of the operation of the propositional function. The propositional expression combines the subject x with the predicate that expresses the concept, "(x) + predicate," thereby constituting a structure that articulates meaning. Its logical notation is "C(x)," in which x is the object, i.e., the logical subject of the proposition, and "C( )"—namely, "( ) + predicate"—is the concept, or predicate. The structure of the elementary propositional sentence is thus expressed as: "C(x): (x) + predicate".

In contrast to Frege and Russell, Wittgenstein focuses on the relation between two variables within the proposition—that is, the relation between an object and a property. Such a relation is an internal relation; its existence cannot be asserted by means of the proposition, but is rather shown in the very proposition that depicts the relevant state of affairs and the objects concerned. It is not expressible by means of a function. An elementary proposition is composed of names, and these names are represented in the conceptual notation by the variables "x," "y," "z." Wittgenstein states that the expression of an internal relation is a propositional variable, and each variable is the sign of a relation. The simplest elementary proposition is a relation between two names; the object is represented as "x," the property as "y," and the relation between object and property as "R." The elementary proposition is a concatenation of names, a relation between two variables; it depicts a state of affairs, and a state of affairs is a possible fact. The structure of the elementary proposition is expressed as R(x, y). (4.122, 4.125; 4.126; 4.1272; 4.22).

Third, the intentionality of the elementary proposition concerns the reference of the propositional sentence, namely, how language represents the world and thereby possesses truth-conditions. Reference is a relation, a link between language or thought and the world (cf. Batterman 2005). In Frege's theory of meaning, the referential relation is a complex structural relation between the sense and the reference of a proposition. Frege states that a thought is that by means of which

something is considered as true (cf. Frege 1997, pp. 325–346); to affirm the truth of a thought is to judge, and the outward manifestation of a judgment is an assertoric sentence, an assertoric sentence that contains truth. An atomic sentence is the simplest assertoric sentence; the referential relation is the complex structural relation in which the atomic sentence, by means of the thought, is directed toward a truth-value. When the truth or falsity of the content of the sentence is asserted, it shows that the object borne by the subject has a reference and satisfies the property specified by the predicate, so that the sentence is true; otherwise, the sentence is false.

Russell, by contrast, maintains that the referential relation is not a complex structural relation between the sense and the reference of a proposition; rather, it is a relation between a propositional function and the objective fact it denotes—a relation in which the atomic sentence, by means of the propositional function, is directed toward that objective fact. Russell states that meaning and reference are not merely linguistic; they necessarily involve a logical connection. According to Russell, once an assertoric sentence has undergone logical-atomistic analysis, its logical structure is laid bare and is expressed through a propositional function. Unlike Frege, Russell holds that the constituents of the proposition are no longer elements possessing independent semantic correlates; instead, they constitute a set of descriptive elements that stand in logical relations to one another. The primary concern is with the value assigned to x within the propositional function: if the value assigned to x is true and satisfies the predicate's description, the sentence is true; if the value assigned to x is false, then no object satisfies the predicate's description, and the sentence is false.

For Wittgenstein, the referential relation is not asserted by means of a proposition; it is neither the complex structural relation between sense and reference of the Fregean kind nor the relation between a propositional function and a fact of the Russellian kind. Wittgenstein shows that the referential relation manifests itself naturally within the proposition, in the configurational combination of names. Wittgenstein holds that the world is represented through thought, and what thought presents is the meaningful proposition. Thought and proposition are able to be pictures of facts because world, thought, and language share a common logical form. A proposition is the perceptible expression of a thought; by means of propositional signs it projects a possible state of affairs, and the method of projection is the thinking of the sense of the proposition. A proposition is a propositional sign in a projective relation to the world; the propositional sign is itself a fact, and only a fact expresses sense. The thinking of the sense of a proposition is at the same time the logically syntactical usage of the propositional sign; in this "usage" the referential relation is exhibited. The proposition "depicts" the world by projection and mirrors the fact through its internal structure. (3.11; 3.12; 3.14; 3.142).

4.1 Applied Relevance of Elementary Propositions to Education and Social Communication

Elementary propositions provide useful conceptual tool for analyzing how meaning is conveyed, interpreted, and negotiated within the educational and social contexts. The clarity of subject predicate the relationship and the explicitness of referential structures strongly influence learner comprehensive. When the teachers articulate knowledge through well formed proposition structures they support students cognitive processing and reduce semantic ambiguity. Similarly, in educational materials like textbooks and documents determines how effectively information is presented and understood. From a social science perspective propositions shows how culture meanings, ideological positions and institutional narratives are structured in discourse. Thus, the philosophical study of elementary propositions shows directly to understand how meaning occurs in both educational and social communication.

A useful analytical foundation for enhancing clarity in instructional communication is provided by comprehending the structure of simple propositions. Teachers frequently use propositional frameworks like "X leads to Y" or "A consists of B" to convey new material in educational contexts. Students suffer from cognitive overload and confusion when these statements are poorly constructed—ambiguous predicates, unclear referents, or collapsed logical relations. Teachers can create educational resources and explanations that more clearly distinguish objects, relations, and states of affairs by using propositional theory. This makes textbooks, learning objectives, lesson plans, and assessment items easier to understand, especially for students studying multilingual or conceptually complex subjects.

Additionally, elementary propositions offer a useful perspective for analyzing media communication and political discourse. Propositions that contain presumptions, causal assertions, or evaluative judgments are frequently used in public communications. Researchers can identify ideological framing, prejudice, and selective representation by examining the underlying propositional structure, which includes what objects are emphasized, what relationships are declared, and what states of affairs are presupposed. This is consistent with more general traditions in discourse and communication studies, where propositional mapping shows how meaning is deliberately created to sway public opinion. Philosophical examination of propositions thus becomes a technique for analyzing how institutional messages, policy declarations, and social narratives influence collective understanding.

Lastly, relating philosophical ideas to practical communication techniques shows that propositional clarity is a social and pedagogical concern in addition to a logical one. It establishes how well information is conveyed, how language creates social reality, and how information is interpreted. The study's applied viewpoint demonstrates that elementary propositions are useful tools for solving real-world issues in media studies, teaching, curriculum design, and cultural communication rather than abstract concepts.

4.2 Educational and Social Implications of Elementary Propositions

Elementary propositions provide an important conceptual lens for examining how meaning is constructed, transmitted and interpreted within educational and social contexts. In teaching and learning, the clarity of propositional structure influences how learners develop relationship between concepts, objects and properties. Whenever teachers explain new source, they rely on elementary propositional forms like “X is Y” “A leads to B” or “C depends on D”. These shows how students internalize knowledge make inference and connect new information to existing cognitive structures.

From the perspective of pedagogy and curriculum development, propositional clarity plays a vital role in instructional design. Educational materials that present ideas through well formed propositions reduce ambiguity, enhance conceptual coherence and facilitate comprehension. Poorly structured propositions in textbooks or classroom speech create misconceptions and cognitive overload. Thus the educational discourse through the lens of propositional unity offers method for evaluating the quality and clarity of instructional communication.

In communication studies and social analysis, elementary propositions shows how institutions guidelines express specific propositional commitments about social facts, values and responsibilities. By examining the compositionality, structurally and intentionality of these propositions, researchers can uncover embedded assumptions, power relations and ideologies. Therefore, the philosophical study of elementary propositions contributes not only to abstract linguistic theory but also to practical questions of educational effectiveness, social inclusion and the representation of knowledge within society.

5. Contribution to the Field

In this research contributes to the field of social science and education by demonstrating the classical analysis of elementary propositions gives a fundamental frameworks for understanding how the meaning is constructed and communicational in educational discourse. This research provides a new analytical lens for evaluating the clarity, coherence and referential precision of instructional and institutional languages. This approach develops a propositional structure how affects learner’s comprehension, the design of curriculum materials, and the interpretation of policy and social messages. This bridges a longstanding gap between the philosophy of language and applied educational research, provides a conceptual tool that can support future empirical and theoretical work in educational and social contexts.

6. Conclusion

Frege, Russell, and the early Wittgenstein’s reflections on the unity of the proposition highlight three fundamental properties of the elementary proposition: compositionality, structurality, and intentionality. Compositionality concerns the mode of identifying the constituents of a proposition; structurality pertains to the

structure that expresses meaning and is constituted by the attribution of properties to objects; intentionality concerns the reference of the propositional sentence. In respect of content, the unity of the proposition foregrounds its compositionality and structurality; in respect of form, the proposition foregrounds its intentionality. Content and form co-present the unity of the proposition.

With regard to propositional constituents, Frege holds that the focus of identification lies in the reference of an object together with its mode of presentation, and the structure of the propositional sentence is expressed as f(x). Russell claims that acquaintance with or description of an object can be unified, and the structure of the propositional sentence is expressed as C(x). The early Wittgenstein maintains that the reference of a name is determined through its logically syntactic use, and the structure of the propositional sentence is expressed as R(x, y).

With regard to the problem of the reference of propositional sentences, Frege holds that the referential relation is one in which the sentence, by way of the thought expressed, points to a truth-value. Russell, by contrast, maintains that the referential relation is one in which the sentence, by way of a propositional function, points to an objective fact. For Wittgenstein, the referential relation is not asserted through the proposition; rather, he claims that the world is represented through thought, and that what thought presents is a meaningful proposition. The referential relation manifests itself naturally within the proposition that depicts the relevant state of affairs and involves the pertinent objects, and it becomes manifest in the various possible combinatory configurations of names.

In addition to their philosophical significance, the analysis of elementary propositions offers important insights for educational and social science. Propositional structures serve as the fundamental unit through which knowledge is communicated in classrooms, educational texts and policy discourse. Understanding their unity clarifies how meaning is constructed how misunderstandings arise, and how instructional and social message can be made more precise. By connecting classical philosophical theory with contemporary concerns in pedagogy, curriculum design and discourse analysis this research highlights the relevance of propositional theory for improving educational communication and interpreting social meaning making.

Research on elementary propositions and their properties was pursued by Frege, Russell, and the early Wittgenstein along divergent paths, yet their work jointly shaped the domain of inquiry and methodology of the philosophy of language. Their central contribution lies in employing language as a mirror that reflects the deep structures of both world and thought, and this is precisely where the significance of the study of elementary propositions resides. The question of the unity of the elementary proposition remains to be explored in depth. Frege, Russell, and the early Wittgenstein set aside natural-language sentences in order to discuss the properties and structure of propositions; yet, for the study of the meaning of elementary propositions, their investigations must be extended into natural language, and this

extension constitutes the central issue of research in the philosophy of language. The analysis gives clarity not only the philosophical nature of elementary propositional but also their practical relevance for understanding how educational and social meanings are expressed, communicated and interpreted. By establishing this interdisciplinary connection the study provides a clear contribution to ongoing research in educational discourse, communication and curriculum theory.

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