

**ARCHETYPES AS EVOLVED PSYCHOLOGICAL  
MECHANISMS: A GROUNDED THEORY BASED APPROACH  
FROM EVOLUTIONARY AND JUNGIAN PSYCHOLOGY**

A dissertation submitted

by

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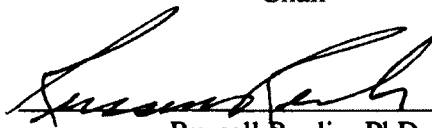
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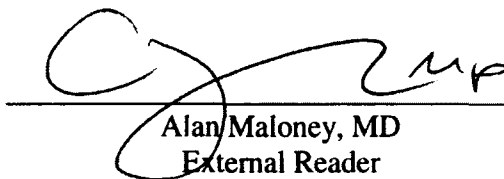
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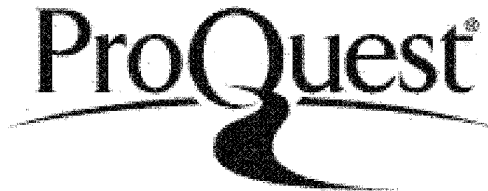
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## ABSTRACT

Archetypes as Evolved Psychological Mechanisms:  
A Grounded Theory Based Approach from Evolutionary and Jungian Psychology

by

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This study developed a theory based on the relationships between Jungian archetypes and the evolved psychological mechanisms described by evolutionary psychology. A grounded theory based approach was conducted on the content of a systematic electronic database search of empirical studies or theoretical articles that examined the relation between Jungian archetypes and the evolved psychological mechanisms in evolutionary psychology. The database search yielded 58 articles in peer reviewed journals and book chapters of which 34 met the inclusion criteria. The coding strategies of grounded theory used open coding to isolate the substantive codings; condensed them into theoretical codings; and grouped the theoretical codes into categories that were used to develop the theory.

In order to examine archetypes as evolved mechanisms or biological entities, a holistic approach was used that considered environment and culture; symbolism and image; individuation and development; human universals; and the collective unconscious. A theory of adaptive function of archetypes emerged that comprised the following components: (a) causal conditions related to the ancestral environment and the adaptive problems of ancestor hunter-gatherers; (b) intervening conditions which includes survival or reproductive problems; (c) the resulting archetype or evolved mechanism; (d) the output human behavior, physiological response, representation, image, or symbol; and (e)

the psychological outcome or goal related to individuation, psychological distress, and complexes. This theory was then applied to the mother and father archetypes and used to explain documented characteristics of these archetypes as evolved parental mechanisms. Such an application was used to better understand these characteristics as they pertained to the marital status of parents, parental investment, and the genetic relatedness of offspring. The theory of adaptive function of archetypes and its applications is potentially useful for clinical and depth psychologists when assessing and treating a range of both adaptive as well as dysfunctional client behavior by utilizing an evolutionary perspective.

*Keywords:* archetypes, evolutionary psychology, evolved psychological mechanisms

## Dedication

To Alex, Mom, and Dad

Without whose love and unconditional support  
I would not have been able to carry this work to completion.  
I am constantly grateful for your love and encouragement.

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## Chapter 1 Introduction

### Introduction and Purpose Statement

The purpose of this study will be to develop a theory by examining the concepts and relationships among Jungian archetypes in Jungian psychology and the evolved psychological mechanisms in evolutionary psychology. This theoretical dissertation will examine archetypes in terms of evolutionary and Jungian psychologies in order to generate a theory using the concepts from the systematic methodology of grounded theory, resulting in a new synthesis that contributes to a depth psychological understanding of these archetypes and their clinical relevance.

Jung believed that a “science of psychology could not be founded on the study of a seemingly infinite variety of individual differences: it was necessary, first of all, to establish the ways in which human beings are all psychologically similar” (Stevens, 2003, p. 23). Evolutionary psychology is built on the notion that in order to understand the relationship between “biology and culture, one must first understand the architecture of our evolved psychology” (Cosmides, Tooby, & Barkow, 1992, p. 5). In like manner to the writings of Jung, evolutionary psychology is built on the central premise that there is a universal human nature, and these researchers add “that this universality exists primarily at the level of evolved psychological mechanisms . . . which are adaptations, constructed by natural selection over evolutionary time” (p. 5).

Jung delineated the concept of *archetype*, not as an inherent idea, but as a universal mode of functioning in humans (Stevens, 2003). At this stage in the research, archetype will be defined as: “innate neuropsychic centres possessing the capacity to

initiate, control and mediate the common behavioral characteristics and typical experiences of all human beings irrespective of races, culture or creed” (Stevens, 2003, p. 352). Within evolutionary psychology, evolved psychological adaptations (or information processing mechanisms) are primarily the result of the selection pressures our hunter-gatherer ancestors faced—or the adaptive problems they had to solve (Cosmides et al., 1992, p. 9). Consequently, evolutionary psychology looks at the relationships between these psychological mechanisms and human culture.

To illustrate the possible general relations which can be drawn when evaluating the integration of Jungian archetypes and evolved psychological mechanisms, this researcher will utilize the research results involving the mother and father archetypes. The mother and father archetypes will be examined symbolically and culturally within the field of Jungian psychology. Evolutionary psychology will then provide the framework needed to examine the maternal and paternal mechanisms in terms of parental investment, genetic relatedness of offspring, and the marital status and age of parents.

This dissertation will use the research findings from evolutionary psychology related to maternal and paternal mechanisms to illuminate the principles of the mother and father archetypes in Jungian psychology. Above all, examining the universality of the mother and father archetypes from the biologically based principles of evolutionary psychology will contribute to the field of Jungian analysis and psychotherapy by presenting the possible behavioral characteristics we possess by virtue of being human. Furthermore, clinicians can integrate and utilize the biological aspects related to the mother and father archetypes when these issues arise in their work with their patients.

This research will examine and articulate the relationships between Jungian

archetypes and the evolved psychological mechanisms described by evolutionary psychology. This will be conducted by a systematic electronic database search in which the resulting content will be coded and analyzed using techniques derived from grounded theory. It will generate a theory as derived from potential relationships between these two approaches to psychology. The resulting theory will be applied to better understand the mother and father archetypes. From a broader perspective, the theory and its applications will be useful for clinical psychologists to better understand a range of both adaptive as well as dysfunctional client behavior.

### **Relevance of the Topic for Clinical Psychology**

Examination of the evolved nature of the mind—or the psychological mechanisms as the product of adaptations—has received little attention in the human sciences and clinical psychology. This may be partly because of “its implied pessimistic messages and partly because of a poverty of good research paradigms” (Cosmides & Tooby, 1992, as cited in Gilbert, Bailey, & McGuire, 2000, p. 4). Of particular importance is using evolved psychological mechanisms in developing and integrating a biopsychosocial approach to therapies (Gilbert, Bailey, & McGuire, 2000). In particular, Jung’s theory of archetypes as taken from an evolutionary viewpoint is in its early stages; and is primarily being explored by researchers including but not limited to: Anthony Stevens, Paul Gilbert, George Hogenson, Alan Maloney, Petteri Pietikainen, Jean Knox, Greg Mogenson, Anthony Storr, Michael Fordham, and Bruce MacLennan.

Another reason why this integration has received little attention is primarily due to the ongoing debate as to how to interpret and analyze Jung’s archetypes and archetypal psychology. For example, researchers have debated Jung’s archetypes as biological



modules that can be located in the human brain (Stevens, 2003), or as culture's symbolic forms (Pietikainen, 1998), as consistent with innateness as found in Archetype Theory (Maloney, 1999), or as Mogenson (1999) has argued: that Jung's archetypes are "specific responses of the relatively autonomous psyche to the material and/or spiritual contingencies which it asymmetrically mirrors" (p. 128). Nevertheless, there exists an imperative need to incorporate the elements of evolutionary psychology, natural selection, and human nature to the field of Jungian and depth psychology in order to better understand human behavior from an evolutionary perspective.

Although considerable research has been devoted to interpreting Jungian archetypes, rather less attention has been paid to developing the biological, cognitive, and developmental aspects of the archetypes. Jean Knox (2003), a Jungian analyst, stressed the following:

we do have to make a choice between a biological and metaphysical view of archetypes, and research developments in the biologically based fields of cognitive and developmental psychology also make it increasingly urgent for us to re-examine and update our biological concept of the archetype in the light of these discoveries. (p. 39)

The above illustrates a divide in current Jungian thought as to how biologically based archetypes are conceptualized; certain explanations may be false dichotomies that appeal to the discredited nature versus nurture debate (A. Maloney, personal communication, November 29<sup>th</sup>, 2011).

There is an imperative need for the field of clinical psychology to take into account and examine Jungian archetypes from the biological and cognitive viewpoints. Anthony Stevens (2003) has extended the study of archetypes to clinical psychology by examining how they can inform our understanding of certain topics related, but not

limited to: stepfamilies, attachment, child abuse, and single mothers. Stevens (2000b) has also recognized how an understanding of evolutionary psychology can help clinicians and analysts better assess the patient's presenting problems,

Acceptance of the evolutionary origins of the human mind has now moved so far that it is unlikely that any psychological explanation will prosper if it is incompatible with the Darwinian evolutionary consensus. By allowing us to see beyond the old medical and psychoanalytic models, this wider vision is likely to impact significantly on psychiatric and psychotherapeutic research and practice in the coming years. It could succeed in reconciling the differences between "biological," "clinical," and "social" psychiatry and thus render obsolete the doctrinal squabbles and internecine battles between the classical schools of analysis. (pp. 93-94)

As a result, human behavior as presented in psychotherapy can be better understood when taking into account the historical context in which these behaviors evolved, as well as taking into account their psychological significance.

It is important to note that adopting an evolutionary perspective on archetypes can be reductionistic if it only looks at the different biological components that may contribute to certain behavioral characteristics of archetypes. By integrating biology within the field of Jungian psychology, researchers can complement it by broadening its scope while preserving the essence of analytical psychology. For example, when considering the mother archetype and mother complex, one can take into account the mother as primary attachment figure (i.e.: attachment theory and maternal mechanisms) to the numinous experience of the Great Mother. After Jung introduced his concept of the mother archetype, John Bowlby followed with his principles of attachment theory—one of the most recognized contributions in evolutionary thinking (Bowlby, 1969, as cited in Stevens, 2000b, p. 100).

Adding to the aforesaid, clinical psychology can also benefit from the clinical

implications which can be drawn from the research related to maternal and paternal evolved psychological mechanisms in evolutionary psychology, with specific attention being paid to the mother and father archetypes. For example, the activation of the father archetype in Jungian psychology—in accordance to how it differs from the mother archetype—is more easily understood when considering parental investment: a middle level theory that falls under general evolutionary theory or inclusive fitness theory in evolutionary psychology (Buss, 1999). Following this, inclusive fitness theory “describes the process of evolution by changes that increase the likelihood of producing variable offspring (classical fitness) and the likelihood that one’s genetic kin will produce offspring (inclusive fitness)” (Buss, p. 39). Using this lens, clinicians can better understand issues related to step-father abuse, the father’s instrumental role (Parsons & Bales, 1955, as cited in Stevens, 2003, p. 131), and gender differences.

Within the field of depth psychology, the personal complexes that emerge in individuals and are attended to in psychotherapy can be better treated if the analyst has an understanding of the possible biological basis of such complexes. Stevens (2003) explained that

as in dealing with any other complex, it must be the duty of depth psychology to render it conscious, for only when a man confronts his complexes in consciousness, when he comes to recognize their power and where they come from, is he in a position to do anything about them. Consciousness gives him the capacity for ethical choice: he is able to decide whether or not he has to act them out. (p. 138)

Bruce MacLennan has spoken to the additional research that is needed on the specific nature of the archetypes from an evolutionary psychology viewpoint (B. MacLennan, personal communication, February 10, 2010). As part of this conversation, MacLennan specified the need for a more comprehensive analysis pertaining to the father archetype in

general, and the dominant hierarchy in evolutionary psychology, in particular, with emphasis on the father/child relationship. This analysis will broaden the understanding of the mother and father archetypes by examining the evolved psychological mechanisms underlying these archetypes.

As the above literature review indicates, Jungian psychologists do not have a comprehensive depth psychological understanding of the mother and father archetypes, as related to Jungian psychology and evolutionary psychology perspectives.

### **Autobiographical Origins of the Researcher's Interest in the Topic**

My research is informed by my own childhood experience of archetypes and innate capacities as the foundations that allowed me to personally overcome childhood difficulties. When I was an infant, my parents chose to escape Peru's era of terrorism known as the "Shining Path" movement and we fled to the United States in the late 1970s. This forced migration had a significant impact on my personal development in that I was exposed to economic hardship, had to learn a foreign language, attempted to "fit in" into a society where I felt like an outcast, and lived with unpredictability on an everyday basis. As a child, my parents' unconditional love and devotion shielded me from the potentially threatening environment that was created by financial instability and constant stress.

Although certain dynamics were present in the rearing style my parents employed (which created a secure attachment), there also existed a deeper, more numinous experience in my archetypal world as a child. The stress that was present in my life due to depleted resources and unpredictability was shielded by a secure parental attachment and a strong connection to childhood imagination, fantasy, and play. At a very early age,

I came to understand that it was the love and kindness that my parents provided my siblings and I that significantly outweighed the perceived lack of necessary resources in our daily lives; and provided the necessary coping strategies we needed to thrive.

Upon entering my scholastic endeavors as a formative student of undergraduate psychology at the University of California in Santa Barbara, I began exploring my fascination with the seemingly innate mechanisms that children possess and allow them to fend and adapt to unstable environments. My questions and interests led me to explore such disciplines as cognitive psychology, anthropology, developmental psychology—the foundations and contributors to evolutionary psychology. I was amazed as to how evolutionary psychology, an approach to psychology, illuminated my understanding of my adaptive capacities as a child. The evolutionary explanations at the basis of attachment theory not only validated my childhood experiences, it opened the door to studying and remaining curious about the evolved psychological make-up that humans possess.

My excitement in the field of evolutionary psychology and cognition led me to a research position studying prosopagnosia, a face recognition deficit. Under the instruction of Dr. Bradley Duchaine, my research team and myself conducted experiments in order to gain a better understanding of the mapping of the human brain by way of domain specificity and adaptive function. By looking at the human brain through the lens of evolutionary psychology, natural selection, and human nature, I was able to have a glimpse into the elaborate architecture of the human brain.

However, in addition to the adaptive capacities I knew I possessed as a child, I did not forget about the comfort and security I found in the archetypes and archetypal world

through imagination and play during my childhood. As a graduate student, I was drawn to research that examined the biological basis of Jungian archetypes and their adaptive significance—the impetus that preceded the present study.

### **The Researcher's Predisposition to the Topic**

Since the present study is a development of my personal curiosity regarding Jung's theory of archetypes and how this fits within human adaptations and evolutionary psychology, I find it necessary to address my own understanding of any personal predispositions I may have related to this topic. As previously stated, I am a product of loving and caring parents who embarked on the "American Dream" in order to improve the opportunities of their children at a significant cost to themselves. Although I was exposed to the suffering that my parents endured as a result of their migration, they invested greatly in their children, and continue to invest in their 35+ year marriage as a couple. I was fortunate to have parents who did not have to go through the process of divorce and become single parents. I can also say that my upbringing did not contain severe abuse or trauma.

I state the aforementioned as an attempt to examine and critique the predispositions I bring to my topic in order to increase the rigor of the project and decrease possible confounds when I am gathering data related to my study. Research studies involving parental investment and care and the lack of it have shown that children who live with one biological parent and one step-parent "are 40 times more likely to be physically abused than children living with both genetic parents" (Buss, 1999, p. 202). This is not to say that this could not have been possible in my family of origin, but is solely meant to be presented as a self-reflection critique which helps to minimize this

researcher's personal biases in order to increase overall objectivity.

The overarching goal of my research is to generate a depth psychological understanding of archetypes and their basis in evolutionary psychology. The resulting theoretical development of a new synthesis between evolutionary and Jungian psychologies will act as a contribution to the field of clinical psychology by providing clinical psychologists with an understanding of the psychological mechanisms as they apply to archetypes and archetypal characteristics. The emerging theory, as derived from a systematic electronic database search and grounded theory based approach, will contribute to the understanding of the mother/father-child relationship and serve as a bridge between depth psychology and the larger field of clinical psychology.

## **Chapter 2**

### **Review of the Literature: Comparing the Mother and Father Archetypes**

#### **Evolutionary Psychology and Jungian Archetypes**

**Basic tenets of evolutionary psychology.** Evolutionary psychology is an approach to psychology that takes into account the adaptive problems that our ancestors faced and the organism's design features which evolved to solve those adaptive problems (Cosmides et al., 1992). Cosmides et al. explain:

By understanding the selection pressures that our hominid ancestors faced—by understanding what kind of adaptive problems they had to solve—one should be able to gain some insight into the design of the information-processing mechanisms that evolved to solve these problems.  
(p. 9)

Cosmides and Tooby (1997) have referred to the standard social science model (SSSM) as the dominant, alternative model of human behavior which posits a brain as a general purpose learning machine. In contrast, evolutionary psychology is an approach to psychology which postulates that “millions of years of evolution provided specific environmental challenges that have resulted in specific cognitive mechanisms designed to meet those challenges, through the process of natural selection” (Siebert & Ward, 2002, p. 236). These cognitive mechanisms or domain-specific modules evolved to solve different adaptive problems and represent human adaptations which come online at different points in the life-cycle (Tooby & Cosmides, 1992). So just as our bodies evolved throughout evolutionary time, our brains also evolved to solve the problems that our ancestors faced in the Pleistocene. In addition, the division of labor between males and females in hunter-gatherer times led to the evolution of gender differences.

Evolutionary psychologists associate complex adaptations and evolved architectures with human universals, which are species-typical and at the core of what



encompasses complex adaptations. The following is a list of the logic surrounding the emergence of complex adaptations (as found in Tooby et al., 1992):

1. A species is a group of organisms with a common history of interbreeding and a continuing ability to interbreed to form offspring who can typically reproduce at least as well as their parents.
2. To survive and reproduce in a complex world, organisms need complex problem-solving machinery (complex adaptations).
3. Complex adaptations are intricate machines that require complex “blueprints” at the genetic level. This means that they require coordinated gene expression, involving hundreds or thousands of genes to regulate their development.
4. Sexual reproduction automatically breaks apart existing sets of genes and randomly generates in the offspring new, never before existing combinations of genes at those loci that vary from individual to individual.
5. If genes differed from individual to individual in ways that significantly impacted the developed design of the component parts of complex adaptations, then existing genetic combinations whose developed expressions had fit together into complex adaptations would be pulled apart by sexual recombination. Equally, new combinations would be thrown randomly together, resulting in phenotypes whose parts were functionally incompatible.

(p. 78)

Leda Cosmides and John Tooby (1997) in *Evolutionary Psychology: A Primer*, cite five principles in psychology; and these “five principles can be applied to any topic in

psychology. They organize observations in a way that allows one to see connections between areas as seemingly diverse as vision, reasoning, and sexuality” (Back to Basics section, para. 2). Cosmides and Tooby (1997) listed the following five principles:

Principle 1: The brain is a physical system. It functions as a computer. Its circuits are designed to generate behavior that is appropriate to your environmental circumstances.

Principle 2: Our neural circuits were designed by natural selection to solve problems that our ancestors faced during our species' evolutionary history.

Principle 3: Consciousness is just the tip of the iceberg; most of what goes on in your mind is hidden from you. As a result, your conscious experience can mislead you into thinking that our circuitry is simpler than it really is. Most problems that you experience as easy to solve are very difficult to solve—they require very complicated neural circuitry.

Principle 4: Different neural circuits are specialized for solving different adaptive problems.

Principle 5: Our modern skulls house a stone age mind.

These principles are meant to be explored whenever considering some aspect of human behavior, such as: “sex and sexuality, how and why people cooperate, whether people are rational, how babies see the world, conformity, aggression, hearing, vision, sleeping, eating, hypnosis, schizophrenia and on and on” (Cosmides & Tooby, 1997, Principle 5 section, para. 9). In accordance to these principles, evolutionary psychologists ask the following fundamental questions when attempting to understand human behavior:

1. Where in the brain are the relevant circuits and how, physically, do they work?

2. What kind of information is being processed by these circuits?
3. What information-processing programs do these circuits embody? and
4. What were these circuits designed to accomplish (in a hunter-gatherer context)?

Therefore, evolutionary psychologists view the brain as a collection of an evolved human architecture (information processing modules), that evolved to solve the adaptive problems our ancestors faced in the environment of evolutionary adaptedness. The mechanisms which evolved to solve the problems our ancestors faced as hunter-gatherers in the savannah are termed “evolved psychological mechanisms.” What follows is a more detailed description of the properties of evolved psychological mechanisms.

**Defining “evolved psychological mechanism.”** Buss (1999) defined an evolved psychological mechanism as a set of processes an organism possesses with the following properties: (a) an evolved psychological mechanism exists in the form that it does because it solved a specific problem of survival or reproduction recurrently over evolutionary time, and (b) is designed to take in only a narrow slice of information, (c) the input of an evolved psychological mechanism tells an organism the particular adaptive problem it is facing, (d) the input of an evolved psychological mechanism is transformed through decision rules into output, (e) the output of an evolved psychological mechanism can be physiological activity, information to other psychological mechanisms, or manifest behavior, and (f) the output of an evolved psychological mechanism is directed toward the solution to a specific adaptive problem (pp. 48-49). These evolved psychological mechanisms are said to have evolved because it led, “on average, to the successful solution of a specific adaptive problem for that organism’s

ancestors” (p. 49). Cosmides and Tooby (1994) have explained:

The brain is a complex computational device, a system that takes sensory information as input, transforms it in various ways, stores it, analyzes it, integrates it, applies decision rules to it, and then translates the output of those rules into the muscular contractions that we call “behavior.” (p. 328)

Since humans faced an array of adaptive problems throughout evolutionary history (i.e., problems of survival and growth, problems of mating, problems of parenting, problems of aiding genetic relatives, etc.), what follows are the solutions that evolved to solve such problems in the form of complex adaptive mechanisms. It is important to emphasize that humans are not conscious of such processes or decision rules which govern behavior. For the most part, “humans have no more conscious access to the structure of these programs and the decision rules they embody than to the processes through which the kidneys select what to excrete (Cosmides & Tooby, 1994, p. 328).

The literature found in evolutionary and cognitive psychology contains little to no mention of Carl Jung and his writings (Knox, 2003). In order to develop a more integrated biopsychosocial approach to psychology in general, more attention is needed when considering archetypes and their cultural significance. The following is a description of archetypes as found in Jungian psychology.

**Basic tenets of Jungian archetypes.** Carl Jung began writing about his ideas related to archetypes as contents of the collective unconscious, and dated principles related to archetypes as early as Plato. Jung (1953/1966a) differentiated what he meant by the personal and collective unconscious in that the collective unconscious is “detached from anything personal and is common to all men, since its contents can be found everywhere, which is not the case with the personal contents” (p. 66). Jung’s idea of the unconscious differed from Freud’s in that Freud thought of the unconscious as solely

personal to the individual. In contrast, Jung (1953/1966b) spoke of the innate architecture of the human brain, as depicted in the following: “The collective unconscious in individual A bears a greater resemblance to the collective unconscious in individual B than the conscious ideas in the minds of A and B do to one another” (p. 304). Jung (1959/1969) defined the collective unconscious as “a deeper layer, which does not derive from personal experience and is not a personal acquisition but is inborn” (p. 3). The collective unconscious is “collective” in that it is universal and the contents of the collective unconscious are the archetypes. Consequently, Jung was one of the first thinkers to write about the universality of human psychology, what he termed the “collective unconscious.”

Furthermore, Jung was one of the first psychologists to reject the *tabula rasa* notion of the human mind, believing that we are born into the world with innate structures (Stevens, 2000b, 2006). He attempted to explain the a priori categories of parents, wife, and man as “images” in the unconscious which are made conscious through experience and presented the notion that individuals come into the world with innate structures. Jung (1953/1966b) succinctly explained:

The whole nature of man presupposes woman, both physically and spiritually. His system is tuned in to woman from the start, just as it is prepared for a quite definite world where there is water, light, air, salt, carbohydrates, etc. The form of the world into which he is born is already inborn in him as a virtual image. Likewise, parents, wife, children, birth and death are inborn in him as virtual images, as psychic aptitudes. These *a priori* categories have, by nature, a collective character; they are images of parents, wife, and children in general and are not individual predestinations. We must therefore, think of these images as lacking in solid content, hence as unconscious. They only acquire solidity, influence, and eventual consciousness in the encounter with empirical facts, which touch the unconscious aptitude and quicken it to life. (p. 190)

In accordance with evolutionary psychology, Jung believed humans possess an evolved

architecture, which is innate and comes online at varying points in the lifecycle.

**Defining the term “archetype.”** Jung defined “archetype” in different ways in varying times in his life, thus making a clear definition difficult. He spoke of archetypes as images of the collective unconscious and sometimes he “distinguished more precisely between archetypes as unconscious forms devoid of any specific content and archetypal images as the conscious contents of those forms” (Adams, 2008, p. 107). He also used “archetype” and “primordial image” interchangeably. Jung later made the distinction between archetypes-as-such and the images they may give rise to. Anthony Stevens (2003) has elaborated on Jung’s archetype hypothesis as the archetypes-as-such “is the inherent neuropsychic system—the ‘innate releasing mechanism’—which is responsible for patterns of behavior” (p. 18).

Jung (1915/1961a) referred to archetypes as instincts when speaking of dreams and how a particular dream “thus constitutes a kind of structural diagram of the human psyche” (p. 161). Instincts are conceptually close to archetypes and it can be said that archetypes are to the psyche what evolved psychological mechanisms are to the body. Instincts have been described to tune perception and behavior for a purpose important to our species, and have been generalized to include mating, infant care, cooperation, social organization, defense, and competition for mates (MacLennan, 2006). MacLennan (2006) postulates that exploring how these instincts have been adaptive in our environment of evolutionary adaptedness (EEA) can provide us with another perspective in understanding archetypes. Stevens (1993) explained the biological basis of archetypes and criterion for archetypes, and defined archetypes in that: “whenever a phenomenon is found to be characteristic of all human communities, irrespective of culture, race, or

historical epoch, then it is an expression of an archetype of the collective unconscious” (p. 65).

Jean Knox (2003, p. 24) has identified the following four core themes on Jung’s concept of the archetypes, which I will outline here in order to provide the reader with an overview of how Jung’s concept of archetypes evolved over time:

- Archetypes as biological entities in the form of information which is hard-wired in the genes, providing a set of instructions to the mind as well as to the body.
- Organizing mental frameworks of an abstract nature, a set of rules or instructions but with no symbolic or representational content, so that they are never directly experienced.
- Core meanings which do contain representations; content and which therefore provide a central symbolic significance to our experience.
- Metaphysical entities which are eternal and are therefore independent of the body.

Knox (2003) has summarized the inherent differences between these models by stating that “contemporary cognitive science is increasingly providing the empirical evidence to show that the human mind does contain core meanings which structure our perception of the world but these are built up from experience” (p. 25). What is integral here is that an explanation involving a biological basis of archetypes needs to account for both nature (nativism) and nurture (experience).

George B. Hogenson (2004) further explained the opposing viewpoints on how to interpret the theory of Jungian archetypes:

Leading Jungian and post-Jungian theorists such as Anthony Stevens, James Hillman and Jean Knox can thus assume radically divergent positions such as Steven's deeply biological and evolutionary interpretation of archetypes that stands in stark contrast to the essentially literary or intuitive use of the concept by Hillman and his followers. Similarly, Knox uses a sophisticated grasp of recent findings in developmental psychology and the cognitive sciences to present a picture of archetypes as developmentally derived properties within a more general theory of mind. (p. 32)

As Hogenson depicts, the author most responsible for the convergence between Jungian psychology and evolutionary thinking is Anthony Stevens (see Stevens 1993, 2000b, 2003). Paul Gilbert, a cognitive psychologist, is also responsible for further expanding the connection between evolutionary psychology and archetypes (Knox, 2003, p. 15). Stevens (1995a) outlined Jung's connection to evolution and mechanisms by way of his archetypal psychology, and explained: "Patterns of behaviour are archetypes made manifest through the body—they are archetypes expressed in body language" (p. 354). Jung (1961/1989) explained his archetype theory:

Consciousness is phylogenetically and ontologically a secondary phenomenon. It is time these obvious facts were grasped at last. Just as the body has an anatomical prehistory of millions of years, so also does the psychic system. And just as the human body today represents in each of its parts the result of this evolution, and everywhere still shows traces of its earlier stages—so the same may be said of the psyche. Consciousness begins its evolution from an animal-like state which seems to us unconscious, and the same process of differentiation is repeated in every child. The psyche of the child in its preconscious state is anything but a tabula rasa; it is already preformed in a recognizably individual way, and moreover equipped with all the specifically human instincts, as well as with the a priori foundations of the higher functions. (p. 348)

Maloney (1999) succinctly and operationally defined Jung's concept of archetype:

Archetypes, in the psychological sense, can be thought of as emotional-cognitive, or more precisely emotional-imaginal, mental structures which functionally shape personal experience and therefore behavior. Archetypes can sometimes be consciously discerned, especially in mythopoetic situations. When consciously discerned, archetypes have a



representational quality. (p. 103)

The field of evolutionary psychology, which looks at human behavior and psychology as “informed by the fact that the inherited architecture of the human mind of the product of evolutionary process,” (Cosmides et al., 1992, p. 7) can greatly amplify archetypes as biological entities, but is also limiting in that it fails to address the inner experiences of individuals (Stevens, 2003, p. 30).

Such similarities between these two disciplines are seen within the work of Jung (1949/1977) and the term archetype

is not meant to denote an inherited idea, but rather an inherited mode of functioning, corresponding to the inborn way the chick emerges from the egg, the bird builds its nest, a certain kind of wasp stings the motor ganglion of the caterpillar, and eels find their way to the Bermudas. In other words, it is a “pattern of behavior.” This aspect of the archetype, the purely biological one, is the proper concern of scientific psychology. (CW 18, p. 518)

The view that the mind is innately structured is also the underlying assumption of Archetype Theory, which denotes that “innate ‘knowledge’ can no longer be dismissed as fanciful; whether its presence is supported by a wealth of applicable empirical research” (Maloney, 1999, p. 103). In order to demonstrate the significance of such innate structures, what follows is an overview of natural selection and archetypes as a product of evolution.

**Natural selection, innateness, and archetypes.** The view of the mind as innately structured means that it contains functional organization—which is the product of natural selection. Natural selection “sorts between design variants depending on which interacting genes—environment inheritances produce organisms that successfully develop functional designs” (Tooby, Cosmides, & Barrett, 2003, p. 863). The interplay

between environmental and genetic inheritances develops this functional design—making the nature versus nurture debate a moot point. Tooby et al. (2003) explained natural selection as:

(a) the set of enduring, nonrandom, cause-and-effect relationships in the world that (b) interact with the reliably developing features of the organisms (c) in such a way that they consistently cause some design variants to reproduce their designs more frequently than others because of their design differences. Hence, those traits that do not reliably develop across generations cannot be systematically interacted with by selection and thus will not be organized by the long-term operation of selection. Reciprocally, if a property of the world does not stably endure across generations, then it will not last long enough to cause some design features to supplant others in large populations, and its effects will not show up in the species-typical design of organisms. (p. 862)

The interplay of genes and the environment in the science of epigenetics has been described as a “complex web of interactions among genes, their products, and the internal and external environment of an organism is the focus of *epigenetics*, a rapidly growing field within the biological sciences that is typically defined as the study of heritable changes in gene expression and function that cannot be explained by the changes in DNA sequence” (Lickliter, 2009, p. 140). The environmental impact of genetics as seen in epigenetics and the role of life experience on biology has long been recognized by evolutionary psychologists: “Indeed, in the history of biology, almost the first thing known about the regulation of gene expression was that it could be turned off and on by environmental factors, and that genes turn each other off and on” (Tooby et al., 2003, p. 858).

In addition to epigenetic inheritance and evolved mechanisms as a product of the selection pressures our ancestors faced and the solutions that evolved to solve those problems, research has indicated that natural selection is causing slow and gradual

change on contemporary humans by extending their reproductive period (Byars, Ewbank, Govindaraju, & Stearns, 2010). Similarly, Jungian psychology also takes into account life experience and how experience then serves to activate the archetype behavior, images, and ideas. Stevens (2003) eloquently explained:

The primal occurrences of life—being born, forming attachments, gaining initiation in to the adult state, courting, mating and rearing children, collective bonding by males for the purposes of hunting and intraspecific conflict, and dying, all are subject to archetypal control and are associated with certain “typical dispositions” both in behavioural and subjective ideal forms. Thus, throughout the whole cycle of life, the archetype stands behind the scenes, as it were, as a kind of author-director or actor-manager, producing the tangible performance that proceeds on the public stage. (p. 59)

The subsequent sections will examine the function of the mother and father archetypes as presented in symbolism and culture, with attention being given to the positive and negative aspects or characteristics of such archetypes.

### **The Mother Jungian Archetype**

One of the most important archetypes is the mother archetype Jung (1948/1969). Jung distinguished between the personal maternal figures, such as our mothers and grandmothers, and those we encounter in the “figurative” sense through religion and mythology (p. 81). In this section of the paper, this researcher will examine the mother archetype as introduced by Jung and further developed by Jungians. This phenomenon will then be elaborate upon by broadening the scope to include the neurobiology of the mother archetype, as seen through the lens of evolutionary psychology.

**The mother archetype in symbolism.** Anthony Stevens (2003) stressed the fact that when Jungians “speak of the mother archetype, they are not referring to an innate image but to an inner dynamic at work in the phylogenetic psyche” (p. 108). The mother

archetype in this representation is made known to or senses through symbolism found in religion, myth, fairy tales, rituals, and symbols. M. Ester Harding (1971) has written on the universality of the Great Mother as found in just about every religion and mythology.

She explained:

It is indeed strange that legends which have taken their origin so far apart should yet be so similar. The only possible explanation is that the myths represent a psychological reality which has been perceived by these widely separated peoples, not in the form of abstract thought, but as an image rising from the unconscious and projected into the outer worlds as a divine being. For as Jung has clearly demonstrated, the gods are principles or forces which function apart from man's conscious volition and to whose fiat he must needs vow. (p. 96)

It is important to note that these associations made with the mother figure date back to the beginning of recorded human history and present universality among humans across cultures. Donald Brown (1991) explained the universal people as composed of the commonalties that all people, all societies, and all cultures share and

the core of a normal UP [universal people] family is composed of a mother and children. The biological mother is usually expected to be the social mother and usually is. On a more or less permanent basis there is usually a man (or men) involved, too, and he (or they) serve minimally to give the children a status in the community and/or be a consort to the mother. (p. 136)

The symbolic aspect of the mother archetype has been examined in terms of religious figures, such as Mary the mother of Jesus (Ford, 2004) and the Madonna and Hodigitria (Fredrickson, 2004). Erich Neumann (1955/1963) has written extensively on the mother archetype and images in his book entitled, *The Great Mother*. Neumann, a former student of Jung's perhaps best known for his theory of feminine development, explained the

function of the image symbol in the psyche is always to produce a compelling effect on consciousness. The archetypal image symbol

corresponds, then, in its impressiveness, significance, energetic charge, and numinosity, to the original importance of instinct for man's existence. (p. 5)

Neumann mentioned the term *numinosity* and defined "numinous" as it applies to the "action of beings and forces that the consciousness of primitive man experienced as fascinating, terrible, overpowering, and that is therefore attributed to an indefinite transpersonal and divine source" (p. 5). This subjective phenomenon is an example of the inner workings of human consciousness, an apparent universal quality, which deserves further integration and examination within evolutionary psychology.

Neumann (1955/1963) elaborated on the representation and manifestation (in images) of instincts in consciousness by stating that this

fundamental constellation is itself a *product* of the unconscious, and not merely an "activity" of consciousness itself. For this reason Jung says: "The primordial image might suitably be described as the *instinct's perception of itself*, or as the self-portrait of the instinct." (pp. 5-6)

Since archetypes are expressed through images and symbols, there exists a possible neurological basis for Jung's concepts, which I will discuss later in this paper.

The mother archetype contains the evolved psychological mechanisms that are found in mothers in the rearing of children, which come online at different points in the life cycle. Stevens (2003) explained that the

assumptions underlying the ethological approach to human instinctive behavior have much in common with those on which Jung based his theory of the archetype. Jung conceived of the archetypal nuclei of the phylogenetic psyche as determining and co-ordinating that basic patterns of human life in a way which was characteristic for all members of the species. Archetypes function, he maintained, at a level of cerebral activity mainly below the reach of consciousness, and, therefore, their modus operandi cannot be perceived. Nevertheless, their influence on our life-experience is profound, their activity achieving expression in the universal forms of behavior, images, and ideas which characterize human communities everywhere. (p. 59)

What follows is a description of the inherent positive and negative characteristics of the mother archetype.

**The positive and negative aspects of the mother archetype.** Anthony Stevens (2003) called the Great Mother “the central aspect of the Archetypal Feminine. “Great” expresses her timelessness and her numinous superiority over everything mundane and merely human. Like all archetypes, the Great Mother possesses both positive and negative attributes” (p. 109). Stevens went on to highlight Neumann’s argument that this type of duality has been experienced by humans since the beginning of history. The positive and negative attributes which are characteristic of the mother archetype are those pertaining to her being creative and loving on one hand to destructive and hateful on the other (Stevens, 2003, see also Neumann, 1955/1963). Within evolutionary biology and inclusive fitness, a child can also experience both positive and negative feelings towards his or her parents (and vice versa) due to certain characteristics involving parent-offspring conflict. Such a conflict between parent and infant is due to both parent and offspring not being genetically identical; and to the partitioning of parental investment among siblings in order to optimize their own inclusive fitness (Daly & Wilson, 1983).

Since the mother archetype in its universal sense is found in Jung’s concept of the collective unconscious, the personal unconscious then houses the mother complex (or personal feelings a person might have towards their mother and father) that individuals possess. The mother archetype, as explained by Jung (1948/1969),

forms the foundations of the so-called mother-complex. It is an open question whether a mother-complex can develop without the mother having taken part in the formation as a demonstrable casual factor. My own experience leads me to believe that the mother always plays an active part in the origin of the disturbance, especially in the infantile neuroses or

in neuroses whose aetiology undoubtedly dates back to early childhood. In any event, the child's instincts are disturbed, and this constellates archetypes which, in their turn, produce fantasies that come between the child and its mother as an alien and often frightening element. (p. 85)

Following this, the next section examines the mother archetypal characteristics as parental evolved psychological mechanisms found in evolutionary psychology.

### **The Mother Archetype from Evolutionary Psychology**

The characteristics of the mother archetype seem to have general relations with the maternal or parental psychological mechanisms in evolutionary psychology. This begins with a review of parental investment and sexual selection in evolutionary theory.

**Overview of parental investment and sexual selection.** In 1971, Darwin differentiated natural selection (individual's abilities to adapt to their "environment") from sexual selection (differential abilities to acquire mates); and went on to further distinguish principles related to intersexual selection (competition for mates) and intrasexual selection (competition between members of the same sex; Buss, 1999; Symons, 1979). In *Sexual Selection and the Descent of Man* (1972), Robert Trivers' theory of parental investment was born out of Darwin's theory of sexual selection, and he defined parental investment as any investment that the parent makes in individual offspring; and that males and females invest differently in their offspring (p. 139). Trivers also explained that outside of the "metabolic investment," parental investment is any investment in offspring that benefits the young, such as feeding or guarding them. Trivers' parental investment theory is therefore the foundation on which evolutionary psychologists base hypotheses and predictable patterns of behavior (Mann, 1992). Mann (1992) further outlined Trivers' parental investment to include

all actions that contribute to the reproductive success of the offspring. On

a more proximate level, this includes parental actions that contribute to the sociopsychological, physical, and cognitive well-being of the offspring. Second, investment in any particular child often compromises the ability of the parent to invest in other children (present or future). (p. 368)

In the above excerpt, a *proximate* cause is one that includes more recent factors involved such as genes, parental actions, developmental history, learning, and environmental stimuli (Siegert & Ward, 2002). Conversely, in evolutionary psychology, an *ultimate* cause refers to all of the evolutionary factors that contribute to the development of a psychological mechanism or patterns of behavior” (p. 238). So in its most basic sense, natural selection favored traits in mothers that would allow them to increase their reproductive success and be able to raise their children until they were of reproductive age (ultimate causes); and parental actions and developmental circumstances are influencing factors (proximate causes).

Mann (1992) listed the following factors and variables affecting parental mechanisms:

1. Infant health status (probability of infant survival to adulthood and correctability of disabilities)
2. Marital status and stability (probability of parent investment)
3. Parity, age, and health of the mother (current reproductive value of mother)
4. Abundance of and access to resources
5. Social support (relatives and/or friends that provide direct and/or indirect aid). (p. 369)

In addition to the above, Janet Mann (1992) concluded: “This necessarily implies that the human psyche is designed to receive and process certain kinds of information that in



turn affect our perceptions, attitudes, thoughts, and feelings about our children” (p. 369). Consequently, we have evolved to have both positive and negative unconscious feelings about our parents and children. In other words, the positive and negative aspects of the Great Mother may be the product of this design, and perhaps analogous to the neuropsychology of the mother archetype.

One of the defining features that separate mammals from oysters and sea turtles is the “amount and kind of reproductive effort that females invest in their young” (Barkow et al., 1992, p. 323). The parental investment at the moment of fertilization in the human species is much less for males than for females. Trivers (1972) outlined this differentiation by stating: “In the human species, for example, a copulation costing the male virtually nothing may trigger a nine-month investment by the female that is not trivial, followed if she wishes, by a fifteen-year investment in the offspring that is considerable” (p. 145). Another characteristic which distinguishes the imbalance in male versus female investment at the time of fertilization includes the nine-month gestation period which females undergo after giving birth to their offspring (Barkow et al., 1992). This imbalance in the initial parental investment by the sexes has led to selection pressures that would make the female the choosier of the two sexes when it comes to mate selection.

Furthermore, Trivers’ theory of parental investment and sexual selection proposes that females should seek to mate with males who show the ability and willingness to invest resources connected with parenting such as food, shelter, territory, and protection. Buss (1992) explained:

These resources provide a selective advantage to females obtaining them because of (a) immediate material advantage to the female and her

offspring, (b) increased reproductive advantage to offspring through acquired social and economic benefits, and (c) genetic reproductive advantage for the female and her offspring if variation in qualities that lead to resource acquisition are partly heritable. (p. 251)

In addition to the observable traits which a male may possess and act as cues to favorable male mate preferences, Buss explained that females may rely on cues which are predictors of potential resources or economic success, such as “sheer hard work (e.g., ambition and industriousness) and intelligence” (Willerman, 1979, as cited in Buss, 1999, p. 251). Buss has also speculated that expressions of love and kindness may act as cues that allow a female to sense that a male is willing to invest resources in her and her offspring. In like manner, it may be that the numinosity that exists between two people in a loving relationship acts as a component in Jung’s concept of individuation, which this researcher will explain later in this paper. At any rate, selection pressures led to sex differences, the evolutionary foundations of both the mother and father archetypes.

**Positive and negative maternal mechanisms.** From the above, evolutionary psychologists began to formulate testable hypotheses regarding maternal mechanisms. In regards to sex differences between males and females, research shows that women “spend more than four times as much time as men in direct child care” (Barash & Lipton, 1997, as cited in Buss, 1999, p. 213). This study was conducted in modern America, where inventions like the baby-bottle made caring for children possible solely by men. When looking at single parenting, about “90 percent of single parents are women” (Buss, 1999, p. 213). While it may be true that men provide some paternal care, women devote more time than men with children in all cultures (Buss, 1999). With this in mind, the positive aspects of the mother archetype (i.e. loving, creative) serve as the foundation of a secure attachment with the infant. As a result, we find the possible universality of the

positive aspects of the mother archetype.

In addition, research has shown that women have a greater ability than men in: (a) their ability to recognize their infant after birth, and (b) in being able to recognize the facial expression of infants when flashed on a screen (Barash & Lipton, 1997). In order to explain the cause of the aforesaid, Barash and Lipton (1997) offer one possible theory:

Men, being larger and stronger than women, carved out their niche as hunters and leaders, leaving the less physically taxing chore of child care to women. Under such an arrangement, men would be socially, politically, and economically dominant over women, who in turn would be relatively powerless and oppressed. Full-time parenting unquestionably deprives women of powerful roles outside the home. Such powerlessness can be especially frustrating for women who find themselves unhappily married yet economically dependent on their husbands. (p. 112)

Accordingly, Barash and Lipton (1997) presented one possible theory whose function (i.e., division of labor) led to success in the rearing of children in the environment of evolutionary adaptedness. Other hypotheses that explore why mothers care more for their children than fathers include: the paternity uncertainty hypothesis, the abandonability hypothesis, and the mating opportunity costs hypothesis (see Buss, 1999). To reiterate, these gender differences are being presented in order to give the reader a better understanding of the evolved characteristics of the positive attributes of the mother archetype.

**Mother parental care.** Buss (1999) made explicit the evolutionary perspective that some children will be better than others at reproducing and passing on the paternal genes to future generations. Having said this, Buss (1999) concluded:

selection will favor mechanisms of *parental care*—the preferential allocation of investment to one or more offspring at the expense of other forms of allocating investment—that have the effect of increasing the fitness of the parent. It follows from this definition that mechanisms of parental care will favor some offspring over others—a condition called

*parental favoritism.* (pp. 195-196)

Following the above, Buss (1999) called attention to three contexts regarding the evolved mechanisms of paternal care: (a) genetic relatedness of the offspring, (b) the ability of the offspring to convert parental care into fitness, and (c) alternatives uses of the resources that might be available to invest in offspring (p. 196). These contexts will be examined in order to illustrate how evolved mechanisms may have given rise to the negative aspects of the Great Mother.

Studies related to genetic relatedness point towards an increased risk for child abuse and child homicide among children being reared by stepparents versus natural parents (Daly & Wilson, 1988). Genetic relatedness is seen as a “powerful predictor of the distribution of parental benefits or the infliction of parental costs. Parental care is costly. Humans seem to have evolved psychological mechanisms that lead them to direct their care preferentially toward their genetic progeny” (Buss, 1999, p. 204). Hence, children would in turn develop feelings of hatred towards their parents, the negative aspect of the mother archetype. Similarly, Buss (1999) explained selection would have:

favored mechanisms that caused parents to invest more heavily in children when it would have mattered most—that is when the children were most able to convert the parental care in to fitness by either an increase in their chances for survival or an increase in reproduction. (p. 205)

Selection would then favor psychological mechanisms which allow the caregiver to differentiate which offspring to invest more in based on the child’s abnormalities and the age of the child (Daly & Wilson, 1955, 1988, as cited in Buss, 1999, p. 205). Similarly, primate mothers at times desert “nonvariable offspring and it is reasonable to assume that human primate mothers shared similar evolved capacities to discriminate offspring quality and wither increased or decreased care allocation, depending upon social,

demographic, and environmental inputs” (Mann, 1992, p. 369).

According to Buss (1999), the third evolved mechanism in paternal care involves knowing when to invest in children as opposed to investing in other adaptive problems (i.e. personal survival, attracting mates, or investing in other kin). Buss (1999) explained:

at the most general level, we expect that selection will have fashioned in humans decision-making rules for when to invest in children and when to devote one’s energy towards other adaptive problems. From a women’s perspective, two contexts that might affect these decisions are age and marital status. (p. 209)

Consequently, Daly and Wilson (1988) have shown that marital status and age are correlated with rates of infanticide since she can then seek a husband and bear children with him. The logic behind such a phenomenon involves the unconscious choices that an unmarried mother faces: raising the child with no assistance, adoption, or infanticide. Daly and Wilson (1988) found that younger women are more likely to commit infanticide, and one possible explanation is that she can then allocate her efforts “to trying to attract a husband, and then have children with him” (Buss, 1999, p. 211).

Accordingly, when clinical issues related to lack of parental involvement, abuse, and infanticide are presented to therapy, the clinician’s knowledge regarding the evolutionary explanations as a factor for such behavior can facilitate the joining process and foster validation between clinician and patient. When taking into consideration maternal and paternal care, what follows is an analysis of attachment patterns and styles between parent and child bonding.

**Attachment patterns.** Following John Bowlby’s (1982) attachment theory, infant attachment patterns or styles are the result of the different types of bonding between parent and child based on the attention, time, and effort which the parent

provided in evolutionary history (Simpson & Belsky, 2008). Ainsworth, Blehar, Waters, and Wall (1978) have identified three primary attachment patterns, known as “secure,” “anxious-ambivalent,” and “anxious-avoidant.” These patterns were recognized within the context of experiments in Ainsworth’s Strange Situation, an experimental construct “well suited to detect different patterns of attachment because it presents infants with two common cues to danger in the EEA [environment of evolutionary adaptedness] being left alone, and being left with a stranger” (Simpson & Belsky, 2008, p. 138). So from an evolutionary perspective, children possess innate mechanisms which come online due to differing cues in the environment.

When taking into account parental investment and attachment, “relatively little is known about whether the conditions that should reduce parental investment *cause* insecure attachment in children” (Simpson & Belsky, 2008, p. 141). Simpson and Belsky outlined contextual factors which can predict the emergence of insecure patterns, such as the parents’ psychological health and well-being and the presence of depressive symptoms in the mother (Belsky & Jaffee, 2006, as cited in Simpson & Belsky, 2008). Other factors, such as external social support and spousal parental support have a “positive impact on both parenting behavior and attachment security in infants and young children” (Simpson & Belsky, 2008, p. 141).

### **The Father Jungian Archetype**

As we move onto the father archetype in Jungian psychology, the revolutionary ideas of Carl Jung continue to be at the forefront when speaking of the psychology of the father and mother archetype from a biological perspective. Jung (1915/1961a) used the word “*imago*” in reference to an individual’s mother and father, “because these fantasies

are not concerned any more with the real father and mother but with subjective and often very much distorted images of them which lead a shadowy but nonetheless potent existence in the mind of the patient” (p. 134). Here, Jung explained the personal feelings a person might have towards their mother and fathers and called them *complexes*. Bruce MacLennan (2006) explained the architecture and formation of the complexes:

The complex particularizes or individualizes the archetype for each person, for better or worse. A complex can channel the manifestation of an archetype in an individual’s life, thus adapting it to time and place. Because of this individual content and structure, complexes reside in the personal unconscious, rather than the collective unconscious. Therefore, complexes can be considered interfaces or mediators between the archetypes and our individual psyches. (Complexes section, para. 2)

Jung explained that the individual possesses the parental imago which is part of the “psychic life” of the child, and adds that the child comes equipped with innate mechanisms which he “never acquired but has inherited from his ancestors” (Jung, 1915/1961b, p. 315). Jung succinctly explained:

He is not born as a *tabula rasa*, he is merely born unconscious. But he brings with him systems that are organized and ready to function in a specifically human way, and these he owes to millions of years of human development. Just as the migratory and nest-building instincts of birds were never learnt or acquired individually, man brings with him at birth the ground-plan of his nature, and not only his individual nature but of his collective nature. (p. 315)

Jung referred to the archetype within a pre-existent instinctual model or pattern of behavior. In the following section, an examination of the father archetype can help to shed light on these principles.

**The father archetype in symbolism and culture.** The father archetype has roots in many manifestations of symbolism, including mythology, religion, and literature. Anthony Stevens (2003) presented a review of the father archetype as seen in myths,

legend, and dreams, and specified that the father archetype personifies: as the Elder, the King, the Father in Heaven, the Lawgiver, the Defender of Faith and of the Realm, where he is “the guardian of the status quo and bastion against all enemies” (pp. 129-130). Stevens listed certain attributes of the father archetype to include: activity and penetration, differentiation and judgment, fecundity and destruction (Stevens, 2003, p. 130). Furthermore, his symbols are “heaven and the sun, lighting and the wind, the phallus and the weapon” (p. 130). These characteristics pertain to the masculine principle, “of which the Father is the primal carrier” (p. 130). Freud (1900/1965), with the help of the Greek myth of Oedipus, formulated his theory of psychological development with the rejection of both the son and the father.

**The positive and negative aspects of the father archetype.** In like manner to the mother archetype, the father archetype encompasses both positive and negative aspects. Stevens (2003) explained:

Heaven symbolizes the spiritual aspirations of the masculine principle, of which the Father is the prima; carrier, but in nearly all religions and mythologies heaven is by no means the realm of universal Good: it is also the origin of natural disasters and human catastrophes, the seat from which the godhead passes judgment and from which he punishes with thunderbolts and rewards with boons; it is the throne room of the primordial patriarch, where he freely exercises his powers of life and death over his wives and children. (p. 130)

Campbell (2008) described the presence of the father in contrast to the protection of the mother, as the “guide and initiator into the mysteries of the unknown. As the original intruder into the paradise of the infant with its mother, the father is the archetypal enemy; hence, throughout life all enemies are symbolical (unconscious) of the father” (p. 133). Campbell also makes the connection between the father and the “compulsion to make war: the impulse to destroy the father is continually transforming itself into public



violence” (p. 133). Similarly, males’ evolved psychological mechanisms pertaining to war and violence in evolutionary psychology are seen in coalitional psychology and intergroup conflict (Yuki & Yokota, 2009).

The father archetype has also been looked at from a cultural perspective in Jungian psychology. Stevens (2003) discussed the archetypal foundation of the father in culture and included this quote by von der Heydt in his analysis:

Whereas the mother in her eternal aspect represents the earth that does not change, the transpersonal [i.e. archetypal] father represents consciousness as it moves and changes. In this sense father is subject to time, subject to ageing and death; his image changes with the culture he represents. (p. 132)

From the above, Stevens concluded that the father is more concerned with events related to time and space, “in the tangible world” and that he “fosters the necessary autonomy” (Stevens, 2003, p. 132). Above all, the aforementioned male characteristics which have been known to be human universals (Brown, 1991), in that they are commonalities of human males across cultures, can be better understood when adapting an evolutionary perspective.

### **The Father Archetype from Evolutionary Psychology**

In like manner to the mother archetype and maternal evolved psychological mechanisms, similarities seem to exist between the father archetype in Jungian psychology and the male paternal mechanisms in evolutionary psychology. The following is a brief review of literature that looks at research related to fathers and parenting.

**Male status and dominance hierarchy.** One of the hypotheses within evolutionary psychology that addresses the question of why fathers are less involved in

parenting than women stems from the reasoning that this effort would take away from mating opportunities (Buss, 1999). Buss (1999) explained that:

when a father holds a position of high status within a tribe (*kombeti*), he devotes less than half as much effort to holding his infant as men of lower status. These high status men are usually polygamous with two or more wives. Low-status men appear to compensate for their standing by increasing the effort they allocate to parenting, whereas high-status men appear to be channeling extra effort into attracting additional mates. (p. 214)

Buss also presented findings related to the possibility that men will devote more effort to parenting as a means to acquire mates. This is seen in the higher amount of male interaction with the children of single mothers before they are married than after (Flinn, 1992, as cited in Buss, 1999). These findings illustrate other possibilities as to why men are typically less likely to be involved in parenting than women, as taken from an evolutionary psychology perspective.

**Father parental investment.** Following what we know in terms of parental investment, research indicates sex differences in parental investment (Grossman, Grossman, Fremmer-Bombik, Kindler, Scheuerer-Englisch, & Zimmermann, 2002). Grossman et al. found the following:

research into the ecology of fathering from an evolutionary as well as from a cross-cultural perspective has pointed to a number of essential differences between the experiences an average infant has with her or his father as compared to the experience she or he has with the mother (p. 310).

Researchers have found that in most cultures, mothers provide the physical and health related care to the infant, whereas fathers provide resources (Grossman et al., 2002, for a review). Grossman et al. (2002) researched fathering from an evolutionary perspective; and a brief summary on his findings follows:

1. Fathers are necessarily “much less involved with their infants” (p. 310).
2. Play between fathers and their infants has been “found to be the most important interactional context in contrast to care giving activities in all investigated European and non-European cultures” (p. 310). Play between father and their offspring is also more vigorous than mothers’ play (Parke, 1995, as cited in Grossman et al., 2002).
3. When observing mother—and father—infant interactions, “fathers were found to show lower caregiving sensitivity than mothers, even in those exceptional families in which fathers were the primary caregivers of their infants for some period of time or both parents had equally little primary caretaking responsibilities for their infants as in Israeli kibbutzim” (p. 310).
4. Research has shown that especially with sons, the “mediating role of the father as being almost universal when comparing it among various cultures” (p. 310).
5. Fathers as “active cultural transmitters provide knowledge and advice and provide the child with new experiences while serving as familiar companions to the child during these experiences” (p. 310).
6. In storytelling, children may sense safety when fathers read to them (Murphy, 1997, as cited in Grossman et al., 2002).

In short, although fathers may provide little amount of time in the physical caregiving of infants, the essential instrumental care they provide includes acting as a mediator between the family of origin and the society at large. Extensive research has been conducted that explores the evolutionary significance of play as a way of

developing crucial fighting and hunting techniques that would have been selected for in the environment of evolutionary adaptedness. Thus, what follows is a closer look at the significance of the father's instrumental role.

**The father's instrumental role.** The father's instrumental (i.e. society and world) role has been differentiated from the mother's expressive role (i.e.: home and family), and these characteristics are "almost universal" (Parsons & Bales, as cited in Stevens, 2003, p. 131). The father's instrumental role includes the facilitation of "the transition of the child from home to the world at large" and allows the child to gain the necessary skills "for successful adult adaptation, while at the same time communicating to the child the values and mores prevailing in the social system" (Stevens, p. 131).

**Father-child attachment.** Although the attachment implications between fathers and their infants has been less researched in the literature than attachment between mothers and infants, father-child attachment has proved to have a significant effect on fostering the development of a more independent self in the child (Borke, Lamm, Eickhorst, & Keller, 2007). In a 16-year longitudinal study, the father's sensitivity in play interactions with 2-year-old children was a more stable predictor of the child's long-term attachment representation at a later age than was maternal interaction (Grossman et al., 2002). These researchers concluded "that both parents shape their children's psychological security, but each in their own way" (Grossman et al., p. 308). Borke et al. (2007) found that interaction among fathers and newborns fostered autonomy in the infants in that they were able to better recognize their faces in a mirror. This is in accordance with the father's instrumental role of fostering overall independence in the infant in order to better prepare them in adapting to their environment as adults.

## **Individuation and Psychotherapy**

According to Carl Jung (1953/1966b), the process by which an individual becomes conscious of the unconsciousness processes within him or herself is what he termed *individuation*. Jung explained that “individuation is a process of differentiation, having for its goal the development of the individual personality” (p. 155). For Jung, it was imperative to not only honor the collective or universal aspects we possess by virtue of being human, but to likewise recognize and develop what makes us our own individual selves. Jung (1953/1966b) succinctly explained:

Everything that all men agree in regarding as universal is collective, likewise everything that is universally understood, universally found, universally said and done. On closer examination one is always astonished to see how much of our so-called individual psychology is really collective. So much, indeed, that the individual traits are completely overshadowed by it. Since, however, individuation is an ineluctable psychological necessity, we can see from the ascendancy of the collective what very special attention must be paid to this delicate plant “individuality” if it is not completely smothered. (p. 155)

Jung recognized that “profound reflection is needed” to understand and discover our individuality within the collective (1953/1966b, p. 155). With this in mind, the process of individuation (to bring consciousness to unconscious processes) may be experienced by individuals through awareness of personal dynamics or facilitated within the safe confines of a therapeutic environment.

Evolutionary theory has an enormous amount to offer clinical psychology and has been integrated within this domain. Paul Gilbert (1995) proposed a biopsychosocial approach and describes human behavior in terms of “biosocial goals and needs for social success derived from evolved social motives. A biosocial goal can be construed as a motivation to create a certain form of relating between self and others” (p. 143). Gilbert

stressed the importance of having an evolutionary approach to psychotherapy by not suggesting a new therapy, but by highlighting the “importance of cultural values. The states of suffering are often related to the effects of the defensive modes of functioning, over which the person feels they have little control” (p. 148). Gilbert (1995) highlighted certain states of suffering, which have an evolutionary basis, to include anxiety, depression, aggression, and escaping an aversive situation.

As presented previously in this paper, evolutionary explanations related to the inherent characteristics of the mother and father archetypes (i.e.: lack of parental investment, child abuse, infanticide) all have underlying implications for clinicians and psychology. In fact, Jung’s notion of archetypes functioning as dynamic units of the phylogenetic psyche depicts archetypes as units which have evolved through natural selection and “which are responsible for determining the behavioural characteristics as well as the affective cognitive experiences typical of human beings” (Stevens, 2000a, p. 6) provides the framework by which these characteristics can be examined. Archetypes and their actualized functions have also been compared to the proximate causes and mechanisms found in evolutionary psychology as algorithms (i.e.: calculation of costs and benefits in social exchange, etc.) (Cosmides & Tooby, 1989, as cited in Stevens, 2000a). Research on the neurobiological evidence of archetypal systems describes these systems as located “in the phylogenetically ancient cerebral regions of the midbrain and the brain stem” (Stevens, 2003, p. 317). Additionally, specificity of archetypal systems and functional types are distributed differently between the left and right hemispheres of the brain (p. 318).

## **Statement of the Research Problem and Question**

**Research problem.** While it may be true that Jung's concept of the archetype is left out of evolutionary psychology, and similarly the evolved psychological mechanisms of evolutionary psychology is left out of Jungian psychology, both of these perspectives—Jungian psychology and evolutionary psychology—have commonalities, are complementary, and also each gives a somewhat different perspective on human behavior. In truth, the abundance of complementary principles between these two approaches is significant, and for this reason, this deserves a thorough analysis. Furthermore, given the ubiquitous universal nature of archetypes in historical context, it seems important to understand the presumably evolved psychological architecture and neuropsychology of archetypes. Since the mother and father archetypes are two of the most researched in Jungian psychology, what follows is an application of both of these archetypes within this domain.

**Research question.** Thus, the proposed study will examine the following problem: What are some generalized relations between Jungian archetypes (Jungian psychology) and evolved psychological mechanisms (evolutionary psychology)? How can these implications be applied to the characteristics of the mother and father archetypes?

Specific research questions within this problem are:

1. What are the differences between Jungian archetypes and evolved psychological mechanisms in evolutionary psychology?
2. What are the similarities between Jungian archetypes and evolved psychological mechanisms?

3. What is a possible theoretical model that can be used to better understand the relations between Jungian archetypes and the evolved psychological mechanisms in evolutionary psychology?
4. What are the implications in viewing Jungian archetypes as evolved psychological mechanisms and how can these implications contribute to Jungian analysis and Jungian psychology?



## **Chapter 3**

### **Methodology and Procedures**

#### **Research Approach**

My research approach seeks to examine and articulate the relationships between Jungian archetypes and the evolved psychological mechanisms in evolutionary psychology. Such a study, being theoretical in nature, will seek to generate a theory as derived from possible relationships between these two approaches to psychology. My research approach is tripartite. First, I will employ a literature review using inclusion and exclusion criteria to systematically select published journal articles related to archetypes in the field of Jungian psychology and evolved psychological mechanisms in evolutionary psychology. Secondly, I will utilize the coding strategies of grounded theory to further analyze the categories which emerge from the critical analysis. It is important to note that this is not a grounded theory study since it is not participant-based. Instead, data will be generated from a systematic review of literature. However, I will be using the coding elements of grounded theory to systematically extract and highlight the concepts and themes as they emerge. Lastly, the codings will be used to develop a theoretical model to better understand the relations between Jungian archetypes and the evolved psychological mechanisms in evolutionary psychology.

#### **Research Methodology**

In conducting a systematic review of literature, I will first search for articles that meet the inclusion and exclusion criteria (explained later in this chapter). Specifying the inclusion/exclusion decision criteria is of particular importance since “researchers can bias the results of a literature review by excluding data that is methodologically questionable based on their own personal, subjective judgment” (Mertens, 1998, p. 54).

As part of this analysis, this researcher is concerned with the biological aspect of archetypes, along with the relations that can be made with the evolved psychological mechanisms in evolutionary psychology.

After collecting the articles that fit the inclusion criteria, this researcher will begin the process of analyzing this data with the coding elements of grounded theory—using conceptual categories and their properties. In grounded theory, data is collected from participants and emerges without forcing preconceived ideas or data. Instead, I will use the literature that met the inclusion criteria and apply the coding elements of grounded theory to organize and develop the categories and their properties as they emerge from the research. This process will then lead to this researcher to selection of an appropriate theoretical coding family in order to generate a theory. Glaser and Strauss (2010) have explained:

In discovering theory, one generates conceptual categories from which the category emerged; then the evidence from which the category emerged is used to illustrate the concept. The evidence may not necessarily be accurate beyond a doubt (nor is it even in studies concerned with only accuracy), but the concept is undoubtedly a relevant theoretical abstraction about what is going on in the area studied. (p. 23)

Glaser and Strauss (2010) go on to explain that the concepts themselves will not change, but have their meanings “respecified at times because other theoretical and research purposes have evolved” (p. 23). Furthermore, from categories (a conceptual elements of the theory) we derived properties—conceptual aspects or elements of a category. As stated earlier, these concepts and their properties shall come from the evidence that will be collected from the comparative groups of Jungian archetypes and evolved psychological mechanisms. For instance, one concept (or category) that may arise is the *universality* of Jungian archetypes—as Jung described—and can be compared to evolved

psychological mechanisms or adaptations in evolutionary psychology. A property, in turn, is a conceptual aspect or element of a category (Glaser & Strauss, 2010).

Comparative analysis “as a strategic method of *generating theory* assigns the method its fullest generality for use on social units of any size, large or small, ranging from men and their roles to nations or world regions” (Glaser & Strauss, 2010, pp. 21-22). The approach of grounded theory and comparative analysis contains “first, conceptual categories and their conceptual properties; and second, hypotheses or generalized relations among the categories and their properties” (p. 35). Through the process of theoretical coding, this researcher will be able to choose an appropriate theoretical coding family that corresponds to the development of the theory as it emerges.

This generating theory will seek to examine and explain the synthesis of data as emerging relations between Jungian archetypes and the evolved psychological mechanisms of evolutionary psychology. The mother and father archetypes and the maternal and paternal evolved psychological mechanisms will be used to illustrate the theory that will emerge as part of the research process.

### **Research Procedures**

The following is a comprehensive list of the research procedures that will be used in this study:

1. Criteria for inclusion. An analysis focused on studies and literatures that examine both Jungian archetypes from a biological perspective and the principles and make-up of evolved psychological mechanisms are possible. To be included, studies and literature will have to be (a) published after 1984, and (b) contain a biological perspective and/or an explanation of archetypes

and evolved psychological mechanisms and (c) can be both empirical studies and conceptual discussions of archetypes and evolved psychological mechanisms in evolutionary psychology.

2. Search Strategy. A search will be conducted in Academic Search Primer®, PsycINFO®, PsycARTICLES®, and PsycBOOKS® from 1984 using keyword search terms combining *Jungian archetyp\**, *biolog\**, *evolutionary psychology*, *archetyp\**, *Jungian*, *evolved psychological mechanism*, and *evolved psychological adaptation*. I will then eliminate studies and literature which clearly do not meet the inclusion criteria. The number of articles and literature that will be generated will be determined by the process of analysis since saturation is expected to be reached. Saturation occurs when, after a core category is identified, the process of selective coding causes no more properties to emerge (Glaser, 1978).
3. Analysis Strategy.
  - a. Substantive coding. Substantive coding involves applying concepts to indicators (events, statements, etc., in the data) and substantive codes “conceptualize the empirical substance of the area of the research” (Glaser, 1978, p. 55). Substantive codes can be broken into two semi-distinct steps: open coding and selective coding.
    - i. *Open coding*. In open coding, this researcher will code for as many categories as may fit, with different incidences of as many categories as possible. Glaser (1978) explained that “new categories emerge and new incidences fit existing

categories. He may even code for what is not obviously stated” (p. 56). This researcher will accomplish this by continuously asking the following three questions of the research: (1) “*What is this data a study of?*” (2) “*What category does this incident indicate?*” and (3) “*What is actually happening in the data?*” (Glaser, 1978, p. 57).

- ii. *Selective coding.* Open coding can be ceased when a substantial amount of open coding has been completed and prospects for a theory begin to emerge—resulting in a core variable and the core variable “becomes a guide to further data collection and theoretical sampling” (Glaser, 1978, p. 61).
- iii. *Concept and indicators.* The concept-indicator model directs the coding of data (Glaser, 1978). I will conduct this by constantly comparing (1) indicator to indicator in order to generate a conceptual code and then (2) compare indicator to the emerging concept.

- b. *Theoretical memos.* Throughout the process of data collection and analysis, I will keep theoretical memos. Glaser (1978) described memos as the “theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding” (p. 83). Memo-writing will allow this researcher to continuously contribute to a memo fund in order to theoretically develop ideas—which will then contribute to the generation of theory.

4. Theoretical coding and generating theory. In the final stages of analysis, I will choose a theoretical coding family as the process of generating theory. As noted above, substantive codes are the categories and properties that make up the theory and then the researcher must put them together somehow. Like substantial codes, theoretical codes are emergent. Glaser (1978) outlined several theoretical coding families to make known to the researcher the possible relations that can be made in the final stages of analysis. For example, Glaser (1978) outlined a theoretical coding family corresponding to social norms and beliefs, which he termed a *Cultural Family* “and the assumption is that personal characteristics are shared to a sufficient degree” (p. 77). Such a theoretical coding family may assist this researcher in guiding the theoretical development within an empirical pattern. Other advantages include helping the researcher maintain a conceptual level, along with preventing the researcher to get bogged down in the data (Glaser, 1978).

#### **Note on Ethical Concerns**

In this section, I will briefly discuss my intention to adhere to the ethical principles established by the American Psychological Association (2002). Since this study is non-participant based and is instead an analysis of text-based literature and journals, the principles established are limited and pertain mainly to research and publication. The present study will adhere to the ethical principles set forth by the APA in research and publication in the field of psychology, such as those pertaining to: reporting research results which are not fabricated, refraining from engaging in the falsification of data with written sources, distorting the meaning of the literature,

plagiarism, and publication credit (American Psychological Association, 2002).

## Chapter 4 Results

### Analysis of the Data

Electronic databases (Academic Search Primer®, PsycINFO®, PsycARTICLES®, and PsycBOOKS® from 1984) were searched for empirical studies or theoretical articles that examined the relation between Jungian archetypes and the evolved psychological mechanisms in evolutionary psychology. Search terms included different combinations of the following keywords: *Jungian archetyp\**, *biolog\**, *evolutionary psychology*, *archetyp\**, *Jungian*, *evolved psychological mechanism*, and *evolved psychological adaptation*; and were sought across all possible fields in the search engine. The resulting studies were then read and examined according to the predetermined inclusion and exclusion criteria.

The studies that did not meet the inclusion criteria were: studies that examined archetypes from a non-biological perspective; dissertations (due to the lack of review); and book/journal article reviews. Additionally, excluded studies included those the search generated due to different derivatives of the word “archetype,” as in “archetypical” (meaning a study which looked at a model or pattern of which things of the same type are representations or copies); and those that did not refer to Jungian psychology and/or evolutionary psychology. After eliminating duplicates (since many keyword combinations produced the exact same results as those found in subsequent searches), the database search yielded 58 articles in peer reviewed journals and book chapters. Of those studies, 34 met the criteria for inclusion and 24 were eliminated. This researcher then conducted a systematic review of the 34 studies that fulfilled the eligibility criteria to synthesize the evidence on the relation between Jungian archetypes



and the evolved psychological mechanisms in evolutionary psychology.

This researcher read each article and recorded information in the preliminary coding phase into a database. The systematic analysis of the 34 studies was conducted by implementing the coding strategies of grounded theory by: (a) engaging in open coding in order to isolate the substantive codings, (b) condensing them into theoretical codings by deducing a higher level of abstraction, (c) grouping the theoretical codes into categories, and (d) reaching a theory based on the categories as it emerges from the data. This author developed a research protocol (see Appendix A) to be utilized during the open coding in order to code for as many categories as may fit, with different incidences of categories; and completed a protocol for each of the 34 studies. In addition to the aforementioned questions, the research protocol included a section on memo writing in order for this researcher to make notes to herself as well as summarize the studies. This memo writing proved to be a crucial step in identifying the core categories when the initial analysis was complete.

By constantly comparing indicator to indicator in order to generate a conceptual code and then comparing indicator to the emerging concept, substantive codes were generated. After the preliminary coding was completed, this researcher re-read the text-based documents and sorted data into theoretical codes by constantly comparing new information with the emerging theoretical codes. During this process, this researcher condensed the theoretical codes and grouped them together in a way that indicated a relationship between them. For example, the theoretical code of “empiricism” was grouped with “evolutionary psychology” since the research showed concepts between these two variables on opposing polarities. Saturation was reached on the 19<sup>th</sup> study, but

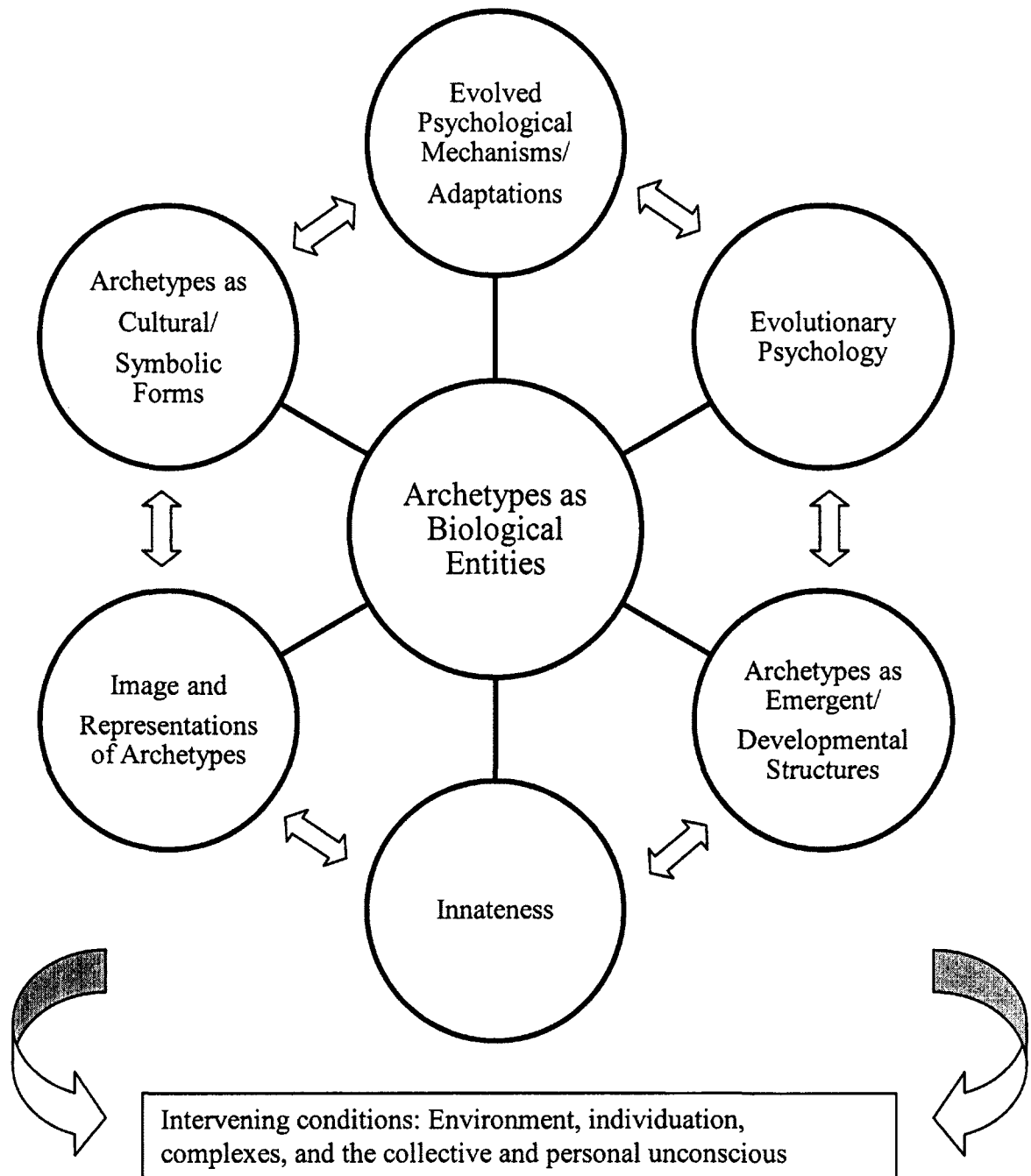
this researcher continued the analysis until completion for continuity purposes. By further analyzing the theoretical codes, the first seven most frequently occurring and most highly represented themes emerged as the core categories of the research.

## **Results**

The findings of the analysis of the literature pertaining to Jungian archetypes from a biological perspective and the evolved psychological mechanisms of evolutionary psychology will be presented in this chapter. The systematic analysis of the 34 studies yielded 748 substantive codes in the preliminary stages and 19 theoretical codes (see Appendix B) in subsequent stages. Final analysis revealed seven core categories that include: “Archetypes as Biological Entities,” “Evolved Psychological Mechanisms and Adaptations,” “Evolutionary Psychology,” “Archetypes as Emergent/Developmental Structures,” “Innateness,” “The Image and Representations of Archetypes,” and “Archetypes as Cultural or Symbolic Forms.” Of these seven categories, the majority of the concepts that emerged from employing a higher level of abstraction centered around “Archetypes as Biological Entities,” “Evolved Psychological Mechanisms and Adaptations,” and “Evolutionary Psychology” (see Appendix C).

From the major categories, “Archetypes as Biological Entities” emerged as the core category, or central theme, because it appeared more frequently than any other category and proved to be more highly interrelated with the other themes. Additionally, as described by Creswell (2007), intervening conditions, or “the narrow and broad conditions that influence the strategy,” (p. 67) also emerged from the data. These included the following categories: environment, individuation, complexes, and the collective and personal unconscious. The results of this study indicate that in order to

examine archetypes from a biological perspective, a holistic approach encompassing the following components must be considered: environment and culture; symbolism and image; individuation and development; human universals and the collective unconscious. Using a categorical paradigm, or a visual representation (Creswell, 2007), this theoretical model is presented in Figure 1.



*Figure 1. A Holistic Approach to Archetypes as Biological Entities*

The anatomy of the emergence of a theoretical model between Jungian archetypes and the evolved psychological mechanisms of evolutionary psychology encompasses a holistic approach since the results showed interrelationships between all of the categories—and are strongly connected to the core category as an underlying theme in

nearly every other category. What follows are the resulting categories and theoretical formulations, as derived from the theoretical codes, whose results demonstrate a higher level of abstraction in the analysis.

During the final stages of analysis, this researcher chose a *theoretical* coding family, which shows the interrelationships in the data through the use of theoretical codes; and is interpretative and explanatory (Glaser, 1978). Evidence from this analysis suggested a theoretical model examining Jungian archetypes as highly interrelated to evolved psychological mechanisms. This theoretical model, the theory of adaptive function of archetypes, will be examined in the following section.

### **Theory of the Adaptive Function of Archetypes**

Using a three phase approach in the gathering of data, analysis, and employing a theoretical family, this researcher used the results of the analysis to develop a theory. At this stage in the analysis, this researcher is able to present propositions of the theory explaining how these categories are interrelated (Creswell, 2007) and stem from the combined core principles of evolved psychological mechanisms and archetypes. This resulting theory was formulated after further developing the themes and categories into patterns. What follows is the emergence of a theory of adaptive function of archetypes (see Figure 2) that is depicted in a conditional matrix in order to “visualize the wide range of conditions and consequences related to the central phenomenon” (Strauss & Corbin, 1990, as cited in Creswell, 2007, p. 161). This theory has five variables or propositions that were determined after analyzing the interrelations of the categories that emerged from the results of the study; these include: causal conditions, intervening conditions, results, output, and psychological outcome/goals (see Creswell, 2007).

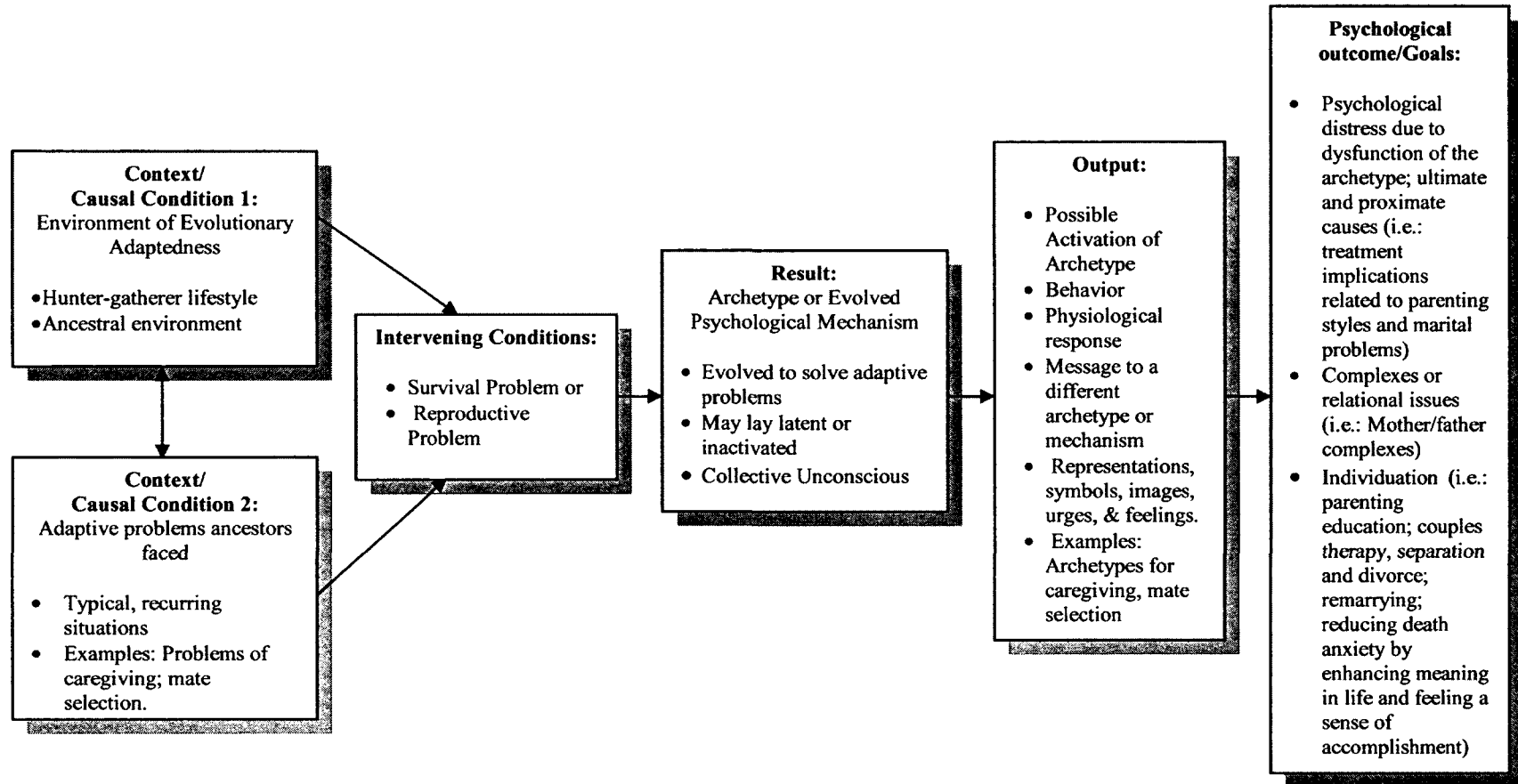


Figure 2. Theory of the Adaptive Function of Archetypes

What follows is an overview of the theory of adaptive function of archetypes with an explanation the aforementioned properties. The perspective of the theory of the function of archetypes, as applied to the mother and father archetypes, will be covered in depth in the following chapter.

**Causal conditions.** Two causal conditions emerged from the results of the study, these included: (a) The environment in which our ancestors evolved, namely, the environment of evolutionary adaptedness; and (b) the adaptive problems our ancestors faced. This context, the environment of evolutionary adaptedness, or EEA, “refers to the statistical composite of selection pressures that occurred during an adaptation’s period of evolution responsible for producing the adaptation” (Buss, 1999, pg. 38). This includes ancestral, hunter-gatherer environments in a way that “by combining data from paleontology and hunter-gatherer studies with principles drawn from evolutionary biology, one can develop a task analysis that defines the nature of the adaptive information-processing problem to be solved” (Cosmides et al., 1992, p. 11).

Therefore, by taking into account the ancestral environment and the adaptive problems our ancestors faced, we are able to hypothesize about the specific archetypes that emerged to solve those problems. For example, the theory of the function of archetypes would understand survival and reproduction in terms of mate selection in that females should seek to mate with males who show the ability and willingness to invest resources connected with parenting, such as: food, shelter, territory, and protection. By looking at the adaptive function of an archetype, one would expect to see an archetype that evolved to solve (on average) one of the aforementioned problems—such as cues when selecting a mate with adequate resources, care-giving capabilities, or other

symbolic cues of wealth and power in the father archetype.

**Intervening conditions.** The intervening conditions that emerged from the results of the analysis correspond to the inherent properties of evolved psychological mechanisms. These mechanisms exist because they were designed to solve specific problems related to survival and reproduction (Buss, 1999). For example, these conditions serve the purpose of solving adaptive problems by selecting the right foods to eat (survival problem) and selecting the right mate with whom to have children (a reproductive problem). The theory of the adaptive function of archetypes recognizes that an archetype evolved, on average, to solve adaptive problems of survival and reproduction. Consequently, food acquisition (hunting and gathering) and care-giving to offspring (parental investment) was essential to the survival of individuals and their young (until reproductive age). This is evident in the assertive abilities of the father archetype and in the nurturing characteristics of the mother archetype.

**Result.** The results of the requisite causal and intervening conditions are the archetypes of the collective unconscious that lay latent until activated. The archetypes evolved to solve the adaptive problems related to survival and reproduction our ancestors faced during evolutionary time. These mechanisms are archetypes that possess the capacity to initiate, control and mediate the behavioral characteristics and typical experiences of all human beings (Stevens, 2003).

**Output.** The output of archetypes is analogous to the possible outputs of evolved psychological mechanisms. These outputs include: possible activation of archetype; manifest behavior; physiological responses; and messages to different archetypes or mechanisms. In addition to these outputs are those found in the writings of Jung



pertaining to the activation of the archetype and archetypal structure; these include: representations, symbol, image, and complexes. The output of the archetype is a physiological response or behavior that may be unconscious, or made conscious and experienced through the process that Jung described as individuation—and may appear in personal complexes. In the same way, the activation of an archetype can be illustrated through the concepts of representations, symbols, images, urges, and feelings; and have the potential to come online at different points in our development. In addition, the potential activation of archetypes or evolved psychological mechanisms is not only part of our innate, evolved psychological architecture, but is environmentally and culturally dependent and may account for differing behaviors, desires, and goals. The underpinnings of these concepts, as found in the theory of adaptive function of archetypes, will be explained further throughout the course of this chapter and in chapter 5.

**Psychological outcome/goals.** The psychological outcome of an evolved archetype is the behavior and resulting complexes of the individual after taking into account proximate causes (genes, parental actions, developmental history, learning, and environmental stimuli; Siegert & Ward, 2002); and ultimate causes (all contributing evolutionary factors). In general terms, the theory of adaptive function of archetypes recognizes that the goals related to the formation and activation of the archetypes is in essence what Jung referred to as individuation. Jung understood the process of development throughout the lifespan, or individuation, as an expression of both biological process and development. Becoming aware of how the adaptive function of archetypes influences our daily lives—and improves our personal development—is the

purpose of individuation and the resulting intent of the archetype. For example, Stevens (2006) wrote that archetypal imperatives seek fulfillment in each stage of development in personality and behavior and provided the following examples:

being parented, exploring the environment, playing in the peer group, meeting the challenges of puberty and adolescence, being initiated into the adult group, accomplishing courtship and marriage, child-rearing, gathering, hunting and fighting, participating in religious rituals and ceremonials, assuming the responsibilities of advanced maturity, old age and the preparation for death. (p. 85)

The theory of adaptive function of archetypes seeks to understand development and the stages of life in terms of the adaptive problems our ancestors faced and the resulting functional archetypes that evolved to solve these problems. Conversely, evolved mechanisms can also fail to operate properly due to genetic factors or “developmental insults (e.g., brain injury), or a combination of these causes” (Buss, 1999, p. 399). Such dysfunctions can account for the varying behaviors and traits seen in individuals who suffer from psychological distress or psychopathology. Additionally, non-dysfunctional interpersonal issues, such as those observed in familial dynamics, pertain to Jung’s concept of complexes; which are rooted in the personal unconscious and may be explored in psychotherapy.

The aforementioned propositions emerged from the data and will be interwoven in the subsequent paragraphs on the research findings of each category. Furthermore, by employing an evolutionary perspective to archetypes, we would expect to potentially observe the mother and father archetypes as maternal and paternal evolved psychological mechanisms. In chapter 5, the theory of adaptive function of archetypes will be applied to the mother and father archetypes.

## **A Holistic Approach to Archetypes as Biological Entities**

**Archetypes as biological entities.** Archetypes as biological entities emerged as the central phenomenon or core category of the seven categories in the study. The concepts that emerged from this category, as derived from theoretical coding, are as follows:

1. archetypes are universal structures and reside in the collective unconscious;
2. archetypes are neuropsychic propensities which evolved through natural selection and operate at the unconscious level;
3. Jung's concepts of symbol and image are involved in the process of activation of the archetype;
4. there exists an ongoing debate within Jungian circles when considering the interplay of biology, evolution, and archetypes.

What follows are excerpts from the studies and theoretical articles that were more strongly associated with the category of archetypes as biological entities.

*Archetypes as universal structures.* Jung's notion of the collective unconscious, and the archetypes that reside there, can be compared to the universality of the evolved architecture of the human brain—as described in evolutionary psychology. Stevens (1995b) stated that “the theory of archetypes can be stated as a psychological law: *whenever a phenomenon is found to be characteristic of all human communities it is an expression of an archetype of the collective unconscious*” (p. 4). According to Stevens (1995b), archetypes are defined as:

the neuropsychic centers which possess the capacity to initiate, control, and mediate the common behavioral characteristics and typical experiences of all human beings. Thus, on appropriate occasions,

archetypes give rise to similar thoughts, images, feelings, and ideas in people, irrespective of their class, creed, race, geographical location, or historical epoch . . . for archetypes are biological entities which evolved through natural selection. (p. 4)

Stevens (2006) explained that Jung linked the archetypes to structures in the brain and adopted a biological view to the structures of the archetypes. Jung (1916, as cited in Stevens, 2006) wrote:

every man is born with a brain that is profoundly differentiated, and this makes him capable of very various mental functions, which are neither ontologically developed or acquired. . . . This particular circumstance explains, for example, the remarkable analogies presented by the unconscious in the most remotely separated races and peoples. (p. 78)

According to Jung (1949 as cited in Stevens, 2006), the term archetype

is not meant to denote an inherited idea, but rather an inherited mode of psychic functioning, corresponding to the inborn way in which the chick emerges from the egg, the bird builds its nest, a certain kind of wasp stings the motor ganglion of the caterpillar, and eels find their way to the Bermudas. In other words, it is a “pattern of behaviour.” This aspect of the archetype, the purely biological one, is the proper concern of scientific psychology. (p. 77)

In addition to the aforementioned, Jung (1928, as cited in Stevens, 2006) described the architecture of the human mind and archetypes as the “deposits of all our ancestral experience, but they are not the experience themselves” (p. 81). Stevens (2006) demonstrated parallels between Jungian archetypes and Ernst Mayr’s “open programmes” “which prepare animals and plants to respond appropriately to environmental changes—as when furry animals moult at the onset of summer, or plants reach upwards towards the sun when put in the shade by tall neighbours” (p. 82).

***Activation of the archetype.*** Jung described the process of activation of the archetype, which is in response to typical or occurring situations. These situations can be compared to the recurrent adaptive problems our ancestors faced—as described by

evolutionary psychology—that led to numerous evolved psychological mechanisms in response to solving adaptive problems. Jung (1911, as cited in Stevens, 2006) wrote:

Although the changing situations of life must appear infinitely various to our way of thinking, their possible number never exceeds certain natural limits; they fall into more or less typical patterns that repeat themselves over and over again. The archetypal structure of the unconscious corresponds to the average run of events. The changes that may befall a man are not infinitely variable; they are variations of certain typical occurrences which are limited in number. When therefore a distressing situation arises, the corresponding archetype will be constellated in the unconscious. Since this archetype is numinous, i.e., possesses a specific energy, it will attract to itself the contents of consciousness—conscious ideas that render it perceptible and hence capable of conscious realization. (pg. 86)

The above excerpt depicts Jung’s conception of archetypal structure as the product of the average run of events that led to the formation of adaptive mechanisms (such as those that are activated in distressing situations). He described the organization of such mechanisms by using the word “numinous” in describing the process by which humans perceive such experiences. When explaining the output of the archetype, Jung described archetypes as giving rise to images, ideas, and behaviors (Stevens, 2006). Similarly, the theory of adaptive function of archetypes seeks to understand the structure of the archetype as derived from expressed behaviors or ideas, complexes, and individuation. The output of an evolved psychological mechanism can be either: output to other mechanisms, a physiological response, or behavior (Buss, 1999). Stevens (2006) succinctly summarized:

Archetypes form the basis of all the usual phenomenon of human existence and we inherit them as part of our genetic endowment. They are the phylogenetic (evolutionary) foundations in which ontogenesis (individual development) proceeds. An individual’s entire archetypal inheritance makes up the collective unconscious, whose authority and psychic energy is co-ordinated by a central nucleus which Jung termed “the Self” or “the archetype of archetypes.” (p. 79)

***Ongoing debate concerning archetypes.*** Contrary to this viewpoint, the results of the literature contained sources that illustrated the current opposition in accepting the biological and evolutionary basis of archetypes within Jungian circles. These included archetypes as: philosophical symbolic forms that emerge strictly from culture (Pietikainen, 1998, 2003); emergent developmental structures without the foundation of evolutionary theory (Knox, 2004, 2010; Merchant, 2006, 2009); biological entities without a sound evolutionary basis (Saunders & Skar, 2001; Hogenson, 1998). However, while there are Jungian analysts who argue against archetypes as evolved biological entities, some stress the importance of examining the interplay between biology and archetypes. Hogenson (1998) clarified this ongoing debate when he wrote:

Stevens is correct, I believe, when he argues that Jung's endorsement of biology is an integral and essential element of his system. Jungians other than Stevens need to take this aspect of Jung's work more seriously, not only when they read Jung, but also when they encounter biological arguments in other quarters and when they seek to move ahead with the development of Jungian theory. (p. 370)

The interrelationships of these viewpoints, in relation to the biological underpinnings of archetypes as the core category, will be examined within each of their corresponding categories in subsequent sections and further developed in chapter 5. What follows is the category of evolved psychological mechanisms; and an examination of the concepts that emerged within this category as a result of a higher level of abstraction.

**Evolved psychological mechanisms and adaptations.** Numerous substantive codes were generated on the studies, book chapters, and theoretical articles containing incidences of evolved psychological mechanisms and adaptations which met the inclusion criteria in the early stages of analysis. From the theoretical codes, a higher

level of abstraction was conducted and the following concepts emerged: defining an evolved psychological mechanism, the process of activation of the mechanism, and examples of the different types of evolved psychological mechanisms and adaptations.

*Defining an evolved psychological mechanism.* Buss (1999) explained the products of the evolutionary process as containing the following: adaptations (inherited and reliably developing characteristics that came into existence through natural selection because they helped to solve adaptive problems of survival and reproduction during the period of their evolution); byproducts of adaptations (characteristics that do not solve adaptive problems and do not have functional design); and random noise (random effects produced by forces such as chance mutations). Buss (1999) went on to say that:

although all three products are important and evolutionary scientists differ in their estimates of the prevalence of these products, evolutionary psychologists tend to focus on adaptations. More specifically, they focus on one special subclass of adaptations that comprises human nature: psychological mechanisms. (p. 64)

Evolved psychological mechanisms are defined by Buss (1999) as being

information processing devices that exist in the form they do because they have solved specific problems of survival or reproduction recurrently over the long course of human evolutionary history. They are designed to take in only a narrow slice of information, transform that information through decision rules, and produce output in the form of physiological activity, information to other psychological mechanisms, or manifest behavior. The output of an evolved psychological mechanism is directed toward the solution to a specific adaptive problem. Evolved psychological mechanisms provide nonarbitrary criteria . . . tend to be problem specific, and are large in number and functional in nature. (pp. 64-65)

Whereas Jung believed that it was “probable that archetypes are the psychic expressions or manifestations of instincts” (Jung 1957/1972, as cited in Saunders & Skar, 2001, p. 309), it is important to note that the totality of the components of evolved psychological mechanisms (input, decision rules, output), as is described in the aforementioned excerpt,

demonstrate the fact that they are not rigid instincts that appear in all behavior. For example, Buss (1999) gave the example of callus producing mechanisms that have evolved to protect the structures beneath the skin and specifies that if the environment is designed so that you do not experience friction, these mechanisms will not be activated. Consequently, the “activation of the mechanisms depends on contextual input from the environment” (p. 53). Thus, the activation of specific mechanisms is content dependent and relies on the information and circumstances in the environment of the individual. With this in mind, Jung’s use of instincts as an element of archetypes constitutes one inherent difference between archetypes and evolved psychological mechanisms.

*Activation of the mechanism.* Furthermore, the activation of the mechanism and the decision rules which are then carried out happen on an unconscious level. Buss (1999) explained that the input lets the individual know which adaptive problem it is facing and that this occurs “invariably out of consciousness” (p. 48). Jung (1953, as cited in Lindenfeld, 2009) termed this deeper level of consciousness, which is hidden from us, the collective unconscious; and wrote:

This part of the unconscious is not individual but universal; in contrast to the personal psyche, it has contents and modes of behavior that are more or less the same everywhere and in all individuals. It is, in other words, identical in all men and this constitutes a common psychic substrate of a suprapersonal nature which is present in every one of us. (p. 221)

Evolved psychological mechanisms are numerous in nature since “a large number of different adaptive problems cannot be solved with just a few mechanisms, the human mind must be made up of a large number of evolved psychological mechanisms” (Buss, 1999, p. 53). In like manner, Jung believed that “there are as many archetypes as there are typical situations in life” (Jung 1953, as cited in Lindenfeld, 2009, p. 222).



Additionally, most adaptations are not caused by single genes, but rather are the products of many genes and the environment or context where these mechanisms evolved must be taken into consideration (Buss, 1999). The theory of adaptive function of archetypes understands the etiology of archetypal structure in terms of the ancestral environment since specific problems in this context led to the evolution of specific archetypes.

It is important to highlight that adaptations and mechanisms are the product of many genes, since this is one argument that was found in the literature against innate predispositions. In reference to the complexity of an evolved human architecture, Knox (2004) stated that because

there are no more than about 30,000 [genes] in the human genetic code, it would be impossible for the complexity of a human being, both body and mind, to be stored as a blueprint of information in such a small number of genes. (p. 5)

Needless to say, the complexity of such a system is currently far within our reach of understanding, and researchers are in the process of attempting to create and test hypotheses in order to better comprehend such a system. What follows is a list of some of the evolved psychological mechanisms that have been researched and were indicated in the findings.

*Examples of evolved mechanisms.* The literature contained various examples of evolved psychological mechanisms that evolved over time to solve the adaptive problems our ancestors faced in the environment of evolutionary adaptedness. These mechanisms include, but are not limited to: parental investment (Buss, 1999); care-giving (Stevens, 2000b); sexual selection (Buss, 1999), including mate selection and mate retention (Gilbert, 1995, Goodwyn, 2010, Hogenson, 2003b, Buss, 1999); parental investment (Hogenson, 2003a; Buss, 1999); sexual jealousy (Buss, 1999); parenting problems (Buss,

1999); parental uncertainty (Buss, 1999); language acquisition (Hogenson, 2003b; Lindenfeld, 2009; Maloney, 2003b; Stevens, 2003, 2006); anxiety and fear (Gilbert, 1995; Stevens, 2000b); mothering (Saunders & Skar, 2001); attachment (Gilbert, 1995; Goodwyn, 2010); formation of alliances (Gilbert, 1995); aggression (Stevens, 1995b); ranking behaviors (Gilbert, 1995); phobias (Goodwyn, 2010); predator/prey inference (Goodwyn, 2010); folk biology (Goodwyn, 2010); pathology (Hogenson, 1998); hunting (Stevens, 1995b); and warfare (Stevens, 1995b). This is, of course, not an exhaustive list, since evolved psychological mechanisms and adaptations are numerous in nature and function. However, this list contains some examples of the output of the mechanisms, namely, what they evolved to do.

For example, during evolutionary time, care-giver and infant attachment was crucial in allowing the infant to survive until reproductive age; and, on average, it was beneficial to have social and spousal support when caring for offspring. As a result, we observe evolved mechanisms for secure attachment, and the positive impact of social support and spousal parental support when caring for infant and young children (Simpson & Belsky, 2008).

The behavior associated with the output of mechanisms is more closely examined in the discipline of evolutionary psychology. These findings, after employing a higher level of abstraction to the theoretical code of evolutionary psychology, are discussed in the following section.

**Evolutionary psychology.** The theme of evolutionary psychology and mental function was one of the driving categories in the literature. As indicated in the results of the analysis, the concepts that emerged from the category of evolutionary psychology

included: algorithms, modularity of the human brain, and differing perspectives involving evolutionary psychology and archetypes. These concepts were derived after employing a higher level of abstraction to the theoretical codes. The following paragraphs contain excerpts of explanatory literature related to this category.

*Algorithms.* As presented in chapter 2 of this paper, evolutionary psychology is an approach to psychology that takes into account the adaptive problems our ancestors faced and the organism's design features which evolved to solve those adaptive problems (Cosmides et al., 1992). Algorithms are said to be the information processing components which help direct attention mechanisms and learning (Cosmides & Tooby, 1992, as cited in Gilbert, 1995). Gilbert (1995) illustrated that some of the more typical social algorithms are concerned with:

proximity-distance, (e.g. the infant becomes alarmed by too much distance from a care-giver) reciprocation (e.g. an individual becomes frustrated, angry or dysphoric by a judgment of giving out a lot but receiving too little back from others), and social comparisons (e.g. of same-difference as in ingroup-outgroup, and inferior-superior as in social ranking). (p. 144)

The basic idea of algorithms, as presented in the research, is that specialized learning mechanisms “organize experience into adaptive meaningful schemas or frames” (Cosmides, 1985, as cited in Stevens, 1995a, p. 356). In spite of the complexity of algorithms being beyond the scope of this paper, ongoing debates about how modular the mind is can be further illuminated by the findings from neuropsychology supporting that “lower level processes are strongly modular, whereas higher-level emergent abilities are weakly modular” (Goldberg, 1995, as cited in Maloney, 2003b, p. 104). Maloney (2003b) explained:

This insight gives weight to the controversial possibility that the features of the environment, through Darwinian processes, probabilistically shape

our emergent mental processes. Regularities in the environment may have a place in shaping the categories of probable function, a modern version of the Platonic ideals. (p. 106)

*Modularity of the human brain.* At the same time, while evolutionary psychologists examine algorithms as information processing modules, results showed that there exists Jungian analysts who conversely oppose the idea of modularity, domain-specificity, and that of evolved mechanisms; calling evolutionary psychology “deterministic” (Hogenson, 2001, as cited in Maloney, 2003b). For example, Knox (2010) claimed that the “emergence of new developmental capacities depends on the information contained in the preceding developmental level of phenotypical organization, rather than in pre-existing genetic or environmental instructions” (p. 523). Knox went on to say that: “the level of organization and complexity involved in any cognitive process is far beyond the capacities and function of genetic instruction, requiring complex interactions between different levels of structural and functional organization in the human mind and brain” (p. 523). Moreover, her argument is that archetypes as image schemas are developmentally derived, environmentally dependent, and do not rely on the foundation of genetic instruction. However, the emergence of developmental processes that account for the image schemas, as Knox describes, is not possible without the mechanisms in place from which these processes are to emerge. Tooby and Cosmides (1992, as cited in Maloney, 2003b) found the following:

The notion that inherited psychological structure constrains is the notion that without it we would be even more flexible or malleable or environmentally responsive than we are. This is not only false but also absurd. Without this evolved structure, we would have no competences or contingent environmental responses whatsoever. Evolved mechanisms do not prevent, constrain or limit the system from doing things it otherwise would do in their absence. The system could not respond to “the environment” (this is, to selected parts of the environment in an organized

way) without the presence of mechanisms designed to create that connection. (pp. 103-104)

Jung agreed with the notion of designed mechanisms, as evident in his writing. Jung (1961, as cited in Maloney, 2003b) wrote:

Consciousness begins its evolution from an animal-like state which seems to us unconscious, and the same process of differentiation is repeated in every child. The psyche of the child in its preconscious state is anything but a tabula rasa; it is already preformed in a recognizably individual way, and moreover equipped with all specifically human instincts, as well as with the a priori foundations of the higher functions. (p. 103)

It was apparent from the literature that there is existing disagreement as to whether or not a convergence between evolutionary psychology and archetype theory should exist.

Maloney (2003a) provided an example of this debate when he wrote:

Hogenson warns against the risk of linking archetype theory to evolutionary psychology lest evolutionary psychology be discredited. I don't share this caution. Archetype theory stands on its own merit and need not be protectively isolated. Additionally, archetype theory and evolutionary psychology complement each other. Evolutionary psychology has focused on mental function, while archetype theory has focused on the recurrent content of the mind and considers how this content shapes subjective experience and thereby motivates behavior. This convergence should be elaborated and tested, not distorted and dismissed. (p. 264)

In addition to the above except, it is important to point out that depth psychology and Jungian archetypes also take into account human universals. The following section will provide excerpts of the category of archetypes and emergent or developmental structures, as derived from a higher level of abstraction of the theoretical codes.

**Archetypes as emergent/developmental structures.** The view of archetypes as developmental or emergent structures appeared regularly in the data that this researcher analyzed. The category was determined after conceptualizing various concepts, including: archetypes as emergent image schemas, the issue of adaptive function in

cognitive psychology, and individuation. The theme of developmental structures was apparent in various citations throughout the literature. What follows is an examination of this category, as interrelated to the other resulting categories and intervening conditions.

*Emergent image schemas.* The developmental or emergent view of archetypes has its foundation in concepts related to Developmental Systems Theory, self-organization, and emergentism. Merchant (2006) described Developmental Systems Theory as

an attempt to do biology without the dichotomies of nature/nurture, genes/environment or biology/culture . . . it prefers to approach matters from a developmental perspective that does not rely on a distinction between privileged, essential causes and merely supporting or interfering ones. The life cycle of an organism understood to be developmentally constructed, not programmed or preformed. (p. 126)

Similarly, but with the addition of genes as a factor, Knox (2004) theorized that archetypes are emergent image schemas, resulting from an interplay of genes and environment; but opposed to the idea of genetic specification or psychic innateness.

Knox (2004) proposed the following:

The central theme here is that self-organization of the human brain and the recognition that genes do not encode complex mental imagery and processes, but instead act as initial catalysts for developmental processes out of which early psychic structures reliably emerge. A developmental account of archetype lends considerable to the key role archetypes play in psychic functioning and as a crucial source of symbolic imagery, but at the same time identifies archetypes as emergent structures resulting from a developmental interaction between genes and environment that is unique for each person. Archetypes are not “hard-wired” collections of universal imagery waiting to be released by the right environmental trigger, a model which would lead straight into the trap of categorizing them as innate ideas, a concept demolished by Locke long before anyone had ever heard of genes. (p. 4)

Knox equates image schemas with archetypes that are understood to be “foundational mind/brain structures which are developmentally produced during human pre-verbal

experience” (Merchant, 2009, p. 341). Merchant summarized the implications of Knox’s model:

There are no such things as pre-existent, innate archetypal structures which direct psychological life and which are at the core of complex development. Rather, there would be developmentally produced mind/brain structures (image schemas) underpinning a later scaffolding through various processes of emergence and self-organization. It is the latter which has the capacity to generate symbolic imagery. The crucial point is that such imagery would be arising out of mind/brain structures which are themselves derived from early pre-verbal developmental experience and not from innate archetypes. (p. 342)

Knox’s model of psychological development, as derived from the aforementioned principles, attempts to explain the emergence of infant cognitive development. Knox (2004) argued that:

If complex symbolic information cannot be contained in the genes which are passed on from parent to child, a new framework is needed for understanding the psychological development of the human infant. We need to explain the fact that we almost all develop the crucial skills of language, numeracy, reasoning, a sense of identity, a capacity for empathetic relationship for others and, central to all these, the capacity to symbolize, so that we acquire a sense that experience is meaningful. (p. 6)

Merchant (2009) went on to say that the ramifications of Knox’s model are substantial “for the very existence of archetypes as Jung conceived them is called into question. This raised the possibility that the whole way we have envisaged the collective unconscious needs reformulating” (p. 342). Based primarily on the central theme that genes do not encode complex mental imagery and processes, and symbolically meaningful content can only emerge from early attachments and cannot be inherited (Goodwyn, 2010; Knox, 2004, 2010), Knox (2004) has argued that the genetically inherited view of archetypes should be discarded in order for this model to be adopted:

Whilst image schemas are without symbolic content in themselves, they provide a reliable scaffolding on which meaningful imagery and thought is

organized and constructed, thus meeting the need for a model that provides for the archetype-as-such and the archetypal image. If we adopt this model for archetypes, we have to discard the view that they are genetically inherited and consider them to be reliable repeated early developmental achievements. (p. 9)

*Adaptive function in cognitive psychology.* Conversely, evolutionary cognitive psychology examines development from a perspective of functional analysis in that information processing mechanisms were designed in accordance to the adaptive problems in ancestral environment (Buss, 1999, p. 375). Buss provided the following example:

Just as we cannot understand the human liver without knowing what it is designed to do (filter toxins), evolutionary psychologists contend that we cannot understand how humans categorize, reason, make judgments, and store and retrieve specific things from memory without understanding the functions of the cognitive mechanisms on which these activities are based. (p. 375)

An example of an evolved psychological mechanism that illustrates adaptive function (the importance of being able to infer the behavior and beliefs of others) is “theory of mind.” Tooby and Cosmides (1992) explained the following:

Intensive research effort in the field of cognitive development has recently provided substantial support for the hypothesis that our evolved psychological architecture includes procedures that cause very young children to reliably develop a belief-desire folk psychology—so called “theory of mind” . . . such inferences appear to be generated by a domain-specific cognitive system sometimes called a “theory of mind” module. (p. 90)

In addition to being wary of accepting models of cognitive development that ignore the adaptive problems the mechanisms were designed to solve, evolutionary psychologists oppose cognitive architecture that is general purpose and content-free. Instead, the premise is that “the mind is likely to consist of a large number of specified mechanisms, each tailored to solving a different adaptive problem” (Buss, 1999, p. 375).



Similarly, there exists another developmental perspective that takes into account neuroscience, the species-typical environment, and the concept of image. For Hogenson, the image is the foundation of psychic experience and it is the role of the archetype as image and action patterns (Vezzoli, 2009). Vezzoli succinctly summarized Hogenson's viewpoint:

It is images and species-specific action patterns that are the key elements in revising and reconstructing the theory of archetypes. He [Hogenson] highlighted the support that mirror neuron research gives to the central role of interaction, both in early development and in clinical practice . . . images are not only products of mental activities but, as part of the human species-typical environment, they are constitutive elements of mental activity and cognitive processes. (p. 304)

Furthermore, Jung believed that archetypes are hereditary, handed down through our ancestors, and that the primordial image comes in response to the activation of the archetype. Moreover, Jung proposed that infants were born with innate capabilities. Jung (1954/1959, as cited in Jones, 2003) wrote:

The images are “primordial” images in so far as they are peculiar to whole species, and if they ever “originated” their origin must have coincided at least with the beginning of the species. They are the “human quality” of the human being, the specifically human form his activities take. This specific form is hereditary and is already present in the germ-plasm. The idea that it is not inherited but comes into being in every child anew would be . . . preposterous . . . (p. 655)

What follows are excerpts—as found in the results—of the study that examine Jung's conceptualization of development as an individual's process of individuation.

***Individuation.*** In fact, Jung understood the process of development throughout the lifespan, or individuation, as an expression of biological process and personality development. Stevens (2003) explained:

The phylogenetic structure is made up of archetypal units which possess the dynamic property of seeking their own actualization in the behavior

and the developing personality of individuals as they live out the human-life cycle within the context of their environment. To this overall process of archetypal actualization and personality development Jung gave the name *individuation*. (p. 73)

For Jung, during the process of individuation, a person shifts “from a focus on ego drives towards an awareness of the interaction between conscious and unconscious processes” (Leader, 2009, p. 509). Similarly, the theory of adaptive function of archetypes seeks to shed light on the process of bringing unconscious behaviors (one possible output of the evolved psychological mechanism) into consciousness (through the use of psychotherapy or otherwise) by assisting individuals in their personal development (individuation) and lessening or alleviating psychological pain.

Additionally, the different phases of life that Jung described as part of the individuation process are associated with the different biological changes pertaining to evolved mechanisms and archetypes that come online at different points in the lifecycle. A key component of evolutionary developmental psychology that is that “human beings face predictably different adaptive problems at varying points in their lives” (Buss, 1999, p. 388). For example, problems related to mating occurred prior to parenting problems; and these life changes and dynamics are relevant stages which coincide with Jung’s concept of individuation. By taking into account the different adaptive mechanisms that account for developmental changes in the lifecycle, we can better understand the dynamics and characteristics that are associated with different archetypes. The mother and father archetypes and their varying characteristics will be explored in depth in chapter 5.

The fifth category that emerged from the data is that of innate mechanisms and a priori structures in the mind/brain system. The category of innateness, as derived from a

higher level of abstraction of the theoretical codes, will be examined in the following section.

**Innateness.** The category of innateness was determined by conceptualizing the following concepts, as found through theoretical coding; and collapsing related codings in order to achieve a higher level of abstraction. These concepts included: how a priori structures are viewed by Jungian analysts, viewpoints that oppose archetypes as innate structures, and innate versus genetic. What follows are excerpts from the studies and theoretical articles that examined the issue of innateness—as related to archetypes—and show evidence of this theme as a significant category in the literature.

*A priori structures and Jungian psychology.* Results indicated various sources that analyzed the issue of the mind/brain as a “blank slate” or “tabula rasa” within Jungian psychology (Pietikainen, 2003; Stevens, 2000b, 2006). Evidence showed that for the most part Jungian psychology opposes the doctrine of the mind/brain as a blank slate (Pietikainen, 2003, Introduction section, para. 2); and various citations demonstrated Jung’s inherent belief that the brain contains differentiated, innate, capacities from birth. Jung (1936/1954, as cited in Stevens, 2006) wrote:

[It is] a mistake to suppose that the psyche of the newborn is a “tabula rasa” in the sense that there is absolutely nothing in it. Insofar as the child is born with a differentiated brain that is predetermined by heredity and therefore individualized, it meets sensory stimuli coming from outside not with any aptitudes, but with specific ones. (p. 74)

In the above excerpt, Jung is not only referring to the innate capacities of the brain as being present at birth, it is likely that his use of “individualized” and “specific” brain structures are analogous to the concept of domain specificity and modularity in evolutionary psychology. The concept of domain specificity is inherent in the theory of

adaptive function of archetypes since adaptive problems are specific, their solutions are specific as well (Buss, 1999). Buss (1999) provided the following example:

To solve these selection problems [selecting the right foods to eat (a survival problem) and selecting the right mate with whom to have children (reproductive problem)] in a reasonable way one would need more specific guidance about the important qualities of foods and mates. Fruit that looks fresh and ripe, for example, will signal better nutrients than fruit that looks rotten. People who look young and healthy will be more fertile, on average, than people who look old and ill. We need *specific selection criteria*—qualities that are part of our selection mechanism—to solve problems successfully. (p. 52)

The theory of adaptive function of archetypes understands that specific mechanisms evolved over evolutionary time to solve specific adaptive problems related to survival and reproduction. This model explains the adaptive problems related to mate selection and child-care (reproduction and parental investment); and food gathering (survival). Consequently, the outcome behaviors and characteristics of these evolved traits are observed in the mother and father archetypes and will be examined in the following chapter.

*Archetypes as innate.* Despite the apparent overall consensus within the Jungian community that the human brain is not a blank slate, results indicated opposition to this notion as it related to archetypes (Hogenson, 1998, 2003b; Pietikainen, 2003; Solomon, 1998). Pietikainen (2003) has argued:

He [Stevens] sees “mental modules” as archetypal propensities that have evolved through natural selection and contends that the “biological implication of archetypal theory are enormous in their ramifications and help to place the whole Jungian edifice on firm epistemological foundations.” But if the archetypal structures of the mind had served adaptive purposes, we should be able to imagine the way it had increased our ancestor’s reproductive success. However, there is no way to relate Jungian archetypes to our ancestor’s relative ability to produce more offspring than their fellow humans. (Jung, a Darwinian Evolutionary Psychologist? section, para. 5)

However, Jung's writings included various examples of archetypes as pre-existent forms in the human brain; and he described them as products of evolution and inheritance. Jung (1959, as cited in Goodwyn, 2010) wrote: "In addition to our immediate personal conscious . . . there exists a second psychic system of a collective, universal and impersonal nature which is identical in all individuals and is inherited. It consists of pre-existent forms, the archetypes" (p. 502).

*Genetic versus innate.* Another concept that appeared regularly in the literature was the notion of genetic versus innate. As discussed in chapter 3: the environmental impact of genetics as seen in epigenetics, the role of life experience on biology, and the complexity of genetics in that genes are able to turn each other on and off, has long been recognized by evolutionary psychologists and helps to explain the complexity of the interplay between genes and environment. Similarly, the literature showed that epigenetics has been recognized within the Jungian community as well. Knox (2010) wrote:

Thus innate structures or capacities must have some kind of genetic pre-specification, but they are not required to be "highly detailed" or one-to-one. This is important, in that this means that "innate" does not have to mean "genetic." Epigenicity is certainly the rule rather than the exception in development—but if a particular faculty develops reliably in everyone regardless of large variation in psychological environment, usually verified via wide cross-cultural studies, then nativists consider this as sufficient criteria to designate it as innate. This definition is therefore both intuitive and practical; moreover it accounts for the highly complex interaction between nature and nurture that is uncontroversial. (pp. 530-531)

While it may be true that epigenetics presents evidence that genetics are shaped by developmental experience, this process cannot come about without the necessary mental architecture from which such a system can emerge. The theory of the adaptive function

of archetypes recognizes the complexity involved in the activation of archetypes—in that archetypes lay latent until activated and that development plays a crucial role. Similarly, Maloney (2003b) emphasized that “experimental results support the assertion that the mind is innately, regularly structured, modular at lower levels of cognitive function, shaped by developmental experience, and capable of every thought/image/feeling that any individual has ever had or ever will have” (p. 104).

The aforementioned exemplifies the interplay between genes and environment, and evolutionary psychology provides evidence for psychological mechanisms, which evolved in the environment of evolutionary adaptedness, that solved the adaptive problems our ancestors faced in that context. Additionally, this interplay demonstrates why it is a false dichotomy to consider evolutionary psychology a form of “nativism” since the interplay of nature and nurture is vital to the formation of the human mind. One of the principles of evolutionary psychology speaks to the adaptive function of evolved circuits as making more sense in the context in which they evolved as opposed to our modern environment. Cosmides and Tooby (1997) explained:

In other words, our modern skulls house a stone age mind. The key to understanding how the modern mind works is to realize that its circuits were not designed to solve the day-to-day problems of a modern American—they were designed to solve the day-to-day problems of our hunter-gatherer ancestors. These stone age priorities produced a brain far better at solving some problems than others. For example, it is easier for us to deal with small, hunter-gatherer-band sized groups of people than with crowds of thousands; it is easier for us to learn to fear snakes than electric sockets, even though electric sockets pose a larger threat than snakes do in most American communities. In many cases, our brains are *better* at solving the kinds of problems our ancestors faced on the African savannahs than they are at solving the more familiar tasks we face in a college classroom or a modern city. In saying that our modern skulls house a stone age mind, we do not mean to imply that our minds are unsophisticated. Quite the contrary: they are very sophisticated computers, whose circuits are elegantly designed to solve the kinds of problems our

ancestors routinely faced. (Principle 5 section, para. 5)

This constitutes yet another line of evidence that illustrates the importance of taking into account the adaptive problems our ancestors dealt with, as well as the context where the adaptive problems took place. Accordingly, the theory of the adaptive function of archetypes seeks to understand the nature of psychological distress and complexes in terms of the ancestral environment and the problems related to survival and reproduction our ancestors faced.

Whereas the “blank slate” model and the “nature versus nurture” debate is not now commonly held within psychology, depth psychology is slower in integrating the two—namely, the concepts of innateness and social behaviors (A. Maloney, personal communication, December 17, 2010). Maloney (2003b) provided another example related to the above excerpt:

Innate effects may be hard to appreciate because they so regularly and effectively serve us. An exception drawn from cognitive psychology demonstrates the rule. Fog produces a great deal of glare. The human mind is unable to sort out the difference between the perception of increased glare and the decreased rates of travel. So people in high fog conditions underestimate their speed, and may even accelerate their automobiles producing more accidents. (p. 105)

Maloney (2003b) concluded by succinctly summarizing the interplay of genes and environment when he wrote:

There are neither genetic effects without environments, nor are there environmental effects without genes. There is only a complex interplay that creates an emergent regularity, the features of which have yet to be fully described. If we are committed to a deeper understanding of the psyche, we need to leave behind sterile arguments like whether genes or environment or emergence shape the psyche, and instead look for the contributions of all relevant factors. (p. 106)

The theory of adaptive function of archetypes would contribute to the formulation of

future questions and hypotheses that address the function of archetypes—while taking into consideration the ancestral environment, adaptive problems, and the possible solutions to such problems. What follows is the category of the image and representation of archetypes—as found in the research.

**The image and representations of archetypes.** The theme related to the image and representation of archetypes emerged from the data after conceptualizing the theoretical codes. The concept of image and representations as the emergent property of the archetype emerged from the data as a result of employing a higher level of abstraction to the theoretical codes. In this section, this researcher will present these findings and show how this concept can be better conceptualized when integrating the theory of adaptive function of archetypes.

Jung (1959/1968, as cited in Gray, 1996) understood that the archetype is made conscious through image when he wrote: “A primordial image is determined as to its content only when it has become conscious and is therefore filled out with the material of conscious experience” (p. 51). The archetype performs at the unconscious level and then is activated and made conscious through image, representations, or urges. In other words, just as the activation of an evolved psychological mechanism leads to a physiological response, an activation of another mechanism, or behavior; the activation of the archetype is experienced at the conscious level by the same phenomenon. Gray (1996) explained the implications of this when he wrote:

We may understand that the archetypal image, the primordial image, is an emergent property of the underlying biological processes. As the emergent whole representing their interactions, it provides a coordination, a direction, an image that can be presented to consciousness that expresses the biological and psychological needs of the organism. (p. 51)



Accordingly, the image, representation, or urges that arise as emergent properties of the archetype are akin to the responses that followed experiencing a threat of survival in the environment of evolutionary adaptedness. For example, Buss (1999) used our evolved fear of spiders as an illustration of an evolved psychological mechanism. The input to the archetype, after having undergone various decision rules, leads to a physiological arousal and behaviors. Buss (1999) explained:

The fear is triggered only by a narrow range of inputs, such as the specific shapes and movements associated with spiders. Once a spider is perceived as dangerous and within striking range this information is transformed via decision rules that might activate physiological arousal and perhaps the implementation of a host of behavioral options. The options—such as stomping on the spider, fleeing or yelling for help—would presumably have lowered the odds of receiving a deadly spider bite in ancestral environments. Thus, the output of the fear of spiders mechanism solves an ancestral adaptive problem. (p. 50)

In the above example, the evolved psychological mechanism of fear of spiders is demonstrated by the individual's fear response and behaviors associated with protecting oneself against a threat to survival. It is important to reiterate that these archetypal processes occur at the non-conscious level “on a level far below consciousness . . . rooted in the biological/protoplasmic history of the individual” (Gray, 1996, p. 52).

The theory of the adaptive function of archetypes recognizes that when the archetype is activated, it will then create a conscious experience. In other words: “it is the image or symbol that unites, expresses and brings the archetype into the realm of being” (Gray, 1996, p. 51). Jung wrote that since this “archetype is numinous, i.e., possesses a specific energy, it will attract to itself the contents of the consciousness conscious ideas that render it perceptible and hence capable of conscious realization” (Jung 1911/1912, as cited in Stevens, 2006, p. 86).

In like manner, Jung associated the activation of the archetypes and the images or representations that followed as analogous to fixed action patterns in animals (Jones, 2003; Lindenfeld, 2009). In addition, “representations emerge from the complex interactions of brain and environment and brain systems among themselves” (Elman, 1999, as cited in Knox, 2004, p. 6). Lindenfeld (2009) provided an example of a fixed action pattern, as described by Jung:

On several occasions he [Jung] drew the comparison with the yucca moth, which is programmed to fertilize only on yucca plant and therefore must have some specific means for recognizing it. That recognition would correspond to the archetypal image. He reiterated that only through such situations can we know the archetypes; they are not accessible directly, and their ultimate nature must remain unclear. (p. 222)

The above illustration provides another example of the adaptive function of the archetype in the form of reproduction and survival. Jung’s writings demonstrated his understanding of the adaptive nature of archetypes, as created by natural selection and evolution, and used images and representations as the emergent properties of the activated archetype in explaining archetypal structure. The theory of the adaptive function of the archetypes—interwoven with the properties of evolutionary psychology—provides the context in which these archetypes evolved and the adaptive problems they evolved to solve. Jung (1954/1959a, as cited in Jones, 2003) concluded: “There are present in every psyche forms which are unconscious but nonetheless active—living dispositions, ideas in the Platonic sense, that perform and continually influence our thoughts and actions” (p. 656).

What follows is the category of archetypes as cultural or symbolic forms that emerged from the analysis of the data. The theory of the adaptive function of archetypes will be used to clarify some of the debate concerning the role of culture and archetypes in Jungian psychology.

**Archetypes as cultural or symbolic forms.** The category of archetypes as cultural or symbolic forms emerged from the data after conceptualizing the theoretical codes and employing a higher level of abstraction. The two principles that emerged from the analysis are: symbols and symbolic forms as products of culture; and what is meant by culture from an evolutionary perspective. The following seeks to examine these principles and illustrate how they can be better understood when considering the theory of adaptive function of archetypes.

*Symbolic forms and culture.* Jung considered symbolic images to be generated as a universal disposition in humans and considered symbols to be the expression of the archetypes in consciousness that are then projected onto others (Lindenfeld, 2009).

Lindenfeld (2009) explained that:

He [Jung] emphasized that they represent a different kind of cognition from rational thought: their purpose was not so much to provide the means of differentiating objects into distinct classes (such as Levi-Strauss's binary categories), or words into sentences (such as Chomsky's syntactic structures) but on the contrary, to override such distinctions by telescoping opposites into one. (p. 223)

Here, Lindenfeld introduced Jung's concept of the symbol as representing opposites. In addition to the presumably biological underpinnings of symbol, as described by Jung, philosophical perspectives also emerged from the analysis. The notion of symbolic, as seen from a philosophical perspective, was evident in Jung's writings—as indicated in the results of the analysis. Jung (1953/1991, as cited in Lindenfeld, 2009) wrote

opposites can be united only in the form of a compromise, or irrationally, some new thing arising from them which, although different from both, yet has the power to take up their energies in equal measures as an expression of both and neither. (pp. 223-224)

Moreover, Pietikainen (1998) referenced the philosophy of symbolic forms when he

wrote:

“Symbolic” is not the one or the other, but it represents “the one in the other” and the “the other in the one.” In this way, independent and characteristic structures of language, myth, and are constituted, and each of these structures earns its value through constructing a specific and independent, self-contained world of meaning according to an inherent formative law of its own. (p. 331)

Pietikainen attributed the etiology of symbols to culture and philosophy; and insisted that archetypes are symbolic forms that have nothing to do with biology and are seemingly products of culture. Pietikainen (1998, as cited in Stevens, 1998a) stated that “man is not born with the collective unconscious but grows into culture, adopting the commonly shared notions, beliefs, and ways of behavior which already exist in cultural environment” (p. 348).

*Culture from an evolutionary perspective.* Contrary to the above, advocates of evolutionary psychology believe that culture cannot be viewed as separate because it rests on the foundation of evolved psychological mechanisms; and evolutionary psychology provides a “true interactionist position.” (Buss, 1999, p. 403) Hence, “cultural differences, due to evoked culture, is due to the combination of a universal evolved psychological mechanism and local between-group differences as input into that mechanism” (Buss, 1999, p. 404).

In regards to the archetypal symbol, the theory of adaptive function of archetypes would focus on the adaptive value of communication through sign and symbol as “one of the earliest archetypal propensities to have evolved” (Stevens, 1998b, p. 22). Symbols are comparable to the deep structures of language, as found in Chomskyan linguistics, because they provided the adaptive function of communication in ancestral environments. Stevens (1998b) explained:

Viewed from the biological standpoint, it is true to say that the evolution of our capacity to decipher visual meanings occurred much earlier than our capacity to use language; as a result, symbols being imagistic rather than verbal, are more directly linked to their deep structures (archetypes) than are words. (p. 28)

When conceptualizing the role of culture and the adaptive function of a mechanism, evolutionary psychologists consider to the complexity of the processes involved in the activation of mechanisms or archetypes. Tooby and Cosmides (1992) wrote:

Our psychological structures come equipped with evolved contentful organization, which can remain latent or become activated depending on circumstances and which may vary in its expression according to procedures embodying any degree of complexity. The claim that some phenomenon are “socially constructed” only means that the social environment provided some of the inputs used by the psychological mechanisms of the individuals involved. (p. 117)

In the following chapter, this researcher will apply the theory of adaptive function of archetypes and its properties to the mother and father archetypes as found in Jungian psychology.

## Chapter 5

### The Adaptive Function of the Mother and Father Archetypes

By taking into account the principles of evolutionary psychology, researchers can understand behaviors and complexes in terms of the adaptive problems our ancestors faced over evolutionary time. Accounting for adaptive pressures allows for a better understanding of the archetypes that evolved to address problems related to survival and reproduction in ancestral environments. The theory of the adaptive function of archetypes recognizes human behavior in terms of the principles set forth by evolutionary psychology and seeks to understand archetypes as the product of this phenomenon. This chapter will apply the theory of adaptive function of archetypes to the mother and father archetypes.

As presented in chapter 3, Buss (1999) explained three contexts (and the dynamics that evolved from these contexts) involving the evolved mechanisms of paternal care: (a) genetic relatedness of the offspring, (b) the ability of the offspring to convert parental care into fitness, and (c) alternative uses of the resources that might be available to invest in offspring (p. 196). The five levels of progression in the theory of adaptive function of archetypes (*causal conditions, intervening conditions, result, output, and psychological outcome*) will be applied to the three aforementioned domains; namely: genetic relatedness, marital status and age, and investment in children. The components of the theory of adaptive function of archetypes (as described in Figure 2) will serve as the framework when explaining the characteristics of the mother and father archetypes in Jungian psychology. The theory of adaptive function, as applied to the mother and father archetypes, is presented in Figure 3. This figure will be the foundation of the discussion and will be explained and referred to throughout the rest of this chapter.

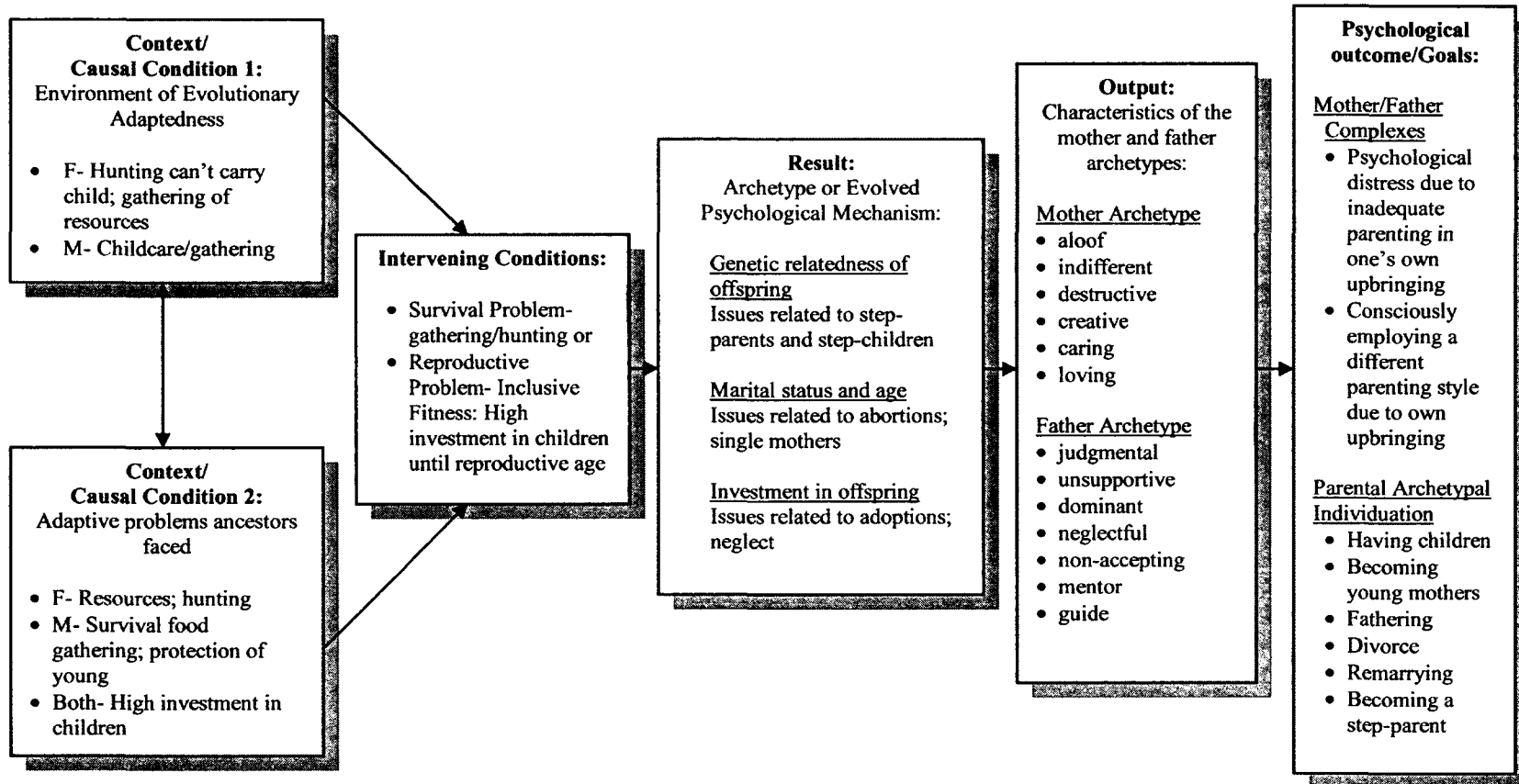


Figure 3. The Adaptive Function of the Mother(M) and Father(F) Archetypes

### Context in Which Archetypes Developed

In order to examine the characteristics of the mother and father archetypes from a biological basis, a basic understanding of the selection pressures our ancestors faced in ancestral environments is warranted. These selection pressures led to adaptations and mechanisms that evolved over evolutionary time to solve the adaptive problems our ancestors typically encountered. In this section, this researcher will explore the circumstances men and women were exposed to—on average—in the environment of evolutionary adaptedness (*causal condition #1*); that led to different adaptive problems involving survival and reproduction (*causal condition #2 and intervening conditions*). This researcher will attempt to explain the characteristics of the mother and father parental archetypes from this evolutionary groundwork.

The theory of the adaptive function of archetypes holds that the *casual conditions* (EEA and adaptive problems) and the *intervening conditions* (problems that affected survival and reproduction) are essential in understanding the contrasting characteristics of the mother and father archetypes. Boyd and Silk (1997) explained several circumstances and responsibilities that men and women faced as “foragers or hunter-gatherers who lived in small-scale societies and depended on hunting game and gathering wild plant food” (p. 394). These are summarized in Figure 3 and include:

1. Women gather plants, capture small prey, prepare food, and care for their young.
2. Men mainly hunted larger game. Food, particularly meat, is widely shared within the group of people who live together.
3. Such groups usually contain several pair-boned couples and their children, a



form of social organization not found in any other primate.

4. Both men and women invest heavily in their offspring.
5. Unlike herding and farming peoples, foragers did not establish permanent settlements, did not have substantial economic inequality, and did not recognize any formal political leadership (pp. 394-395).

In addition to the above, hunter-gatherer societies were composed of small-band groups (about 50-200 people) who lived together and engaged in social exchange and cooperation (see Barkow et al., 1992). Additionally, it has been hypothesized that women did most of the childcare, gathering of food, food preparation, and perhaps hunted small prey; while men hunted and were essentially—on average—not able to physically handle their young while hunting larger animals (Boyd & Silk, 1997). However, both parents invested highly in their offspring in the form of direct childcare or by providing food, shelter, and resources. These essential tasks led to evolved mother and father parental archetypal traits that satisfied both survival problems (food, shelter) and reproductive problems (inclusive fitness); and are the *intervening conditions* in the theory of adaptive function of archetypes.

In this chapter, this researcher will explore the resulting traits and characteristics related to the maternal and paternal qualities that emerged due to the varying responsibilities of our ancestors. Additionally, Maloney (1999) has found archetypal themes related to quest, conflict, and attachment as part of adult innate structures of the human mind; and this “produces ‘apparent’ content, thereby shaping human experience and culture” (p. 112). For example, caring and nurturing qualities are highly documented traits of the mother archetype; and these characteristics make sense from an evolutionary

perceptive. Conversely, some of the traits of the father archetype are those pertaining to exhibiting order, discipline, and providing the instrumental role of facilitating the transition of the child from the home to society. While keeping in mind the adaptive problems our ancestors faced in the environment of evolutionary adaptedness, this researcher will demonstrate the qualities of the mother and father archetype as they relate to genetic relatedness, marital status and age, and investment in children (see Figure 3).

### **Resulting/Output Characteristics of the Mother and Father Archetypes**

By examining the parental mechanisms related to genetic relatedness of the offspring, marital status and age, and investment in children; parental care can be explored as the “preferential allocation of investment to one or more offspring at the expense of other forms of allocating investment—that have the effect of increasing the fitness of the parent” (Buss, 1999, p. 195). Since the resulting phenomenon in the theory of adaptive function of archetypes is the mechanisms that evolved to solve the adaptive problems our ancestors faced, hypotheses can be made regarding the different archetypal characteristics that developed within the aforementioned contextual makers.

**Genetic relatedness of offspring.** When considering the genetic relatedness of the offspring, mothers are certain that their offspring are their own whereas fathers are not. In the EEA, women carried children in their womb from conception until birth; and the question of parental uncertainty pertained solely to men. Similarly, studies have indicated that “substitute parents will generally tend to care less profoundly for children than natural parents, with the result that children reared by people other than their natural parents will be more often exploited and otherwise at risk” (Daly & Wilson, 1988, as cited in Buss, 1999, p. 196). Similar findings have shown stepfather interaction with

stepchildren as being less frequent and more aggressive, with the rates of child murder being far higher for stepparents than genetic parents (Buss, 1999). The aforementioned are examples of possible outcomes or behaviors that may occur in blended families and help explain the negative aspects of the mother and father archetypes. However, it is important to note that “these findings do not mean that intense feelings of parental love cannot be activated by any child other than a genetic one,” (Buss, 1999, p. 196) but on average it has been found that resources are less likely to be allocated to stepchildren than genetic ones (Daly & Wilson, 1988, as cited in Buss, 1999).

The context of genetic relatedness of offspring is being presented as a way of explaining one of the possible origins of the negative aspects of the mother and father archetypes (the resulting mechanisms in the theory of adaptive function). Paternity uncertainty (one component of the father archetype) and the genetic relatedness of offspring (components of both the mother and father archetypes) help explain the negative characteristics of the mother and father archetypes such as the aloof, indifferent mother; or the neglectful, unsupportive father (see Figure 3, as listed in the *Output* rectangle). Moreover, “male jealousy, dominance, and possessiveness, can be understood as the product of selection pressure to achieve some guarantee that a man is indeed the father of his wife’s children” (Stevens, 2003, p. 136).

**Marital status and age.** In like manner, an individual’s marital status and age will also affect the degree they invest in their children due to finite energy and effort in ancestral environments. Buss (1999) explained that “at the most general level we expect that selection will have fashioned in humans decision-making rules for when to invest in children and when to devote one’s energy toward other adaptive problems” (p. 209). A

woman's age can influence her decision as to when to have children, with younger women having more time than older women. From this evolutionary perspective, we can expect that "natural selection would favor a decision rule that causes older women to invest immediately in children rather than postponing to do so" (Buss, 1999, p. 209). Also, a context that may affect a man's parenting effort is his potential sexual access to women—in that he might be prone to engage more in mating than in parenting if this access is high (Buss, 1999).

Following the aforementioned reasoning, and as presented in chapter 3, rates of infanticide are higher among younger women than older women; and "both age and marital status are correlated with rates of infanticide" (Buss, 1999, p. 211) with single mothers being more likely to do so than married mothers. Moreover, the mother archetype is known to be creative and loving on one hand and destructive and hateful on the other (Stevens, 2003); and infanticide is another phenomenon that may help to explain the origins of such archetypal characteristics.

**Investment in children.** Lastly, the context of investment in children when examining parental care contains additional reasoning that supports the differentiation of positive and negative characteristics of the mother and father archetypes. While mother and father archetypal qualities are associated with nurturance, warmth, understanding, and support; lack of investment in children can lead to childhood abandonment, trauma, and neglect. As presented in chapter 3, the rationale concerning investment in children falls under the category of inclusive fitness within evolutionary psychology in that investment in offspring until reproductive age increases the overall fitness of the individual. Buss (1999) has summarized some of the evidence supporting evolved

mechanisms for parental care:

Evolved parental mechanisms are also predicted to be sensitive to the ability of the offspring to convert parental care into reproductive success. Three lines of research support this theoretical expectation. First, children born with congenital problems such as spina bifida or Down syndrome are commonly institutionalized or given up for adoption; if they are cared for and not given up for adoption, they are far more likely to be physically abused by their parents. Second, a small study of twins found that mothers tend to invest more in the healthy infants than in their less healthy twins. Third, young infants are at greater risk of abuse and homicide than older children. (pp. 220-221)

The aforementioned excerpt contains circumstances that unconsciously affect an individual's ability to gauge their own reproductive success by allocating parental care. Such difficult contexts—and the decisions underlying them—are part of our evolved human nature and can account for some of the negative aspects of the mother and father archetypes. Through the process of psychotherapy, clinicians can assist individuals who are experiencing such circumstances by pairing a depth psychological approach (facilitating individuation and awareness of personal complexes) with an evolutionary point of view.

### **On Parental Archetypal Behaviors and Individuation**

Through the process of development throughout the lifespan, or individuation, the biological underpinnings of development and depth psychology can be utilized as approaches to assist individuals in becoming more aware of their personal complexes. When examining the mother and father archetypes, both parental mechanisms and psychopathology can lead to a psychological obstruction of the archetypal intent (Stevens, 2003); and having an awareness of the biological underpinnings of human nature from an evolutionary perspective can assist clinicians when conceptualizing cases.

The archetypal parental circumstances discussed in the previous section arise at

different points in the lifecycle and affect the process of individuation (the psychological outcome in the theory of adaptive function of archetypes) through developmental milestones, such as: having children, becoming young mothers, becoming fathers, going through divorce, remarrying, and issues involving blended families. For example, when considering the genetic relatedness of offspring, issues related to: step-children and step-parents; blended families; and allocation of resources for non-genetic children (i.e.: caring for children that are not your own; Buss, 1999); can be better understood when considering an evolutionary paradigm. Furthermore, by incorporating an evolutionary perspective, the clinician can assist the patient in normalizing some of the dynamics that may arise in psychotherapy.

Additional examples of issues related to parental care—that may surface during the individuation process—are those involving marital status and age and the degree of investment in children. For example, young unmarried teenagers may be more likely to engage in abortions—as opposed to older women who may have additional resources available to them (i.e.: achieved a higher education or established a career) and have less time to become mothers. By utilizing an evolutionary lens, a better understanding of some of the dynamics and feelings that may arise depending on a woman's marital status and age can be achieved.

When considering attachment patterns—and as presented in chapter 3—Simpson and Belsky found contextual factors which predicted the emergence of insecure patterns (i.e.: parents' psychological health and the presence of depressive symptoms in the mother; Belsky & Jaffee, 2006, as cited in Simpson & Belsky, 2008). Such psychopathology can be equated with evolved archetypes operating in a high stress or

highly disorganized environment and may account for the overall psychological distress of the primary caregivers. Moreover, these dysfunctions can contribute to relational problems between mother/father and child, leading to an insecure attachment pattern.

Later in life and through the process of individuation, the children that were the product of such an upbringing can gain awareness of such complexes as adults and help to rectify these personal issues by making life changes, learning from their upbringing, raising their own children differently, and so forth.

The aforementioned characteristics of the evolved mother and father archetypes are meant to serve as an overview of the possible biological underpinnings of these archetypes. By examining certain evolved psychological mechanisms, a better understanding of the opposing polarities of the mother archetype can be achieved including the following: being loving, creative, and nurturing on one hand and destructive, aloof, demeaning, and indifferent on the other. Similarly, the father archetype can be experienced as the mentoring instrumental figure that provides his offspring with the necessary skills to adapt in society at large; and this contrasts with the neglectful, non-accepting archetypal father figure.

In short, the evolved psychological mechanisms and archetypal properties provide a blueprint in organizing life experience and are made conscious through personal images, narratives, feelings, and dysfunctional behaviors. Even though these mechanisms may lead to outcomes that are undesirable (Buss, 1999), such as child abuse and neglect, evolutionary psychology can also help individuals to understand why “behaviors are judged undesirable—they jeopardize our own reproductive interests” (Buss, p. 402). These archetypal mechanisms, how they affect life experience, and how

individuals can rectify psychological distress, are all significant components that lend themselves to clinical implications.

### **Clinical Implications**

When taking into account the mother and father paternal archetypes and their evolved characteristics, the implications for clinical psychology when utilizing an evolutionary lens are profound. The principles of evolutionary psychology and the theory of adaptive function of archetypes can be utilized when conceptualizing cases. From these findings, this researcher has provided a model that contributes to the explanation some of the characteristics pertaining to parental archetypes. The positive and negative attributes of the mother and father archetypes contribute to psychological outcomes and manifest themselves through complexes at different times in the individuation process.

For instance, clinical issues involving teenage pregnancy and the consideration of abortion may be better understood when seen from the contexts involving the age of the woman and the lack of resources available to her. If she is unmarried and most likely has not established a career, these factors can unconsciously contribute to her decision to consider abortion due to the likely difficulty in raising her child until reproductive age without additional support. Furthermore, because she is young and is capable of conceiving later in life, this teenager may consider adoption as an option. Clinical interventions may include the following: exploring other alternatives to abortion, processing feelings of ambivalence concerning raising a child on her own, utilizing resources available to her in order to have the patient feel more capable of raising a child on her own, or soliciting the assistance of extended family members.



Following this rationale, older women might invest more immediately in children since they are nearing the end of their reproductive years. With this in mind, clinical issues involving making a conscious choice to become a single mother, seeking a higher level of education, and possibly dealing with issues of becoming a blended family may be factors of clinical relevance. By incorporating an evolutionary perspective, clinical psychologists can conceptualize cases from a depth psychological approach that allows for a biological foundation.

Finally, when clinical issues arise concerning milestones such as remarrying and becoming a step-parent (Stevens, 2003), evolutionary relevant markers pertaining to the allocation of resources for non-genetic children may be explored within the safe space of couples and/or family therapy. Possible feelings related to ambivalence, resentment, and altruistic behaviors may be typical of step-parents when providing resources to non-genetic children. Although many parents acquire such costs for the benefits of being in a loving relationship later in life, such feelings and tradeoffs seem sensible when taking into account an evolutionary framework.

**Implications for assessment and treatment.** Following the aforementioned clinical implications involving teenage pregnancy, single parents, and step-parenting from an evolutionary approach, this researcher will present general assessment and treatment considerations when utilizing this perspective with varying clinical disorders. Evolutionary psychology and the theory of adaptive function of archetypes provide significant clinical implications for professional psychologists by assessing human behaviors as the product of evolved mechanisms in ancestral environments. Such an understanding will assist psychologists by providing a context in which these behaviors

evolved and will, in turn, help de-pathologize them in clinical assessment and treatment by providing a reference as to why these behaviors came about in the first place.

*Assessment.* In order to develop a proper clinical assessment utilizing the theory of adaptive function of archetypes and evolutionary psychology, this researcher will summarize the essential principles of this theoretical framework. When examining how the theory of adaptive function of archetypes complements clinical psychology and explains clinical disorders, the following implications are warranted during the assessment phase of treatment:

1. In contrast to hypothesizing about the mind (and the behaviors that emerge) as a general purpose learning machine (see Standard Social Science Model; Cosmides & Tooby, 1997), evolutionary psychology and the theory of adaptive function of archetypes postulates that the mind is a collection of specialized mechanisms that evolved to solve adaptive problems in the environment of evolutionary adaptedness.
2. This ancestral environment, being different than our modern environment, means that mechanisms evolved to solve specific problems of our “hunter-gatherer ancestors—problems like finding mates, hunting animals, gathering plant foods, negotiating with friends, defending ourselves against aggression, raising children, choosing a good habitat, and so on” (Tooby and Cosmides, 2000, as cited in Siegert and Ward, 2002, p. 238); and these problems affected survival and reproduction.
3. Another criterion is that mechanisms “develop reliably and efficiently in all human beings unless linked to a sub-group” (Siegert and Ward, 2002, p. 237),

as in gender related adaptations.

4. Behaviors, clinical disorders, and personality traits that emerge from such mechanisms (or by-products) can better explain and de-pathologize clinical issues related to: jealousy, mating, aggression, anxiety, parenting step-children, becoming single mothers, and so forth.
5. Additionally, conceptualizing cases from an evolutionary perspective will therefore assist clinicians in normalizing the patient's behaviors; developing empathy; validating feelings and life circumstances; and de-pathologizing disorders, psychological distress, and dysfunction. This will, in turn, facilitate the rapport building process in the early stages of treatment and help develop interventions in later stages.
6. As presented in chapter 2, evolutionary psychology accounts for both proximate and ultimate causes and the clinician should consider both these factors during the assessment phase. This includes proximate causes such as such as genes, parental actions, developmental history, learning, and environmental stimuli (Siegert & Ward, 2002); and ultimate causes being all contributing evolutionary factors. Proper clinical assessment would include a thorough psychosocial assessment, including: developmental history; assessing for abuse and trauma; educational history; medical/psychiatric history; substance abuse history; mental status exam; and level of social support.
7. Moreover, the formation of evolved psychological mechanisms or archetypes is activated by information in the environment, and this activation and

development is predisposed by environmental influences. This then results in “quite different beliefs, ideas, desires, goals, and behavior” (Siegert & Ward, 2002, p. 239) which would be explored by the clinician during the course of treatment. In addition to these outputs—and as presented in chapter 4—are representations, symbols, images, urges, and feelings that result from the interplay of the activation of the archetype and experience (or environmental input).

8. Since mechanisms come on-line at different points of the human life cycle and are part of an individual’s process of individuation and development, clinicians would assess where in the individuation process the clients finds themselves and facilitate the awareness of possible personal complexes in later stages of treatment.

The above principles are being presented as a way of guiding professional psychologists when making clinical assessments of clients using an evolutionary framework as an adjunct to their clinical orientation in practice. Whereas traditional diagnostic criteria may not account evolutionary explanations for behaviors and emotions, evolutionary psychology and the theory of adaptive function of archetypes can provide a reference and help de-pathologize what are seen as dysfunctional or maladaptive behaviors.

***Treatment.*** Perhaps the most significant treatment implication when utilizing an evolutionary approach in clinical psychology is that employing such a perspective allows the clinician to normalize, understand, and validate a patient’s seemingly maladaptive behaviors. For example, in “ancestral environments anxiety functioned as an alarm system that alerted individuals to possible threats and forced them to take immediate

action” (Nesse & Williams, 1997, as cited in Siegert & Ward, 2002, p. 254). Whereas anxiety may be seen as a disorder or maladaptive symptoms or behavior, using an evolutionary explanation as to the etiology of anxiety brings out its adaptive function of survival. Likewise, anxiety related symptoms without the contextual makers may be due to a likely dysfunctional evolved psychological mechanism.

Similarly, aspects of the negative mother parental archetype (aloofness, neglect), and possible underlying behaviors (abortion, adoption, child abuse) are better understood when taking into account evolutionary factors, such as: marital status and age, investment, and genetic relatedness. Having knowledge of these ultimate causes (while keeping in mind proximate causes) can lead to interventions that help to validate and create empathy for these behaviors and feelings rather than pathologize them. Thus, naming and working with perhaps seemingly undesirable behaviors can be made easier.

In general, the course of treatment when utilizing the theory of adaptive function would consist of facilitating the individual’s awareness of possible unconscious processes as they pertain to biology and development. Through the process of individuation, archetypal manifestations such as: images, representations, symbols, desires, and feelings may be explored during treatment in order to facilitate personal growth and change.

Finally, Siegert and Ward (2002) made an important point when considering clinical implications for treatment from an evolutionary perspective in that clinical psychologists “may have to adopt a different, and more complex model of mental disorders. Current models of pathology in clinical psychology frequently conceptualize mental disorders either as illnesses or learned behaviors” (p. 254). Consequently, the theory of adaptive function of archetypes seeks to complement clinical psychology by

bringing forth the biological underpinnings of evolutionary psychology that help explain the etiology of certain mental disorders, while honoring the individuality of the creative psyche.

## **Chapter 6 Discussion**

### **Archetypes as Functionally Adaptive**

This study suggests that in order to examine archetypes from a biological basis, as presented in chapter 3, researchers need to utilize a holistic approach rather than simply isolating relevant components, such as culture and human development. That is, environment and culture; symbolism and image; individuation and development; human universals and the collective unconscious; are all fundamental and necessary elements when investigating archetypes from a biological perspective. Aside from the inherent necessity of taking into account environment and culture, the theory of adaptive function of archetypes understands that archetypes perform at the unconscious level are then activated and brought to consciousness through image, representations, symbols, urges, and feelings. Certain mechanisms come on-line at different points of the human life cycle and are part of an individual's process of individuation and development.

Evidence from this analysis has been used to develop a theoretical model that presents Jungian archetypes as highly interrelated to evolved psychological mechanisms. The properties of this theory are the following: the environment of evolutionary adaptedness and the adaptive problems our ancestors faced; the evolved mechanism or archetype; the resulting output behaviors; and the psychological outcome or goal related to individuation, psychological distress, and complexes (see Figure 2). Since evolutionary psychology provides the theoretical framework needed to analyze the possible etiology of Jungian archetypes from a biological basis, the principles of evolved psychological mechanisms served as the bedrock for the theory of adaptive function of archetypes.

The properties of the theory of adaptive function of archetypes demonstrate the similarities between evolved psychological mechanisms and archetypes from a biological perspective. Conversely, one contrasting notion is that of instincts (as conceptualized in the writings of Jung) since evolved mechanisms are more complex in nature than instinctual responses. By taking into account our evolved human nature, certain behavioral characteristics—most of which come on-line at different points in the lifecycle—begin to make more sense and hang together adequately.

With this theoretical framework in mind, the mother and father archetypal parental characteristics were better explained when incorporating contexts related to genetic relatedness of offspring, marital status and age, and parental investment. In order to maximize their reproductive fitness, our ancestors provided high investment to their own children until they were of reproductive age. Since it was more advantageous in the ancestral environment to raise a child by cohabitating parents, marital status is a significant factor. Similarly, the age of the woman and the health of the infant are also relevant elements. The aforementioned reproductive problems and the archetypal mechanisms that evolved to solve these problems are properties of the adaptive function of the mother and father archetypes (see Figure 3; *Intervening Conditions* and *Result boxes*).

Furthermore, viewing archetypes as analogous to evolved psychological mechanisms, and related to the principles of evolutionary psychology, provides the advantages of applying a biological approach to the understanding of these issues in the clinical setting. These issues included, but are not limited to: caring for step-children; becoming step-parents; teenage pregnancy and abortion; becoming single mothers and



being financially independent.

By looking at the different biological components that may contribute to certain behavioral characteristics of archetypes, this researcher was able to demonstrate that the lessons that can be drawn from these findings come from applying a reductionistic lens to Jungian archetypes. It is my contention that incorporating an evolutionarily sensitive approach when conceptualizing clinical cases from a depth perspective will not diminish the numinous quality of the psyche, but will instead enhance our capacity to understand and normalize behaviors that others possess by the sheer virtue of being human.

### **Comparison with Other Theories of Conceptualizations of Archetypes**

**Archetypes as developmental and emergent.** The results of the systematic search in this study yielded numerous empirical studies or theoretical articles that examined Jungian archetypes from a developmental or emergent perspective. Findings from these studies suggested that while archetypes are developmentally constructed—a finding that is consistent with the theory of adaptive function—the life cycle of an organism is not programmed or preformed (Merchant, 2006). Although environmental input and variation is necessary for evolved mechanisms to come on-line at different points in the life cycle, these evolved mechanisms provide the blueprint for development. Whereas this developmental perspective emphasizes the fact that archetypes emerge through human development, they discount the genetic component that is necessary for such developmental processes to occur.

Similarly, Knox (2004) theorized that archetypes are emergent image schemas resulting from “an interplay of genes and environment that is unique for each person” (p. 4). Since evolutionary psychology accounts for genetic variation, biological epigenetic

processes, and the ability of genes to turn themselves on or off, individual “uniqueness” is also a common factor in the theory of adaptive function. However, and more importantly, is the fact that without a universal human nature, none of the mechanisms that are responsible for epigenetic-type processes are possible. Not only did Jung illustrate—through his writings—his understanding of how much individual psychology was universal, he saw individuation as a human psychological necessity in the differentiation process (Jung, 1953/1966b).

Primarily due to the fact that genes do not encode complex mental imagery, Knox (2004) concluded that “archetypes are not ‘hard-wired’ collections of universal imagery waiting to be released by the right environmental trigger, a model which would lead straight into the trap of categorizing them as innate ideas” (p. 4). Following this reasoning, it seems that Knox is equating archetypes with the phenomenon that occurs as the output of innate structures (i.e. behavioral expressions, ideas, imagery) and not the structures themselves. It also seems worth clarifying that this study has demonstrated that ideas are not innate, but the structures that produce them are. Again, Jung wrote of archetypes as not inherent ideas, but as universal modes of functioning in humans (Stevens, 2003). As a result, this developmental hypothesis of archetypes is inconsistent with the results of this study, with the writings of Jung, and with the emergent theory of adaptive function of archetypes.

**Archetypes as cultural and symbolic.** Another conceptualization that resulted from the systematic search, coding and in depth analysis of grounded theory concerning archetypes from a biological perspective was that of archetypes as cultural and symbolic forms. When conceptualizing archetypes from a biological perspective, one commonality

with the cultural perspective arose from the fact that culture cannot be viewed as separate from evolved mechanisms and therefore, archetypes (see chap. 4). However, conceptualizing archetypes as products of culture holds true as long as it is recognized that cultural differences “due to evoked culture, is due to the combination of a universal evolved psychological mechanism and local between-group difference as input into that mechanism” (Buss, 1999, p. 403). In other words, both between group differences and mechanisms or archetypes account for culture.

This interactionist position holds true in evolutionary psychology since this approach looks at the relationships between psychological mechanisms and human culture, but these findings are not consistent with Pietikainen’s view of archetypes as strictly cultural products. Pietikainen (1998) proposed that archetypes are symbolic forms that have nothing to do with biology and are products of culture. Contrary to this proposition, the theory of adaptive function of archetypes posits that archetypes are biological structures that give rise to representations, symbols, images, urges, and feelings. These occurrences are manifestations of the archetype—once it has been activated—and are experienced as physiological responses or output behaviors that may be carried out at the unconscious level (see Figure 2).

In addition, an apparent commonality with the archetype as a symbolic entity perspective stems from the focus on archetypal symbols in general. However, employing an evolutionary perspective means that one must consider the adaptive value of an evolved mechanism that is likely to produce such a phenomenon. An example of this, as presented in chapter 4, is language and the adaptive value of communication through sign and symbol that took place in ancestral environments.

### **Closing Comments on Findings**

One of the findings of this study was that in order to examine archetypes from a biological perspective, a holistic approach encompassing the following components must be considered: environment and culture; symbolism and image; individuation and development; human universals and the collective unconscious. A biological perspective that analyzes archetypes across these domains allows for a more comprehensive view of archetypes and psyche. At the same time, Hogenson (1998) noted that “reductionism is important because it entails certain methodological and theoretical consequences” (p. 363); and the theory of adaptive function of archetypes may be considered reductionistic in that it looks at the different biological components that contribute to certain human behavioral characteristics. However, such an explanation is meant to contribute to an epistemological basis of the archetypes and the psyche, while being careful not to diminish the psyche to strictly biological components. Maloney (2003a) wrote,

because brain structure and function reflect regularities of our physical world, the a priori features of our psyche in effect anticipate the world around us. This insight gives weight to the controversial possibility that the features of the environment, through Darwinian processes, probabilistically shape our emergent mental processes. (p. 106)

Therefore, incorporating an evolutionary perspective of archetypes not only takes into account the complexity of the evolved mechanism and the way it takes in environmental input, it also allows for consideration of individual differences.

According to the findings in this study, an etiological model that explains archetypes as biological entities from a holistic approach was warranted. The theory of adaptive function of archetypes seeks to provide an evolutionary explanation for archetypes by comparing them to evolved psychological mechanisms. As presented in

chapters 2-4, there exists numerous references to archetypes as evolved structures in the writings of Jung. For instance, Jung associated archetypes to a universal mode of functioning in humans (Stevens, 2003); and understood that just as the body evolved through evolutionary time, so did the psychic system (Jung, 1961/1989). Stevens (2000a) has concluded from Jung's writing that archetypes are "responsible for determining the behavioural characteristics as well as the affective cognitive experiences typical of human beings" (p. 6); and added that Jung described archetypes as giving rise to images, ideas, and behaviors (Stevens, 2006). Despite Jung's descriptions of archetypes as evolved entities, an account of the probabilistic function and processes of such structures was lacking.

For this purpose, the complexity of an evolved psychological mechanism in evolutionary psychology (the foundation of the theory of adaptive function) provides the framework for a possible biological explanation of archetypes. In short, an evolved psychological mechanism requires that such a mechanism evolved because it solved a specific problem of survival or reproduction recurrently over evolutionary time; told an organism the particular adaptive problem it is facing; and the input was then transformed through decision rules into output that was directed toward the solution to a specific adaptive problem (Buss, 1999). What emerged from this study, due to the complementary components of archetypes and evolved psychological mechanisms, is the theory of adaptive function of archetypes. As represented in this model, the behavioral characteristics of the mother and father archetypes are the products of parental archetypes that evolved to solve the problems that human ancestor hunter-gatherers faced during evolutionary time (see Figure 3).

## **Discussion of the Strengths and Weaknesses of this Study**

**Strengths.** One strength of this study was the systematic electronic database search (Academic Search Primer®, PsycINFO®, PsycARTICLES®, and PsycBOOKS® from 1984) that was conducted in order to find all empirical studies or theoretical articles that examined the relation between Jungian archetypes and the evolved psychological mechanisms in evolutionary psychology. Such a search proved fruitful in gathering all the possible studies that analyzed archetypes from a biological perspective and introduced rigor to the methodology. Since the results of the study suggested that examining archetypes from a biological viewpoint holds some controversy, scanning databases with strict search criteria added rigor and diligence to the data collection.

In addition to developing a search strategy in gathering data pertaining to archetypes from a biological perspective, this researcher used the coding and in depth analysis of grounded theory as a means of generating theory. That is to say, the systematic analysis of the studies was conducted by implementing the coding strategies of grounded theory by using the following methods: (a) engaging in open coding in order to isolate the substantive codings, (b) condensing them into theoretical codings by deducing a higher level of abstraction, (c) grouping the theoretical codes into categories, and (d) reaching a theory based on the categories as it emerged from the data. Above all, this multi-step data analysis helped to reduce the overall bias in the study and presents a novel method of text-based analysis and theory formulation.

Another strength of the present study is the implication that the theory of adaptive function of archetypes attempts to unify the ongoing debate as to how to conceptualize archetypes by taking into account symbolism, representations, and culture. Such a

holistic approach integrates the four current models of Jungian archetypes—as presented in chapter 2—and provides a more comprehensive view of archetypes by explaining how biology can affect archetypal characteristics and account for symbolism, images, and representations.

Workability of the theory of adaptive function follows from this in that employing a biological perspective drew commonalities with evolved psychological mechanisms and evolutionary psychology. Consequently, another strength of this study is that it points to evolutionary psychology and how utilizing an evolutionary perspective on archetypes and mechanisms provides a non-arbitrary framework for assessing psychopathology by considering the function/dysfunction of a mechanism (see Buss, 1999). For example, a dysfunctional archetype that emerged due to a faulty attachment style during formative years may lead to that person exhibiting symptoms related to anxiety and depression. This mechanism is then said to “fail to coordinate as it was designed to coordinate” (Buss, p. 399) and that individual may then be neglectful towards his or her own children. The view that dysfunctional mechanisms account for psychological distress and diagnosis (or frustration of the archetypal intent) is the basis of evolutionary psychiatry (see Stevens, 2000a).

Similarly, because the theory of adaptive function of archetype takes into account the environment of evolutionary adaptedness and the adaptive problems faced by ancestral humans, this provides a contextual framework explaining the function of the archetypes that evolved to solve these problems. Furthermore, a more thorough examination of archetypes calls attention to their evolved function which is content dependent. This is evidenced in the process of activation of the archetype and the role of

environment and culture. Therefore, the functionality of archetypes provides direction when assessing the behavioral characteristics of specific archetypes.

In addition to the aforementioned strengths of this study, the theory of adaptive function of archetypes includes the goal of resolving complexes and psychological issues that emerge through the process of individuation. When assessing how individuation and the stages of life are affected by our psychology, an evolutionary perspective provides clues about changing psychological make-up based on reproductive value. As presented in chapter 5, employing an evolutionary lens to the problems that are presented in psychotherapy allows the clinician to better understand possible dynamics related to life stages, the individual's age, and possible mating/relational problems. As a result, evolutionary psychology can be potentially helpful to clinical psychology and these findings are further supported by the biopsychosocial approach that has been proposed by Paul Gilbert (1995; see chap. 2); and that of evolutionary psychiatry and Anthony Stevens (2000a).

In like manner, this study helps to highlight how evolutionary psychology complements clinical psychology by de-pathologizing seemingly dysfunctional or maladaptive behaviors. As illustrated in chapter 5, certain symptoms and behaviors—which may on the surface appear dysfunctional—were once adaptive in ancestral environments. This understanding further helps to reframe and recontextualize the behavior in more non-pathological terms, and allows for a number of clinical interventions (see chap. 5). In like manner, clinicians themselves are able to place diagnostic presentations in a different context when utilizing an evolutionary framework. Accordingly, the theory of adaptive function of archetypes lends itself to the formulation



of a more complex model of mental disorders by utilizing principles of evolutionary psychology.

**Weaknesses.** One weakness of the study is that it employed a search strategy that focused on theoretical articles and studies of archetypes solely from a biological perspective. In doing so, the research eliminated studies that examined archetypes through myth, metaphor, literature, fairy tales, and archetypes from an imaginal perspective. This is relevant because human expressions and fascinations with such humanities speaks to evolved mechanisms and is of cultural significance. As presented in chapter 2, Harding (1971) spoke about myth and universality when she said that “the only possible explanation is that the myths represent a psychological reality which has been perceived by . . . widely separated peoples” (p. 96). Jung also described the archetypal content as expressing itself in metaphors (Gray, 1996, p. 53), and Hillman (1975, as cited in Gray, 1996, p. 53) agrees with this conceptualization of the archetype. Hillman wrote:

The curious difficulty of explaining just what archetypes are suggests something specific to them. That is, they tend to be metaphors rather than things. We find ourselves less able to say what an archetype is literally and are more inclined to describe them in images. We can't seem to point to one or to touch one, and rather speak of what they are like. Archetypes throw us into an imaginative discourse. (p. 53)

By eliminating studies that examined archetypes through myth, metaphor, literature, fairy tales, and archetypes from an imaginal perspective, this researcher biased the resulting theory of the study by developing a search strategy that focused solely on the biological perspective. Having said this, the intent of this study was to examine and develop a greater understanding of the biological underpinnings of archetypes, making an examination of archetypes from a non-biological viewpoint outside the scope of this study. However, additional research concerning the interplay between archetypes as

evolved mechanisms and the imaginal perspective is warranted.

In addition, the methodology of this study included using the coding elements of grounded theory despite this not being a classic grounded theory study due to the fact that it was not participant-based. Since grounded theory focuses on inquiry that is structured “by discovery of social and social psychological processes” (Eaves, 2001, p. 655) of people, classical grounded theory has yet to come to a consensus regarding the analysis of text-based material. Additionally, the coding elements of grounded theory were used to systematically extract and highlight concepts and themes as they emerged. The procedure of inductively deriving theoretical or higher level of abstraction from substantive coding may be considered a limitation since this researcher cannot be sure that the singular incidences reveal the actual phenomenon of study.

### **Future Areas of Research**

This study begins to formulate and further develop the pioneering work of Anthony Stevens—and the biological perspective of archetypes—by proposing a theory that was then applied to understanding the evolutionary basis for parental archetypes. Additionally, while employing an evolutionary lens, researchers can ask questions and develop hypotheses that take into account the ancestral environment and the types of problems our ancestors faced. Future areas of research may entail further analyzing the specific archetypal properties of the parental mechanisms that were presented in this study. For example, researchers may generate hypotheses and empirical studies that analyze the correlation between male status/dominance and hierarchy using projective techniques that evoke images and representations, such as those found in Jungian analytical psychology.

Such studies would contribute to analytical psychology by mapping the collective nature of the psyche and shed light on the etiology of archetypes and dynamics that present themselves in psychotherapy. Furthermore, there exists a need for a more comprehensive analysis pertaining to the father archetype in general, with emphasis on the father/child relationship.

Additional areas of research in this domain would seek to further generate and develop Jungian Evolutionary Psychology as an approach that examines the collective psyche for archetypal structures that evolved over evolutionary time to solve the adaptive problems our ancestors faced. This would incorporate the basic tenets of evolutionary psychology (see chapter 3) and a model—such as the theory of adaptive function of archetypes—to further examine Jung’s concept of archetypes and archetypal structure. Evolutionary psychologists seek to map the evolved domain specific modules and algorithms, which operate at the non-conscious level. Consequently, Jung was one of the first thinkers to write about the universality of human psychology, what he termed the “collective unconscious.” Additionally, Jung’s work proved to be one of the “rare cases in intellectual history where true unconscious—inaccessible to consciousness—was postulated and to some extent employed” (Noam Chomsky, personal communication, August 12, 2011). Additional research examining expressions of the unconscious through alternate manifestations such as dreams, myth, metaphors, literature, and fairy tales from an evolutionary perspective would help to further unravel the mystifying aspects of the human unconscious.

In addition to the aforementioned, other areas of research would be to use the adaptation of grounded theory coding with other text-based material in order to evaluate

how well it can work and to assess its applicability to the continued formulation of theory. This application can be compared to the ongoing synthesis approach in ground theory. This is consistent with Eaves (2001) who emphasized that “it would be beneficial to the discourse if more qualitative scholars would publish their techniques of using ground theory” (p. 662).

Finally, from a clinical psychological perspective, the clinical implications emerging from the synthesis of evolutionary psychology and clinical psychology is in its early stages. Additional research with actual clients in assessing the possible benefits of employing an evolutionary approach to case conceptualizations, assessment, and treatment is warranted.

### **Summary**

Primarily due to the documented need for further examination of the components of archetypes from a biological standpoint, this researcher used a systematic literature search based on strict inclusion/exclusion criteria combined with using coding techniques derived from grounded theory to analyze data concerning Jungian archetypes and their relationship to evolved psychological mechanisms in evolutionary psychology. The results of this study indicated that, in order to examine archetypes from a biological perspective, a holistic approach encompassing the following components must be considered: environment and culture; symbolism and image; individuation and development; human universals and the collective unconscious.

Based on the data analysis, a theory emerged that takes into account the ancestral environment and the adaptive problems our hunter-gatherer ancestors faced. These selection pressures gave rise to evolved mechanisms or archetypes that are comprised of

evolutionary factors, environmental stimuli, and developmental history. This theory is meant to further develop the synthesis between evolutionary, Jungian, and clinical psychologies by utilizing evolutionary explanations for the etiology of maladaptive behaviors in order to recontextualize and de-pathologize human behaviors.

This research has contributed to the field of Jungian psychology by formulating a theory that outlines the behavioral characteristics of the mother and father archetypes as a product of mechanisms that evolved through evolutionary time to solve the adaptive problems of our ancestors. Such a theory—one that takes into account natural selection and human nature—is meant to contribute to depth psychology by complementing a person's unique and individualistic nature (as evidenced through the process of individuation and exploring complexes) with the evolved biological underpinnings that individuals possess by virtue of being human.

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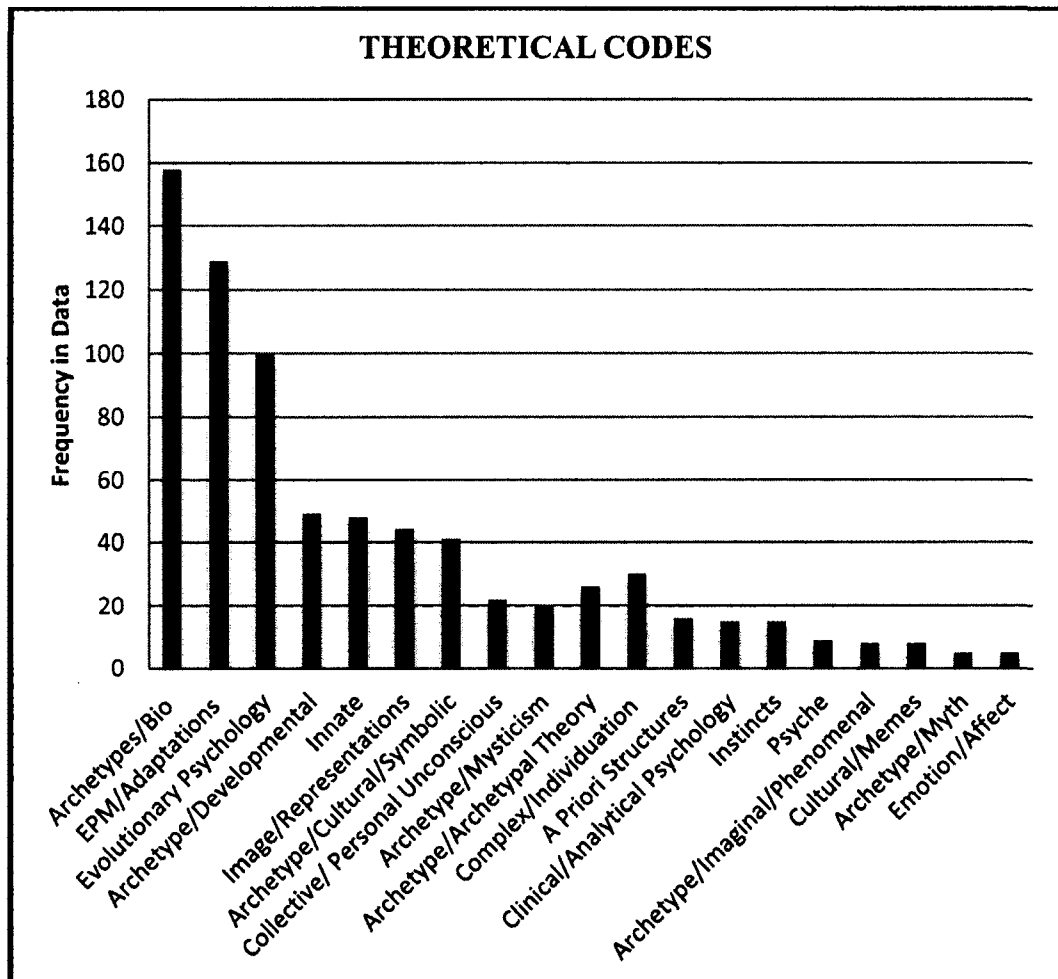
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**Appendix A**  
**Sample Research Protocol**

<b>Research Protocol</b>	
<b>Date</b>	04/01/11
<b>Study #</b>	2
<b>Source Type</b>	Journal Article
<b>Title</b>	Goodwyn, E. (2010). Approaching archetypes: reconsidering innateness. <i>Journal of Analytical Psychology</i> , 55(4), 502-521. doi:10.1111/j.1468-5922.2010.01862.x
<b>What is this data a study of?</b>	The idea of psychological structures as innate Jung's idea of innate psychological structures as "misguided"; Archetype as such should be abandoned from more developmental and emergent theories of the psyche; Domain specific algorithms and how they create archetypes and symbols
<b>What category does this indicate?</b>	Archetypes as biological entities; mind as personal (ontogenetic) and collective (phylogenetic); DSA create archetypes not another name for archetypes.
<b>What is actually happening in the data?</b>	The data is beginning to demonstrate different types of innate structure, domain specific algorithms (DSAs) and how these structures may produce archetypes and symbols, not archetypes themselves. Data attempting to clarify what is meant by innateness and elaborates on the lack of innateness concerning symbolic meaningful content; Existence of core human psyche is largely a product of evolution..
<b>Memos</b>	Innate, emergent, developmental, we need innate structures in order to have the possibility of psychological structure coming online, good quote by Tooby. No exploration of the function of the EPMs which was created to solve problems in the EEA, no mention of adaptive problem.  Need more clarification on symbolically meaningful content and where it fits in theory, i.e.: how is this explained by EPMs? Representations, etc, not inherited according to Jung.

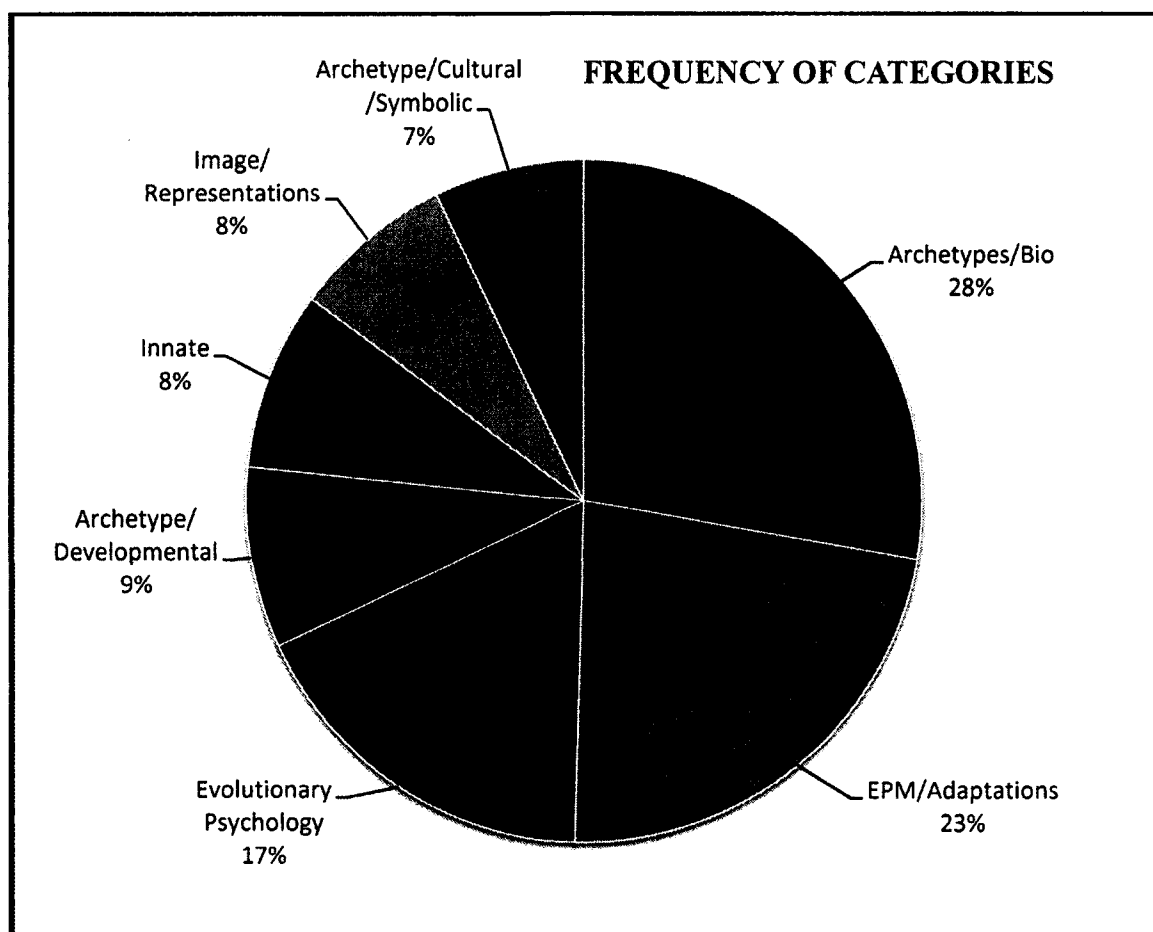
**Appendix B**  
**Table of Theoretical Codes**

Table 1 *Bar graph of the frequency in data of theoretical codes*



### Appendix C Frequency of Categories

Table 2 *Frequency of each category as it appeared in the data*



**Appendix D**  
**List of Sources and Core Categories**

	Author(s)	Title	Year	1	2	3	4	5	6	7	Construct
1.	Buss	The new science of evolutionary psychology.	1999		X	X		X			2,3,5
2.	Gilbert	Biopsychosocial Approaches and Evolutionary Theory as Aids to Integration in Clinical Psychology and Psychotherapy.	1995	X	X						1,2
3.	Goodwyn	Approaching archetypes: reconsidering innateness.	2010		X			X			2,5
4.	Gray	Archetypal explorations: An integrative approach to human behavior.	1996	X				X			1,6
5.	Hogenson	Reply to Maloney <i>Journal of Analytical Psychology</i> , 48(2), 265-266.	2003a	X	X			X			1,2,5
6.	Hogenson	"Archetypes as symbolic forms": Response to Pietikainen and Stevens.	1998	X	X					X	1,2,7
7.	Hogenson	Reply to Maloney. <i>Journal of Analytical Psychology</i> , 48(1), 107-116.	2003	X	X			X		X	1,2,5,7



8.	Jones	Mixed Metaphors and Narrative Shifts: Archetypes.	2003	X			X		X	X	1,4,6,7
9.	Katz	Personal construct theory and emotions: An interpretation in terms of primitive constructs.	1984	X					X		1,6
10.	Knox	From archetypes to reflective function.	2004				X	X	X		4,5,6
11.	Knox	Responses to Erik Goodwyn's "Approaching archetypes: reconsidering innateness".	2010	X	X	X	X			X	1,2,3,4,7
12.	Leader	The Odyssey: A Jungian perspective: Individuation and meeting with the archetypes of the collective unconscious.	2009				X		X		4,6
13.	Lindenfield	Jungian archetypes and the discourse of history.	2009	X	X	X			X	X	1,2,3,6,7
14.	Maloney	Reply to Hogenson.	2003	X	X	X					1,2,3
15.	Maloney	Archetype theory, evolutionary psychology and the Baldwin effect. A commentary on Hogenson's paper (October 2001, JAP, 46, 4).	2003	X	X	X		X		X	1,2,3,5,7

16.	Merchant	The developmental/emergent model of archetype, its implications and its application to shamanism.	2006				X	X		X	4,5,7	
17.	Merchant	A reappraisal of classical archetype theory and its implications for theory and practice.	2009				X	X		X	4,5,7	
18.	Mogenson	Psyche's archetypes: A response to Pietikainen, Stevens, Hogenson, and Solomon.	1999	X						X	X	1,6,7
19.	Nunn	Archetypes and memes: Their structure, relationships and behaviour.	1998	X						X		1,6
20.	Pietikainen	Archetypes as symbolic forms.	1998							X	X	6,7
21.	Pietikainen	"Archetypes as symbolic forms": Response to Hester McFarland Solomon, George B. Hogenson and Anthony Stevens.	1998								X	7
22.	Pietikainen	Soul man meets the blind watchmaker: C. G. Jung and neo-Darwinism.	2003	X						X		1,5
23.	Saunders & Skar	Archetypes, complexes, and self-organization.	2001	X	X					X		1,2,6

24.	Shelburne	Mythos and logos in the thought of Carl Jung: The theory of the collective unconscious in scientific perspective.	1998	X				X	X		1,5,6
25.	Solomon	Response to Petteri Pietikainen's "Archetypes as symbolic forms."	1998	X					X	X	1,6,7
26.	Stevens	Thoughts on the psychobiology of religion and the neurobiology of archetypal experience.	1986	X						X	1,7
27.	Stevens	Jungian Approach to Human Aggression With Special Emphasis on War.	1995	X	X						1,2
28.	Stevens	Jungian psychology, the body, and the future.	1995	X							1
29.	Stevens	"Archetypes as symbolic forms": Response to P. Pietikainen.	1998	X						X	1,7
30.	Stevens	Jungian analysis and evolutionary psychotherapy: An integrative approach.	2000	X	X	X					1,2,3
31.	Stevens	The archetypal hypothesis.	2003	X	X	X	X				1,2,3,4
32.	Stevens	The archetypes.	2006	X				X	X	X	1,5,6,7

33.	Vezzoli	Introduction to papers from the conference on "Neuroscience and analytical psychology: Archetypes, intentionality, action and symbols."	2009	X			X		X		1,4,6
34.	Wloch	Some biological underpinnings of the self-image.	1991	X							1

Note: 1 = Archetypes as Biological Entities; 2 = Evolved Psychological Mechanisms/Adaptations; 3 = Evolutionary Psychology; 4 = Archetypes as Emergent/Developmental Structures; 5 = Innateness; 6 = The Image and Representations of Archetypes; and 7 = Archetypes as Cultural or Symbolic Forms