Spring 4-30-2019

The Poetic Function of Imagination: The Parallel Process of Poiēsis

Angela Carlson
Lesley University, acarls07@lesley.edu

Follow this and additional works at: https://digitalcommons.lesley.edu/expressive_theses

Part of the Ancient Philosophy Commons, Cognition and Perception Commons, Contemporary Art Commons, History of Philosophy Commons, Interdisciplinary Arts and Media Commons, Logic and Foundations of Mathematics Commons, Other Philosophy Commons, Other Psychology Commons, Other Rhetoric and Composition Commons, Philosophy of Mind Commons, Psycholinguistics and Neurolinguistics Commons, and the Theory and Philosophy Commons

Recommended Citation
https://digitalcommons.lesley.edu/expressive_theses/216

This Thesis is brought to you for free and open access by the Graduate School of Arts and Social Sciences (GSASS) at DigitalCommons@Lesley. It has been accepted for inclusion in Expressive Therapies Capstone Theses by an authorized administrator of DigitalCommons@Lesley. For more information, please contact digitalcommons@lesley.edu.
The Poetic Function of Imagination: The Parallel Process of Poïêsis

Capstone Thesis

Lesley University

March 2019

Angela Carlson

Master of Arts in Clinical and Mental Health Counseling: Expressive Arts Therapy, MA

Raquel Stephenson, Thesis Instructor
“I believe...great science and great poetry are both visionary, and may even arrive at the same intuitions. Our culture is foolish to keep science and poetry separated: they are two tools to open our eyes to the complexity and beauty of the world” (Rovelli, 2016, p 105)

Abstract

In the advent of Postmodernism, modern approaches to understanding the nature of things is being put into question. As the gap between objective and subjective realms of experiences is narrowing, there is an increased need for a more artful approach to science. This paper serves as my attempt to promote the field of Expressive Arts Therapy (ExATH) as a mode of poetic science for understanding the experience of ‘Being’ in the world. Through a critical review of the semantic development of the ancient Greek concepts poiēsis, noēsis, and aisthēsis, the imagination is identified as a function of alēthaic revealing, personified in the myth of Athena’s birth. Data from the fields of philosophy, phenomenology, psychology, mythology, etymology, and cognitive linguistics was gathered to identify fundamental elements for a model of the poetic function of the imagination to inform ExATH practices. As the foundation of poetic science is to remain loyal to the phenomena of concern, results were validated by comparison to developments in the field of Quantum Physics, at the heart of which is the notion that we are a part of that nature that we seek to understand. Collected evidence is presented as a prototype model of the poetic function to be used for readers to experiment with quantum-informed approaches to ExATH.
Introduction

It seems to me that there is “something lacking” (Nachmanovitch, 1990) in the field of expressive arts therapy (ExATh), as evident in the recurring call for dialogue on the fundamental elements of its theory and practice, combined with the struggle to provide empirical support behind the practice (Johnson, 1991; Kossak, 2015; Levine, 1998; 2009). The term “evidence-based practices” (EBP) manifests as a looming shadow, cast by past invalidations of our imaginal competency due to the “mass-produced conformity” rampant in our monocultural society (Nachmanovitch, 1990, p. 117). While expressive arts therapists intuitively engage in the arts as an aesthetic way of knowing (Kossak, 2015), efforts to advance the field are futile if this way of knowing remains out of grasp to those outside the field.

In its modern form, the reliability of EBP in the mental health field is being questioned, as it is shown to be “clearly unsuitable and unhelpful in determining” the efficacy of treatments when “uncontrollable variables are eliminated from consideration” and in the process may “eliminate elements which are very important to the populations being studied”, including social, cultural, and geographical elements (Miller, 2017, p. 5). In a deviation from EBP, Miller advocates for research into practice-based evidence (PBE) approaches that uphold the EBP principle of collecting evidence in a methodical, person-centered fashion, while attempting to “consider redefinitions of what constitutes as evidence”, and communicate findings in specific, clear language that is understandable from a research standpoint (2017, p. 11). While the ExATh field may benefit from adopting PBE approaches in research, therein remains the challenge to methodically collect evidence and present findings in universal language, as the nature of evidence originates in the imagination and either transfers between or encompasses all the modalities (Kossak, 2015).
Potter (2015) argues that the fields of phenomenology and psychoanalysis have more experience “understanding human meaning” than that of “all of the so-called evidence-based modalities put together” (p. 57). Acknowledging the roots of these fields as originating in ancient Greece, Potter (2015) holds Freud responsible for returning “psychological life to its cultural roots in Greek Mythology” by “rooting psychology…in the poetic basis of mind, whose imagination is structured by …archetypal presences” (p. 58). This approach to psychology was furthered by Jung with his attention to mythology and religion.

Jung posited that one’s life purpose is “the unfoldment or manifestation (alētheia) of a person’s character, to individuate and become the individual he or she was meant to be” (Potter, 2015, p. 58). Related to Heidegger’s notion of alētheia as the embodiment of ‘truth’, truth came to mean the “disclosure of Being… [that] necessarily contains fragments of the unknown from which it emerges” (Potter, 2015, p. 60). By viewing humans as beings, the “revitalization of the imagination” becomes a potential goal of the therapeutic process that strives to improve an individual’s imaginal capacity to bridge internal and external reality through poiesis, the act of creating truth in the world (Levine, 1992, p. 33).

Plato equates the poiēsis with mimesis or “imitation”, and portrays the artist as a copier of his perception, based on his view that “the world in which we live is only an imitation of the ideal form of things”, thrice-removing the artist from truth (Levine, 2009, p. 74). Aristotle holds similar views of poiesis, granting it a cognitive value as a way of “knowing…by making”, yet differentiates it from “the pure contemplation of ideal form in itself”, or theoria, with the view that imitation of form occurs “in the mind of the maker and not in an ideal realm of Being” (Levine, 2009, p. 30). After Aristotle, the concept seems to disappear until the birth of post-
modernism with its emphasis on “temporality and change”, thus challenging the “eternal and unchanging” foundation of philosophy (Levine, 2009, p. 31).

The post-modern Poiesis, in relation to mimesis, possesses a “performative” function with the intent to provide “bodily presence” to its “corporeal logic” (Levine, 2009, p. 63). The notion of mimesis residing “at the heart of poiesis”, made manifest in poetic mimesis, evokes the primordial function of dance and ritual to attain “tragic wisdom” by accepting the responsibility of “suffering” (Levine, 2009, p. 63).

Levine clarifies that mimesis or is “neither identical with nor different from its ‘object’”, and instead “is like what it imitates” (2009, p. 61). The distinction between these interpretations is a matter of logic: the logic of resemblance versus the logic of identity (Levine, 2009). Functioning within the logic of identity predictably results in a return to the “antimonies of classical thought”, a type of “failed mimesis”, in which “imitation is reduced to identification, and the distance that is necessary to recognize the mimetic performance is abolished” (Levine, 2009, p. 61). Within the logic of resemblance, post-modernism aims to “overcome these antimonies by developing a mode of thinking differently, a way of thinking within the middle realm ‘between’ the oppositions of traditional logic” (p. 63).

Yet within the current postmodern era lies the caveat of a hiddenness to truth, something incapable of being abstracted and “holds itself back from appearance”, portrayed by Heidegger as ‘Earth’, exemplifying the hiddenness of truth incapable of becoming a concise and demarcated notion (Levine, 2009, p. 32). The fundamental role of ‘Earth’ within “the temporal character of Being” is indicative of the inability to “achieve the knowledge that philosophy has always aimed for”, as a result of the human inability to “get outside of time” (Levine, 2009, p. 32). While it
does not deny the existence of truth, we are thus forced to reconstruct our meaning of “truth” so that it may reflect the mortality of temporal beings (Levine, 2009, p. 32).

Levine (2009) posits that “the truth that actually matters…is the truth of our existence”, and acknowledges the mistake in believing that “the methodology of natural science is the only one appropriate for the study of human beings” (p. 158). Framed in the idea that “we are what we are studying”, Levine considers the truth being pursued as “poetic knowledge”, “a truth of knowing…[and] a truth of being” that we aim to reach “with our entire existence…our passions, our emotions, our will, as much as with our cognitive faculties” (2009, p. 159). As such, poetic knowledge comes to fruition through the imagination: “we make forms embodying images that reveal the truth of what we see” (p. 158). Endeavoring to engage in this kind of knowledge-seeking requires the belief that “the imagination can in-form us, that art is not non-cognitive, but that it binds together both feeling and form in a way that can reveal truth” (Levine, 2009, p. 159).

Levine (2009) contends that the ExATh field requires a new theory of psychology that “acknowledges the essential role of the imagination” in order to understand its potential as a primary aspect of the human experience of being in the world (1992, p. 42). Pearson & Wilson (2009) posit the imagination is a “self-activated, inbuilt, corrective, healing drive and organizing principle”, and that engagement with the imagination has been shown to “awaken dormant creativity, reach clients through artistic expression of what lies within, lead clients to a better understanding of their unconscious, be a means for accessing hidden resources, and provide clients with a vehicle for expressing internal conflicts” (Pearson & Wilson, 2009, p. 20).

From a depth psychology perspective, Avens (1980) positions the imagination within Hillman’s concept of the forgotten ‘third’ or “middle position…that is neither physical and material, nor spiritual and abstract…but bound to them both” (p. 9). This is similar to the
alchemical principle of *imaginatio* – the hybridization of psyche and matter, physical and spiritual, rational and imaginal – considered by Jung as “the way the self perceives the world” and the basis of his concept of active imagination (Stein, 2017, p. 19). Kossak (2015) contextualizes imagination as “what contains and reveals messages from the psyche”, which is communicated through its own language of images, sounds, movements, words, stories or dramas (p. 4), conceived by Laughlin & Throop (2001) as the language of myth.

By combining Kossak’s language of the psyche and Jung’s hybridization of psyche and matter, the central aspect of ExATh may be viewed as the translation of the psyche’s imaginal language into external reality through the act of *poiesis*. By treating the imagination as a central function of the self as well as external reality, ExATh challenges not only the Platonic split between subject and object but also the split between poets and philosophers (Levine, 2009). This conflict is also evident in Freud’s admitted inability to understand the imagination within logical groupings (Levine, 1992), and explicated by Rothko’s criticism of the scientific method that has “forever disrupted the unity that had existed between the objective world and the imaginative” (2004, p. 60).

Influenced by the perspectives of Winnicott and Heidegger, Levine (1992) contends that when human experience is considered an act of “being-in-the-world”, the concept of psychopathology transforms to include damage done to the inherent human capacity to engage in the “imaginative and playful space of experience” (p. 33). It becomes the role of the therapist to act as both witness and guide to the unearthing of the truth of a client’s experience, engaging them in creatively making meaning and finding direction in the experience of Being (Levine, 2009).
Purpose of the Review

From an agential realist perspective, I engaged in an interdisciplinary inquisitive dive into the depths of the imagination with the intent to uncover a functional model of the imagination as it relates to human experience. The purpose of this inquisition was to identify gaps of knowledge in the field of ExATh and existing fields of knowledge for a rudimentary formulaic structure of imaginative functioning that could be applied to ExATh practice.

The process of gathering data initially began with a search for articles using the keywords “expressive arts therapy”, “evidence”, and “practice” in order to identify existing research. Resources with concentration on single modalities were omitted in order to retain focus on the imaginative function used across all modalities. This initial search results yielded staple works used in ExATh academia at Lesley University (Levine, 1992, 1999, 2005; Kossak, 2015). For the purposes of this paper, these notable works were referenced for resources related to the imagination existing outside the extant literature on ExATh. Levine’s most recent publication *Trauma, Tragedy, and Therapy* (2009) was referenced as a provisionary guideline for identifying knowledge areas requiring further examination for the purposes of this paper.

Reasoning for the examination of poetics, or *poiesis*, is based on Clarke’s Continuum of Metonymic Transformation in etymology (2005) and Levine’s (2009) hermeneutic circle of inquiry that argues for the deconstruction of the word and the inclusion of a phenomenological underpinning of the practice. As such, the phenomenological perspectives of Hegel and Heidegger were reviewed in order to examine the Greek origins of *poiesis* and its relation to *noesis*, both of which may be considered the respective “roots” of Western philosophy. Uncovered evidence of these concept was compared to Levine’s philosophy of ExATh (1992; 2009) and Rothko’s philosophy of art (2004) in order to construct an interpretation of Western
philosophy that acknowledges the role of poets, or artists, as the ancient philosophers of Greek antiquity. This interpretation provided reason to explore the Parry-Lord theory of oral formulaic composition (Pagán Cánovas & Antovic, 2016) as a potential formulaic structures for the imagination.

As the fundamental notion of poetic science is the obligation to remain “faithful to the phenomena one seeks to explore” (Freeman, 2011, p. 391), Gaston Bachelard’s synthesis of “scientific truth” and “poetic presence” in his phenomenology of imagination will be presented as a potential phenomenological foundation of ExATh (Caws, 1990) to be used in amalgamation with the Continuum of Metonymic Transformation (Clark, 2005) and the Mythopoetic Cycle of Meaning and Maturation (Laughlin & Throop, 2001). The potential for the efficacy of this formulaic structure will be supported by evidence of quantum physics implicit in the aforementioned resources. Suggestions for further areas of research will address the poetic scientific unity of ExATh and the field of quantum physics.

Why Poetic Science?

Freeman (2011) implies that the “narrow image of what constitutes (valid, legitimate) science” calls for a self-realization of the field, and presents the thesis that “psychology can reach a greater, more authentic mode of scientificity precisely by becoming more art-ful in at least a portion of what it does” (p. 390). Freeman (2011) broadens the scope with the claim that “academic psychology has not been scientific enough” and is only capable of telling “part of the story of being human”, with regards to the “fundamental obligation of the scientific endeavor…to be faithful…to the phenomena of concern” (p. 389-390).

Freeman (2011) encourages the field of psychology to adopt “a mode of science that is on the very border of art”, called “poetic science” (p. 390). This is based on the argument presented
by Heidegger on the traditional approach to science, which “represents a severely truncated version of the idea, especially as it had existed in the time of the Greeks” (p. 391). Clegg (Freeman, 2011) identifies “uncertainty as a scientific fundamental value”, which remains absent in the logical practice of the dominant “naturalistic framework” that is on the verge of becoming obsolete. Within this framework, “humans and human institutions are modeled in straightforwardly materialistic and deterministic terms; where the unpredictable vagaries of human life are constructed as error, or variability; and where research designs seem principally aimed at erecting impenetrable bulwarks (i.e. research controls) against such scientific messiness” (Freeman, 2011, p. 391).

Clegg ventures to call this approach to science as “problematically unscientific”, as it fails to remain loyal to “the phenomena one seeks to explore” (Freeman, 2011, p. 391). Heidegger provides a similar perspective on the sciences as ineffective in accessing “those deeper, more ambiguous, uncertain regions of Being”, comparable to Langer’s term “livingness”, the embodiment of “the qualities of felt tensions and resolutions” (p. 394). Freeman considers the possibility that these regions of Being “are left to poets and novelists and other artists more willing, and able, to deal with reality in its fullness, feelings and all” (2011, p. 394).

Freeman (2011) posits that science should be capable of including this dimension of livingness, and it is imperative to develop “modes of inquiry and…writing that can carry the full weight of the realities at hand” (p. 394). He proposes poetic science as “a new direction for conceptualizing the scientific project”, embodied in the phrase “the more art, the more science” (p. 395). Poetic science calls for, “in the name of science”, works of literature that are “oriented toward feeling as well as thinking”, that are supportive of epistemological, ethical, and aesthetic aims, and that provide readers a feeling of being “displaced by the otherness of the text before
them” with the prospect of a felt sense of “engagement” found in works of literature “when they seek to disclose the deeper realities of experience” (Freeman, 2011, p. 395).

**Psycholinguistic Realities and Formulaic Creativity**

Central to the philosophical framework of expressive arts therapy is *poiesis*, a word appropriated from ancient Greek language that bears multiple connotations (Knill, Levine & Levine, 2004, p. 10; Levine, 1992 & 2009; Levine & Levine, 1998; McNiff, 1999). When traditionally defined, *poiesis* “does not offer us any ground on which to stand”, for which reason Levine posits that “the traditional concept of *poiesis*...has to be ‘deconstructed’...in order to explore its underlying assumptions” (2009, p. 29).

Clarke contends that the “standard doctrine” of studying “psycholinguistic reality” is problematic when attempting to understand ancient Greek language (2005, p. 14). From an etymological perspective, the modern methods of semantic reconstruction have stripped “the Greek realities of their internal structure and reassembled them in a framework provided by our own cultural and linguistic world” (Clarke, 2005, p. 15). Furthermore, Clarke contends that following the history of a word may provide use with a “valid synchronic map...entirely independent of the semantic structure of English”, based on “the units of sound and sense that we reconstruct as Indo-European roots” (2005, p. 16).

When enquiring into the meaning of a word through “metonymic mapping”, Clark (2005) aims to transcend the “distinction between synchronic and diachronic axes” (p. 26) and presents etymology and polysemy as a continuum that is “imagined as an inverted cone” (fig. 1), providing a structure within which to “arrange the chaos of the referential possibilities according to systematic pattern” (p. 28). If we assume that a word has an “ordered semantic structure”, we may also assume that “the word answers to a coherent area of meaning” (p. 16). This opens the
possibility of applying metonymic mapping to the process of deconstructing a word’s “referential possibilities” that developed in as answers to “certain criteria: if for no other reason than…it is our duty to seek order not chaos” (p. 16).

For the purposes of this paper, the question arises as to how historical development has influenced the understanding of Ancient Greek language, specifically how poiesis and noesis have transformed over time. It might be assumed that our philosophical understanding remains influenced by an imbalanced perception of reality, which values the rational over the imaginal, indicative of the ancient quarrel between the philosophers and the poets that ensued into the dialectical opposition between art and science.

Bachelard contends that in Newtonian science “nothing is given to the imagination, not even something “hidden” – what there is seems less discovered than invented” (Caws, 1990, p. 136). This lack of understanding is also apparent in the cognitive sciences, in which exist unanswered questions to “the problem of human creativity” (Pagán Cánovas & Antovic, 2016, p. 73). In response, cognitive linguistics have endeavored to provide a new outlook on the oral formulaic style of the oral poets through the development of a new interdisciplinary field termed
“cognitive oral poetics” (Pagán Cánovas & Antovic, 2016, p. 73). The central idea of this technique is that “singers in oral epic tradition compose their poems as they perform, without relying on a fixed text and without verbatim memorization of long stretches” (p. 66). Rather, singers use formulas of “partially fixed expressions, acquired by listening and singing” that are formed within a “collective process constituted by innumerable performances across the long diachrony of the epic tradition” (Pagán Cánovas & Antovic, 2016, p. 66). Lastly, these formulas are constructed to “meet metrical constraints…[and] clustered according to thematic criteria” in order for singers to retain them in memory (p. 66). These “peripheral elements or lexical slots can be varied” to compose additional “formulaic patterns” (Pagán Cánovas & Antovic, 2016, p. 66). Parry and Lord termed this process “composition in performance”, based on the “mastery of formulae” (Pagán Cánovas & Antovic, 2016, p. 67), which is indicative of Arnheim’s conception of art as structuring the chaos of sense-perception (Levine, 2009).

The Poetic Imagination

According to Bachelard, poetics, or poiesis, is an oscillatory process between traditional Western dichotomies of “subject and object, mind and matter, active and passive”, which “transcends the traditionally opposed roles of the image as either ‘imitation’ or ‘invention’” (Bachelard, 2014, p. xx).

Bachelard (2014) presents his phenomenology of imagination in response to the need for a new methodology that broke ties with the rigidity of traditional science. Since “the poetic act has no past”, attention must be given to the image “at the very moment it appears, both as itself and as a vibration of the psyche (p. xix). The value of Bachelard’s phenomenology of imagination is its expansion from Aristotelian poetics of plot (muthos) and imitation (mimesis)
and his concern “as much with the ‘material’ image that stirs us in our depths as with the ‘formal’ image that we produce in response” (Bachelard, 2014, p. xix).

In his work *The Poetics of Space*, Bachelard (2014) expresses “little patience” for psychologists, psychoanalysts, and psychiatrists, often referring to the philosophy that supports these practices in his time as a “cancerization of the linguistic tissue” (p. xv). Having such dissatisfaction for dogmatic approaches which restrain the imagination, Bachelard contends that “understanding without imagination is doctrine without growth” (p. xv), and even further suggests that the imagination encompasses the “antecedence of being”, as images “give logos to perception” (2014, p. xxiii) and “offers…a kind of relation to the world (Caws, 1990, p. 138).

In *The Poetics of Reverie*, Bachelard (1971) conceives of memory and imagination as rivals in “giving us back the images which pertain to our lives” (p. 105). For Bachelard, memory and imagination are primordially connected in the nucleus of childhood, which resides at the “center of the human psyche” (p. 108). Combined with poetry, imagination and memory form the “triple liaison” that helps situate the “human phenomenon…within the realm of values” (p. 105), in which imagination sets verbs into motion and turns “sensations into metaphors by inviting us to live figuratively” (Bachelard, 2014, p. xxiii) In order to benefit from this unity of memory and imagination, the soul and the mind must be united in poetic reverie, and within this unity “our past being imagines itself living again” (Bachelard, 1971, p. 105).

Bachelard envisions the imagination as the “major power of human nature” that propels us into the future, while also separating us “from the past as well as from reality” (Caws, 1990, p. 139). He refers to imagination as a “function of unreality” in dialectical opposition to “scientific truth”, or “the function of reality”, yet compatible with the temporal “poetic presence” of being (Caws, 1990, p. 140). This poetic presence is said to counterbalance “unimaginable”
mathematical reasoning, and is characterized as “a possession of the subject by the image, as a reverberation that constitutes a ‘veritable awakening of poetic creation…in the soul of the reader’” (Caws, 1990, p. 140). Rather than view these as oppositional, Bachelard views imagination and mathematical reasoning as complementary, best represented “through the mediation of language” (Caws, 1990, p. 141).

Bachelard (2014) conceives of the imagination as the “coming into being of language”, a form of “not non-being but surplus-being: being as incessant birthing of newness through images”:

The cosmos, no less than the human psyche, is brimming with the force of the imaginary. And to return to his favorite example of the house, he maintains that the poetic reimagining of the stairs, passageways, porches or dressers brings together powers of memory, perception and fantasy that crisscross in all kinds of surprising ways, sounding previously untapped ‘reverberations’ (retentissements). Imagination is a laboratory of the possible inviting us – through reverie and poetry – to give a future to the past (p. xx-xxi).

Phenomenologically viewed as “the function of unreality”, imagination is comparable to the temporal “poetic presence” of being that counterbalances formulaic reasoning (Caws, 1990). Manifested through the mediation of language, imagination and formulation possess a reciprocal relationship that is at once both infinite and finite. Language functions as “the house of Being”, the containment of the human functions of scientific complexity and poetic intensity, which serves as the point of intersection occupied by the individual (Caws, 1990, p. 141)

A Philosophy of Art

In his manuscript on the philosophy of art, Rothko (2004) presents an alternative image of the poets of Greek antiquity than that of Plato. Rothko claims that philosophers of antiquity did not exist in the traditional sense, but were the poets themselves, that embodied the “ultimate unity of all that was considered reality in the created myths, which were the products of poetry.
These myths were not only science; they also constituted the basis of religion as well” (p. 26).

The function of the “old philosophers” was similar to the artist, which “reduced all…perceptions of actuality to the most basic level to which humans relate: sensuality” (p. 26):

Sensuality stands outside of both the objective and subjective. It is the ultimate instrument to which we must refer all our notions, whether they be abstract, the result of direct experience or of some circuitous reference to such experience. Sensuality is our index to reality. The proponents of both points of view – the objective and the subjective – must ultimately appeal to our sensuality, our notions of the validly existing. They must make contact with our sense of the tactile that is the textural quality of ideas or substances (Rothko, 2004, p. 25).

Rothko (2004) considers sensuality the fundamental language, or “human quality”, required for “the human experience of all things” and “the appreciation of all truth”, ultimately referring to the “sense of touch, to the tactile, which…is still the final justification of our notions of reality” (Rothko, 2004, p. 25). Since the word “sensation” is separable, he is specific to use “sensuality” to signify “man’s final sensation [as] a synthesis of atomic particles of separate sensations”, which is only understandable through the complete integration of reality (Rothko, 2005, p. 25). Such sensuality is a generalization that combines “all the sensible factors”, and portrays the “relevance of all knowledge, intuition, experience, and whatever else is admissible in reality at any particular time” (p. 24). This language of sensuality is used by artists and philosophers, who are considered responsible for portraying the significance of all phenomena to humanity so that they may learn how to relate harmoniously to each of these entities (Rothko, 2004).

Following “the philosopher’s separation from the poet”, the modern philosopher creates their version of an “unified worldview by making ethics the objective of all researches”, and as a result conforms sensuality to “the harmony of all the other factors” in order to retain the status of a philosopher instead of a scientist (Rothko, 2004, p. 27). While the function of the artist, to establish ultimate unity through the reduction of “all phenomena to the terms of the sensual”
remains intact, an all-encompassing vision of a “unified reality” is out of grasp for both perspectives in the modern era (Rothko, 2004, p. 27). As a result, subjectivity and objectivity are viewed as separate entities.

As each side is inadvertently striving towards the same fundamental uncertainty, Rothko (2004) diminishes the gravity of the split between subjectivity and objectivity:

…The objectivist tries and succeeds daily to draw more and more of what is commonly called subjective into the orbit of his order, whereas the subjectivist succeeds more and more daily to show that, by the very dismissions of the objectivists, the subjective is given greater credence. What constitutes the real unity of our age, then, is the reality of an abstraction of faith that all phenomena can submit to generalization. In other words, we are really recapturing the profundity of the Greeks, who accepted the unknown as a positive element of reality (p. 27).

The opposition between the subjective and objective is “fast approaching” a complementary return to Platonic ideals “in an inverted significance”, credited to humanity’s capacity to differentiate “between reality and [their] apperception that is [their] symbolic statement of it” (Rothko, 2004, p. 28). This implies that within post-modernism, humanity has arrived at the point of understanding the valuable relationship between myth and reality. For Rothko, myth is considered “a symbol of the notions of reality at a particular age”, specifically recognizing the “single unity” or “comparative unity” present in ancient myths (2004, p. 82-83).

**Mythological Reality**

The comparative unity between ancient myth and its reality indicates that “there is no separation in the world of the myths between reality and unreality” (Rothko, 2004, p. 97). The relationship between myth and reality is based on the idea that imagination is a “natural process” or “universal function of the human brain”, which is “embedded in the universe of ordered energy within which it evolved, in which it develops, which sustains it, and which informs it by
way of energetic interrelations at many levels, including that of the quantum sea” (Laughlin & Throop, 2001, p. 710). This implies that the mythopoeia of various societies and cultures are “variant expressions of a single reality”, made manifest in various modes of expression as part of the Mythopoetic Cycle of Meaning (fig. 2) (p. 712).

Within this cycle, the imagination functions as an aide in determining “the nature of any given object that may be affecting the senses” (Laughlin & Throop, 2001, p. 720). Traced back to Aristotle, this idea indicates that imagination plays a fundamental role in “helping to form an accurate understanding of reality”, based on evidence which suggests that “intuition” and “imagination” arrived in evolutionary development prior to linguistic and “abstract conceptual faculties of the brain” (p. 720). In the spirit of poietic science, there is value in learning from the “intricacy and sophistication” of a society’s mythopoeia, on the grounds that the primary structure of myth is neurocognitive, “a structure of consciousness” (Laughlin & Throop, 2001, p. 720).

The Mythopoetic Root
Embodied in Homer’s mythopoetic depiction of Athena’s birth, “hê theon noêsis” was interpreted by Plato as “divine intelligence”, or “the ability to create new ideas out from the struggle between life and death”, the highest form of intelligence that was only available to the gods or “most prized of philosophical minds” (Crisafi, 2017, p. 80).

Athena was the daughter of Zeus (ultimate order) and his first wife, Metis (wisdom) (Sears, 2014). At first, Metis was reluctant to submit to Zeus, and made efforts to “escape his advances by disguising herself, taking on different forms” (Sears, 2014, p. 160). Eventually, Metis yielded to Zeus and became pregnant, after which Gaia (Mother Earth) informed Zeus that after giving birth to a daughter, Metis would give birth to a son fated to overthrow Zeus. In order to avoid fate, Zeus swallowed Metis whole. When Metis was ready to give birth, Zeus was “struck motionless by a piercing pain in his head” (Sears, 2014, p. 112), and called upon Hephaestus to split his head open with an ax to relieve the pain. Once the ax split his skull, Athena was born fully dressed in armor and met the world with “an adult’s war cry” (p. 112).

Crisafi posits that “the Platonic image of Athena as the hê theou noêsis…is what drives the human to create, maintain, and sustain its existential space within nature predicated on engaging the active intelligence” (2017, p. 85). Adapted from the Ancient Greek concept of “the operation of nous (mind)”, Athena is equated to noesis as “intelligent consciousness”, or the “creative force” that manifests dialectically between “mind and reality” (Crisafi, 2017, p. 79-80). Refraining from “mythologizing the intellectual process”, Hegel personified Athena as “the pure embodiment of rational intelligence born by the noetic mind into the natural world itself” (Crisafi, 2017, p. 84).

In *Trauma, Tragedy, and Therapy*, Levine (2009) alludes to the goddess Athena while discussing Arnheim’s psychology of art and the balancing of chaos and form. Associated with
Athena is the symbol of the owl to denote wisdom, used by Levine to portray wisdom granted to Arnheim from observing the chaos of history, and coupled with his personal observation of “creative attempts of artists to overcome it” (p. 106). Although Athena is obscurely referenced, its presence increases in value in light of Athena’s portrayal of noesis.

One of Levine’s earliest mentions of poiēsis considers it a “fundamental human capacity…[which] guarantees that the varieties of artistic expression have a common origin” (Levine & Levine, 1998, p. 11). A more recent take on the concept provides a more applicable understanding within the context of therapeutic practice:

The act of poiēsis in expressive arts therapy is one in which clients take themselves out of the passive or helpless state…and instead become actively involved in making their world, reshaping it, taking… the wounds they have suffered and the experiences they’ve had, and making them new (Levine, 2009, p. 166).

This transfer from a passive to active state is mimetic of Aristotelian noesis, which transfers “by reason of its becoming identical with its object, the intelligible form” (Crisafi, 2017, p. 86). Based on the logic of resemblance, this object identification exemplifies a failed mimesis, and implies that instances of noesis in place of poiēsis results in unproductive or traumatic recapitulation of past experiences. When mimesis is situated “at the heart of poiēsis” (2009, p. 63), poiēsis could be viewed as the capacity for understanding of possibilities, (de)constructing (ag)noein forms or ideas, and the creative discovering of unearthed alēthaic truths, all of which contribute to the aisthetic framework of experiencing (un)reality.

A fundamental element of the philosophy of poiēsis is the inclusion of Nietzsche’s Apollonian and Dionysian principles of existence to embody science and art, respectively (Levine, 1992; 1998; 1999; 2009). Originating in Greek mythology, Apollo and Dionysius are dialectically opposed imaginative personifications of structure and chaos. Although there is no
personified image of the harmonious union of Apollo and Dionysius, Levine alludes to the means from which it manifests:

Dionysian power…has to be transformed by Apollonian clarity. The result would be living form. The “chaos” of the Dionysian, joined with the “cosmos” (order) of the Apollonian, would give birth to the “dancing star” of an artistic culture (1992, p. 14).

This imaginative expression may serve as a portrayal of the alêthaic truth of being, a harmonious union of chaos and order resulting in “living form”, which is significant in comparison to the act of giving “birth” to a “dancing star” that is without name and exists on a cosmic level. Given these referential meanings, a potential consideration is Athena as a personification of this living form, born as a dancing star. As the god of universal order, Zeus is analogous to “pure form, in the traditional sense of something outside of time and change” (Levine, 2009, p. 31), as indicated by his efforts to avoid the inevitability of his fate. The act of Zeus swallowing Metis whole is comparable to Nietzsche’s Apollonian principles of autonomy and control, while the gestation period and subsequent birth of Athena, coupled by the piercing pain in Zeus’s head, reflects Heidegger’s concept of a work of truth as a “struggle between World and Earth…[that] has been brought into a structure in which that struggle itself is revealed” (Levine, 2009, p. 32).

As the philosophical relation between matter and form, World is “the dimension of openness in which things show themselves to us”, while Earth is “the hidden source from which World manifests [that] resists appearance and can be grasped only as that upon which the World is grounded” (Levine, 2009, p. 183). Considering her ability disguise herself in different forms to thwart Zeus’s advances, Metis is comparable to Heidegger’s concept of “Earth”, or “hiddenness [that] is intrinsic to the temporal character of Being, which has no eternal form that could reveal itself to philosophical intuition” (Levine, 2009, p. 32). As a result, Athena must
symbolize World, the living form that manifests from Earth, or Metis, the eternal hidden source inside Zeus that remains concealed.

Since the struggle between World and Earth occurs through poiēsis- the fundamental process of truth coming to be that reveals a previously unknown world to be returned back to the earth–Hephaestus portrays the process of poiēsis. As the “master craftsman” capable of creating anything imaginable (Sears, 2014, p. 152), Hephaestus symbolizes “the attendant of beauty” that “frees the work from the block of stone in which it is hidden” (Levine, 2009, p. 33). Hence, Hephaestus is responsible for freeing the living form from Athena from the stone, signifying the revealing of alētheia, the truth that comes into being. This metaphor is furthered by associating Metis, the daughter of Tethys (goddess of the sea) and Oceanus (god of rivers), as symbolizing the wisdom of the unconscious (Chodorow, 1997).

Since Athena is known not only as the goddess of wisdom and war, but also as the goddess of the arts and “patron of spinners and weavers” (Sears, 2014, p. 113), it’s possible to envision Athena as personifying the “living form”, or “the appearance of truth in sensible form” that encompasses both chaos and order (Levine, 2009, p. 33).

Examining Noēsis, Deconstructing Poiēsis

Plato places noēsis within the “new spiritualized conception” of the Platonic soul that is designated as “the arche of all cognitive activity”, in which aisthēsis is “perception by the soul through the body, and phronesis (wisdom) is an operation of the soul alone” (Crisafi, 2017, p. 81). Noēsis is considered the activity of the logistikon, or “knowledge of the noeta”, and becomes a subdivision of the logistikon alongside dianoia, “the activity of the mind which has as its object the mathematical” (Crisafi, 2017, p. 81).
Functioning within the fields of *dynamis* (force) and *energeia*, or (energy), Aristotle posits that *noesis* and *aisthèsis* interact in a parallel process of knowing (Crisafi, 2017). *Aisthèsis* “extracts the sensible forms of sensible objects”, while *noesis* “thinks the intelligible forms in sensible images (*phantasiai*)” (Crisafi, 2017, p. 86). This is accomplished by extracting from perception, operating through judgment, or by combining (*synthesis*) or separating (*diairesis*) ideas (Crisafi, 2017).

Aristotle’s paralleled *noesis* and *aisthèsis* is also presented by Heidegger as the modes of being of the soul, or *anima*, that transcend dialectic discourse (Thompson, 2011). *Noesis* is translated as the “intuitive apprehension” of that which is tangibly apparent “in its sheer objective presence” and possesses “the temporal structure of a pure ‘making present’ of something” (Heidegger, 2010, p. 24). Heidegger identifies the initial model of contemporary aesthetics as “the science of *aisthèta*”, that dealt with “matters perceptible by the senses”, comparable to *noema*, that dealt with “matters accessible to thought alone”, or “truths dealt with in mathematical logic” (Thompson, 2011, p. 47).

When viewed as parallel sciences, *noesis* and *aisthèsis* both seek some form of understanding, and implies that relation to “the true” is comparable to relation to “the beautiful” (Thompson, 2011, p. 47). Resulting from this parallel process is pure *noein*, or “(re)presentation” that is “in the purest and most original sense ‘true’”, and at its worse may be erroneous due to ignorance, or *agnoein* (Heidegger, p. 32). Later elaboration on Husserl’s “pure structure of the *noesis*” introduces the concept of the *noematic core*, or the “part of the *noema* that remains the same…over different intentional relations”, which transforms the term *noema* to denote “the sense of the object”, and thus displacing the role of *aisthèsis* to something that is perceived by *nous* (Crisafi, 2017, p. 93).
Due to the diachronic function of *logos* that either discovers or conceals the truth, Aristotle never associated the truth of *logos* with pure *noein* (Heidegger, 2010). Rather, he viewed “the ‘truth’ of [aisthēsis] and the seeing of the ‘Ideas’” as “the primordial discovering” or elemental unearthing of truth (Heidegger, 2010, p. 216). With its root meaning “connected with breath”, *aisthēsis* is viewed as “a primary mode of existence”, within which “*poiēsis* restores the body to life, it animates or ensouls it” (Levine, 2009, p. 49). Levine (2009) contends that within *aisthēsis* lies a multi-layered meaning of sensing: that includes the bodily act of sensing, the imaginal act of sensing, and the noumenal act of sensing which, when combined, make up a “framework of experience” that is both internal and external (p. 49).

Heidegger presents this parallel process to critique of modern aesthetics, as it “frames its understanding of art by presupposing the subject/object dichotomy” (Thompson, 2011, p. 56). The modern aesthetic approach “follows from and feeds back into subjectivism”, referring to the pursuit to secure unrestrained authority in the “calculating, planning, and molding… [of] all things” (Thompson, 2011, p. 57), that extends beyond subjectivism and into enframing, a “technological understanding” of being in the world (Levine, 2009, p. 181).

The meaning behind enframing traces back to the ancient Greek delineation between two different “modes of revealing”: *poiēsis*, a “poetic shepherding into being that respects the natural potentialities of the matters with which it works”, and *techne*, “a technological making that imposes a predetermined form on matter” with ignorance towards its inherent possibilities (Thompson, 2011, p. 21). Between these modes of revealing, enframing is the associated with *techne* within the modern aesthetic approach, while *poiēsis* implies that all art is, in a sense, poetic, and considered the process of “creatively disclosing the possibilities inherent in the way ‘the material’ of the thing ‘resists’…pregiven designs” (Thompson, 2011, p. 80). Levine (2009)
echoes this interpretation, and frames *poiēsis* as “the discovery of what was previously not known, a process that requires a giving up of control rather than an imposition of the will” (p. 183).

In response to modern aesthetics, Heidegger proposes that “the best way to get beyond aesthetic experience is to transcend it from within” (Thompson, 2011, p. 56). This transcendence is reflective of art as *poiēsis*, and alludes to the post-modern reevaluation of the subject/object dichotomy underlying Western philosophy which has been “taken-for-granted” (Levine, 2009, p. 160). This leads to the revival of not only “uncertainty” but poetic activity itself, which “shapes the existence of one who performs it; world-making is also self-making” (Levine, 2009, p. 166). The restoration of *poiēsis* as a “fundamental capacity of being human” reconnects it to “truth” as an *alētheiac* revealing of world, which requires a relinquishment of control through “poetic thinking” (Levine, 2009, p. 166). In observing semantics, the phrase “poetic thinking” embodies the complementary union of *poiēsis* and *noesis*. Although *poiēsis* is thought to operate through the imagination (Levine, 2009) and *noesis* is considered an operation of *nous* (Crisafi, 2017), only through the amalgamation of these processes does *alētheia* come unearthed.

**Discussion**

Based on the presented notions of *noesis*, it may be argued that *noesis* resides in the imagination, but lacks an openness of interpretation or possibility due to its focus on “fixed” truths or matters, like numerical values, spatial relationships, or temporal measurements. It’s possible to combine this with Heidegger’s conception of pure *noēin* as truth that is never false, as it is related to external reality. Through this interpretation of *noesis*, the imagination may be considered a “field”, within which *poiēsis* is the shaping of world or self through the synthesis of *noetic* “modes” and *aïsthetic* “elements” resulting in *eides* that conceal or reveal *alētheiac* truths.
As its primary obligation is to remain loyal to the phenomena of concern, poetic science reinstates uncertainty as a fundamental scientific value. Poetic science can support the ExATh field in creating a more authentic method of scientificity to disclose the deeper realities of experience through the formation and fragmentation of the alêthaic truths of our lived experience. The ExATh field is already equipped to address the regions of Being rejected by modern science as flawed deviants, due to the willingness and proficiency of artists to “deal with reality in its fullness, feelings and all” (Freeman, 2011, p. 394).

Standard linguistic approaches to the semantic reconstruction of Ancient Greek language has stripped “the Greek realities of their internal structure” and reorganized them within a modern cultural framework (Clarke, 2005). Rooted in prototypical units of sound and sense, synchronic mapping may serve as a structural entity for developing a model of imagination, based on the responsibility of the imagination to encompass chaos (Rothko, 2004). As it relates to the creative process, the Parry-Lord theory of oral formulaic style is presented as an example of formulaic creativity that involves in-the-moment structuring of thematic elements.

The human capacity to understand the connection between myth and reality represents the return to Platonic ideals “in an inverted significance”, and thus validates the mode of poetic science. The complementary unity between the subjectivists and objectivists is a recapturing of Greek wisdom, which reinstates the unknown as a positive element of reality (Rothko, 2004).

The mythopoeia of various cultures and societies are “variant expressions of a single reality” that develop in a cyclical process in which function of the imagination is to determine “the nature of any given object that may be affecting the senses” (Laughlin & Throop, p. 720). Thus, imagination is a “universal function of the human brain” that is “embedded in the universe of ordered energy” that interrelates “at many levels, including that of the quantum sea” (Laughlin
& Throop, 2001, p. 710). This indicates that the imagination plays a fundamental role in the formation of an accurate interpretation of reality.

The nature of the imagination as a cosmic force, or the “being of incessant birthing of newness through images” (Bachelard, 2014, p. xx), indicates the fundamental need for an imaginary field within which things are observed in order for them to become manifest (Levine, 2009). This imaginary field is comparable to noesis, which “before it knows is actually nothing but potentially all the things it can know” (Crisafi, 2018, p. 86). Although it’s possible to position this field in external reality (Crisafi, 2017), this existential space within nature could be conceived as a proverbial house of the psyche grounded on synthesis of noesis and aísthesis.

Bachelard likens active intelligence, which may be likened to poiēsis, to Heidegger’s house of Being, which references poiein as the act of making “a place for being” through poetry, so that “Being may come to dwell in it” (Caws, 1990, p. 141).

**Quantum Fields of Energy**

Considering the notion of human experience as an act of “Being in the world”, there is a need for scientificity required for a poetic model of imagination, which can be found in the realm of Quantum Physics further explain the mythopoetic cycle of meaning and the either/or presentation of past and future, as well as imagination and cosmos. This quantum element provides another example of “complementary unity” of previously separated entities: fields and particles.

In short, the basic mechanism of quantum field theory is Dirac’s equation, which formulates the theory that fields are made up of particles, which “in a certain sense are diffused in space like fields, but the fields interact like particles” (Rovelli, 2016, p. 127). Originally based on the interaction of photons (particles of light) and electromagnetic fields, Dirac’s equation was
expanding to explain the granular fields of other elementary particles. The important notion here is that photons are perceived as light, but in fact are the “quanta” of energy, which “travel along the oblique lines” that demarcate the temporal boundaries of past and future, and are also referred to as “light cones” (Rovelli, 2018, p. 127).

From a quantum perspective, the trajectory of light cones is always oriented toward the future, and may be structured in a cyclical pattern that returns to the initial occurrence. This is based on the idea that every event, or phenomena, has “its past, its future, and a part of the universe that is neither past nor future” (Rovelli, 2018, p. 53). This cyclical structure is indicative of the Mythopoetic Cycle of Meaning, and comparable to Bachelard’s functions of unreality and reality and the role of the imagination to give a future to the past through poetry and reverie.

The light-cone shape reflects the separation of past from future by “the expanded present” – a moment so brief it is “almost imperceptible”, and thus is compressed into a “thin horizontal band” which reflects our experience of “the present” (Rovelli, 2018, p. 50). Light cones are the particles that form the temporal structure (time) of the universe, while “the speed at which time flows changes from place to place”, indicating that the temporal structure is in constant flux as opposed to a predetermined form (Rovelli, 2018, p. 52). Compared to Clarke’s metonymic mapping as a method of finding order from chaos, the flux nature of time implies that the structured forms we create are also subject to change.

The inclusion of Quantum Physics in a model of the imagination provides scientific validity and presents a potential field of further psychological and phenomenological inquiry. This is based on the connection between Quantum Physics and Psychology, established by the collaboration of Carl Jung and the physicist Wolfgang Pauli, who recognized the transcendent function as the “psychic mechanism” that synchronizes psychic experiences, including:
conscious and unconscious; light and dark; masculine and feminine; spirit and matter; fantasy and reality; and creative and reactive” (Bruce, 2010, p. 44).

While the full scope of its influence is broad for the purposes of this paper, the distinct difference of Quantum Physics to that of its predecessors is the element of uncertainty. This occurs both in theory but also in practice, as there is so much that still remains a mystery, while the truth that has been revealed is often difficult to explain to the outside world. As a result, the field of Quantum Physics requires a mode of poetic science in order to reveal those things that objective mathematical reasoning has yet to comprehend (Rovelli, 2016).

**Amalgamation of Formulaic Structures**

For the purposes of constructing a tentative model, this inquiry identified fundamental elements for consideration in the development of a model of the imagination that fits within the realm of poetic science and remains faithful to the phenomena of concern.

- *Poiēsis* is a mode of revealing alēthaic truth that respects the natural potentialities of the matter being formed, as opposed to *techne*.
- *Poiēsis* makes meaning of the framework of experience resulting from the parallel process of *aisthesis* and *noēsis*.
- Language is the mediating function of imagination and intuition, or the “house of Being”, which structures the framework of experience.
- There is a unification between reality and unreality that incorporates the fundamental element of uncertainty.
- The imagination is a cosmic force through which we travel in the cyclical pathway of the mythopoetic function. The amalgamation of these elements is portrayed in figure 3. The cone shapes presented are mimetic of Clarke’s metonymic mapping, and serve to represent the function of applying meaning to disparate elements. The two cones mirror one another to represent both past and future, while the hourglass shape demarcates the formulaic field of the imagination.
The imagination or cosmos is presented as a container of possibilities, comparable to a cloud of chaos dispersed in space, forming fields, and represents the quantum field of energy as a whole, which we also inhabit. As we travel forward time via the function of reality, these chaotic elements emerge on the surface of *aisthēsis*, which extracts sensible objects intuited by *noēsis* as intelligible forms that are integrated into a framework of *eides* that portray the present moment, or our house of Being (*poeien*).

The process of crossing over the horizon line of the present occurs via *mimesis*, from which this framework transforms into an internalized likeness of the now prior experience of Being. *Poiēsis* makes meaning of these *eides* as a result of the noetic dissemination of the *eides* and *aisthētic* extraction of sensible forms, an *alethēiac* revealing of sorts. As we continue to travel forward, this framework becomes an experience of the past, that is deconstructed by *noēsis* and *aisthēsis* and returns to the referential fields of chaos as sensible objects and sensible forms. The ostensible return to the imagination or cosmos cues another iteration of this process that forms the cycle of meaning.

Considering the notion that past, present, and future occur as a unified phenomenon, it’s possible that while we externally travel forward in time, we also internally “travel” backward in time. Perhaps this is an “unearthing” of *alethēia*, which proceeds through an inverted version of the aforementioned process. The crossing over the horizon of the present would still occur via *mimesis* as a transformation of an internal framework of experience into an external likeness of the phenomenon.
The combination of these two modes of travel represent the function of reality, *poiētic mimesis*, via the parallel process of *aisthēsis* and *noēsis* that reveals the *alethēiac* truth of our experience of Being. At the same time, also present in the unified phenomenon of past, present future is the part of the universe that is neither past nor future, that, when aligned with the notion of non-being or surplus being, its arguable to assume there is also the function of unreality that engages in the same parallel process aimed at concealing the *alethēiac* truth of our experience of non-being.

*Figure 3*
Conclusion

The results of this literature inquired into gaps of knowledge present in the field of ExATh and external fields of knowledge to present a prototype model of the poetic function to inform ExATh practice. The model may serve as a method of evaluating imaginative functioning, mapping the progression of intermodal transfers, and assessing an individual’s ability to make meaning out of discrete referents. The hope is for readers to take this knowledge and play with the ideas in the field to experiment with quantum-informed approaches to ExATh. The connective threads between fields of knowledge is admittedly theoretical, based on fundamental similarities I identified based on my personally developed understanding of Quantum Physics. Thus, further inquiry into this field is necessary (Rovelli, 2016; 2018).

At the heart of Quantum Physics is the notion that “we are a part of that nature that we seek to understand” (Barad, 2018, p. 26). Just as we are unable to step outside of time, we are also tethered to the cosmos that creates our realm of possibilities. The cosmos informs our experience of Being in ways we are still unable to logically comprehend. Given our ability to embody contradiction and embrace uncertainty in our ways of knowing, the ExATh field could break out of the confines of the Enlightenment that oppress us to the brink of madness. By adopting a quantum scientific mode of inquiry, an opportunity is presented to ExATh field to find evidence to support practice, if for no other reason than the ability of the language of physics to describe the fundamental elements engaged with in poiēsis.

Yet hidden within the myth of Athena’s birth lies the alêtheiac truth of poiēsis, which remains resting in the belly of Zeus awaiting the blade of an ax to break the noetic façade of the Enlightenment. The act of poiēsis is responsible for releasing Athena from the ordered universe, a burst of oscillating energy, the dancing star of a quantum poetic science.
References


