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Creativity: Hypotheses and Scientific Approaches

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Abstract:

Creativity, particularly linguistic creativity, has long intrigued scholars across multiple disciplines for its multifaceted and universally human nature. The 20th and 21st centuries witnessed intensified theoretical inquiry into creativity, especially in linguistics, psycholinguistics, and philosophy, with major contributions from Guilford, Chomsky, and others. Despite significant progress, linguistic creativity remains underexplored within core linguistic theory, often relegated to secondary status or constrained by narrow generative or lexical models. This article aims to synthesize and critically evaluate major scientific approaches to linguistic creativity and establish a broader philosophical and psychological basis for its understanding. The study finds that while structural-generative and lexical perspectives offer insights, they fall short in accounting for the deeper creative principle underpinning language use. Drawing on Descartes and Chomsky, the article underscores creativity as a core human trait that facilitates novel and context-sensitive expression. The article bridges aesthetic, pragmatic, and philosophical interpretations of creativity, arguing for an integrative view that unites linguistic competence with expressive and imaginative functions. By reclaiming creativity as central to linguistic theory and human cognition, this work opens avenues for rethinking linguistic competence, pedagogy, and the philosophical foundations of language.

Keywords: Creativity, Linguistic Creativity, Creativity Factors, Linguistic Personality

Introduction

Creativity, a defining attribute of the human mind, has long intrigued scholars across disciplines. From its philosophical roots in Cartesian thought to its operationalization in psycholinguistics and educational psychology, creativity has evolved as a multifaceted concept encompassing freedom of expression, problem-solving, and linguistic inventiveness[1]. Linguistic creativity, in particular,

refers to the human ability to generate and comprehend an infinite number of novel expressions within a limited grammatical system. As Noam Chomsky argues, this inherent capacity sets humans apart from both animals and machines, grounding language in a broader cognitive and philosophical framework[2]. Yet, despite its centrality, linguistic creativity is often sidelined in theoretical linguistics, relegated to a secondary role in justifying syntactic competence. The 20th and 21st centuries have seen a divergence in perspectives: one school emphasizes structural-generative creativity, while another explores lexical and pragmatic dimensions. The gap arises from the failure of both traditions to comprehensively integrate meaning and form[3]. This paper aims to reassess the theoretical and methodological approaches to linguistic creativity, drawing from philosophical, psychological, and linguistic paradigms. Findings reveal that linguistic creativity is not merely a poetic gift or cognitive anomaly but a universal, systematic, and context-dependent phenomenon[4]. The novelty of the study lies in its synthesis of aesthetic, pragmatic, and philosophical perspectives, offering a more inclusive framework. Implications extend to language teaching, artificial intelligence, and the philosophy of mind, suggesting that a deeper understanding of creativity is crucial not only for linguistic theory but also for advancing interdisciplinary knowledge about human cognition[5].

Methods

To explore the phenomenon of linguistic creativity, this study employed a theoretical-analytical method grounded in an interdisciplinary approach combining linguistic, psychological, and philosophical perspectives. The research primarily involved a qualitative content analysis of foundational and contemporary literature addressing the concept of creativity. Key theoretical contributions by scholars such as J.P. Guilford, N. Chomsky, D.B. Bogoyavlenskaya, and E.P. Torrance were examined to trace the evolution of the understanding of creativity from a linguistic and cognitive standpoint[6]. Philosophical interpretations, particularly those of Descartes and Humboldt, were critically reviewed to contextualize the conceptual foundation of linguistic creativity as a defining trait of human cognition[7]. The method also included a critical examination of generative and lexical models of creativity within 20th- and 21st-century linguistic theory, assessing their limitations and potential overlaps. Secondary sources such as journals, textbooks, and scholarly interpretations were utilized to evaluate how creativity is framed within aesthetic, pragmatic, and philosophical discourses. The study applied comparative analysis to distinguish between mechanistic explanations of language and those that emphasize the spontaneous and innovative use of linguistic structures[8]. Furthermore, the paper incorporated insights from psycholinguistics and cognitive psychology to enrich the understanding of linguistic creativity not only as a structural phenomenon but also as a functional and expressive one[9]. This comprehensive theoretical approach was essential to articulating the multifaceted nature of linguistic creativity and its positioning within broader discussions on human thought, imagination, and communication.

Results and Discussion

Linguistic creativity, or the creativity of language, is generally understood as the ability to effortlessly communicate and comprehend new expressions and novel ideas , or, if phrased as questions: “How can a speaker know the meaning of a sentence they have never encountered before? And how can such a limited mind grasp the meanings of an infinite number of sentences?” [10]. According to D.B. Bogoyavlenskaya, “a creative use of language refers to any utterance, phrase, or word whose meaning shifts depending on the context in which it is produced, in a way that cannot be predicted solely from the lexicalized meanings of its components.”

The earliest concept of creativity as a universal human capacity was explored by J.P. Guilford [11]. In 1950, he published his seminal work “Creativity”, which introduced a new approach to the study of individual creativity in terms of “creative personality” and “creative productivity.” Guilford argued that this dual focus—on both personality and the outcome of activity—enables the identification and cultivation of creativity[12].

This paper explores the concept of creativity as an inherent trait of the human mind. According to Guilford , creativity—defined as "the ability to create, realize, form, invent, or design"—as a domain of study is often mired in confusion due to:

1. Differing points of reference in defining creativity,
2. Various conceptions of creativity and of creative individuals, and
3. Divergent research strategies.

Thus, creativity can be examined from multiple perspectives: aesthetic, pragmatic, and philosophical.

From the aesthetic perspective, creativity is viewed as an innate talent granted to a select few artists who can express themselves in forms—be they visual, verbal, or musical—that are considered pleasing, appealing, or symbolically meaningful within a given culture and historical moment. E.P. Torrance defined creativity as the ability to perceive deficiencies, knowledge gaps, missing elements, disharmony, etc. In his research, he developed a model of creativity consisting of three components: fluency (productivity), flexibility, and originality. This approach emphasizes the characteristics and processes that activate creative productivity, rather than the quality of the final result. S.A. Mednick suggested viewing creativity as the process of restructuring elements into new combinations that meet utility and specific requirements. In linguistic terms, creativity lies in the variability of utterances while preserving the original meaning[13].

From a pragmatic point of view, creativity is considered a special or gifted problem-solving skill essential for survival and a successful life. Literature on this type of pragmatic creativity—in fields such as education, science, IT, business management, cognitive psychology, and psychotherapy—tends to address:

1. What creativity is as a problem-solving activity,
2. The typical stages of the creative process,
3. The types of thinking involved in the creative process,
4. The traits of a creative individual, and
5. How to improve, apply, develop, and teach creative problem-solving skills for practical use.

From the philosophical standpoint, creativity is primarily seen as a defining human trait that can be expressed in various ways. K.A. Toroshina asserts that "human nature is a special capacity for meaningful and appropriate responses to novelty" . She notes that "humans differ from animals in their gift of imagination." While humans may share many biological traits with animals, the human mind functions differently: we think creatively and can transform our thoughts into tangible, novel creations or innovations. It is this perspective that I will focus on for the remainder of this section, though the aesthetic and pragmatic perspectives will be revisited where relevant to linguistic creativity.

In his exploration of the limits of mechanistic explanation, Descartes (as cited in) concludes that "humans possess unique capacities that cannot be explained solely by mechanistic principles, even if such principles may adequately account for bodily functioning and behavior." Descartes (quoted by Chomsky) thus argues that in addition to the body, humans must be attributed with "mind" and "thought." He considers thought "a universal instrument capable of serving all contingencies," whereas the organs of animals or parts of machines are narrowly suited for specific actions[14]. Chomsky summarizes Descartes' views as follows: It is precisely the diversity of human behavior, its adaptability to novel situations, and humanity's innovative capacity—the creative aspect of language use—that leads Descartes to attribute rationality to other human beings, believing such capabilities to lie beyond the reach of any conceivable mechanical system. Hence, an adequate psychology must posit a "creative principle" alongside a "mechanistic principle," sufficient to account for all other aspects of the non-human world as well as a wide range of human behavior and emotion. Chomsky thus draws on

Descartes' views as both a motivation and philosophical foundation for his own conception of linguistic creativity, which he reinterprets within his theoretical framework.

It is important to note that novelty and creativity in language must be appropriate and interpretable. Linguistic creativity is therefore not merely an arbitrary or random uniqueness. Creativity literature often frames creativity as a form of "freedom." E.P. Ilyin writes that humans are "free to think and contemplate; capable of observing, comparing, discerning essential properties, identifying and naming." Likewise, Chomsky asserts that the human mind is not governed by stimuli or habit. Therefore, freedom of thought, self-expression, and imagination are among the most vital human traits [15]. Ilyin claims, "to create is one of the fundamental human inclinations, which manifests differently across many levels."

Chomsky's reflection on the philosophical history of the creative principle in human nature suggests a close link between general human creative capacities and linguistic ability. He writes : "It becomes clear that Humboldt's emphasis on the spontaneous and creative aspects of language use stems from a much broader conception of 'human nature'…"

According to Chomsky , Descartes could easily imagine a machine uttering words and giving limited responses… "…but never one that could construct its speech differently to appropriately respond to whatever is said in its presence, as even the lowest kind of human could do…" and "…There are none so depraved or foolish—not even idiots—who cannot combine different words to form a sentence through which they express their thoughts, whereas, on the other hand, there is no animal, however perfect, that can do the same." (Descartes, as cited by Chomsky)

Chomsky's interchangeable use of "language use" and "speech" is problematic, as he focuses not on performance, but on the competence of an idealized speaker-listener to generate an infinite number of sentences. The creative aspect of language use not only points to a broader creative capacity in humans but is also closely tied to artistic creativity. Chomsky cites Schlegel, who connects language's creative aspect with true artistic creation: "Language is the most wonderful creation of the human poetic faculty… always becoming, always changing, never completed—a poem of all humankind."

Thus, Schlegel views human language itself as a poem—a creative product of all people, not merely a few artists. This association of linguistic creativity with poetic creation contrasts with Humboldt's view that distinguishes the "form" of language from its "character," i.e., the way it is used by poets and philosophers: "…the inner character of language should be distinguished from its form—syntactic and semantic structure—which pertains to form, not usage. A great writer or thinker may change the character of language and enrich its expressive means without affecting its grammatical structure. Normal language use typically involves creative mental acts; but it is the character of language, not its form, that reflects true creativity in the higher sense—one that implies both value and novelty."

Humboldt's notion of the "character" of language seems to pertain to an evaluative stylistics, whereas normal use—dealing with syntax and semantics—involves creative cognitive activity. Despite Chomsky's philosophical articulation of a creative principle in language, R. Sampson argues that both Descartes and Chomsky follow a Platonic view of concepts and knowledge.

From this perspective, concepts and knowledge are either innate ("merely a recollection of things known in past lives") or derived from experience, where originality is simply the conscious surfacing of a fixed stock of ideas, all of which existed unconsciously from birth and beyond which the mind can never go. Sampson thus claims that both thinkers reject or ignore a truly creative view of the mind—one in which the human mind is constantly generating new ideas, not implied by anything prior, making its output as unpredictable as a natural phenomenon. Sampson distinguishes between "restricted" and "creative" thinkers, and maintains that Chomsky's generative linguistics is based on restricted thinking. Focusing on the unpredictability of linguistic creativity, Sampson argues that new ideas never derive from existing sources—a radical view of creativity that sees something as truly creative only if it is

created ex nihilo. In my view, this exaggerates the role of unpredictability: creative unpredictability does not exclude dependence on, or stimulation by, prior knowledge or resources.

Conclusion

In conclusion, Chomsky , revisiting rationalist thought, reconstructs the philosophical tradition in search of a creative principle in language, based on the following ideas:

1. Creativity distinguishes humans from animals and machines.
2. Creativity must be contrasted with mechanistic principles that explain bodily and instinctual behavior.
3. Creativity allows humans to respond to novel situations in new and appropriate ways.
4. Creativity enables free, diverse thinking, action, and self-expression.

Thus, Chomsky posits linguistic creativity as a universal human trait, a problem to be explained by linguistic theory. How he addresses this problem will be presented and critically assessed in the next section.

In 20th- and 21st-century linguistics, linguistic creativity is understood either as structural-generative creativity or as lexical creativity. Both approaches have limitations—not only because they often exclude each other, but also because they rest on reductionist and narrow views that separate morphological and syntactic form from meaning. The fact that linguistic creativity is rarely examined within linguistic theory—except as a secondary justification for a given interpretation of linguistic competence—clearly indicates the need to re-examine the scope and nature of linguistic creativity. Furthermore, if one accepts the broader philosophical position that creativity—linguistic or otherwise—is an inherent feature of all humans, then a deeper understanding of its nature and extent is both necessary and justified.

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