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INSIDE THE COMPOSING PROCESS: THE MEANINGS OF CREATIVE STAGES AND THEIR INTERCONNECTIONS

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Abstract
This article focuses on the process of musical composition and the avenues for identifying distinct stages within the context of 20th-century theories of creativity and the creative process (e.g., Wallas, 1926; Rossman, 1931; Osborn, 1952; Koberg and Bagnall, 1971; Fritz, 1991) The possibility of segmenting the composition process into phases is considered, the analytical basis of which is thestudy of precompositional (sketch) material. The expression of creative thought is inherently dependent on the individuality of the creator; thus, universally applying existing models of creativity is limited by the risk of subjective interpretation, particularly when relying on the specific sequence of stages proposed by any one theory. Given that most theories of the creative process are formulated based on research in psychology, philosophy, and related fields, they often exhibit recurring structural and conceptual patterns. I propose a combination of these models as a potential means of identifying compositional phases that directly correlate with the creative evolution of a selected composer's work.

Keywords
music, creativity, process, compositional phases, sketches.

Introduction

Understanding the creative process (or processes) and identifying internal mechanisms remains a complex challenge within the discourse of

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musicology. The concept of process (from the Latin *processus* – "a moving forward") refers to a dynamic phenomenon, characterized as a sequence of actions or a progression of states connected by causal relationships. However, segmentation of the process as a creative act – differentiating phases or stages, which would clarify what occurred, when, and how in the course of composing music – remains a largely unresolved issue. There is a lack of research that directly addresses such questions, and the majority of studies involving the key concepts of *creativity* and *process* have been conducted in the fields of psychology, philosophy, neuroscience, and the social sciences. Meanwhile, the individualized nature of creative expression requires a continual reconsideration of the analytical tools.

For decades the creative process has been a widely discussed phenomenon in academic literature, prompting researchers to schematize the logic of distinct stages (or phases) of creativity and define their functional meaning. However, the specific challenges posed by individual disciplines – such as musical composition – reveal atypical sequences of creative actions that do not fit neatly within the frameworks of established theories of the creative process.

Creativity is a topic of interest across various disciplines, including the philosophy of art, aesthetics, psychology, sociology, and education. Its definition develops based on the unique characteristics of the fields in which creative activity occurs. Generally, creativity can be understood as the result of an individual's intentional effort. This involves the ability to transform one's knowledge and experiences into an artifact or intersubjective text that others can perceive. In this context, creativity is the act of bringing something new into existence. However, culturally embedded experiences and elements of musical tradition continue to shape a composer's relationship with their work. Some scholars suggest that this relationship can be viewed as a *recombination of associative elements*.[2] Composer and musicologist Zvonimir Nagy focuses on the psychological origins of musical creativity. In his book *Embodiment of Musical Creativity: The Cognitive and Performative Causality of Musical Composition,* Nagy emphasizes the importance of interdisciplinary research of the composition process. According to the author, the connections between psychology and neuroscience play a crucial role in analyzing the compositional practices of individual composers. Nagy defines the embodiment (composition) of musical thought as *cognitive and performative causality*, arguing for the elements of creative

[2] Sarnoff A. Mednick, "The Associative Basis of the Creative Process," *Psychological Review* 69, no. 3 (May 1962): 229, https://doi.org/10.1037/h0048850.

associations found in the person and works of each composer: “whose associations become the foundation for an understanding of embodied creativity.”[3]

There are similarities in the thought of philosopher Alfred North Whitehead (1861–1947), who describes creativity as a fundamental metaphysical principle responsible for the emergence of novelty: “Creativity is the principle of novelty. An actual occasion is a novel entity diverse from any entity in the 'many' which it unifies.”[4] In this quote Whitehead portrays creation as the realization of potential – the fusion of actual facts and ideal forms into a new reality. In other words, creativity is a structural feature of being that encompasses the realities of the past. According to the philosopher, the world is composed not of static objects but of actions and processes – these are genuine yet fleeting moments of becoming.[5]

A connection can be made with the definition of *bisociation*, conceptualized by Arthur Koestler in 1977.[6] In his exploration of the nature of creativity, Koestler defines it as an *act of bisociation.*[7] According to the author, creativity involves the intersection of distinct conceptual spaces defined by codes and matrices – where *code* represents a fixed, habitual element of skill or behavior, and *matrix* refers to its variable component.[8] In his article *Bisociation of Artistic and Academic Approaches in Problem-Based Projects*, Falk Heinrich notes that Koestler metaphorically employs the notion of play as a space of possibilities constrained by rules. “This allows him to theoretically play with the possibility of new emergent conceptual spaces or conceptualisations.”[9]

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[3] Zvonimir Nagy, *Embodiment of Musical Creativity: The Cognitive and Performative Causality of Musical Composition*, 1st ed. (New York: Taylor and Francis, 2016).

[4] Alfred North Whitehead, *Process and Reality*, ed. David Ray Griffin and Donald W. Sherburne (New York: Free Press, 1978), 21.

[5] George R. Lucas, "Alfred North Whitehead," *The Stanford Encyclopedia of Philosophy* (Spring 2019), edited by Edward N. Zalta, https://plato.stanford.edu/archives/spr2019/entries/whitehead/.

[6] Arthur Koestler, *The Truth of Imagination* (London: Hutchinson, 1977).

[7] Bisociation – the simultaneous mental association of an idea or object with two fields ordinarily not regarded as related. “Bisociation,” *Merriam-Webster.com Dictionary*, Merriam-Webster, accessed June 12, 2025, https://www.merriam-webster.com/dictionary/bisociation

[8] Koestler, *The Truth of Imagination*, 40.

[9] Falk Heinrich, “Bisociation of Artistic and Academic Approaches in Problem-Based Projects,” *Journal of Problem Based Learning in Higher Education* 6, no. 1 (2018): 88–105, https://doi.org/10.5278/ojs.jpblhe.v6i1.1949.

This theoretical discourse on creativity and creative thinking resonates with the practices of composers who emphasize the rational foundations of creativity. In their work, one can identify the associative elements and recombinations described by Nagy – such as basic structures, cells, modes, series, and so forth – as well as causal relationships that function as expressions of compositional strategies or methods (e.g., Iannis Xenakis's stochastic composition, John Cage's chance operations). Inevitably, past experiences and knowledge permeate both unified (e.g., atonal and serial systems) and/or highly individualized compositional methods (e.g., Cornelius Cardew's graphic scores, Rytis Mažulis, Harry Patch's microtuning systems, spectralism, La Monte Young's sustained tones), thereby producing what we recognize as a new musical work. These practices embody the essence of creativity as defined by the aforementioned scholars. As Arnold Schoenberg stated, "Without organization music would be an amorphous mass, as unintelligible as an essay without punctuation, or as disconnected as a conversation which leaps purposelessly from one subject to another. The chief requirements for the creation of a comprehensible form are logic and coherence. The presentation, development and interconnection of ideas must be based on relationship. Ideas must be differentiated according to their importance and function." [10]

For these reasons, musical creation – characterized by clear, rational structure and logically conceived architectonics – proves to be the most adaptable to theoretical interpretations of the stages in the creative process.

1. Analytical Object

Precomposition (from Latin *pre-* before, *compositio* – arrangement, assembly) refers to the activation of creative thought within the material of a specific art form and the strategic transformation of ideas into artistic substance. In music, precomposition may involve the planning of elements for the future work, such as sketches of generative material (e.g., *Grundgestalt* in Schönberg's terms, or *pitch cell* and *rhythmic cell* according to Réti), harmonic conceptions, compositional techniques, formal logic, hypotheses of space-time structure, fragments of literary text, symbolic associations, form schemes, and more. Creative ideas are often expressed verbally – through the writing down of thoughts, notes, associations, references to sources, etc. – and are collectively referred to as *sketches*. As Friedemann Sallis states, sketches offer the public a new

[10] Arnold Schoenberg, *Fundamentals of Musical Composition*, ed. Gerald Strang, with the collaboration of Leonard Stein (London: Faber and Faber, 1967), 1.

path of approach to the composer and his music.[11] On a basic level, the study of sketches suggests a linear process through which a composer, artist, or writer moves from initial ideas to an overall draft (outline), eventually arriving at a finished result – the final version (*Fassung letzter Hand* in German). Nevertheless, in most cases, the creative process is significantly more complex, resembling a web of interrelationships rather than a straightforward and linear path.[12] Due to the diversity of compositional techniques and the originality of precompositional material used by composers, several analytical challenges persist. Dave Headlam (1994) points out that precompositional material is often used to reveal connections between sketches and the final version of a musical work. However, according to the author, using sketches to support the analysis of the finished composition should be regarded as methodologically less sound when compared to a systematic investigation of all possible relationships between sketches and the final work. [13] Although similar use of sketches appear in numerous studies (e.g., Sallis, 2015; Hall, 2004; Headlam, 1994), the use of sketches in the analysis of tonal music remains a matter of scholarly debate. The primary reason lies in the wide range of methods and techniques employed by composers, along with varying strategies of idea development. These factors continue to obscure the terminology used to describe the content and structural components of precompositional material. Sketches function as *mnemonic* devices (from the Greek *mneme*, meaning "memory") and are typically intended to preserve thoughts or ideas that are difficult to retain in memory with precision.

Although sketch studies often serve primarily as epistolary material for reconstructing compositional technique or even aspects of a composer's biography, a rich corpus of such documents in singular cases offers opportunities for more diverse analytical approaches. This includes the possibility of reconstructing the creative process itself, tracing its genesis and uncovering not only the compositional layers of individual works but also the retrospective formation of the piece. This allows for a clearer understanding of the development and evolution of creative thought, and it serves as a primary means to explore the extent to which

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[11] Friedemann Sallis, *Music Sketches*, Cambridge Introductions to Music (Cambridge: Cambridge University Press, 2015), 2.

[12] *Ibidem. 33-34.*

[13] David Headlam, "Sketch Study and Analysis: Berg's Twelve-Tone Music," *College Music Symposium* 33/34 (1993–1994): 160, accessed July 1, 2025, https://symposium.music.org/index.php/33-34/item/2104-sketch-study-and-analysis-bergs-twelve-tone-music.

early, unrefined precompositional material relates to the final product, the completed work. [14]

The shifting phases of precomposition present the central analytical challenge in studies that take sketches as their primary object of inquiry. Within the framework of established creativity process theories, it remains challenging to identify which features or types of precompositional material can be evaluated as distinctive (i.e., differential) components of the creative process. Existing studies tend to classify sketches based on characteristic signifiers, such as tables, graphs, drawings, and harmonic structures, but these analyses mainly focus on revealing the features of compositional technique. In contrast, from the perspective of the creative process itself, no clearly defined criteria exist for interpreting the meanings of different elements found in precompositional material and their significance for the development of creative thought. Such interpretative links become possible only through the application of combinations of existing theories of creativity. Erkki Huovinen[15] discusses this very prospect, arguing that theoretical eclecticism and revisionism in musical practices may provide a deeper understanding of the processual aspect of music composition.

2. Projection of the Idea

In studies of the creative process[16], the most attention is devoted to the initial moment of creation. It is important to note, however, that the boundaries of the creative beginning and end are themselves subjects of separate scholarly debates and investigations, as their identification is closely linked not only to the individuality of the creator but also to the evaluations of the surrounding environment (i.e., society), as well as to the performance, interpretation, and continued life of the work. For this reason, I focus specifically on the technological aspect – the evolution of the composition from its initial sketches to the final score.

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[14] Ian Bent, "The 'Compositional Process' in Music Theory 1713–1850," *Music Analysis* 3, no. 1 (1984): 54–55.

[15] Erkki Huovinen, "Theories of Creativity in Music: Students' Theory Appraisal and Argumentation," *Frontiers in Psychology* 12 (March 25, 2021), https://doi.org/10.3389/fpsyg.2021.612739.

[16] Graham Wallas (1926); Joseph Rossman (1931); Alfred Einstein (1939); Alex Osborn (1953); Joseph Kerman (1970); Michael Koberg and James Bagnall (1971); Marha Hyde (1977, 1980, etc.); Ian Bent (1984); Scott Isaksen and Donald Trefflinger (1985); Barry Cooper (1990 m.); William Kinderman (1991); Robert Fritz (1991); Sidney J. Parnes (1992); Paul Plsek (1996); Mihaly Csikszentmihalyi (1996); Joseph Auner (2005); Jean-Baptiste Thiebaut (2010); Guerino Mazzola, Joomi Park and Florian Thalmann (2012); Patricia Hall, Friedemann Sallis (2004, 2015); Sigitas Mickis (2017); Daniel L. Nevels (2018) and others.

Authors who emphasize systemic thinking define the creative point of departure in various ways: as *preparation* (by Wallas, 1926), *observation* (by Rosmann, 1931, and Koberg & Bagnall, 1971), *analysis* (by Bandrowski, 1985), *exploration* (by Kratus, 1989), or *conception* (by Fritz, 1991), among others. In contrast, the actual birth of an idea is often identified only in the second or third stages of these models. From a broader perspective – what could be termed the *golden ratio* – the idea emerges as the culmination of directed, conscious preparation, involving the accumulation of both material and knowledge. Therefore, the moment of *illumination* (in Wallas's terms) or the "arrival of the muse" should be understood not as a spontaneous miracle but as the result of prior knowledge, preparation, and work.[17] This contrasts with earlier scholars of the creative process, who often ascribed a foundational role to the moment of invention or idea-generation, positioning it as the primary stage in the creative continuum. [18]

The term *idea* (from the Greek *idea* – concept, image)[19] is defined as a plan, thought, or proposal; an image or impression arising from the surrounding environment and existing knowledge; an opinion or point of view; or a goal, or a more complex expression of feeling. In any case, ideas do not emerge *ex nihilo*. [20] Both etymologically and epistemologically, an idea is projected based on one's own and others' prior experiences, involving questioning, hypothesizing, and conducting relevant environmental investigations. Once a point of departure or core[21] is selected and the idea matures, methods of its realization are sought, the best solution is chosen, and it undergoes reflection. In other words, the formation of an ideational core enables the transition to the physical-psychological creative process. The segmentation of this latter process is

[17] Jane Piirto, "The Creative Process as Creators Practice It: A View of Creativity With Emphasis on What Creators Really Do," in *Perspectives in Gifted Education: Creativity*, vol. 5, ed. N. L. Hafenstein, K. Haines, and B. Cramond (Denver: Institute for the Development of Gifted Education, Ricks Center for Gifted Children, University of Denver, 2009), 50.

[18] In 1713, Johann Mattheson presents the first structural model of music composition, in which, based on the principles of rhetoric, the author distinguishes three structural elements of the music composition process: *Inventio* (invention), *Elaboratio* (elaboration),and *Executio* (execution, performance). Johann Mattheson, *Das Neu-eröffnete Orchestre* (Hamburg: B. Schiller, 1713),10.

[19] *Idea* – In Oxford learner dictionary: https://www.oxfordlearnersdictionaries.com/definition/american_english/idea

[20] From Latin *Ex nihilo* – from or out of nothing. Merriam-Webster, s.v. "ex nihilo," accessed June 30, 2025, https://www.merriam-webster.com/dictionary/ex%20nihilo.

[21] The definition proposed by the author of this article.

inseparable from the creator's personality, education, and other circumstances, yet essential components or phases within which micro-creative processes occur remain constant.[22] Such invariant macro-components or processes can be traced back to the theory of Johann Mattheson from the 18th century. In his *Das neu-eröffnete Orchestre* (1713), Mattheson, drawing upon rhetorical principles, identified three structural elements of the musical composition process: *Inventio* (invention), *Elaboratio* (elaboration), and *Executio* (execution, performance).[23] These three macro-phases, analogous to Plato's procedural triad,[24] encompass the entire framework of the creative process and are indispensable for the completion of any creative act. It is noteworthy that Mattheson designates the first stage as *inventio*, without accounting for preliminary steps leading up to this moment. This logical sequence may have been informed by two factors: (1) the limited psychological knowledge aimed at analyzing creative thinking at the time, and (2) belief that the creative process begins only once the idea or the core of the future work is in place.

Heinrich Christoph Koch, in his *Versuch einer Anleitung zur Composition* (1787), further developed Mattheson's rhetoric-based theory between 1782 and 1793, bringing it closer to music by creating a pedagogy that addressed the aspects – *Beyspiele* – and processes of composition. Koch utilized Johann Georg Sulzer's *Allgemeine Theorie der schönen Künste* (1774) schematic model, which was adapted from universal methodologies employed by ancient philosophers.[25] Sulzer translated the Latin concepts into German and applied them to the practice of musical composition and analysis, formulating the German triad as *Anlage* ("plan") – *Ausführung* ("execution") – *Ausarbeitung* ("elaboration"). Unlike Mattheson, Koch emphasized

[22] Based on the 16th-century theories of Nikolaus Listenius. He was one of the first music theorists who, in his work *Musica* (1537), distinguished the creative process and the musical work from the performance of the work. He called the creative process and the musical work *musica poetica*, and the performance of the work *musica practica*. Listenius defined the composer's task as the creation of a perfect and complete work — *opus perfectum et absolutum*. Michael Chanan, *Musica Practica: The Social Practice of Western Music from Gregorian Chant to Postmodernism* (London: Verso, 1994), 73.

[23] Mattheson, *Das Neu-eröffnete Orchestre,* 10.

[24] ἰδέα (idéa) – "idea," "form," the ideal prototype, the unchanging essence; ὕλη (hylē) – "matter," "material," chaotic, ever-changing potential; ψυχή (psychḗ) or δημιουργός (dēmiourgós) – "soul" or "Demiurge" (creator, craftsman) who shapes matter according to ideas.

[25] Lat. *Inventio* – the discovery of the main idea; *Dispositio* – the arrangement (of material); *Elaboratio* – the development (or refinement); *Decoratio* – the embellishment (or ornamentation).

thematicism[26] as fundamental to achieving the primary compositional purpose.[27] Koch characterizes the musical work's plan (*Anlage*) as "the fundamental compositional ideas interconnected and presented to the composer as a coherent whole, together with its principal harmonic properties." [28] Ultimately, ideas must appear in the only possible (perfect) order. Once this order is constructed, the composer must use their ability to think harmoniously when creating a melody and to experiment rationally.[29] Since the work organically unfolds from the concentrated ideational material modeled in the precomposition phase, the *Anlage* stage involves anticipating the totality and the main parts that form it – the generative potentials of the compositional material.

Thus, the projection of the idea – regardless of definitional variations – becomes a fundamental question concerning what we consider the creative process and at which point we mark its inception. This problematic "knot" marks an important divergence among scholars investigating the creative process, as they identify the moment of beginning differently. However, such disparity represents a natural expression of differing perceptions of the phenomenon. Within the field of compositional practice, the moments of idea genesis are often differentiated not only across various composers' methodologies but also within the creative trajectories of particular works.

In the second half of the 20th century, Italian-American psychiatrist Silvano Arieti systematized eight previously known models[30] of the creative thinking process in his seminal work, *Creativity: The Magic Synthesis*.[31] It is important to note, however, that some scholars reject the notion that creativity can be adequately explained as a linear sequence of model-based steps. Psychologist William Vinacke[32] for instance, argued that creative thinking does not conform to the principles of modeling.

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[26] Koch: "Thema is in Töne gefährte Affekt oder Carakter" – „A theme is an affect or character conveyed through tones.

[27] In his research, Koch aimed to investigate three key aspects: the highest function of art, the fundamental aesthetic properties of composition, and, most importantly, the conditions under which a composition must emerge in order to fulfil the purpose of art. Natasha Kovaleff Baker, *The Aesthetic Theories of Heinrich Christoph Koch* (London: Routledge & Kegan Paul, 1977), 183.

[28] The structure of the *Anlage* includes a melodic-motivic substance—*thematicism*—that generates the primary material and serves the expression of emotion.

[29] Kovaleff Baker, *The Aesthetic Theories of Heinrich Christoph Koch*, 186.

[30] The authors: G. Wallas (1926), J. Rossman (1931), J. Taylor (1959), M. Stein (1967, 1974), A. Koestler (1964), A. Oborn (1952), J.P. Guilford (1950).

[31] Silvano Arieti, *Creativity: The Magical Synthesis* (New York: Basic Books, 1976).

[32] William E. Vinacke, *The Psychology of Thinking* (New York: McGraw-Hill, 1953), 77.

Representatives of Gestalt philosophy expressed similar views. Max Wertheimer[33] conceptualized the process of creative thought as an integrated stream of thinking, incompatible with rigid segmentation. According to him, the creative process progresses from a structurally unstable and unsatisfactory situation (S1) toward a state that represents a solution or resolution (S2). The distance between these two points (from S1 to S2) is filled with elements prompted by constructive and productive thinking – elements whose structural coherence becomes apparent only in retrospect, upon viewing the process as a whole. This notion of cognitive "distance" or "gap" directly corresponds to what we might understand in compositional terms as the transition from sketches and drafts to the completed manuscript. Wertheimer also suggests that the movement from S1 to S2 often begins in reverse, as the thinker imaginatively projects potential relational links between a hypothesized outcome (S2) and the initial, unstable point of origin (S1).[34] This backward search for coherence often leads to moments of illumination, or the so-called Gestalt *"a-ha"* moment (Ger. *Aha-Erlebnis*), associated with the emergence of insight.

Gestalt theorists further posited that problem-solving involves qualitatively distinct phases: (1) the discovery of a principle or core idea (functional phase), and (2) the verification and realization of that idea (executive phase). Creative, constructive thinking is therefore understood as problem-solving, where the segmentation into discrete stages remains closely tied to a concrete goal – in this case, the musical work itself. The realization of such a work typically emerges from a drive toward resolution, the overcoming of a creative obstacle, or the selection among possible alternatives.[35] Although Wertheimer critiques the segmentation of the creative process – especially attempts to reduce creativity to a linear chain of discrete actions – the dual structure of idea generation and realization nonetheless implicitly supports a conception of creativity as a systematic and structured act.

At the end of the 20th century, Hungarian psychologist Mihaly Csikszentmihalyi[36] defined creativity through a triadic model that can be

[33] Max Wertheimer, *Productive Thinking* (New York: Harper, 1945), 7–8.

[34] *Ibid.*

[35] Raimondas Kaffemanas, *Mąstymo psichologija* (Šiauliai: Šiaulių universiteto leidykla, 2001), 79–83.

[36] Mihaly Csikszentmihalyi, *Creativity: Flow and the Psychology of Discovery and Invention* (New York: HarperCollins, 1996), 156.

interpreted similarly to Mattheson's compositional framework.[37] The model consists of three components: *domain*, *field*, and *individual*. For the result to be significant within its domain, it must meet two criteria: (1) it must be new and unique; (2) it must be original and anomalous.[38] The *domain* designates the discipline, set of symbolic rules and procedures, an area of knowledge or sphere of influence – or even an emergent, yet-to-be-defined idea or creative core – that informs the completed work. The *field* can be understood as a subset of the domain and represents the specific context in which the creative output is evaluated.[39] Within this narrower framework, the creative core emerges during a dynamic phase of the process and assumes its final form only once the product is realized. This model reveals a connection between divergent and convergent thinking: divergence generates novelty (the idea itself), while convergence brings about originality through the rational development of that idea.[40] Such cognitive structuring is identifiable in compositional practice. Lithuanian composer Sigitas Mickis emphasizes the importance of this perspective: "Describing the specificity of creativity is part of a broader scholarly debate concerning the specificity of creativity research itself (i.e., which areas are generalizable and which require domain-specific specialization)—the so-called 'creativity–domain problem'." [41]

Some theorists, propose a component mechanism instead of a phase-based model. Psychologists Mark A. Runco and Ivonne Chand[42] propose a *Two-Tier Model of Creative Thinking*, in which the *first tier* identifies three core skills that govern the creative process: *problem finding* (including identification, definition, etc.), *ideation* (fluency, originality, flexibility of ideas, etc.), and *evaluation* (critical reflection).[43] The *second tier* represents *supporting processes*, namely the creator's knowledge and motivation, both of which are highly dependent

[37] Similarities can also be seen in Teresa M. Amabile's (1993) Componential Model of Creativity (see: Teresa M. Amabile, "What Does a Theory of Creativity Require?" *Psychological Inquiry* 4, no. 3 (1993): 179–181).

[38] Daniel L. Nevels, "Music Software in the Compositional Learning Process," Graduate Theses and Dissertations (2018), 8.

[39] *Ibid.,* 9.

[40] Leif Runar Forsth, *Naujas praktinis mąstymas* (Vilnius: Eugrimas, 2014), 22-25.

[41] Sigitas Mickis, "Kūrybingumo fenomeno muzikos kompozicijoje tyrimo teorinis modelis," *Lietuvos muzikologija* 8 (2017): 48.

[42] Mark A. Runco and Ishwar Chand, "Cognition and Creativity," *Educational Psychology Review* 7, no. 1 (1995): 243.

[43] Guerino Mazzola, Jinghui Park, and Fabio Thalmann, *Musical Creativity: Strategies and Tools in Composition and Improvisation* (Computational Music Science) (Heidelberg: Springer, 2012), 142–143.

on the factors of the first tier. It is important to note that following the principle of duality the authors further subdivide these components into smaller segments, which in content resemble other models that aim to segment the creative process. A central focus of the theory is *ideation*, which, in their model, occupies a *key structural position*. This term encompasses not only the generation of an idea that becomes the core of the creative work but also the concept, structure, and essential operational dimensions of creativity. The Runco/Chand model is particularly notable in that it presents *ideation* as the central axis of the entire creative process, one that is subject to opposing forces throughout. In other words, *ideation* is not a fixed element, but rather a dynamic component that shifts and evolves during creative activity.

In the second half of the 20th century, scholars turned their attention to the popular seven-step model of creative thinking proposed by Alex Osborn[44], the originator of the widely known technique of *brainstorming.*[45] This model introduces a theory of balance between analysis and imagination. Although Osborn's ideas are somewhat distant from the specific domain of musical creativity, it is important to highlight the sequence of steps he proposes, which correlates with the stages of musical composition. In Osborn's model, primary emphasis is placed on *orientation*, or the anticipation of a problem. In the context of this study, the musical work serves as a creative goal. While this first step does not yet fulfill the function of a fully formed idea (Osborn labels idea generation as the third step in his model), a clear orientation or envisioned outcome (the composition as the final product) acts as a germinal strategic impulse. Upon this foundation, and with the aid of analysis (the second step in Osborn's sequence), the core of the idea (or ideas) is cultivated.[46] In this respect, Osborn's insights are more closely aligned with earlier research that identifies the beginning of the creative process as the formation of the initial idea.

Among scholars who identify the beginning of the creative process with *preparation* (by Wallas, 1926; Taylor, 2014), *exploration* (by Kratus, 1989), or *analysis* and *conception* (by Barron, 1988; Fritz, 1991;

[44] Alex F. Osborn, *Applied Imagination* (New York: Charles Scribner's Sons, 1953).

[45] *Brainstorming* is one of the active methods for generating ideas, with its rules and principles established by Osborn (1948). While brainstorming is typically conducted in groups to facilitate collective idea generation, there are variations of the method that apply clear guidelines for individual problem-solving as well. It is noteworthy that Osborn conceived the concept of a purposeful idea both in his notion of "alternative selection" and through the development of brainstorming rules as a structured tool to facilitate this process.

[46] Osborn, *Applied Imagination*, 36-48.

Koberg & Bagnall, 1971; Bandrowski, 1985), this initial phase consistently occupies the primary position. Most models of creative thinking developed after 1926 are, in many respects, variations of sociologist and psychologist Graham Wallas's foundational framework, which – despite widespread use – has not been fundamentally redefined in terms of how the creative process is segmented. For this reason, Wallas's model serves in this study as a conceptual invariant from which alternative models of the creative process can be examined. In his 1926 book *The Art of Thought*, Wallas introduced one of the earliest and still most widely cited models of creative thinking. Synthesizing insights from scientists and observations on the process of problem-solving and creativity[47], Wallas proposed a four-stage model:

Preparation – The creator actively prepares to solve a problem by consciously investigating its dimensions.

Incubation – The problem shifts into the subconscious, where the solution begins to develop beyond conscious awareness.

Illumination – Also referred to as insight or creative breakthrough, this is the moment when the solution or idea emerges from the subconscious into consciousness.

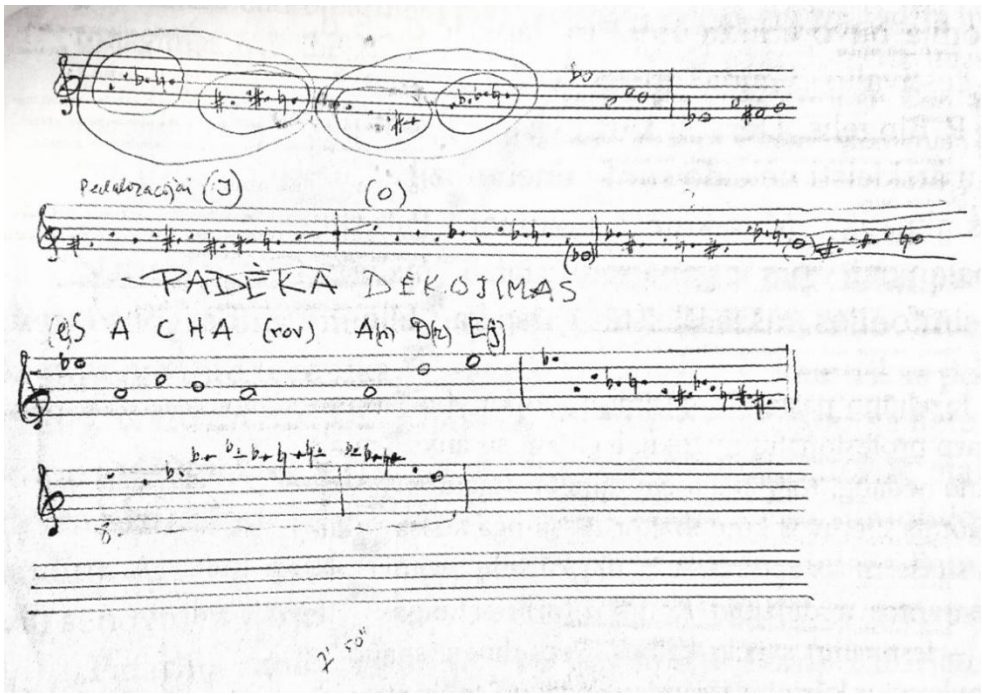
Verification – The idea is tested, developed, and applied in a concrete context.

In this framework, the creative idea corresponds to the third stage – *illumination*, positioning it near the end of the creative sequence. This segmentation implies that a significant part of the creative process belongs to the first three stages, which involve both conscious and unconscious cognitive activity. The *preparation* phase is an extended period of intentional engagement during which the creator formulates a strategy or plan for implementing a potential outcome. Although no tangible idea may yet exist at this point, this phase includes goal setting, question formulation, hypothesis development, task planning, knowledge gathering, fact collection, and experimentation with various elements to identify promising configurations. [48]

[47] In the context of the concepts used by the author, problem-solving is equivalent to creative thinking. Applying this theory within musicology contexts, the concept of a problem—as an active notion—is replaced by the definition of a musical work**.**

[48] Graham Wallas, *The Art of Thought* (New York: Harcourt, Brace and Company, 1926), 133–135.

In the context of musical composition, the preparation phase corresponds to the composer's earliest creative notations – initial sketches and conceptual cues for the future work. These may range from abstract sources of inspiration to detailed schematic drafts through which the composer begins to shape the core compositional material (e.g., Example No.1).



Example no. 1 – Julius Juzeliūnas' "Gratitude" (lit. Dėkojimas) – precompositional material. Modal structures (from Lithuanian Archives of Literature and Art, F.260-84).

This stage represents a period of deliberate effort and convergent thinking. Many researchers emphasize that formulating the problem is often more important than solving it.[49] In this regard, analyst Steven H. Kim notes that the problem or objective must be both difficult and complex. According to Kim, creative thinking is provoked by confronting a challenge or problem. More specifically, creativity cannot occur within a "comfortable" environment – a condition that renders the widely discussed concept of "creative struggle" a tangible and real phenomenon.[50]

[49] Donald E. Papalia, Carol J. Camp, and Ruth Duskin Feldman, *Adult Development and Aging* (New York: The McGraw-Hill Companies, Inc., 1996), 56.

[50] Steven H. Kim, *Essence of Creativity: A Guide to Tackling Difficult Problems* (New York: Oxford University Press, 1990), 42–45.

Similarly, psychologist Ellis Paul Torrance conceptualizes creative thinking as a process in which (1) ambiguities, problems, gaps in information, and unusual or unexpected phenomena are sought out (in the context of music composition—original and conceptual ideas); (2) hypotheses are formulated and questions posed, such as exploring methods for realizing an idea, by developing technological or compositional approaches (e.g., in serialist practices, the creation of functional tone rows); (3) the proposed hypotheses or assumptions are evaluated and tested, which in music may include the testing of constructive elements, their variational potential, and, if necessary, the revision or repetition of decision-making processes; (4) the results are presented (completion of the musical composition).[51] Torrance notably identifies Wallas's earlier four-stage model as the foundation for many contemporary creative thinking models. Indeed, most other widely known theories of the creative process tend to replicate the structure of Wallas's framework, often with only minor modifications or additions (e.g., Koberg & Bagnall, 1981; Bandrowski, 1985; Barron, 1988; Kratus, 1989; Fritz, 1991; Parnes, Isaksen & Treffinger, 1992, among others). The inclusion of an *incubation* phase and the element of sudden *illumination* in this popular model offers insight into the interrelation between creative and critical thinking. The fact that Wallas's model begins with intentional *preparation* and ends with critical evaluation (*verification*) suggests that creative and analytical thinking complement one another. As Torrance notes: "Creative thinkers verify and evaluate, but they expect surprises[52] and therefore avoid evaluating too early." [53]

Although some models of the creative process[54] define creativity as a mysterious[55] or miraculous phenomenon, dominant theories increasingly attribute the emergence of new ideas to conscious efforts to balance analysis and imagination. This notion is supported by the work of constructivist composers of the dodecaphonic system (e.g., Schönberg, Berg, Webern), whose compositional thinking was grounded in a rational, logical, and combinatorial 12-tone structure (the series). Joseph

[51] Ellis Paul Torrance, "The Nature of Creativity as Manifest in Its Testing," in *The Nature of Creativity*, ed. Robert J. Sternberg (Cambridge: Cambridge University Press, 1988), 50.

[52] As early as the 18th century, Heinrich Christoph Koch asserted that the final refinement of a work of art is determined by contingent (or incidental) values.

[53] Torrance, E.P. "The Nature of Creativity as Manifest in Its Testing", 52.

[54] In the eighteenth century, Heinrich Christoph Koch emphasized the aspect of Genialität—which he equated with the concept of a „Wunder" (miracle)—as one of the essential conditions for attaining the ultimate purpose of art.

[55]Kovaleff Baker, *The Aesthetic Theories of Heinrich Christoph Koch*, 183.

Rossman[56], conducted a large-scale survey involving 710 inventors and creators, examining the stages of their creative processes and extended Wallas's original four-stage model into a more detailed seven-step framework: (1) observation of needs and difficulties (problem identification); (2) analysis of the need (problem analysis); (3) investigation of all available information (information gathering); (4) formulation of all objective solutions (solution generation); (5) critical evaluation of these solutions (solution evaluation); (6) emergence of the new idea or invention (idea/invention generation); (7) experimentation and refinement (testing and implementation). Regardless of how finely the creative process is segmented, a clear trend emerges: a substantial preparatory phase typically precedes the moment of idea generation. In the context of musical creativity, this preparatory phase may be understood as *precomposition* – a stage distinct from the act of composition itself (which assumes a clear concept and execution plan). Between these two phases lies what Wallas describes as the *incubation* stage, in which accumulated knowledge and experience begin to operate at the unconscious level. Wallas also uses the terms "subconscious" and "fringe-conscious" to refer to this transitional cognitive space.[57] The *incubation* phase allows the creator to synthesize prior knowledge and collected materials, refine key conceptual elements, and discard irrelevant informational residue.[58] This stage serves as a transitional bridge leading to the emergence of the creative idea. Based on the findings of the aforementioned theorists, precomposition in music can be identified or classified using well-known models of the creative process. Although most of these models were not developed initially with musical composition in mind, there are clear functional parallels, for instance, between the preparatory work undertaken before writing a literary text and that of composing music. Such parallels provide a theoretical basis for integrating general creativity theories into the discourse on musical creativity.

Music, as one of the most expressive forms of human creative activity, provides a compelling testing ground for general theories of creativity. However, research into musical creativity is often conducted within disciplinary silos, somewhat isolated from broader frameworks of creative cognition and process theory. Of course, in music, the projection of an anticipated result is inseparable from the work itself, which acts as

[56] Joseph Rossman, *The Psychology of the Inventor* (Washington, DC: Inventor's Publishing, 1931), 77.

[57] Wallas, *The Art of Thought* ,140.

[58] *Ibid.,* 141.

an expression of individual identity. Diverse examples of creative practice suggest that the most objective way to examine the creative processes of composers is through a synthesis of multiple theoretical frameworks. When comparing the creative tendencies of the 19th and 20th centuries, it becomes evident that not only the character of creativity but also the nature of the compositional process itself has undergone significant transformation. As a result, the phases and internal structure of the creative process become dynamic and variable elements – a process within a process.

3. Realization of the Idea

A frequently emphasized position in creativity research is that a formulated concept, often built upon an original and flexible operational idea, develops through a process of systematic and sustained work. However, this phase of the creative process often overlaps with another critical stage – *verification*, as described by Wallas. In this phase, the idea is expanded, tested, and evaluated in terms of its validity, and analyzed to determine whether the anticipated outcome aligns with the initial artistic or conceptual goal. Decisions and discoveries made during this phase are supported by discipline-specific or interdisciplinary knowledge. As in the initial phase, this work may occur on a conscious cognitive level, or in a combined mode, where the conceptual foundations of the idea are developed through practical experimentation. In the case of composers, this often involves the fixation of primary compositional material – harmony, rhythm, formal architecture, and so forth – with a clearly defined logical-conceptual projection of the final artistic result.[59] The act of self-evaluation carried out by the creator may be likened to Koberg and Bagnall's *selection* phase, in which the rotation and testing of ideas are emphasized. While, at least in theory, the *verification* stage involves only minor corrections that do not significantly alter the overall structure of the work, in practice, radical changes may still occur. For instance, psychologist Romanas Kafemannas proposes a distinct strategy for addressing problems that may arise specifically during the *verification* phase. He divides this stage into four sub-stages: *Preparation* – identifying a problem or a gap; *Data analysis* – determining what must or could be changed and proposing a hypothesis; *Solution* – planning a course of action, choosing a method, and seeking a resolution; *Evaluation of the solution* – testing whether the chosen solution confirms the initial hypothesis. Kafemannas also incorporates the *incubation* phase and *insight* into this model, suggesting that creative verification cannot be

[59] Sallis, *Music Sketches*, 132-133.

reduced to purely rational procedures alone.[60] That said, the microprocesses of *verification* can best be observed through the analysis of precompositional materials. Meanwhile, external evaluation is essential not only for the creator but also for the creative work itself. This stage often determines the lasting artistic value and cultural impact of a composition within the broader context of creative activity, specifically in this case – music. Such evaluation is influenced by temporal, cultural, social, and economic factors, which collectively shape the work's significance and relevance within its historical and artistic context.[61]

The realization of a formed idea is expressed through various processes. Drawing on established models of the creative process, the idea is implemented through execution (*Ausführung*) and elaboration (*Ausarbeitung*), as defined by Koch (1787), that is, through practical action or sustained work that enacts the conceptual plan developed during earlier phases (see Bandrowski, 1985; Koberg & Bagnall, 1971). From a psychological perspective, this stage is shaped by several key factors, including motivation, the structural properties of the idea, and most importantly, self-analysis, evaluation, or verification. Suppose the idea serves as the central anchor of the creative process. In that case, the stages both preceding and following its emergence constitute a network of influences, insights, strategies, and individual modes of creative behavior, the specifics of which vary widely from case to case. As is often emphasized, "A composition is first born in the mind. And for it to mature [...] an impulse is needed – a point of contact with life, with people." [62]

Graham Wallas wrote: "I shall not [...] deal at any length with the stage of Preparation. It includes the whole process of intellectual education. Men have known for thousands of years that conscious effort and its resulting habits can be used to improve the thought-process of young persons, and have formulated for that purpose an elaborate art of education."[63] In this light, *preparation* fundamentally refers to the acquired capacity to work with material, to understand and manipulate the principles of musical composition, and, through a

[60] Kaffemanas, *Mąstymo psichologija,* 82.

[61] Robert S. Albert and Mark A. Runco, "A History of Research on Creativity," in *Handbook of Creativity*, ed. Robert J. Sternberg (Cambridge: Cambridge University Press, 1999), 16–36, 52.

[62] Julius Juzeliūnas, „Julius Juzeliūnas apie save, jauno žmogaus savarankiškumą ir muzikos prasmę. Pokalbis su Dalia Kairaityte," in *Julius Juzeliūnas. Straipsniai. Kalbos. Pokalbiai. Amžininkų atsiminimai*, ed. Algirdas Jonas Ambrazas (Kaunas: Spindulys, 2002), 327.

[63] Wallas, *The Art of Thought*, 82-83.

narrowing of focus, to select and generate new or transformed material for a particular work. Lithuanian composer Justina Repečkaitė describes her process as follows: "When compositing I find it important to refine the material. I often rewrite my musical systems until I have learned them by heart, streamline them into a 'musical key' in visual form, and only then do I begin notating the score."[64] Repečkaitė's reflection resonates with Wallas's notion that during the preparation phase, the mind seeks to refine and select ideas, while the verification phase reenacts this filtering process. The composer's mind, working within a relatively narrow field of already refined elements, applies nearly the same logical principles to consciously control verification as those used to direct preparation. Without these phases and their mutual interactions artistic work can be composed.[65] By contrast, *illumination* is a *flash*[66] – the moment of an idea's emergence, which, in terms of measurable time, is the result of long, often unsuccessful and preliminary attempts. It represents the sudden crystallization of prior effort, emerging unexpectedly as a culmination of complex mental activity.

The analytical writings, compositions, and the preference for rational construction in the work of American composer Milton Babbitt demonstrate a conceptual approach that is broadly analogous to the German term *Aufbau*, meaning construction or structured building. Musicologist Zachary Bernstein, who has extensively studied Babbitt's oeuvre, argues that the composer's analytical practice reveals a concentrated focus on fixed motivic patterns. As in *Aufbau*, the construction process proposed in Babbitt's writings is typically hierarchical, whereby unprocessed surface-level data are progressively integrated into increasingly complex structures.[67] The combination of these abilities, their positioning within musical material, and their manifestation across the temporal dimension of a composition result in what we understand as the creative process.

As noted by various scholars, musical composition continues to be studied without explicit information or links to cognitive processes, and as a result composers' creative processes are largely disembodied. When

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[64] O. Jamalavičiūtė, „Justina Repečkaitė: ‚Muzikos rašymas – kaip kodavimas'," *Muzikos antena*, June 21, 2018, accessed June 6, 2025, https://muzikosantena.lt/2018/06/21/justina-repeckaite-muzikos-rasymas-kaip-kodavimas/.

[65] Wallas, *The Art of Thought* ,81.

[66] *Ibid.,* 94.

[67] Christian Damböck, ed., *Influences on the Aufbau*, Vienna Circle Institute Yearbook 18 (Cham: Springer International Publishing, 2016), 55.

musical composition is examined in isolation from the mental faculties that underpin all other forms of human thought, the possibility of understanding creativity at a fundamental level is effectively excluded.[68] Consequently, the eclecticism that emerges from broader efforts in music research to engage with creativity theories often results in both theoretical vagueness and inconsistency in the selection and application of frameworks. Theoretical skepticism, in turn, appears to foster premature conclusions or dismisses the potential for engaging with and adapting existing models. Nevertheless, the analysis of the creative process cannot rely exclusively on empirical studies, particularly when the aim is to assess case-specific creative modifications during the realization stage (i.e., the *verification* stage). Authors of differing theoretical models propose heterogeneous definitions for evaluation, iteration, and selection within the compositional realization process. For this reason, the theoretical frameworks I reference in this study are not adopted as prescriptive visions of creative outcomes, but rather as methodological guides that enable an objective analysis of creative processes. This stance aligns with the perspective of Erkki Huovinen, who, in his study "Theories of Creativity in Music: Students' Theory Appraisal and Argumentation"[69], critically engages with the challenges of applying creativity theories in musicological research. According to Huovinen, the scholarly resistance to general theories of creativity often reflects a deep-seated disciplinary concern. On the one hand, general creativity theories are sometimes viewed as overly focused on cognitive mechanisms or as being unjustifiably rooted in a modernist conception of individual innovation. On the other hand, some scholars may perceive themselves as defending against universalizing tendencies and culturally blind science. This kind of epistemological commitment can be challenging to reconcile with the apparent generality of creativity theories. From this perspective, creativity may seem simultaneously too narrow and too broad to be meaningfully examined under unified theoretical models.[70]

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[68] José L. Besada, Anne-Sylvie Barthel-Calvet, and Cristóbal Pagán Cánovas, "Gearing Time Toward Musical Creativity: Conceptual Integration and Material Anchoring in Xenakis' *Psappha*," *Frontiers in Psychology* 11 (2021): 32, https://doi.org/10.3389/fpsyg.2020.611316. 32

[69] Erkki Huovinen, "Theories of Creativity in Music: Students' Theory Appraisal and Argumentation," *Frontiers in Psychology* 12 (March 25, 2021), https://doi.org/10.3389/fpsyg.2021.612739.

[70] *Ibid., 87-88.*

4. Adaptation of Creative Process Models in Composition

The expression of creative thought is inherently bound to the individuality of the composer. Consequently, no general model of creativity can be applied in its original form, particularly regarding the sequence of process stages as proposed by any one theorist. However, a close examination of major theories reveals shared denominators and supplemental elements that allow us to map temporal stages of the compositional process onto phases identified in studies of specific authors, works, or creative outputs. To construct a flexible and adaptive model, it is essential to distinguish between *Invariant macro-phases*—those stages common to most creativity models and *Variable, conditional (micro) phases*—contingent elements that may vary depending on the compositional context.

These intersection points and unique theoretical aspects reveal key methodological challenges. Firstly, many models resist functional assessment. Secondly, each model features phase structures that are inherently indeterminate and cannot always be fully described or operationalized. Finally, in real-world compositional practice, it is often difficult to model a sequential flow from initial idea to concrete decisions. As Tom Ritchey has emphasized, without monitoring, it becomes impossible to control outcomes or scientifically reconstruct the creative flow.[71] "Every synthesis is built upon the results of a preceding analysis, and every analysis requires a subsequent synthesis in order to verify and correct its results."[72] However, while analysis and synthesis provide a methodological backbone, they lack the quantitative differentiation needed to account for the variable-rich creative phases of various models. Problem spaces may be framed in terms of quantitatively undefined variables and conditions. Likewise, these many-sided variables can be synthesized into configurations—well-defined relational structures that reflect the decision-making "spaces" composers navigate.

In this approach, the compositional process is organized into *macro-phases*, each containing *micro-phases*—discrete subprocesses that encode specific variables. Crucially, *macro-phases* are not necessarily of greater extent; instead, they denote stability and structural prominence within the overall creative timeline. Depending on the content of precompositional material and the interplay of models, the number and

[71] Tom Ritchey, "General Morphological Analysis: A General Method for Non-Quantified Modelling," adapted from a paper presented at the 16th Euro Conference on Operational Analysis, Brussels, July 1998, 2.

[72] Tom Ritchey, "Outline for a Morphology of Modelling Methods: Contribution to a General Theory of Modelling," *Acta Morphologica Generalis* 1, no. 1 (2012): 15, https://www.swemorph.com/amg/html/amg-1-1/amg-1-1.html.

order of phases are potentially unlimited. By relinquishing the constraint of fitting analysis into a single theoretical model, we gain the capacity to develop customized compositional process models attuned to individual composers or specific works, and accurately identify the distinctive features of a composer's creative flow.

To facilitate this adaptation and synthesis of creativity models, this study employs morphological analysis, originally introduced by Fritz Zwicky in 1942. This method enables the systematic enumeration and exploration of all potential modifications within a given problem-solution complex. Morphological analysis eliminates blind variant searches. By constructing a morphological "box" – an inclusive container encompassing all functional attributes (in this case, all possible definitions of process phases and their enactments) – we can synthesize multiple creativity models. The resulting variable matrix provides a toolkit for analyzing musical precompositional material through the lens of *macro-* and *micro-phases* defined in this study. As Ritchey explained: "Essentially, general morphological analysis (GMA) is a method for identifying and investigating the total set of possible relationships or 'configurations' contained in a given problem complex. In this sense, it is closely related to typology analysis, although GMA is more generalized in form and has far broader applications."[73]

Since any action unfolds within the dimension of time, this movement is most effectively visualized along a horizontal axis in a three-dimensional system. Within this temporal horizon, the stages of well-known creative-process models, when dynamically deconstructed, enable the expansion of phase variants to an indeterminate number. However, to simplify the phase selection process and apply segments of different theories to individual case studies, a reduction of phases is necessary.

As noted, creative process models and their phase variations generate a wide range of possibilities. Graham Wallas, who laid the theoretical groundwork for creativity in the early 20th century, divided the creative process into four *macro-phases* in his 1926 model: *Preparation*, *Incubation*, *Illumination*, and *Verification*. These phases recur in all subsequent models and are therefore adopted here as core *macro-phases*. Despite varying definitions, the phases across different theories remain similar, with only minor variations in content. This commonality allows us to identify shared denominators, typologize creative phases by their nature and significance, or – using a

[73] Ritchey, "General Morphological Analysis. A general method for non-quantified modelling", 3.

morphological analysis perspective – to include an analysis–synthesis moment, which serves to reduce the set of possible phases.

Although the creative process begins at the mental level, prior to any material inscription of ideas in precompositional documents, this phase cannot be empirically identified or typologized. Nevertheless, some theorists explicitly acknowledge this as a *pre-preparatory* mental phase: *observation of a need* (Rossman 1931), *orientation* (Osborn 1952), *objective finding* (Parnes, Isaksen & Treffinger 1992), *problem finding* (Runco & Chand 2012), *formation of the idea* (Jarmalavičiūtė 2020). Each author positions the onset of the creative process within a non-material realm, consistently marking the moment of goal/need identification or decision to create. We can therefore interpret this as the *pre-preparatory* phase.

Since Wallas's model and its phases are used in this study as macro-phases—immutable determinants of the creative process – later theories and their phases are reduced according to the logical structure of Wallas's model. The selection of creative-process theories I discuss in this paper reflects their predominance in the academic literature. A visual representation of each theory's functional phases is provided in Table 1.

As can be seen from the creative process models presented in Table 1, a total of 72 hypothetical phases of the creative process emerge. In the reduced version presented below, this number is brought down to 35. The zero and fifth phases represent stages outside the boundaries of those typically documented in precompositional material, while the first through third macro-phases, each containing 7–8 micro-phases, correspond to clearly identifiable stages within the precompositional domain. By contrast, the fourth phase, *verification*, pertains to the compositional phase proper, in which tangible musical fragments begin to take shape and are ultimately integrated into the final manuscript of the work. Although Wallas's four-phase model appears in virtually every scholarly discussion of musical composition, it is important to recognize that the theoretical identification of phases may be conditional in specific cases and may not conform to the sequence proposed by the original model. Each composer's creative process individually determines the configuration of macro-phases, their micro-variants, and their relative proportions within the combinatorial model. The reduction of multiple models eliminates redundant, overlapping, or semantically identical phases. Nevertheless, it enables the construction of a flexible, highly adaptive model tailored to the creative process of an individual composer – or even a specific work – without restricting analysis to any one established theory. It is crucial to acknowledge that the individual

characteristics of a composer's creativity necessitate a differentiated phase structure.

Classical theories of creativity										
Mattheson 1713		Inventio		Elaboratio					Executio	
Mattheson 1739		Inventio		Dispositio	Elaboratio	Decoratio			Executio	
Koch 1802		Anlage		(Structure)	Ausführung	Ausarbeitung				
20th century theories										
Wallas 1926		Preparation (definition of issue, observation, and study		Incubation (laying the issue aside for a time)	Illumination (the moment when a new idea finally emerges	Verification (checking it out)				
Rosmann 1931	Observation of a need or aficulty/ Analysis of the need	A survey of all available information	Formulation of all objective solutions	A critical analysis of these solutions for their advantages and disadvantages	The birth of the new idea - the invention	Experimentation to test out the most promising solution, and the selection and perfection of the final embodiment				
Osborn 1952	Orientation: pointing up the problem	Preparation: gathering pertinent data	Analysis: breaking down the relevant material	Ideation: piling up alternatives by way of ideas	Incubation: letting up, to invite illuanination	Synthesis: putting the pieces together	Evaluation: judging the resulting ideas			
Koberg/Bagnall 1981	Accept the situation (as a challenge)	Analyze (to discover the "world of the proble")	Define (the main issues and goals)	Ideate (to generate options)	Select (to choose among options)	Implement (to give physical form to the idea)	Evaluate (to review and plan again)			
Bandrowski 1985		Analysis - standart planning, insight development	Creativity - creative leaps, strategic connections	Judgment - concept building, critical judgment	Planning - action planning, creative contingency planning	Action - flexible implementation, monitoring results				
Barron 1988		Conception (in a prepared mind)		Gestation (time, intricately coordinated)		Parturation (suffering to be born, emergence to light)			Bringing up the baby (further period of development)	
Kratus 1989		Exploration		Development		Repetition			Silence	
Fritz 1991		Conception		Vision	Current reality	Take action	Adjust, learn, evaluate	Building momentum	Completion	Living with your creation
Parness/Isaksen/ Treffinger 1992	Objective finding	Fact finding		Problem finding	Idea finding	Solution finding			Acceptance finding	
Cropley 2000		Preparation - perceiving or identifying a problem	Information - learning more about the subject of the problem, accessing relevant information	Incubation - thinking divergently about the problem, making new links and associations	Illumination - becoming aware of a novel possibility, a solution or interpretation	Verification - checking and evaluating the novel outcome	Commuication - displaying the novel outcome to other's and getting feedback	Validation - the creative outcome is judged in terms of its relevance and effectiveness by judges		
Kilgour 2006		Problem difinition		Idea generation and creative techniques	Internal evaluation and refinement	Idea expression				
Runco/Chand 2012	Problem finding	Ideation				Evaluation				
Jarmalaviciute 2020	Formation of an idea	Research		Sketching	Conception	Score	Editing		Performance	

Table no. 1. Summary of creativity process models (J. Valčikaitė-Šidlauskienė)

The analytical framework presented here – built on combinatory models of creativity theories – is illustrated through a case study of Lithuanian composer Julius Juzeliūnas (1916–2001)[74] and his *String*

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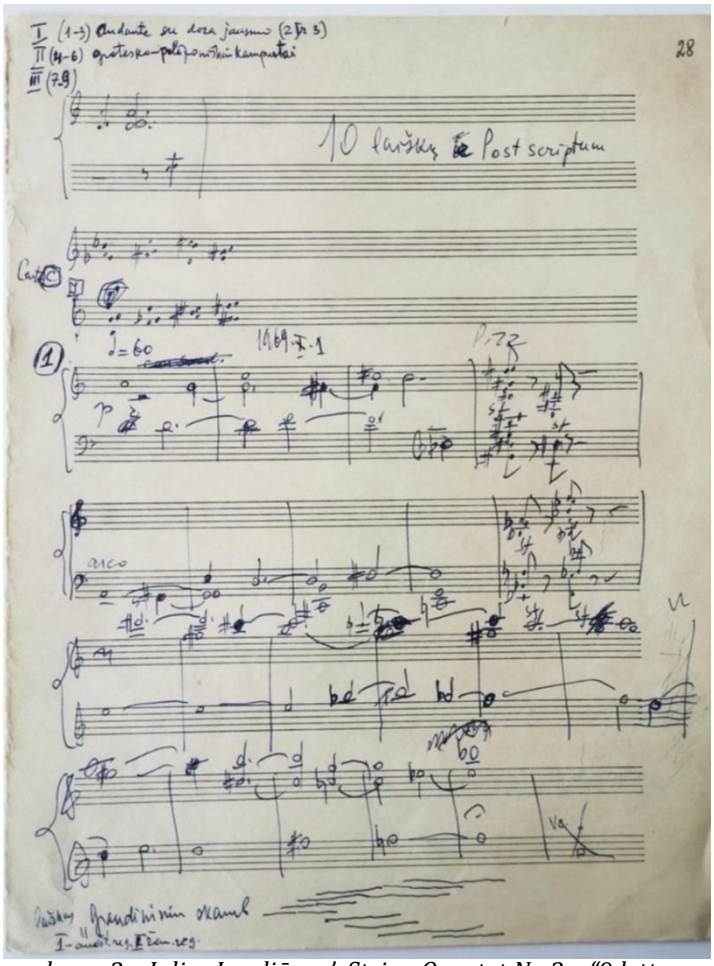
[74] Julius Juzeliūnas (1916–2001) was one of the most prominent Lithuanian composers of the 20th century, as well as a long-standing composition pedagogue who nurtured several generations of Lithuanian composers. He developed and refined his own compositional system, fundamentally grounded in extensive studies of Lithuanian folk music. By analyzing characteristic intonational cells and pivotal tones,

Quartet No. 3: 9 Letters and Post Scriptum (1969).[75]

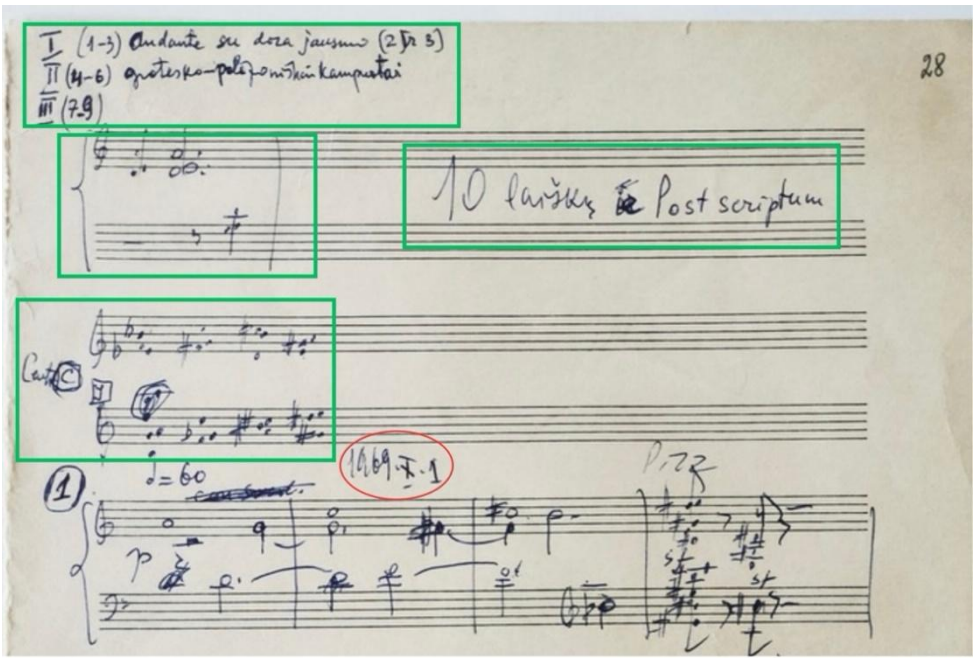


Example no. 2 – Julius Juzeliūnas' String Quartet No.3 – "9 letters and Post Scriptum" (lit. "9 laiškai ir Post Scriptum) – manuscript (from Lithuanian Archives of Literature and Art, F.260-91).

and by uncovering their complex systems of recurrence and interrelation, Juzeliūnas formulated a unique modality-based harmonic system. This theoretical framework was later consolidated in his monograph *On the Structure of the Chord* (*Akordo sandaros klausimu*, 1972), which served as the basis for his postdoctoral dissertation.

[75] Juzeliūnas's oeuvre presents a particularly valuable case for studies of the compositional process. On the one hand, his creative method was explicitly conceptualized in his aforementioned habilitation work; on the other, a substantial archival corpus—including manuscripts, sketches, and other materials related to his compositional activity—has been preserved, allowing researchers to trace the genesis and development of his finished works. These documents are held in the Lithuanian Literature and Art Archive (LLMA, F.260).

Analyzing the compositional sketch, two crucial indicators emerge at the outset: a formal designation – namely, the title, which encapsulates the structural content of the work – and a clearly articulated three-part division, each part comprising three smaller segments, which the composer identifies as "letters." Additionally, a harmonic plan is presented, serving as the principal operational and connective framework for the entire musical material. These segments are marked in green (e.g., no. 3):

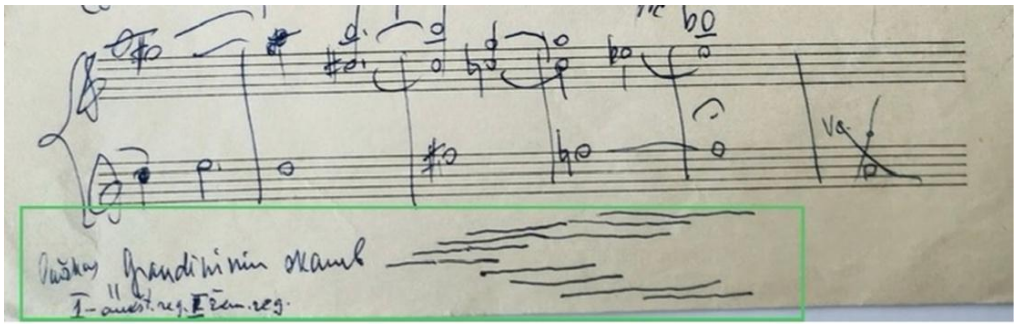


Example no. 3 – Julius Juzeliūnas String Quartet No.3 – "9 letters and Post Scriptum" (lit. "9 laiškai ir Post Scriptum) – manuscript fragment (from Lithuanian Archives of Literature and Art, F.260-91).

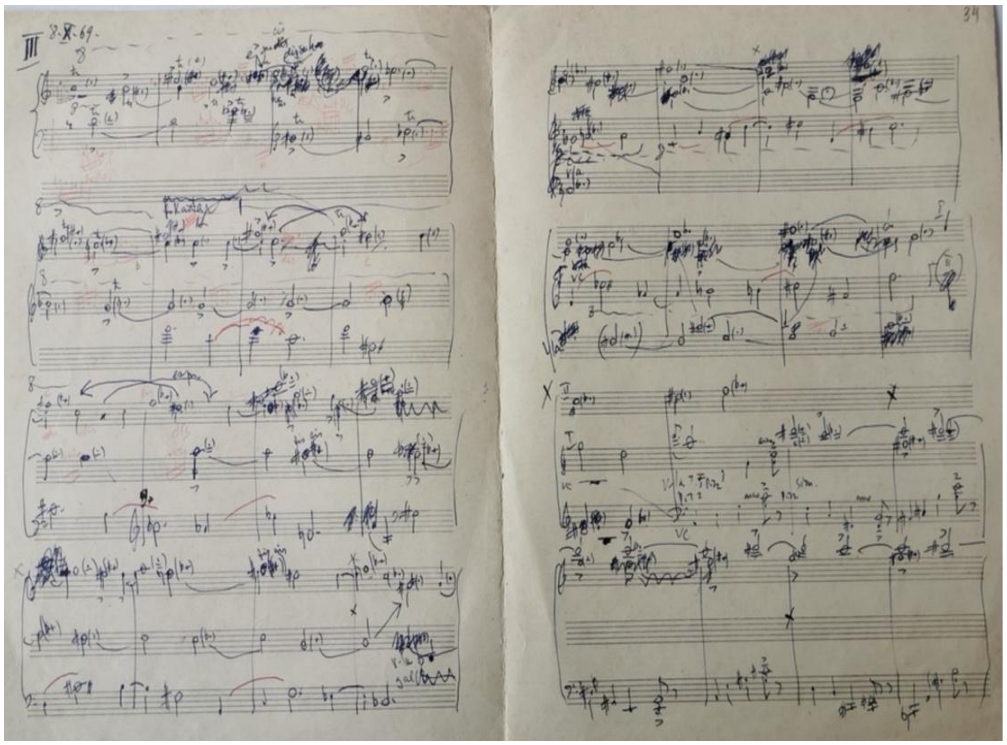
At first, the seemingly laconic notations in the sketch immediately provide an answer to one of the most crucial questions within theories of the creative process – namely, the moment of the idea. Referring to the phase definitions presented in the aforementioned models, it becomes evident that in the creative process of this composition, the idea and concept (clearly marked even before any musical material is written down) constitute the initial phase. Prior to the formation of the concept, it is likely that some form of *preparation* occurred, although the possibility of a sudden creative breakthrough cannot be excluded. However, the primary constructive and preparatory material of the piece – the harmonic cells – is indicated only later in the sketch. This suggests that the

phase of *preparation* followed the moment of the idea's emergence (or, to use Wallas's terminology, came after *illumination*).

Following the initial compositional fragments, the composer marks a visual representation of the structural progression of the piece at the bottom of the sketch (e.g., no. 4):



Example no. 4 – Julius Juzeliūnas' String Quartet No.3 – "9 letters and Post Scriptum" (lit. "9 laiškai ir Post Scriptum) – manuscript fragment (from Lithuanian Archives of Literature and Art, F.260-91).



Example no. 5 – Julius Juzeliūnas' String Quartet No.3 – "9 letters and Post Scriptum" (lit. "9 laiškai ir Post Scriptum) – manuscript fragment (from Lithuanian Archives of Literature and Art, F.260-91).

The subsequent content of the sketch consists of a relatively continuous draft of the entire composition, featuring detailed time markings and revisions (e.g., no. 5). From an analytical and processual perspective, this systematic act of composing may be aligned with the *verification* phase during which the composer realizes (notates) the refined material, simultaneously evaluating and modifying it. Looking more closely, one can also identify smaller *micro-phases* (or sub-processes), which, depending on their definition, closely resemble the notations found in the precompositional material. For example, this could correspond to the *repetition* phase proposed by Kratus (1989). In the sketch, it is evident that the composer rewrote the final section twice. Although the harmonical content remained the same, he altered the rhythmic values and expressive means in the second version.

The following diagram summarizes the entire precompositional material of the work in a chronological framework (fig. no. 1):

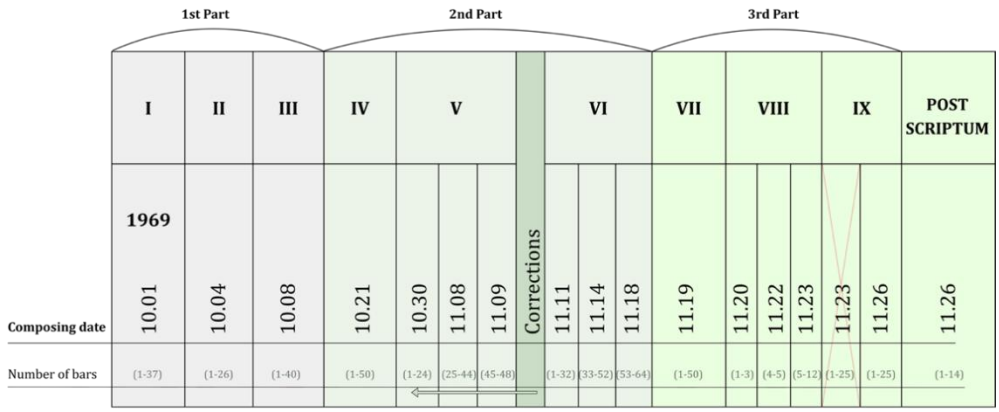


Figure no. 1 – Julius Juzeliūnas' String Quartet No.3 – "9 letters and Post Scriptum" (lit. "9 laiškai ir Post Scriptum) – chronological compositional scheme (J.Valčikaitė-Šidlauskienė)

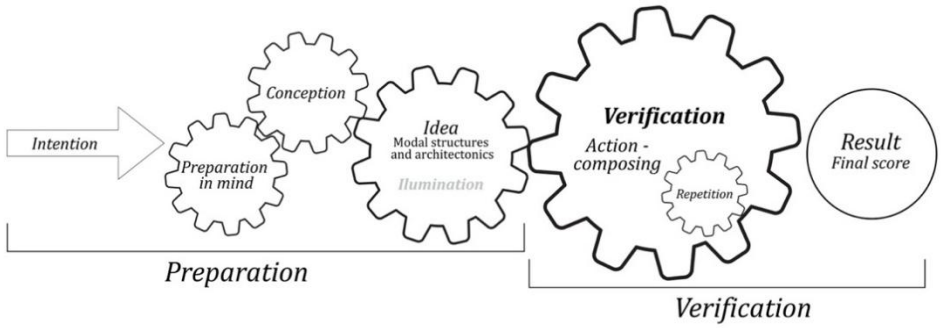


Figure No. 2 – Julius Juzeliūnas' String Quartet No.3 – "9 letters and Post Scriptum" (lit. "9 laiškai ir Post Scriptum) – scheme of the compositional process (J.Valčikaitė-Šidlauskienė)

When observing the sketch from a broader analytical distance, the following creative process scheme emerges (fig. no. 2): *preparation* (including *micro-processes* such as *mental preparation* and *conception*); *illumination*; and *verification* (including the *micro-phase* of *repetition*).

As this example illustrates, we are faced with the *proportionality paradox* when analyzing the composition process. The content of precompositional materials does not correspond to the sequential logic of compositional stages as defined by the theories discussed. Although preparation and subsequent phases are considered the most significant and extensive in creative-thinking models, reconstructing the actual compositional process reveals only the "tip of the iceberg." We cannot estimate the duration of the *pre-preparatory* phase – mental precomposition – because the methodology discussed here relies solely on material evidence (precompositional documents, correspondence, etc.). Only in cases where the composer is living and willing to share detailed insights into their creative process can more be known. Nevertheless, despite the proportional paradox, each phase of the creative process is equally important. Following causal logic, no step can occur without its predecessor. These initial stages represent a period of deliberate effort and convergent thinking, in which problem formulation often outweighs the final solution, the piece itself. For this reason, when retrospectively modeling the compositional process, even the most minute sketch fragments may indicate significant creative transitions and should be considered independent phases in their own right. The most challenging task in theoretical discourse regarding the creative process lies in the *verification* phase. In musicological analysis, the essence of compositional phases lies within the evolving musical text, in the deep layers of the new work, and in the stages of generation and refinement. This is echoed by Rudolph Réti (1951)[76], whose analytical model centers on the concept of the work as a unified organism. Viewing composition as a linear process, Réti posited that creativity begins with

[76] Among Rudolph Réti's most significant theoretical contributions are the following works: *The Thematic Process in Music* (1951), *Tonal Space* (1958), and *Thematic Patterns in Sonatas of Beethoven* (1967).

the emergence of one or more foundational cells or motives, whose evolution, transformation, and combinatory reorganization drive the development of the complete work.

However, such analytical reconstruction – grounded in existing process theories – is virtually impossible because most creative-thinking models are based on general knowledge and research in psychology, philosophy, and related fields, rather than on the specific elements of musical composition. For these reasons, any model of musical composition must be augmented with clearly defined procedural or technological *verification* phases that provide concrete functional definitions to otherwise theoretical – and often abstract – stages and eliminate the possibility of subjective interpretation. Addressing this gap is a task requiring a dedicated study, which is the focus of my ongoing research.

Conclusions

The investigation of the creative process within musicological discourse remains a complex and methodologically constrained field, one in which the success of any analysis is highly dependent on the specific attributes of the subject under scrutiny – namely, the detail and completeness of precompositional materials (such as sketches, manuscripts, and other documents), and the traceability of their chronological progression. When examining a musical work through the lens of creative process theories, the theoretical eclecticism inherent in this domain may lead to an impasse, wherein the chosen model compels the researcher to interpret the work exclusively within the framework of that particular theory. For this reason, the models of the creative process I discuss in this article (ranging from Wallas, 1926 to Jarmalavičiūtė, 2020) are not presented as universally applicable methodologies but rather as orientational tools – heuristic frameworks to aid, not to constrain, the analytical process.

Given that precompositional materials are inherently unique – both in the case of individual composers and individual works – analyses grounded in a single theoretical model necessarily risk a degree of subjectivity. However, by employing combinations of existing models, flexibly interpreting their stage definitions, and avoiding strict adherence to any prescribed sequence of creative phases, it is possible to identify emergent creative patterns within musical works and to distinguish their most critical developmental stages.

From an analytical perspective, the essence of compositional phases lies in the deeper structural layers of the work itself – in the processes of generation and maturation. Within the context of creative process theories, these stages are typically framed as part of

the *verification* phase. However, this phase must be enriched by the introduction of new, operationally defined concepts capable of identifying emerging micro-processes during composition and of articulating the fundamental mechanisms underlying the genesis of a musical work.

Finally, such studies should not be absolutized or treated as incontestable frameworks. To date, few investigations have approached musical works of this nature with the methodological rigor necessary to produce fundamental insights into compositional process. Nevertheless, the combinatory application of multiple creative process models makes it possible to formulate differentiated analytical models for each composer – or even for each work. When applied to a suitably documented case, such an approach may reveal recurrent creative tendencies, the repetition of which provides the basis for broader scholarly discussion and further inquiry into the conceptualization of compositional model structures.

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