Theories of Symbolism

Symbols in Structure and Function
Volume 1

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DEDICATION

For Carole

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PREFACE

THE ORIGIN AND HISTORY OF THE WORD "SYMBOL"

In the time of legend, long ago, when Greece ruled the Tyrrhenian sea and magic ruled the hearts of men, a merchant who lived near the fortified city of Vela sailed out on a voyage of commerce. He traveled alone. Two weeks hence he was to meet a purveyor of gems, a man unknown to him by sight. Arrangement for recognition had been established by a mutual friend, who had cleft in twain a golden coin. One part was given to the merchant. The other part had been given to the stranger. A time and a place to meet had been set. A saffron shawl would mark the stranger out from the crowd, so that the merchant could find him. Joining the matching edges of the bits of coin would confirm the identity of the stranger and attest to his trustworthiness.[1]

The joined tokens, like a clasp of hands, encouraged trust. Each token stood as testament to the reliability of the token bearers. Each token could be identified as a part of the whole coin and in addition each token represented the unseen abstract attribute of trust.

The process of putting the pieces of coin together was given the Greek name "Symbolos". This usage was derived from the Greek"Symballein" which meant "put together". (from Sym = together and Ballein = to put or throw as in shot-put.) In the fourth century BCE, Aristotle (ant-1) in his "On Interpretation" adapted the word symbola (ou^ßo^n) to usage in a modern sense. Namely symbola denoted a conceptual representation. (e.g. „that words spoken are symbols or signs of affections or impressions of the soul; written words are the signs of words spoken." (p 115)

"Symbolos" became in Latin "Symbolum"[2], a word used to represent individual tokens[3]. In Elizabethan English, Shakespeare (1622) used the word "symbol" only once in his dramatic writings[4]. In the phrase,

> "To win the Moor, wer't to renounce his baptism, All seals and symbols of redeemed sin," (Othello II, iii, 358).

The word symbol is used in a poetic sense. In time cognate words representing "symbol" were included in the romance languages.

THE DISPERSION OF MEANINGS FOR THE WORD "SYMBOL"

The root concept associated with "Symbol" consists of a representation (an object, image, usage or word) that stirs the mind of the observer to a response, which exceeds the implicit content of the representation. Within the limits of this definition modern Western languages have generalized the concept of symbol to include all mental phenomena in which a concept or thing is manifested in a token or representation that falls short of being an exact reproduction[5]. In modern English the definitions of the word "symbol" have been so dispersed that they have come to represent a multitude of related phenomena. In keeping with this the uses of the word "symbol" have been broadened.

There are today so many meanings for the word "symbol" that the world of symbols has become a vast unregulated tract. Though characteristics and landmarks that can be used to identify different symbol types on the map of this tract are unchallengeably real, ambiguous usage has muddied the landscape. This had led to concepts of symbol that are colored more by preconceptions, contexts and theories than by perceived forms.

At first glance an image of fantastic confusion hits the eyes of those who would seek to identify the structure and function of symbols. In staking their claims, early explorers of the "symbol world" created protean descriptions of the territory. Overlapping boundaries resulted in confused definitions. At times, portions of the reality of symbols were replaced by theory and reality observations that contradicted the theory were excluded from consideration. Out of this maelstrom of raging cross-purposes, there arose the contradictory definitions of symbolic forms and phenomena to be found in contemporary everyday speech. This situation has saddled modern researchers with a muddling of communication between scholars that has given birth to absurd confusions. One need not look far to see this. Vast volumes (Cassirer (1953), Werner (1963) have been devoted to symbols without mentioning repression, which is essential to the comprehension of symbols as understood by Psychoanalytic clinicians. Other volumes (Jones (1916) see repression as the sole key to symbolism. Some (Freud (1900) and Jung (1964)} limit "symbols" only to those representations, which have "universal meaning". Others (i.e. D'Alviella (1894) see symbols in anything that represents.

A REMEDY FOR DISPERSION OF THE MEANING OF "SYMBOL"

To remedy the confusion that arises from the use of the word "symbol" for so many different concepts, I have chosen throughout this book to comb out the tangles by preceding each type of "symbol", when needed, with a descriptive adjective. The adjectives used are terms derived from usages and concepts to be found in ancient, past, and current literature. They are introduced in the first four chapters of Unit One and repeated where needed. In this way, the reader can be oriented to a given use of "symbol" in the context in which it appears at any given point in this book.

WHY STUDY SYMBOLS

There are enough differences among the definitions of symbol that the term has become useless without modifiers and many who work with symbols fail to identify them as such? For instance Freedberg (1989) in his study of the power of images, which makes a vital contribution to Transcendent Symbolism, holds use of the word "symbol" to a minimum in his work. He explains that the term symbolism has ". . . clouded almost all discourse about the history of images . . ." (p78). Sperber (1975) relegates Freud's symbol theory to a zone of exclusion that sets psychoanalytic symbols apart from those symbolic forms, which he finds to be worthy to be the object of the task of „rethinking symbolism". (P 23) There are many studies that deal with elements, which I would call symbols that are folded into other phenomena by theorists. For example, Cartwright (1990) in discussing dreams does not speak of symbols directly. Yet she is dealing with symbols and symbolic forms when she speaks of „images" (p 182). When she refers to someone who feels inadequate in waking life, she writes, „. . . not the self but some other character was inadequate in the dream." (p183). This is certainly a symbol in all but name.

The use of words other than „symbol" for reduced representations has a long history. For thousands of years before Freud and Jones identified Psychoanalytic symbols, and Piaget named Secondary symbols, phenomena answering to their definitions had been extensively studied under the name "divine awe" (Longinus (250 AD), Burke(1757), Kant (1790) etal). In the present text an attempt is made to draw the wandering word ways traversed by symbolic forms over the years into a single fold, call them all symbols, and precede them with modifiers that define their differences. The addition of modifiers will help to tolerate fragmentation of symbols into their different forms without denying access to the common

structures and the mental mechanisms that lie at the root of all symbols, making it possible to understand symbols as a unit, while respecting the differences between individual component symbolic forms.

Why go into detail and depth in seeking to understand and define the limits of the concept of the symbol? There are intrinsic characteristics held in common by representations that define them as members of a single entity (the symbol). These characteristics are a key to a vast body of information, which can enable us to understand symbols in all their manifestations, no matter what word is used to represent them. If one were to exclude a given way of seeing a symbol because it contradicts or doesn't fit his pet theory, one may well lose access to wisps of evidence related to the rejected form, that could have marked the way to understanding the essential nature of symbols, the mental functions that produce them, and keys to the treatment of related pathology. Truncating and disbanding the brotherhood of symbols leads to a loss of insight into man and art. Any process that expands awareness of symbols in their structure and function enhances self-conscious participation in cultural evolution.

SYMBOLS AND CONSCIOUSNESS

Symbols participate in the maintenance of the moment-to-moment boundaries of consciousness. Consciousness recedes when memory content is enhanced. Memory gives way to consciousness. Traces of content, which have been remanded to memory, persist in awareness in the form of symbolic representations. Entry into consciousness is at times confounded by the affects, which are attached to a concept's memory content. Strong affects could make memories unmanageable, were they to be permitted to enter consciousness unchanged. A memory content that, though thus hobbled, seeks surface manifestation, requires the mobilization of symbols to achieve representation in consciousness. Alteration of form to produce a safer symbolic form permits ideas and memories to find conscious expression with diminished valence for attracting affect.

WHY FOCUS ON CRYPTIC SYMBOLS?

The study of cryptic symbols offers a view portal into man's fallibility, creativity, and culture. Cryptic symbols are the mark of man. Man alone of all animals produces cryptic symbols. Langer (1941) called "the need of symbolization" (Her Italics) a "… basic need, which certainly is obvious only in man …" The

symbol-making function was for her a fundamental process o£ man's mind. P 41 She saw "Man's conquest of the world" as a product of his ability ". . . to synthesize, delay, and modify his reactions by the interpolation of symbols in the gaps and confusions of direct experience, and by means of "verbal signs" to add the experiences of other people to his own." (P 29)

Cryptic symbol formation makes possible extended delays in response to stresses. Symbols offer to the emotionally oppressed, building blocks from a perilously false world that is initially more comfortable to behold than reality. Symbols provide access to one's place in history. Symbols guard the gates of consciousness and tend its borders. For those who hold all symbols to be products of the brain, symbols serve to support abreaction, trial action, abstraction, internal pathways of adjustment, communication, invention, art, creativity and psychopathology. For those who hold all symbols to lie within the domain of transcendence, symbolic forms offer entry into the secret pastures of the soul.

This book consists of three units.

UNIT 1
THEORIES OF SYMBOLISM

Unit 1 presents a discussion of symbol types, a developmental study of symbols with emphasis on age appropriateness of symbol usages, and a study of the biological infrastructures involved in the formation of symbols.

UNIT 1 SECTION A—BASIC SYMBOLS

The primary contents of Unit 1 section A, which includes chapters 1 through 4, are descriptions of the basic symbolic forms.

These are:

Simple Symbols such as words, which by convention communicate clear meanings directly in conversations and writings. They are described in Chapter 1.

Psychoanalytic Symbols such as the cryptic visual images met in dreams, which have masked

meanings. The recalls they represent are unknown to the dreamer, for the link between the symbol and that which it represents has been repressed. They are described in Chapter 2.

Poetic Symbols are verbal abstractions that appear in poems. New insights and lovely images for which there are no words in a given language are their referent meanings. Poets are people talented in the identification of facets of known words both ancient and modern to be used for the expression of images that had neither form nor "a place of habitation and a name." They are described in Chapter 3.

Transcendent Symbols invoke feelings of communication with present deity. Examples are sanctified icons, items found during sojourns on the mystic way, and cherished landmarks such as forests and craggy mountains. The intents and presences of deity are their referent meanings. Acolytes who are drawn to and serve them are people with infused knowledge that has been incorporated into panels in their memory. Such panels inform recognition that these symbols are manifestations of a force beyond the boundaries of man. They are described in Chapter 4.

UNIT 1 SECTION B—THE ONTOGENESIS OF SYMBOLS

The primary content of unit 1 section B, which includes chapters 5 through 7, is an explication of the ontogenetic developmental origins of symbols, with reflections on pathological forms and therapeutic approaches to them. One is not born with a capacity to create, communicate or interpret symbols. A longitudinal study of the ontogenesis of symbol formation reveals symbols to be the end product of a long process of development manifested in maturational and developmental interactions within the growing individual.

Chapter 5 deals with the ontogenetic aspect of symbol structure and function. This includes the maturation of symbol formation that underlies normal cognitive, emotional, and personality growth. This information provides the basis for understanding the gradual evolution of symbols from birth to age with concomitant insights into the psychopathology that is produced when individual growth digresses from the normal stages and timetables of symbol development.

Chapter 6 deals with the symbolic forms created by the symbolizing function during the period from birth to six years of age. Highlights in the developmental line of symbol formation during that time

period include the first appearance of generic symbols, symbolic play, traumatic dreams and wish fulfilling dreams, repression and the dawn of psychoanalytic symbols at 24 to 26 months, and the role of Psychoanalytic symbols in the working through of the infantile roots of transference.

Chapter 7 delineates the role of psychoanalytic symbols in supporting adjustment through fantasy during the latency years. It discusses the passive use of the symbols offered by society in myths, tales, and religious instruction during the acquisition of superego contents. This is followed by a presentation of the developmental march of symbols that carry the child from latency to adulthood. During this march to maturity the symbol contents of fantasy and its kin, psychic reality, increasingly shift their referents to realistic elements. Play symbols eventually lose their ability to serve as media for discharge (Ludic Demise). Symbols go from an evocative discharge mode to a communicative one as part of the maturation of symbolic forms that occurs during late latency-early adolescence. This maturation of Psychoanalytic Symbolic forms plays a strong role in age appropriate resolution of narcissism and in the acquisition of the cognitive skills involved in falling in love. Weak or failed negotiation of this important stage of transition is reflected in the use of dreams, daydreams and fantasies as adjustment strategies which result in false fulfillments in which affect is reduced without resolution of problems or conflicts.

UNIT 1 SECTION C—THE BIOLOGY OF SYMBOL STRUCTURE

The primary content of Unit 1 section C, which includes chapters 8 through 11, is marked by a transition in emphasis from cognitive and psychological aspects of symbol formation to the study of the biology that defines the organic infrastructure of symbol formation. Symbols (especially psychoanalytic symbols) are complex and many layered structures. This complexity requires a search for the venue of their formation in a "… dynamic mosaic of distant points in the nervous system that are united in the task …" (see Pavlov on p 23 of Luria 1973A) It is necessary to find the relevant brain areas that are associated with affect transmission, memory function, perceptual suppression, and affect dissociation. All of these play a role in symbol formation.

Localization of these symbol functions form the basis for an hypothesis that places in a brain structural context, the locus of formation of symbols that lessen affect through repression of content and the creation of substitutes.

Chapter 8 deals with approaches to symbol formation, which make it available for study using the scientific method.

Chapter 9 offers descriptions of the symbolic forms that are typical of electroencephalographic stages of sleep, including hypnogogic and hypnopompic states.

Chapter 10 deals with the role of symbols in the formation of the boundaries of consciousness and offers an hypothesis regarding the localization of symbol formation in the brain.

Chapter 11 describes the organization of brain venues that are involved in the role of symbol formation in the generation of the "sense of reality".

UNIT 2
SYMBOLS IN PSYCHOTHERAPY

Unit 2 is devoted to psychotherapeutic approaches to pathological symbol formation. These include the affect porous symbols involved in phobia formation, shadow symbolism and nightmares, the protosymbols and body language that underlie psychosomatic symptoms, and pathology associated with symbolic forms that are related to regressions, repressions and other exclusions from consciousness. There is reference to developmental abnormalities in symbol formation as they relate to mental illness and pathological digressions in the nature of symbolic forms including regressions of symbolic form along the path of ontogenesis. The information presented on the normal and abnormal development of psychoanalytic and poetic symbols is applied to therapeutic approaches to the disorders of the symbolizing function. This is illustrated with case studies which include intervention with pathology at 26 months, working through of impaired symbol precursors in children with lagging symbolizing function, treatment of failure to enter latency, enabling discharge of tension, working through using play and fantasies during latency, encouraging the shift of manifest toward reality sources after ludic demise (the loss of the discharge potential of symbols that accompany the end of latency), encouragement of the shift from evocative to communicative symbols in treating a strong sense of reality that intensifies poor reality testing during late latency, enhancing the cognitive ability to fall in love, and resolving adolescent narcissism.

Specific pathological states resulting from disordered symbols and symbol formation, including the production of inadequate symbols, impaired utilization of symbols, and pathological symbolic forms during sleep, are included. There is also included a review of the approaches used by advocates of transcendent symbols in dealing with symbols that appear during psychotherapy.

UNIT 2 SECTION A—SYMBOL THEORY IN PSYCHOTHERAPY

Chapter 1 deals with the role of symbols in the production of mental illness.

Chapter 2 deals with the role of symbols in the process of psychotherapy.

UNIT 2 SECTION B—REGRESSIVE SYMBOLIZATION

Three forms of regressive symbolization in which people with adequate symbolization regress to more primitive symbolic forms are presented in chapters 3, 4 and 5.

In chapter 3, psychotic symbolization and its treatment are presented.

In chapter 4, neurotic symbolization and its treatment are presented. Included are such aberrant forms as affect porous symbols, affect-laden symbols, and rare dream symbols in the form of shadow symbolism.

In chapter 5, the role of symbol formation in the development of somatic symptoms is presented with emphasis on categorization of psychosomatic symptoms according to the level of regression in the symbolizing function, which has participated in their formation.

UNIT 2 SECTION C—SYMBOLS IN TRANSFERENCE AND CHILD THERAPY

Chapter 6 discusses the relationship between symbols and transference. Included is the clinical presentation of a child with poor symbol formation. The therapy required to help him acquire adequate symbol formation is described. Upon acquiring the capacity to use symbols in the formation of fantasies, he created of himself a boy king who would rule the therapist.

In chapter 7, the psychotherapeutic use of symbols that occur in fantasies and dreams during therapy is illustrated with multiple clinical cases.

UNIT 3
SYMBOLS IN CULTURE, ART, AND MYTH

On a more abstract level than the study of the structure, theory and clinical application of symbols is the study of the role of symbols in art and in society. Unit 3 is devoted to the latter study.

UNIT 3 SECTION A—THE PHYLOGENESIS OF SYMBOLS

Unit 3 Section A is devoted to the evolution and history of symbols.

Chapter 1 presents the phylogenesis of symbols as they evolved in tandem with the evolution from beast to man.

Chapter 2 studies the universality of symbols and myths across cultures.

Chapter 3 explores the occurrence of universal symbols through the study of core fantasies that are shared by Mayan, Inca, Western European, and East Indian cultures. The introduction of new symbols to a culture, the death of symbols and myths and the mutation of symbols and myths as they migrate through space and across time are illustrated.

UNIT 3 SECTION B—THE ROLE OF SYMBOLS IN THE TRANSMISSION OF CULTURE

UNIT 3 Section B is devoted to the role of symbols in cross-cultural transmission of customs, beliefs and morality.

Chapter 4 deals with symbolic moralism. This is a philosophy of cultural transmission that teaches that infused memory systems inform symbolic representations that fix the image of reality. They hold that symbolic dramatic action sustains the social order over time.

Chapter 5 presents a study of the influence through time of myths about the meaning of dreams on

the symbolic forms that appear in manifest dreams of a given culture. This is a study of the use of dreams by cultures that changed as societies evolved. In addition there is presented a review of the nature of oneiric (dream) symbols.

Chapter 6 explores the power within a manifest image that evokes responses in man and at times recommends that image for use as a symbol.

UNIT 3 SECTION C—SYMBOLS AND ART

Unit 3 Section C is devoted to symbolization involved in the creation of works of Art

Chapter 7 presents the effect of thought disorder on the symbols in works of art by psychotic artists. Four artists (Joyce, Dadd, Tasso and De Chirico) with histories of psychosis or psychotic episodes that were diagnosed by psychiatrists are presented. Their emotional lives are discussed and the role of thought disorder in influencing their symbols is explored.

Chapter 8 presents a study of the changes in the symbols used by the nineteenth century American artist Thomas Cole in his great series paintings. His choice of symbols as reflected in his art paralleled his life choices as reflected in maturation in his assumption of personal responsibility.

SYMBOLIZATION

The process of symbolization operates in two directions. It provides access to consciousness for representations of concepts that have been stored in memory. Conversely it creates content in memory to be used in the interpretation of perceptions. The symbolizing function is involved in many mental functions. These include but are not limited to: organization of society, interpersonal communication, and the establishment of the sense of reality. The boundaries of acceptable behavior for a society are symbol determined. Aberrant behavior is defined through memory panels consisting of symbols that represent deviance. An explication of these processes is the goal of this book.

NOTES

1 Shipley (1945) Page 346.x

2 Ibid

3 Partridge (1958) Page 688.

4 See Bartlett 1913.

5 Goblet D'Alviella (1894).

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I should like to acknowledge those who have helped me in the forty years of study, travel, and clinical work that have produced this book. To my late wife Carole, expert in childhood cognition, belongs the most precious of accolades. She gave me time, proofread, discussed concepts, pointed out strange symbols I had missed on ancient temples on six continents, and shared childrearing with the special context that one gets from alertness to symbolic forms and their relationship to maturation, creativity, and object relations. We thank Kalidasa for "The Cloud Messenger". George Kowallis M.D. of St. Vincent's hospital in New York made it possible for me to present ideas to students. Drs. Don and Helen Meyers introduced me to the Columbia University College of Physicians and Surgeons Psychoanalytic Clinic for Training and Research, which provided me with a platform for presentation and for the development of ideas both in the course "Latency in Child Development" that I gave to the candidates and graduate students for over twenty years, and in the elective on "Symbols and Myths". The American Psychoanalytic Association let me present papers on symbols at their national meetings. There are very few other forums for this material. Jon Sarnoff, M. D. and Patricia Adrian offered great help in editing and polishing the text, during the final years of preparation. Max Schur M.D. supervised my work in South America. Jason Aronson M.D. must be thanked for publishing my early work. Dr. Dagmar O'Connor through the agency of her swift clear mind sharpened the clarity of my concepts. Mr. Joseph Campbell must be thanked for his comments on my work and for opening my eyes to the possibility that there could be a science of mythology for which I hope this book offers a beginning. Finally the Princeton University library must be thanked for being a source of last resort in the search for hard to find books.

Charles A. Sarnoff, M.D. 2002

INTRODUCTION

The best universal definition for a symbol was given by Goblet D'Alviella (1894), a nineteenth century student of symbolism. He defined a symbol "as a representation which does not aim at being a reproduction." (Page 1) This definition covers the basic characteristics of all symbols, both generic (simple) as well as cryptic (complex).

GENERIC (SIMPLE) SYMBOLS

Generic (Simple) symbols consist of images or words, which are assigned by convention to represent a concept or thing; no implied or hidden meaning beyond the obvious exists. Simple symbols, being representations, fall short of full reproduction. The symbols of science are an example of simple symbols. Scientific notation, which consists of simple symbols, does not describe nature as such, but is rather only a reflection of reality limited by what simple symbols within their intrinsic limits permit us to convey. It is an illusion to think that simple symbols convey total meaning, since subtleties are left unsaid and full reality remains hidden.

COMPLEX (CRYPTIC) SYMBOLS

Complex symbols consist of images and words whose meanings and total impact exceed their obvious surface or conventionally assigned meanings. Typically complex symbols appear in contexts that inspire speculation as to meaning in the observer. This characteristic permits complex symbols to carry a widened load of obscure or unconscious meanings. Such obscurity enhances the possibility that the surface manifestation of a symbol will evoke covert relief of psychological tensions. Widened loading of a symbol with latent meaning increases the ability of the symbol to communicate secret meanings subtly.

The capacity of the symbolizing process to expand the burden of implied meanings that images and words can carry is a manifestation of the mental mechanisms of condensation and displacement. This combination of mechanisms makes substitute responses to stress possible. As a result of this process, compromise formations and widened human capacity to delay gratification are produced. Using cryptic symbols, one can repress and express the unacceptable all at once, and find expression for abstract and

poetic insights as well as codify that which is numinous.

There are two types of complex (cryptic) symbols. First there are those cryptic symbols whose expressed (manifest) form is evocative. The manifest forms of such evocative symbols are derived from the contents of the personal inner world of memory and experience. Second there are those cryptic symbols whose manifest form is communicative. The manifest forms of communicative symbols are derived from experiences based in shared reality and the conventions of a culture.

Cryptic (Complex) manifest symbols, whose latent content finds manifest expression in content associated with current realities, can be used to reshape the psychic image of the world. They substitute hope for uncomfortable affect. They inspire fantasy formations that offer gratification in the face of ineradicable frustration. Their manifest contents remain in the context of reality. The templates and patterns of symbols that are used to manipulate fate have a better potential for influencing positive changes in the destiny of the symbolizer.

Cryptic (Complex) symbols, whose manifest forms mask meaning, are derived from areas of preconscious awareness that in excluding shared reality, distract from practical approaches to reality problems. Little of the truth of real problems are available to be addressed when symbols or the affects that they defend against draw attention away from realities, especially those realities which the neurotic has been sensitized to see as dangerous by past experience. The world and pained responses to it that afflict the symbolizer without cease can be defended against by the production of cryptic symbols. When cryptic symbols soften the effects of anxiety, the fantasies they form can be called upon for the production of neurotic symptoms and the provision of templates and patterns, which can be used to manipulate fate toward sad outcomes. When such distortions come to dominate life, therapeutic interventions, which identify and address fantasy that has been transmuted into troubling reality, are needed.

Psychoanalytic symbols (see chapt 2), the simple symbols of Heinz Werner (See p 44.) and the representations studied by neuroscientists (see chapter 7) are products of the monistic scientific mind-brain. Such symbols are predicated on the philosophical approach of western monism. Monism in this context refers to the fact that as Johnson (1994) has stated "Virtually all neuroscientists believe that the mind is what the brain does—that all mental processes can be explained as the workings of the brain

cells, or neurons."(p. 5) The brain stands alone as a source of man's creativity.

SYMBOL THEORISTS SHAPE THE CONCEPT OF SYMBOLS

Symbol theorists, especially those who deal with complex symbols, are identified by the root contents, which their theories recognize to be the sources that infuse manifest complex symbolic forms with cryptic meanings. Their focus of attention is the locus of origin of the *latent* contents which the *manifest* symbols represent. Theoretical differences in the identification and understanding of the sources of such contents give rise to distinct and often contradictory explanations for the structure and function of cryptic (complex) symbols. Such disparate explanations give rise to the following groups of theoreticians:

A. Repression theorists for whom complex manifest symbols represent instinctual drives and repressed contents (Psychoanalytic symbols of Jones/ secondary Symbols of Piaget).

For this group the latent repressed content to which the manifest Psychoanalytic symbol refers is understood to be derived from repressed (actively forgotten and affectively charged) experiences of early childhood or from recent traumas. The affects of anxiety, depression and humiliation etc. motivate repression. Study of the production of such symbols provides clinicians with access to a means of trespass into the forbidden wishes and sensitive memories that have achieved masked access to consciousness. In understanding these symbols, repression is the defining focus and masking of meaning is the goal. In the thinking of this group of symbol theorists poetic and transcendent symbols also carry repressed meanings.

B. Poetic theorists, who conceive of complex symbols as tools of the trade for poets.

Poets, for this group, are those wordsmiths who devote themselves to finding new ways to communicate insights that have been derived from human experience. Here the goal of symbol formation is communication and clarification of meaning for consciously perceived relationships and awarenesses. A discontent with the failure of ordinary word usage to convey new insight is the motivating affect that propels the creation of poetic symbols. In understanding these symbols, the goal of communication and growth of language provide the intrinsic core of their purpose.

C. Transcendent theorists for whom complex symbols represent the works of a deity.

For this group, images, things, and events, which are associated with strong affects, have potential for use as complex or cryptic manifest symbols. The affects involved include fear and awe associated with water falls, thunder, fire, forest glens, flood, the movement of the stars, statues that seem real and shadows, (see below). These strong affects recommend their associated images for use as ideas with extended meanings, from which can be created symbols with messages that exceed their form. Expanded meanings underlie symbols that are—interpreted to be—manifestations of the acts and will of gods. This group studies manifest symbolic forms in search of an understanding of gods, cosmology, the meaning of life and an afterlife.

Transcendent symbols including religious symbols and mythic symbols are predicated on the philosophical concept of eastern monism. As Kolanad (1994) tells us, in India there is the ". . . profound philosophy . . . that sees the whole universe as one transcendent reality." (P56) This view in its extreme form is expressed in the description of Zimmer (1972) and O'Flaherty (1980) of Vishnu's Maya (the creative power of the Hindu God). This view regards the product of deistic design to be so powerful and so all reaching that all creation and existence can be seen inside the „. . . mouth of god" (p 93). To a lesser extent, deistic monism is manifested in the myth of the Egyptian God Ptah, who created all things with his words and in the concept that „in the beginning was the word". These theorists hold that decisions by individuals made after the creation reflect a free will shaped and created by the original creator. The latter concept makes way for components of the world to be recognized to be products of the creativity of the human mind. It opens the way to a concept of a binary source for symbols such as one sees in the Greek concept of a dual origin for dream symbols. (see Vol. 2 Chapter 5.) in which dream elements come from the gods through the gate of ivory and from ordinary function of the mind through the gate of horn. It is but a step from this concept of dream origin to conceive of a dualism that will admit a dual sense of reality which recognizes the referents for symbols to be derived from either deistic will or human experience.

OTHER SYMBOLIC FORMS

There are other ways of categorizing symbols. These include magical symbols, evocative symbols,

communicative symbols, oneiric symbols and ludic symbols. Contrary to the basic four (one simple and three complex) presented above, these symbolic forms are categorized according to function and do not lend themselves easily to the study of the intrinsic structure and function of symbols. Theories involving them will be woven into the body of this book where appropriate.

SYMBOLS AND AFFECTS

The affects hidden in the latent symbol empower the manifest symbol. Affects provide a tension that forces the election of a substitute and impels manifest symbols so formed to become more than the obvious surface message conveyed. The products of these affects are akin to the arrow, described in Rilke's (1923) poetic line

> ". . . the arrow endures the bowstring's tension, so that gathered in the snap of its release it can be more than itself." (p 153.)

To the casual observer effective manifest complex symbols seem at first to have meanings complete in themselves. Any meaning beyond that which seems obvious on the surface seems from the first to be foreclosed. In the situation in which affect is not apparent, the hint that there are cryptic underpinnings to the conscious representation is lost to view.

Poetic and transcendent symbols seek to reconnect symbol and affect. The poet seeks a manifest symbol, which will stir affect in the reader. The composer seeks the notes that will stir chords within the heart of the listener. The object, which stirs awe recommends itself to the transcendentalist who seeks cosmic meaning even in the downward course of the fallen sparrow. Conversely the goal of the psychoanalytic symbol is the banishment of affect.

AFFECT AND THE PSYCHOANALYTIC SYMBOL

Banishment of the affect in the creation of symbols is a very old concept. Butcher (1890) in a gloss on Aristotle's theory of catharsis, presents a clear description of the process. The absence of a theory of repression and the dynamic unconscious made it impossible for either Aristotle or Butcher to postulate the psychoanalytic symbol, though they were able to describe a process of substitute formation akin to it.

Butcher (1894) noted that "Art does not . . . embody the objective reality of things . . ." (p 127) ". . . by the principles of Aristotle's philosophy it can present no more than a *semblance* (italics, my own) . . .". ". . . real emotions, the positive needs of life, have always in them some element of disquiet. By the union of a form with a matter, which in the world of experience is alien to it, a magical effect is wrought. The pressure of everyday reality is removed, and the aesthetic emotion is released as an independent activity." (p 128)

A successful manifest psychoanalytic symbol is one, which is so far displaced from its latent meaning, that it has lost all valence for the attraction and attachment of affect. There is an exception to this rule. In the case of affect porous symbols (see chapter 6) affect remains attached to the manifest representation. Though the symbolizing function in these cases has been successful in distracting attention from latent meaning through displacement, affect continues to accompany the substitute representation and continues to draw attention despite the efforts of the masking element to produce a modifying representation in consciousness.

The definition of a symbol as "something that represents something else" fits simple symbols. The complex symbol consists of something more than a representation. The additional something is motivating affect. For instance, the psychoanalytic symbol consists of a triad of components. This triad consists of

1. A conscious representation (manifest content),

2. An unacceptable internal referent or root (latent content).

3 Latent affects, which make the referent unacceptable in consciousness.

Latent affects, which are associated with the latent meanings of manifest symbols, motivate a defensive shift of attention from referents to representations and other concrete meanings. This attenuates the conscious connection between referent and representation. In cases of strong affect, the internal referent becomes unavailable to consciousness, when attention is drawn from it and directed instead toward a manifest representation. This isolates the manifest symbol and its concrete meaning in consciousness from its latent meaning. In this process of countercathectic repression, strong affect motivates a comforting exclusion of offending concepts from consciousness.

When powerful affects approach consciousness, initiation of psychoanalytic symbol formation results in attenuation of the impact of affect. In phylogenesis, *the first memory that was disjoined from its affect in this way became the first symbol. (i.e. a partial representation)*. Impairments in this aspect of the process of disjuncture results in conscious states of anxiety, anxiety dreams, and in affect porous symbols.

AFFECT POROUS SYMBOLS

The manifest symbol element, which is associated with affect that does not quite fit the manifest context, invites speculation on the part of an observer that it hides deeper latent meaning. In this situation, repression has failed to the extent that the manifest symbol retains valence for attracting affect. Such manifest symbols are called affect porous symbols. Such semi failed symbols with their conscious affects are the basis for phobia formation.

Awe of lightening, majestic mountains or emotion charged words suggest themselves for use as affect porous manifest symbols, because they offer rational appearing affect coloration to manifest complex symbolic forms. These include the emotional reactions that recommend words or experiences for use as manifest poetic and transcendent symbols. They are always available to consciousness and are always available to be used as manifest symbolic forms.

LATENT AFFECTS

Uncomfortable affects, which are associated with the inexpressible latent content that arises with the dawn of ideas, push poets to find expressive metaphors for their new insights. Such affect can also activate the mechanisms of defense that produce neurotic symptoms. The pain in painful memories can in addition generate the manifest symbols that help in the working through that occurs in dreams and symptoms. In this regard the anxiety that is linked to the latent form of the Psychoanalytic symbol is of primary importance in motivating the production of psychopathology.

The goals for the production of poetic and psychoanalytic symbols differ. For the poetic complex symbol the goal is the production of manifest symbolic forms, which communicate and expand meaning. For the psychoanalytic symbol, the goal is to produce manifest symbols as substitutes which dim or extinguish affects while masking latent meaning and secretly serving the needs and wishes at its root.

It is not enough to have mental mechanisms at the ready that make possible the finding of substitutes for expression through words and images. Affect must also be at hand, imparting intensity and direction of flow to the transition from root meaning to manifest symbol. In the case of the psychoanalytic symbol, an uncomfortable affect bound to a latent content reaches a repressing intensity either when its strength overwhelms ego integrity or when it accompanies an image, wish, passion or impulse that challenges proscriptions of conscience. Potential punishment or loss in the future is also important. Displacement of attention to related representations that carry less of the original affect and meaning is invoked defensively to stabilize the functioning of the personality. This displacement ends its journey when a representation (manifest symbol) is chosen which provides expression of impulse while hiding meaning and moderating affect. (For a neurophysiological parallel to this psychological description, see Unit 1 chapter 10.)

Affect and discomfort diminish as the focus of awareness follows a pathway from a charged root form till it comes to rest (bezetzung) on a neutralized manifest symbol. A shift of cathexis (attention) away from tension provoking or forbidden root impulse or ideas accompanies the displacement of awareness to a substitute for which the connection to the root becomes cryptic. Displacement to less threatening substitute representations can muffle latent affect. At that point a substitute becomes the (countercathectic) manifest symbol. The establishment of such a manifest symbol, free in awareness from latent meaning and affect, completes repression.

Repression is a mental mechanism that is the mainstay of the defenses described in psychoanalytic theory. The principles of psychoanalytic symbol formation apply to those aspects of poetic and transcendent symbols, which express unconscious conflicts.

AFFECTS AND THE MANIFEST TRANSCENDENT IMAGE

The power to induce affect in the observer, inherent in some images, suggest them as appropriate carriers for secret meanings. The selection of the manifest forms of transcendent symbols are strongly influenced by this process. One such affect is awe generated by realistic elements such as eyes or tears in religious statues (Freedberg 1989). High on the list of such phenomena is the sense of the sublime and the beautiful

(Burke 1757/1958, Longinus 1982/app 250 A.D.) experienced in the sight of fire, flood, landscapes, waterfalls, and shadows in dreams. Fluids, which when imbibed produce intoxication or hallucinations, impart to the user or observer the sense that the content of the drink exceeds its form and that "spirits" contain spirits. (In this regard see Harrison, J. (1903) "Prolegomina to the Study of Greek Religion" in which the origin of Bacchus is traced in part to the god Bromius, he-of-the-cereal-intoxicant (p 416)

DUALISM AND MONISM, AND SYMBOLISM

Theories of symbolism place the creation of the mind's symbols in two domains. These are the domain of the brain (western monism) and the domain of the spirit (eastern monism). Theories that restrict symbol origin to either scientific (western) monism or religious (eastern) monism are both called monistic. This creates confusion requiring careful definition. Theories that propose the simultaneous origin of symbols in both domains are called "dualistic". Dualism refers to the concept that mind and brain are not one. In this context ideas are thought to have possible origins in floating streams of independent thought that enter our minds or dreams from sources beyond personal experience. This concept was presented by Descartes (see Johnson (1994) ". . . there is an inseparable (sic) divide between mind and the brain." (p. 5). Such symbols are seen to be mystery messages from "beyond" that speak the intent of gods through our experiences and dreams as well as the images and landscapes we behold. For example Hastings as quoted in Butler (1948) described the belief of the Gnostic religion in a ". . . soul (that) was native to a higher world" that had existed ". . . previously to its conscious existence." (p74). In another example, Plato (app 374 B.C.) stated that "Soul taken as a whole is in charge of all that is inanimate, and traverses the entire universe, appearing at different times in different forms." (p51) ". . . the soul that has shed its wings falls until it encounters solid matter. There it settles and puts on an earthly body." ". . . this combination of soul and body is given the name of living being." (p74) The soul was capable of recognizing truth because of experiences in a "former existence" (p. 56). The implications of these concepts are far reaching. Man is free to see dream symbols as messages from gods. Landscapes can be seen as deity immanent in the creativity of a religious cosmology. The polylocal appearance of a symbol can be explained on the basic of revelation. Symbols that disappear only to reappear somewhere else at other times and places can be explained on the basis of having found a haven, in the spiritual

stream, that can endow symbols with a power of persistence that supports an ability to transcend the memories and motives of mankind.

Psychoanalytic symbols and transcendent symbols are conceptually far apart and philosophically of different worlds. In many zones of experience they are mutually exclusive. Freudian psychoanalytic symbols are in the province of western scientific monism. They are moieties for conveying memory. Transcendent symbols are in the province of eastern religious monism. They are moieties that convey what Tillich (1958) called the "unconditioned concern", (p50) the unconditional transcendent. It is acceptable in Western thinking to tolerate a sense of reality that admits origins for symbols in both the brain and in the spiritual realm.

Although there are practitioners who see no conflict in conceptualizing a therapy involving both psychoanalytic and transcendent symbols, a psychotherapy utilizing both concepts requires a very special synthesis. (see Unit 1 Chapt 11.) In a world Context, psychoanalytic symbols are recognized to exist by a few tens of thousands, while transcendent symbols express and support the hopes of billions of people throughout the earth.

Investigators associated with one group of theorists rarely entertain tolerance for the explanations and concepts of others. Since each school comes to new tasks with preordained preconceptions, which shape their perceptions and explanations, estrangements are to be expected. It is the aim of this book to present each element of the spectrum of approaches to symbols evenhandedly. Since acceptance of the concepts of one group as often as not forces invalidation of the views and concepts of other groups, the reader should be prepared for contradictions in the text between the proponents of each symbol type, (i.e.the simple generic symbol, and the complex symbols including the psychoanalytic symbol, the poetic symbol, and the transcendent symbol.) To maintain balance and fairness, chapters in Unit 1, Section A will champion each symbol type, with extensive quotes from leading proponents of each symbol type.

CRYPTIC SYMBOLIC FORMS

Cryptic symbolic forms are allied with three distinguishable orientations toward the image of man.

Psychoanalytic—The first orientation (psychoanalytic) regards man's symbols to be elements of

fantasy derived from memories of early childhood experience. Creation of symbols in this theory involves the substitution of neutral representations in consciousness to counter affects associated with repressed memories or other disturbing unconscious content, which press toward consciousness. These substitute neutralized representations are called Psychoanalytic symbols by Jones (1916). To accommodate those symbolic forms, which represent that which is unconscious but not necessarily repressed, the term Secondary symbols (Piaget (1945) is used.

Repression of the abstract link between latent and manifest content during the production of these symbols is central to the achievement of neutralization of affect through symbol formation. For those who deny the existence of repression, psychoanalytic symbols can have no perceivable existence.

Affective neutrality softens or banishes affects, which had forced the rejection of the appearance of latent fantasy in consciousness. Fantasy, once stripped of affect by a mask of symbols, can enter manifest consciousness, where it affects both thought and play. Manifest play, dreams, and fantasy, which use components produced through Psychoanalytic symbol formation, achieve a softening of tension discharge that has been recognized as "catharsis" since the time of Aristotle.

Psychoanalytic cryptic symbols can aid adjustment by providing neutralized substitute gratifications in art, dreams, poetry, and personal fantasy. As part of individual adjustment, symbols can be organized into domains of fantasy in which the weakest of men can conquer or achieve in personal meta-earths hidden from the ken of other men. Such word worlds are populated by satisfying cryptic substitute forms, which gratify needs at the same time that they challenge with riddles about their true meanings.

Poetic Symbols—The second orientation sees man as a searcher after insight, whose symbols are produced in an effort to find communicative tools to express new awareness. These symbols are affect charged representations, which convey personal experience and innate response. They are called into play when existing and available representations are insufficient to convey, burnish, or expand new meanings. These passwords to new meanings are called poetic symbols (see Yeats (1961). Poetic symbols are the result of a search to find new uses for old words to express the new, the numinous, and that, which is felt intuitively. (In the evolution of language all simple symbols were once poetic symbols[1] or

personal ones.) Personal symbols are those poetic symbols that are the product of idiosyncratic prior personal experiences. At times symbols are created in the form of new words or newly found uses for old words that fix in place new experiences, inventions and awarenesses. This is the lifeblood of the evolution of culture. Words fix form. They can be manipulated, communicated and encoded to create the shared fixed memory that defines a society.

Transcendent Symbols—The third orientation sees man in a religious context. In this orientation man is the recipient of reminders of the transcendent presence of God in all things. These reminders take the form of symbolic representations whose meanings are considered to have a source, which is not in the brain but resides in the domains of deity. Theories about them are strongly influenced by the conceptualizations of Platonic and Gnostic Dualism (See pp 90 and 98.). These are the transcendent symbols. Transcendent Symbols are thought by their devout users to be a deistic communication immanent in the manifest form of the representation. The non-religious observer interprets the transcendent symbol to be a product of either religious infusion or mythological education, which trains the observer to see all things of the world as representation of the universal presence and works of deity. Since cryptic symbols are often experienced as linked to some referent in reality, which is hidden, one possible source for their existence could be inferred to be a reality that exists beyond man's experience and creativity. In this concept symbols are traces of and messages from the cosmological sources that made man. They are traces that testify to the existence of a transcendent creator. In the thinking of their acolytes, they predate man and will continue as a creative force when man has extinguished himself.

NOTES

1 Emerson, R.W. (1844) p 455.

FIRST UNIT

THEORIES OF SYMBOLISM

SECTION A

THE NATURE OF SYMBOLS

CHAPTER 1
SIMPLE (GENERIC) SYMBOLS

> In modern usage, "The word, symbol . . . has become synonymous with the representation of a concept by a conventional sign." (P. 49) This is the basic definition of a simple symbol (see De Lubicz (1978).

Simple manifest symbolic forms have many sources. Most traditional symbols represent an heritage of word roots with culturally transmitted connotations. Those of more recent origin are established by convention to serve as representations of something new. The latter have often become representations by convention as a result of their emergence as poetic symbols, which open new possibilities of meaning for once bland words.

The existence of simple symbols implies the presence of conscious and readily available meanings shared by a thought with the signs or words, which have come to represent it. Assignment of meaning to words is the product of an ancient and ongoing cultural process by which words gain meaning through usage or convention to represent a concept or a thing. Often they appear to be fused. Beneath the surface, simple symbols hold hidden internal structures, and phylogenetic and ontogenetic histories, which are so complex that defects and failings during the course of their formation can result in pathological forms.

WERNER AND THE PHENOMENOLOGY OF SIMPLE SYMBOLS

The outstanding scientist in the realm of exploring such complexity in simple symbols is the psychologist Heinz Werner. He comes to the study of symbols from a background in the phylogenetic study of mental development as presented in his book "Comparative Psychology of Mental Development". (1940) As such his understanding of symbolism is influenced by its role in evolution. In addition he provides a fundamental description of the phenomenology of symbolism.

Werner (1963) viewed a symbol as a memory moiety. He saw it as an evolutionary factor, used for structuring the world and codifying its image in memory to create a map to guide one in the interpretation and explanation of new experiences. Symbols for Werner (1963) were needed ". . . in order to build up a truly human universe, that is, a world that is known rather than merely reacted to,

(For this) . . . man require(d) a new tool—an instrumentality that is suited for, and enables the realization of those operations constituting the activity of knowing. This is the symbol." (P. 13) The tools of simple symbol formation were acquired during the early development of mankind's knowing and remembering. In modern man, they have evolved into carriers of previously experienced phenomena to be used in the interpretation of newly acquired perceptions.

Compare! Werner sees the symbol as a means for interpreting the present and organizing the future in terms of past experience. The psychoanalyst sees the role of the symbol as an outlet for the pressures of the unconscious. The poet sees the symbol as a tool of expression for his insights. The acolyte of deity sees the symbol as a channel of communication from god to man.

Werner (1963) presented a sophisticated phenomenology for the simple symbol. (P 49) His vocabulary simplifies communication about symbols for those who follow his system. He analyses the simple symbol into the following "four principle (generic) components". (p. 40)

"Referent" or "Significate" describes "the entity which is represented". (p 15) (i.e. the poetic insight, the psychoanalytic latent content, the transcendent numinous)

"Symbol" and "symbolic vehicle" refers to the conscious representation of a referent, (p 15) (i.e. the manifest symbol").

"Addressor" is used for the person who creates or uses the symbol in communication.

"Addressee" refers to the person who receives or interprets the symbol. (p 14)

Werner recognizes ontogenetic growth in symbols. This permits the creation of a developmental line for simple symbols. Psychoanalytic symbols are similar in this regard. Theorists who deal with poetic and transcendent symbols do not reconstruct developmental aspects. According to Werner (1963), as the symbolizing function of the child grows, maturation and development of simple symbols is manifested, in increasing "complexity and abstract(ness)" for the referents (ideas or things represented) and ". . . increasingly conventional and communal nature" (p 40) for the symbolic vehicle. (the manifest symbol).

Maturation in symbol formation is manifested in "distancing or polarization" (p 42) of the principle

(generic) components. This is an observation shared by psychoanalytic symbol theorists in whose works it can be detected in self object differentiation, the development of object ground differentiation, and the shift from the evocative to the communicative pole in the symbol formation of the late latency early adolescent.

WERNER AND PSYCHOANALITIC SYMBOLS

The similarities described in the last paragraph are not accidental. Werner's simple symbols and psychoanalytic symbols share in common their origin in discoveries by theorists schooled in the scientific method. They are both derived from the study of many cases. The difference between the two theories lies in Werner's decision not to pursue a study of the role of repression and the unconscious in the formation of symbols. Werner (1963) has stated ". . . since symbolization, in its more characteristic manifestations (e.g., in speech) entails an awareness of duality between vehicle and referent, it will be obvious that our conception of symbol formation differs from that propounded by many

psychoanalysts (cf E. Jones [1916], 121)" (p 467 fn). Since repression of the conscious link between the symbol referent and the symbolic representation is the defining characteristic of the Psychoanalytic symbol, Werner's contributions are here included in the description of simple symbols. Conversely if the definition of a symbol were dependent upon conscious awareness of the connection between its referent and its representation (symbolic vehicle), the psychoanalytic symbol would have to be excluded from the ranks of symbolic forms as defined by Werner.

There are other areas worth comparing in a comparison of the symbol theory of Werner and that of Jones. Psychoanalytic symbols have five principle components. Three of these components are also found in Werner's symbols. Two of the components are present in Psychoanalytic symbols alone.

The components of similarity are:

1. The latent symbol, which is the source of the meaning expressed in the manifest symbol. Werner calls this the referent.

2. The manifest symbol, which is a representation of the referent. This is called by Werner, the "symbolic vehicle".

3. A polarity in the choices of manifest symbols influences the objects available for use in the selection of the manifest symbol. This polarity reflects a choice between evocative and communicative factors in the selection of the manifest symbol. The content of an evocative manifest symbol is selected in the service of evocation of inner needs. The content of a communicative manifest symbol is selected in the service of the communication of content and the establishment of object relationships. The latter includes fulfillment of the need to communicate in terms of concepts and contexts that are known to the person addressed. A shift to the selection of a communicative form of representation, which generates distancing from evocative private meanings is the same process that Werner describes as the increasing "communal nature" (p 40) of the >"symbolic vehicle" (p 40). This process will be described in detail below in Unit I, Chapt. 7 "Latency On". See also "The Shifting Symbolic Forms of Late Latency—Early Adolescence." (Sarnoff (1987B)

The two components present in Psychoanalytic symbol formation alone consist of:

1. The shift from symbolic forms with open high valence for attracting affect to symbols and forms with minimal valence for attracting affect. This phenomenon is the result of displacements during symbol formation, which create and support repression.

2. Description of a "march of manifest symbolic forms" in childhood fantasy, from concrete representations through abstractions to real objects. This is expressed in a progression through symbols in the form of animals, amorphous forms, humanoids, human forms, which ends with a move toward using real people and situations as symbols in realistic future planning.

There are also characteristics of symbolic forms in Werner's theory which are understood to be present in psychoanalytic symbol theory, but which are not specifically named or given priority.

These include: increasingly "complex and abstract character of referents", and the change in "addressees from parents to peers to generalized others" (p 40).

WERNER AND FREUD

Both Werner and Freud do not use "symbol" to refer to Jones' referent/representation dualities in which repression has resulted in a loss of awareness of the link between referent and representation. Each reserves "symbol" for another type of symbolic form. Werner reserves "symbol" for simple conscious

symbolism. Freud reserves "symbol" for inherited symbolic forms with universal meanings. Freud understands Jones' psychoanalytic symbol to be part of that group of compromise formations which are called the dream work or are the products of the ego functions which produce neurotic symptoms, fantasies, delusions, play, and wit.

The process of developing a personal verbal visual image of the world that can be used as reference when orienting oneself to new experiences begins in early childhood. The complex psychoanalytic symbol is an adaptation of this skill, It develops at 26 months in association with the maturation of repression. With the introduction of repression into the process of symbolic interpretation of new experiences a buffering mechanism is provided to divert attention from high levels of affect recalled from past traumatic experiences whose "simple symbol" encoding in memory is evoked during recognition and interpretation of new experiences. Manifest substitute formations (symbols) are produced as the result of repression of the link between referent and symbolic vehicle. Displacement to more benign affect representations neutralize situations, which could evoke memories of past situations associated with high levels of affect.

A cruel world as viewed and codified and remembered through symbols (substitute concepts) can leave a strong trace of fear. When these symbols are applied to the interpretation of new situations, affects invoking phobic avoidance are generated from manifest symbolic forms that are non-threatening and have less valence for attracting affect. Thus is created a world view in which one need not deal with affects. This can either generate a form of impaired reality testing that creates the frightening world of mental illness or can serve as a technique for setting aside intruding distortions from the past which have been the source of a false psychic reality. When the latter is chosen, reality is given a chance to prove itself. The more conscious the link between the representation and what is represented, the better able is the individual to differentiate the reality of the present from reality colored intrusions from the past.

Symbols can represent points of focus in the development of concepts. Their existence may be transient and primarily evocative. An example of a brief concept symbol would be the short-lived personal symbols that occur in dreams. They may influence symbolization over extended periods of time, and contribute to sustained communicative symbols, which inform the content of institutional transcendent symbols and those symbols, which come to be shared as group identifying elements within

a culture.

Whether long-lived or short-lived, symbols and their referent contents are interpreted by researchers to represent multiple sources, forces and mental operations. The specific source elements depend upon the orientation, which a researcher brings to the study of symbols,

The source elements are:

the sociocultural past,

the past of personal experience,

the transcendent spiritual realm with deep religious and spiritual

impact,

projections of past history in the form of traces of ancient usage

and remnant manifest symbols.

SIMPLE SYMBOLS PRECEDE COMPLEX SYMBOLS DURING ONTOGENESIS

Complex symbols (poetic and psychoanalytic) have simple symbols as their supporting infrastructure. Transcendent symbols (religious and mythic) when explained by theories of western scientific monism also have simple symbols as their base.

Complex symbols cannot be understood without knowledge of the intrinsic nature of simpler symbolic forms and the mental processes that create them. Simple symbols are at the core of all complex symbolic forms. Simple symbols are the first symbols to be formed ontogenetically, although simple symbols are preceded by poetic symbols during phylogenesis.

The cognitive maturational skills that accompany the acquisition of the capacity to develop simple symbols are all present in the first year of life. Increasing strength mark their ascent to the functional level at which they can actually produce simple symbols. Skills required for the formation of symbols must be considered when a clinician is asked to diagnose inability to create or utilize symbols, as occurs

when there is an impaired ability to develop speech. One such basic skill that underlies simple symbol formation is the ability to differentiate sensations and associated perceptions and objects into discrete remembered units, and to create a branching mental armature, each of whose tines hold a differentiated concept-sensation unit, which can be used in categorizing new perceptions. In the case of simple symbols, the mechanisms of displacement and condensation shift attention cathexes from an initial concept-sensation tine in the armature toward substitute representations to be used as the basis for recognition. In the case of later (24 months) developing psychoanalytic symbols, a beholding of substitutes that exclude awareness of less comfortable latent content concept-sensations occurs. The result of this process is a truncation and alteration of potential to interpret perceptions.

Based upon this ability to reinterpret sensations, one part of the body can be interpreted to represent another. This process underlies the somatic symbolization, which supports psychosomatic symptom formation and the mechanism of incorporation. (Incorporation refers to reawakening of memory for lost love objects that occurs through recathecting of physical sensations that were associated with these objects. The physical sensations referred to include skin contact sensations, respiratory experiences, cleansing experiences and nursing.) These sensations become the point of experience to which the symbolizing function regresses during the formation of psychosomatic symptoms. (see protosymbols in Unit 1 section B. Chapter 5,) Displacement can permit one organ to substitute for another, as occurs in cases of clinical impotence when impaired use of the arm is the presenting symptom. There are implications that the ancient Greeks were aware of this process. They attributed some symptoms in distant parts of the body in women to a wandering of the uterus. These conditions were called hysteria after the Greek word for uterus, Hysteron. In modern parlance, we refer to displacement upward when one part of the body is used to represent another. A literary example of this would be Oedipus blinding himself with his wife/mother's broaches as a substitute for auto castration

The next important step in the maturation of the cognitive skills underlying the capacity to form simple symbols is the development of self-object boundaries, which permit a differentiation between inside and outside the self. Boundaries strengthen the ability to use similarities between elements (organs, concepts or words) within the self and elements (images and words) beyond the boundary of the self in symbol formation. These similarities become symbolic linkages. These are links of affinity, which guide internal memory concept representations to the venue of the manifest symbol. In order for

such linkages to be formed there must be a strengthening in the ability to recognize similarities. These may be based upon idiosyncratic insight into similar characteristics as occurs in autistic thinking and similarities that can be consensually validated because they relate to intrinsic characteristics in common between the elements that are joined in the symbolic linkage. The latter is an ability (abstract thinking) that contributes to reality testing.

In the acquisition of speech, imitative behavior in which the child picks up sounds without meaning is the first step. Defining parental response to these sounds makes it possible for the child to attach meaning to the sounds. As a result, shared vocabulary made up of simple symbols is acquired, which conforms to the conventions of the child's society. The child gathers a vocabulary of concepts that create within his memory a mirror of the world he has seen and experienced. In the future, he will be able to use this knowledge in evaluating the familiarity and reality of interpreted perceptions.

The skills required for simple symbol formation combine with repression to form psychoanalytic symbols at 26 months. Such symbols free social speech from anxiety. They open the way for conventions for nonconflictual communicative expression of insights and feelings, and the creation of poetic symbols shortly after puberty.

METAPHOR

Sharpe's (1940) attention to metaphors offers insight into simple symbols. She defines metaphor as "a transference of a word to a sense different from its signification" (from Aristotle's "Poetics".) She holds that, "In metaphor that is the expression of vital emotion the repressed psycho-physical experiences have found the verbal images in the preconscious that express them." (p 155) Metaphors are channels of discharge for emotions, which originally accompanied bodily functions. Her definition of metaphor recognizes that ideas, some of which can be directly grasped and some of which are "too subtle" for reduction to a simple formula are beyond the boundaries of verbal memory. They are codified through the establishment of references to related contexts. Representations (pictures, words music.) become the means by which that which lies beyond the grasp of the mind, can be held in memory or transmitted to others as a means of sharing the experience or laying the groundwork for future resolution and perhaps the advancement of knowledge and culture.

SUMMARY

The study of the emergence of psychoanalytic, poetic, and mythic symbols from the simple symbolic form aids in the understanding of the development and use of symbols in general. This study opens the door to an understanding of the role of pathological symbol formation in the creation of aberrant mental functioning. This is a point of departure from previous work on symbolism and is the raison d'etre for this book. Simple symbols are not simple at all when one looks more deeply into them than their simple surface appearance.

CHAPTER 2
SYCHOANALYTIC SYMBOLS

PSYCHOANALYTIC AND SECONDARY SYMBOLS

The Psychoanalytic Symbol was best described by Ernest Jones (1916). He noted that a Psychoanalytic symbol is formed when there has been repression of the abstract connection between a representation (manifest symbolic form) and that, which is represented (latent symbol). His exact words are,

> "In most uses of the word, a symbol is a manifest expression for an idea that is more or less hidden, secret or kept in reserve. Most typically of all, the person employing the symbol is not even conscious of what it actually represents . . . . Symbols (are) made spontaneously . . . and, in the broad sense of the word, unconsciously. The stricter the sense in which this is used, the truer is the statement" (p. 90). "Only what is repressed needs to be symbolized. This conclusion is the touchstone of the psychoanalytic theory of symbolism." (p. 116).

Schilder (1938) made an observation in children that described the dynamic motivation that propels this process when he noted that "Symbols . . . will only occur when the process of experimentation has been prematurely interrupted and the child is afraid . . . (of) interrupted or forbidden drives." (P 25) and ". . . threats which originate either from the situation or from the attitude of adults." (P 24) Recent extensive reviews of the topic are to be found in Donadeo (1974), Blum (1978) and Rose (2000 p 456)

The initial step in the selection of a manifest psychoanalytic symbol, that will permit a concept that is driven toward conscious awareness to circumvent censorship, involves matching latent concepts to related less affectively charged preconscious representations within the concept cluster to which the latent content belongs. Concept clusters consist of verbal, visual, or musical elements. In the next step the abstract connection between the latent concept and potential representations within the concept cluster are lost to the focus of awareness. This occurs when the focus of awareness is shifted to a manifest representation, within the concept cluster, which has been selected because it is the least affect charged and most removed in form from the latent concept. This shift of awareness is called countercathexis.

Countercathexis as a term refers to the acceptance into consciousness of a symbolic carrier, which

carries in extremely defused form the strong affects associated with latent contents and wishes. Manifest representations are symbolic carriers with altered affect. They obscure while expressing and discharging the affects of latent wishes. All other remaining potential representations within the concept cluster are considered to be repressed. This is a function of the observation that consciousness and memory are mutually exclusive. The process of exclusion from consciousness leaves the other representations unknown, hidden, (latent), and huddled with the core concept in the "repressed" reaches of the System Unconscious.

Psychoanalytic symbolic representations are not products of the moment. The concept clusters from which they are derived are created by complex organizations of defense. Manifest symbol contents are drawn from historical traditions as well as from open social and closed familial networks of experience and acquired meanings. Non-psychoanalytic symbols are not the products of countercathexis. The process of finding a representation is more direct in that a consciously selected manifest signifier is chosen as a representation.

PIAGET AND SECONDARY SYMBOLS

Piaget (1951) calls a symbol that is a manifest expression of an hidden idea "a secondary symbol" (Ch 7). The term "primary symbol" is reserved in his theory of symbols for the simple symbol. Piaget recognized an identity between his secondary symbol and the psychoanalytic symbol as well as the role of repression in the latter's formation. However he included poetic symbols as well in his concept of the secondary symbol. This exception should be noted.

Piaget's concept of "secondary symbol" includes the possibility of a latent content for a cryptic symbol, which is not repressed, but is to be found in new awarenesses and insights for which there are neither prior experiences or practiced expressions. He denied repression a role as the only source of unconscious content. He recognized a type of secondary symbol with unconscious roots whose repression free latent content had entered the portals of the unconscious in the form of an awareness for which there were not yet fully expressive words. saying ". . . unconscious symbolism, extends far beyond the field of what can be censored or repressed, and rather than being a disguise or a camouflage, seems to constitute an elementary form of consciousness of active assimilation . . . ." (P191) ". . . the primacy of

assimilation explains . . . the "unconscious" symbol." (p 4)[1] This expansion opens the way to an understanding of the poetic symbol.

In the present volumes, complex symbols that are uninvolved in repression are called poetic symbols. Such personalized interpretations of new experiences which have never been available to consciousness, give rise to innovative ways of seeing the world and concepts for which there are no preexisting patterns of expression. Elements of awareness that pass through this portal to nonconscious zones require a search for a means of expression by the symbolizer using verbal, visual or musical content. Their cryptic quality is not the result of repression guided by a censorship, but is derived from the need of the symbolizer to shape new awarenesses and insights into representations (symbols) that can be used to fix ideas in memory and to convey ideas to others.

The concept of the non-regressed secondary symbol opens a theoretical niche in Piaget's theory for the poetic symbol (see below). There is no comparable place in Piaget's system for the transcendent symbol. Piaget's theory, steeped as it is in scientific monism, has no place for symbols whose content sources lie within the world of the spirit.

Two mechanisms of repression that activate portals into the system UCS for the concepts that subsequently may be expressed in consciousness (CS) through psychoanalytic symbolism, are recognized in Psychoanalytic symbol theory. One forces contents out of consciousness when they have acquired too much affect to be tolerated. In this first mechanism, Freud conceived of the manifest symbol as an external element that drew conscious attention (cathexis) away from the idea of the thing to be hidden (primal repression). If a conscious symbol were used to support the diversion of attention from and create latent content, the process was called by Freud "countercathexis". The second mechanism produces repression as the product of a force conceived of as being imposed by a censorship (repression proper). The repressed content, now latent, pushes to return to awareness and express itself through manifestations whose low valance for attracting affect makes it accessible to consciousness with the greatest level of comfort. The product of this process of selective return of the repressed is the psychoanalytic symbol. Either form of repression could give rise to a psychoanalytic symbol with an unconscious latent content. Piaget (1951) conceived of repression in the former sense. He stated "The origin of the unconscious symbol is to be found in the suppression of consciousness of the ego by complete absorption in, and

identification with, the external world . . ." (p 199). The manifest symbol is an example of such an element in the outside world. He challenged the concept of a universal role for a censorship in the creation of psychoanalytic symbols.

DISTINGUISHING FEATURES OF THE PSYCHOANALYTIC SYMBOL

That which sets the psychoanalytic symbol apart from all other symbols are the communicative dynamic processes that drive its creation. The simple symbol is created out of conventions that assign relationships between words and ideas. Poetic symbols arise out of the poet's anguished search for the "right word". Poetic, simple, and transcendent symbols arise from an urge to clarify meaning through the use of the more communicative of two linked elements (concepts and words) and are motivated by the need to influence and communicate. Transcendent symbols emerge from religious traditions. The creation of a transcendent symbol involves intensification of affect. Its manifest forms are chosen on the basis of the ability of the representation to generate an intensified affect and harness the apotropaic thrust of awe to the creation of intense faith. The psychoanalytic symbol conversely is motivated by a need to hide meaning, to blur communication, and to diminish affect. Within any branch of a symbolic linkage, either of which could serve to express a concept, the path of expression in consciousness always makes its way toward the representation with less valence for attracting affect. It steers consciousness away from the more affect-laden representations.

APPROACHES CRITICAL TO THE CONCEPT OF PSYCHOANALYTIC SYMBOLS

The complexities of Psychoanalytic symbol theory do not invite simple criticism. Leading symbol theorists such as Cassirer (1953, 1955), and Werner and Kaplan (1963) ignore Psychoanalytic symbols and the role of repression in symbol formation although their work provides rich source material for an understanding of the processes that produce such symbols. Typical of an active negative approach to the idea of unconscious meanings for symbols is the work of Hobson (1988) who equates psychoanalysts with "soothsayers" (p 9) and warns that it is ". . . as unhealthy as it is unscientific to indulge in symbol interpretation." (P 11) He claims that his ". . . position echoes Jung's notion of dreams as transparently meaningful (sic) and does away with any distinction between manifest and latent content." (P 12). In this regard, Jung's (1964) actual view of a repression free transparently meaningful relationship

between manifest and unconscious latent content in dream symbolism is worth our attention. He noted that, "Thus far, nobody can say anything against Freud's theory of repression and wish fulfillment as apparent causes of dream symbolism." (P27) "If somebody with little experience and knowledge of dreams thinks that dreams are just chaotic occurrences without meaning, he is at liberty to do so. But if one assumes that they are normal events, . . . one is bound to consider that they are either causal—i.e. that there is a rational cause for their existence—or in a certain way purposive or both." (P 32)

The idea that Jung considered the relationship between manifest and latent symbol content to be characterized by clarity is contradicted by Jung's statement "Because there are innumerable things beyond the range of human understanding, we constantly use symbolic terms to represent concepts that we cannot define or fully comprehend." (p21) "Man also produces symbols unconsciously and spontaneously in the form of dreams." (p 21) Jung's thoughts also find a place for Piaget's poetic secondary symbols. For instance, he notes that the images and ideas found in dreams cannot be explained only ". . . on the basis of memory, and that they contain concepts that have never been conscious". (See the present volume p 77.) (P 38)

FREUD, JUNG, JONES AND THE DEFINITION OF THE PSYCHOANALYTIC SYMBOL

Both Freud and Jung emphasized in their study of symbols those to which they attributed universal meanings. Freud's emphasis did not neglect the psychoanalytic symbol as did Werner. However his use of the word "symbol" reduced psychoanalytic symbols to the status of only one of a group of compromise formations which are not necessarily called symbols and which are products of such ego structures as the dream work, ego functions that produce neurotic symptoms, fantasies, delusions, play, and wit. This de-emphasized Psychoanalytic symbols as they were described in his concept of secondary process thinking (1911). As a result there occurred in Freud's works a reduction of interest in the meaning of mental content accompanied by an increase in emphasis on the study and explanation of the structures of the mind. The eventual result of this vicissitude in the turnings of Psychoanalytic theory was the development of structural theory and of a psychology of the Ego.

> Jones (1916) in his writings took up the banner of repression based symbolism. His approach called for describing any symbol associated with repression, a psychoanalytic symbol. In Jones' concept of Psychoanalytic symbols, the tendency for communication to be secondarily abrogated during symbol formation introduces a broad area of potential for mental dysfunction that need not be considered when working with simple symbols.

NOTES

1 Assimilation refers to the process of putting the external world in the service of inner forces and memory elements. New experiences are interpreted through the influence of memories of past experience.

CHAPTER 3
POETIC SYMBOLS

Poetic symbols are verbal, visual or musical expressions that fit latent concepts and abstractions to representations that evoke awareness and clarify meaning. Poetic symbols are found in works of art (e.g. poems, paintings and other visual depictions, as well as music, dance and mime).

Shakespeare (Midsummer Night's Dream V. 1) reflected on this process when he noted,

> ". . . as imagination bodies forth
> The forms of things unknown, the poet's pen
> Turns them into shapes, and gives to airy nothing
> A local habitation and a name."

Nabokov (1959) described poetic symbols as "the mysteries of the irrational as perceived through rational words." (p 55) Poetic symbols clarify and improve the communication of latent concepts that are new and obscure. By way of comparison, the function of Psychoanalytic symbols is to obfuscate the obvious.

Poetic symbols, once formed, can be recruited by the symbolizing function for additional duties as carriers of psychoanalytic, transcendent or play symbol function. When so used they may appear on the surface to be indistinguishable from the latter symbols. However the intrinsic characteristics of poetic symbols override any such confusion and make it possible to recognize in poetic symbols an underlying pure form. They are a distinct entity, which is subject to invasion by pathologies in their formation. (see below "Symbols and Thought Disorder" (Unit Three Sect C Chapt 7)

Poetic symbol formation in pure form has been the subject of insightful writings by a number of artists, who are gifted with introspective self-awareness. A description of poetic symbols and their function will be presented through quotes from the writings of these artists. Germane commentary by poets (T.S. Eliot, Yeats, Rupert Brook, Vladimir Nabokov, and Ernest Hemley) and by writers such as Emerson and Thomas Mann, as well as the views of the painter Andrew Wyant and the musicians Gustave Mahler and Felix Mendelsohn, will be presented.

POETIC SYMBOLS EXPRESS PERSONAL INSIGHTS

Poetic symbols are used by writers and poets to convey subtle awarenesses, affectively charged insights, and moods and concepts. This is achieved through a conscious choice of representations. They provide fresh insights into human experience through enhancing access to consciousness for new ideas. Poetic symbols make communication of the otherwise unknowable possible.

When simple representations are felt by a poet to lack the ability to convey insight with affect, symbols are sought for the enhancement of communication. This is achieved when the poet places established affect-loaded words into unique contexts. When selected for subtle facets of meaning, these contexts can express thoughts that have never reached consciousness. (see Jung 1964, p38).

Poetic symbols codify the expanding boundaries of a culture, creating a milieu and conduit that bring into the mainstream of thought, ideas that would otherwise have hovered imperceptibly on the horizons of possible expression. The goal of poetic symbol formation is communication and clarification of meaning for consciously perceived insights into relationships and awarenesses. Such symbols light a pathway, which gives access for ordinary minds to the key to awareness that is genius. That which exists beyond the ordinary mind's grasp and would be otherwise unknown are brought into range and illuminated by poetic symbols. The frontiers of cultural growth expand through enhanced awareness of human potentials and behavioral possibilities.

When newly established awareness has strayed far from precedents, preexisting verbal usages fail to deliver their meaning. New shadings of meaning, provided by the contexts of poetic symbolism, need be invoked. They serve as the first communicative access to consciousness of insights, wide of established ways that generate the evolution of culture. The poetic symbol can link psychoanalytic symbols to abstract reductions of word meanings. The manifest forms that are produced are viewed as approximations of numinous occult and eldritch unknowns.

POETIC SYMBOLS ARE THE ESSENCE OF LIVING LANGUAGE

Ralph Waldo Emerson (1844) perceived poetic symbols to be the tools through which poets forge new meanings for old words and find new words for new meanings. "The poet, by an ulterior

intellectual perception, gives (words) power which makes their old use forgotten, and puts eyes, and a tongue, into every dumb and inanimate object." (p 456) This fountain of poetic symbolism has brought forth language for "Language is fossil poetry." (P 457) "Every new relation is a new word." (p455) and "Every word was once a poem." (p 455) "The world being thus put under the mind for verb and noun, the poet is he who can articulate it." p456

A byproduct arises with the creation of poetic symbols. The transmuting contexts of the poetic reuse of the established words of a language give form to new meanings and ideas that had been hovering on the brink of awareness. Words and usages that are created through poetry serve to codify new customs, insights, and awarenesses.

The presence of such a medium for transformation and codification is a sign of vitality in a language. When recruited to serve as poetic symbols, words themselves take on new meanings. A living language must have an active poetry that stretches its words to cover new concepts and customs in the evolving culture of which the living language is a part. The creation and existence of poetic symbols is a sign that the languages to which they belong are alive and flourishing. The history of a people is imbedded in their language. "The poets made all the words, and therefore language is the archives of history, . . ." (p 457)

Old usages cling to words that have taken on new meanings. An example of this would be the word melancholia. In antique Greek this literally means Black Bile, the ancient Greek hypothesized marker for depression. Today melancholia means simply depression. The relationship of the word to the liver persists only as an historical curiosity.

T.S. Eliot (1937)[1] defined the quality of a poet by the extent to which the poet uses poetic symbolism in the creation of poems. The role of the poet in the discovery of new meanings for words is, to Eliot, the essence of poetry in its role as the lifeblood of living language. Eliot judged a poet by his ability to take an active role in contributing newly discovered latent meanings to existing vocabulary (i.e. the creation of poetic symbols). Byron's status as a poet, in Eliot's eyes, is reduced because "He develops nothing in the meaning of individual words" (McConnell (1978) p378) Elliot implies that this is something which the poet must do if a language is to live as a flexible means of expression for emerging

ideas and changing forms and customs. As life pursues new ways, language must follow or die.

SIMPLE SYMBOLS ARISE FROM POETIC SYMBOLS

New cultural uses for simple symbols are created through the manipulation of obscure or alternative definitions associated with established and ordinary vocabulary. Poetic awareness is ordinarily expressed through the use of preexisting simple symbols. New ways of thinking and insight come from the small alterations of awareness that arise during the emulation of well defined and established patterns of word usage. How are such new meanings developed for already existent words so that they can take on expanded new meanings and enter a life beyond the limits of the poem? The poet creates a context of imagery that draws attention to new meanings inherent in and related to past usages experienced in the etymological roots of the word. The poet's art creates expanded meanings for extant words. This is achieved by placing words in contexts that emphasize or expand usages and meanings that were formerly little applied. Past meanings and associations are recruited to express expanded awareness. At first these awarenesses are too newly formed to have a name. The concept has no way to become a verbally codified memory, unless a symbol is created to represent it.

At first personal use of a poetic symbol finds expression for meanings and associated affects that are so personal that they cannot be communicated in the form in which they arise in the awareness of the poet. Faced with this limitation, poets expand the use and meaning of the words of existing vocabulary to suit their needs through a process of scanning words for nuances of meaning. Through this search, they seek new implications and implied affective colorations in old words. Eventually in this process, poetic symbols are consciously selected for their ability to convey an original percept and its accompanying affect in a single representation whose meaning the reader can comprehend.

Nabokov(1989), for example, invoked his own experience to illustrate the process of symbol selection based on recollected word usage. In the image of a flower petal falling towards the reflecting surface of a stream, he saw a metaphor for the audience seeking activities of a writer in the process of creating a poetic symbol.

He noted "Now and then, shed by a blossoming tree, a petal would come down, down, down, and

with the odd feeling of seeing something neither worshiper nor casual spectator ought to see, one would manage to glimpse its reflection which swiftly—more swiftly than the petal fell—rose to meet it; and, for the fraction of a second, one feared that the trick would not work, that the blessed oil would not catch fire, that the reflection might miss and the petal float away alone, but every time the delicate union did take place, with the magic precision of a poet's word meeting halfway his, or a reader's, recollection." (Page 271)

An active though unsuccessful search for poetic symbols to express a memory and its affect is described by Hemley (1963) in his poem "Orpheus". (Quoted with the permission of Prof. Robin Hemley.) Here Hemley tells of the failure of Orpheus in an attempt to transmute a memory of Euridice into a musical image. Memory linked to a powerfully evocative affect had drawn Orpheus' attention to his inner self. Energy for the search for a symbolic form that could communicate content is instead turned toward mourning.

ORPHEUS

"I must find her;
Here in some meadow of myself the song of an imaginary bird
May be her speech,
Or a flower growing in the shade
Of a thought
May have roots that reach
Through the ambiguous shadows
Into the night.
It is my destiny to fracture time
And climb
To silence through the breach,
to touch a memory
And with a word
Kiss it awake.
I sing and as the music
Glistens,
Others see her shape
I listen but I know
The face is only mist.
The chord I need
Is hidden in my grief."(p34)

This poem (as quoted above) is remarkable in that it contains self-reflective awareness, on the part

of a poet, of the role of music and poetry as manifestations of symbolic form ("representations which are not reproductions"). The process of a failed search for such a poetic symbol is illustrated. Note however the successful use of the poetic symbol "meadow" in the second line to describe a dwelling in the heart beyond the reach of memory.

An effective search for a poetic symbolic representation can be found in "Dust", a poem by Rupert Brooke (1915). As in "Orpheus", the poet's quest is to find a symbol to represent lost traces of love, at a time when quickening in memory has dwindled under the pressure of time's passing and the still long silence of death.

DUST

"When the white flame in us is gone,
And we that lost the world's delight

Stiffen in darkness, left alone

To crumble in our separate night;

When your swift hair is quiet in death,
And through the lips corruption thrust

Has stilled the labour of my breath—

When we are dust, when we are dust!—

Not dead, not undesirous yet,
Still sentient, still unsatisfied,

We'll ride the air, and shine, and flit,
Around the places where we died,

And dance as dust before the sun,

And light of foot, and unconfined,

Hurry from road to road,
And run about the errands of the wind.

And every mote, on earth and air,
Will speed and gleam down later days,

And like a secret pilgrim fare
By eager and invisible ways,

Nor ever rest, nor ever lie,
Till, beyond thinking, out of view,

One mote of all the dust that's I
Shall meet one atom that was you.

Then in some garden hushed from wind,
Warm in a sunset's afterglow,

The lovers in the flowers will find
A sweet and strange unquiet grow

Upon the peace; and, past desiring,
So high a beauty in the air,

And such a light, and such a quiring,
And such a radiant ecstasy there,

They'll know not if it's fire, or dew,
Or out of earth or in the height,

Singing or flame, or scent, or hue,
Or two that pass, in light, to light,

Out of the garden, higher, higher . . . .

But in that instant they shall learn

The shattering ecstasy of our fire,
And the weak passionless hearts will burn

And faint in that amazing glow,

Until the darkness close above;

And they will know—poor fools, they'll know!—
One moment, what it is to love." (p 50)

One of the glories of this poem is the poet's ability to tell of an evocation in the garden dwellers of things numinous while stirring a like feeling in the reader. Poetic representations become here the means by which that which lies beyond one's grasp and the mind's recall, can be made vital, transmitted, and used by the reader as media for the resolution of loss through cathartic re-experiencing.

POET AND THE PLOUGHMAN

The poet has a role in the transmutations of a living language. New symbols are introduced by artists and taken up by the masses. In swiftly measured moments, the poetic mind imparts intuitive meanings to words. This process underlies the evolution of words.[2] More slowly wrought than in the mind of the poet, the evolution of a language is also the province of the ploughman.

EVERYMAN AS POET

Redefinition of words can evolve as well out of the associations and verbal usages of those who traverse ordinary lives. There is a role for "everyman" in the process of enhancing language through the semantogenics of poetry.

> Language evolves through shared changes in the use of words by everyday men in society, as they traverse the ever changing pathways that open the way to tomorrow. This poetry of the masses provides newly found meanings for words by focusing on facets of meaning unearthed through emulations[3], (i.e. inventive everyday word usage). Reworked words are generated in response to the need to find names for evolving ideas and potentialities. Symbols of lasting worth are developed when words are found whose prior usages conveyed intellectual content that could be adapted to help one convey new ideas and constructs. Yeats (1961) described the everyman poet as ". . . himself mingled with the procession." which creates new word meanings ". . . out of the dreams of one poet and of a hundred generations whose hands were never weary of the sword." (P 64)

"EVERY WORD WAS ONCE A POEM"

Every word has an history and each new usage betrays a turning point in a culture. In this regard note again Emerson's comment "Every word was once a poem." This process occurs repeatedly through

centuries until each word comes to represent a matted agglomeration of overlapping meanings. This is a rich ore, from which new word meanings can be forged. Each word becomes a palimpsest containing a thousand maps, with each map offering a meaning that can be called up through the word itself to reshape language and serve future awarenesses. Poetic symbol formation offers to shadows from the past the power to set in order the semantic stepping-stones that lead to the future.

POETIC SYMBOLS AND AFFECTS

> Yeats (1961) described an aspect of poetic symbolism that is allied with the underpinnings of Psychoanalytic symbols. A poetic symbol can be used as a cushioning substitute that expresses otherwise affect rich latent contents, which could not otherwise be confronted directly. Yeats tells of poetic gestures that convey meanings, which cannot be made accessible to the mind by means of direct description. (i.e. ". . . the whiteness of the moon and of the wave, whose relation to the setting of time is too subtle for the intellect, . . ." (P 61)

POETIC SYMBOLS IN PSYCHOANALYSIS AND TRANSCENDENCE

One can differentiate the adherents of transcendence from those who recognize psychoanalytic symbolism by their use of poetic symbols. For the acolytes of transcendence, the symbol is a representation of the comforting or threatening numinous. The numinous becomes fixed for recognition through the forms of poetic symbolism. They carry the

characteristics of abstract power and the affects of awe. These are amongst those elements of thought and comprehension, which are too subtle for the intellect to grasp. They offer handles for controlling fate and the powers of deity. For the adherents of Psychoanalytic symbols, poetic symbols are recognized to be representations of affect rich latent content that is so strong that it cannot be addressed directly. Such symbols help to make unbearable reality bearable. The child, who cannot accept his small role as a tyke and reacts by making himself a king in fantasy, symbolically converts his own image into something acceptable. This for a fragile moment makes life tolerable.

THE SLOW EVOLUTION OF WORD MEANING IN SOCIETY

At this point let us examine examples of evolution of word meaning, which establish the symbolic linkages along which symbols are formed. We start by identifying some unrelated root words in antique languages.[4] The words we will study are

[A] *Scutum* (Latin), [B] Cild (Old English) and [C] Cniht (Old English).

In the beginning:

(A) SCUTUM (Latin) for shield was derived from the Greek word SKUTOS meaning leather, the material from which shields were made in ancient Rome. Apparently in late Roman times it became a term of respect when applied to the makers of shields for warriors. (P 329)

(B) CILD—(Old English) was derived from the Gothic word KILTHEI meaning womb. This provided the meaning "That from which man emerges." Cild became child in the sense of "The child is father to the man." (P 93)

(C) CNIHT—(Old English) means boy. Later it depicted youth. In time it came to describe an attendant at Court or to a noble house. A brief jump in meaning caused the word to describe a military follower of a king. (p 329)

Scutum, Cild, Cniht began their journey as a part of a common stock of related concepts when chosen to fill a need for words to express elements in the training of horse borne knights. Let us observe how these unrelated words came to be bound to each other by an affinity derived from usage. The first affinity was produced when these unrelated words were fused into a concept cluster related to the acquisition of knightly power during the age of chivalry. Through this arbitrary link, coloration of meaning conveying the idea of power came to be shared in common by these words. By the time that knighthood's flower had wilted and its authoritarian structure had faded with the passage of time, or had dwindled through custom, coloration denoting respect for power persisted in the use of these words. It became possible to impart dignity in later times to the image of men simply by using modern derivatives of these words to describe them. The use of these words endow persons and circumstances with a sense of dignity and respect derived from the initial aura that they had acquired through association with antique individual acquisition of knightly power.

In the middle ages these words or their derivatives took on meanings that implied sovereignty, power and respect. During the days of chivalry, derivatives of these words were used to identify the stages of ascent to knighthood. These derivatives were:

(A) SQUIRE—this word, derived from SCUTUM refers to a knight in training. His assigned duties

emulated those of the leather workers of Rome. They had risen in position from shield makers to become those who attended the knight.

(B) CHILDE—this word, derived from CILD was the name given to the fully trained squire, who awaited elevation to knighthood. In essence it was the stage from which the knight emerges.[6]

(C) KNIGHT—this word, derived from CNIHT described a fully qualified warrior in service to honor and the king.

Now let us look ahead to the time when chivalry had declined and the world had become a wasteland devoid of knights errant. Though a close link to knighthood had been lost for these words, their link to respectability persisted. Today in everyday usage, derivatives of these words have become symbols of respect. This has colored their meanings for us in the present day and may be seen in the following current usages.

(A) SQUIRE has become ESQUIRE, a title of respect applied to a gentleman, often appended to the names of lawyers.

(B) CHILDE has come to mean a well-born youth. In the context of a term of respect this word was used symbolically by Byron to impart to the protagonist in one of his poems ("Childe Harold's Pilgrimage"[7]) a sense of wealth and nobility.

(C) KNIGHT continues as a term applied to people who have made outstanding contributions. It serves as an honor granted by a king.

Note how the simple words of the root stage were transformed into titles of respect as a result of having been linked to the acquisition of power during the days of chivalry, producing a shared level of meaning that persists today in the coloration implied by former usages of these words. Coloration such as this can be emphasized by a poet to create a new symbol or metaphor.

SYMBOLS AND VERBAL POETIC SENSIBILITY

Poetic symbols express new usages for words. These usages are often based on antique meanings, which are evoked anew to illuminate poetic insights for the reader. (Examples follow)

Kalidasa (@200 A.D.) in his poem "The Cloud Messenger" uses the phrase "the bow bearer's color" in place of the word 'blue', (verse 46) when telling his wife to draw water from a sacred river. He tells her she will take on that color and be seen by sky dwellers to be like an emerald strung on the river. Blue alone would not convey this concept. "Blue of the bow bearer" implies godlike power. The phrase is a sort of a kenning, a phrase which, known to all who are educated to a given cultural symbol net, bundles a host of meanings into a few words. In this case the symbol is part of the network of symbols that supports Hindu religious lore. Specifically in the "Mahabharata", the blue skinned Krishna, who is a manifestation (avatar) of the God Vishnu, becomes the bearer of the bow of Arjuna one of the leading warriors. By the use of this phrase, ("Color of the Bow Bearer") heavily weighted with ancient meanings, the poet's wife is elevated to an image that expresses the otherwise inexpressible regard with which her husband beholds her.

Thomas Mann (1911) described poetic symbol formation in the quotes that follow.

> ". . . the mind liberated from the pressure of the will is unfolded in symbols." (P 63)

> ". . . symbols, associated with ideas that are more than fragments of the shadows thrown upon the intellect by the emotions they evoke, are playthings of the allegorist or the pedant, and soon pass away." (P 64) This refers to the distorting effect of affects—which forces people to substitute symbols for reality. (p 64)

> "Form as divine thought, the single and pure perfection which resides in the mind, of which an image and likeness, rare and holy, was here raised up for adoration." (P 44)

> Things are ". . . secret before they cry out in the market place." (P 63)

POETIC SYMBOLISM AND SENSIBILITY EXPRESSED THROUGH MUSIC

The addition of musical underscoring enhances the telling of tales. Auditory symbols manifested in musical rhythms and melodies serve as external stimuli, which awaken the empathic inner response readiness of listeners. Music evokes emotion through adding affect to a symbol, which is extrinsically much removed from a dangerous referent.

> "Beethoven had an extraordinary capacity to effect audiences with his use of the power of musical auditory images to evoke emotion. This was described by his student Carl Czerny (see Solomon M. [197])

"In whatever company he might chance to be, he knew how to produce such an effect upon every

hearer that frequently not an eye remained dry, while many would break out into loud sobs; for there was something wonderful in his expression in addition to the beauty and originality of his ideas and his spirited style of rendering them. After ending an improvisation of this kind he would burst into loud laughter and banter his hearers on the emotion he had caused in them." (P 59)

A number of poets and musicians have described the symbolic representation that finds form in the rhythms and melodies of music.

Yeats (1961) wrote of the musical qualities of poetic symbols. ". . . call down among us certain disembodied powers, whose footsteps over our hearts we call emotions; and when sound, and colour, and form are in a musical relation, a beautiful relation to one another, they become as it were one sound, one color, one form, and evoke an emotion that is made out of their distinct evocations and yet is one emotion." (p 62)

Thomas Mann (1911) spoke of the musical relation of sound shaped to convey emotion. Things both feeble and strong ". . . would have been a little different if some mind long ago had not given itself to some emotion . . . . and shaped sounds or colours or forms, or all of these, into a musical relation, that their emotion might live in other minds." [8] (p 62)

Pushkin (see Galie Wheen Co—1989) in his poem, "Do Not Sing For Me Fair Maiden", tells of the ability of song to represent former lives and distant places.

"Do not sing for me fair maiden,
The songs of sad Georgia;
They remind me of
Another life and the distant shore.
Alas they remind me
Your cruel melodies
Both steppes and the night, and in the moonlight,
The features of the faraway, poor maiden! . . ."

George Du Maurier (1894) was both one of the foremost sketch artists of the late 19th century and one of its foremost novelists. His drawings for Punch held the awe and the attention of the English-speaking world. His novel "Trilby" inflamed the passions of a vaster audience. In "Trilby" Du Maurier described music as a symbol. If anyone could have told of the varied incarnations of human experience

that shape symbolic forms and are available through semblance, metaphor and symbolic forms, it was Du Maurier.

In his novel "Trilby" Du Maurier (1894) described a graphic artist's view of music as a symbolic key to inner feelings

> "He had never heard such music as this, never dreamed such music was possible. He was conscious, while it lasted, that he saw deeper into the beauty, the sadness of things, the very heart of them, and their pathetic evanescence, as with a new inner eye—even into eternity itself, beyond the veil—a vague cosmic vision that faded when the music was over, but left an unfading reminiscence of its having been, and a passionate desire to express the like some day through the plastic medium of his own beautiful art." (Page 24)

According to Felix Mendelsohn (see Kupferberg (1978) though words may appear to some listeners to clarify meaning while music seems to introduce ambiguity, to him ". . . entire sentences . . . <and> . . . individual words . . . <are> . . . so ambiguous, so vague, so unintelligible when compared to genuine music, which fills the soul with a thousand things better than words . . ." (p 14)

Reik (1953) seemed to agree. He wrote, "Music is the language of psychic reality. Language is at its poorest when it wishes to grasp and communicate nuances and shades of feelings, the very area in which music is most efficient and expressive."

Hemley's poem "Orpheus" (see above) reveals the poetic and musical processes, which poems and music serve as symbol contexts to be used for the exploration and expression of otherwise inexpressible concepts, memories and feelings. The expressive manifest contexts of art, (pictures, music, and poems) are more ambiguous than prose and therefore far more apt to yield up the pathos of the soul rather than its secrets. The latent content dealt through poetic symbols is outside of consciousness but not necessarily repressed.

Schwaller de Lubicz (1978) dealt directly with music as a poetic symbol. He noted that "When an image, a collection of letters, a word or a phrase, a gesture, a single sound, a musical harmony or melody have a significance through evocation, we are dealing with a symbol. This presupposes that the meaning of the determined aspect of the symbol must be known, so as to be able to evoke a non-determined aspect in the consciousness of the observer. This is the common nature of the symbol—somehow its rallying effect is like the effect that a few notes of a national anthem may have on patriots under an invader's

yoke." ". . . a melody evokes moments experienced, producing gaiety or sadness just as a symphony can transport an audience into a spring or autumn landscape. Here it is a matter of an emotive evocation, and the music is its symbol." P. 45

Gustave Mahler applied these principles directly to musical forms. "My symphony (third) will be something the world has never heard before! In it nature herself acquires a voice and tells secrets so profound that they are perhaps glimpsed only in dreams![9]

Psychoanalytic symbol formation attenuates affect. Entry into consciousness of representations, original concepts, and memories is facilitated by the removal from consciousness of affect. As a result stories can tell of Oedipal longings devoid of original feelings. Declawed and displaced manifest story and dream elements offer the chance to achieve catharsis or working through using benign surrogates as substitutes for personal antagonists. Music becomes a symbol for repressed affects. Music can inject strong affect into pale symbolic forms. When this effect produces an experience sensed to be complete and real, a simulacrum of idea and affect results. The listener lends the affects of his own life experience to complement a singer's words. The completed unit, sounding like reality's song, brings forth emotional responses as though the work of art were real. Thus is explained the tears that are shed by opera audiences in response to scenes and plots of fantastic illogicality.

ETA Hoffmann thought of music as a powered image, which evokes feelings in the listener, which are related to the realm of the spirit. In his review of Beethoven's Fifth Symphony, he noted "So also does the instrumental music of Beethoven open the realm of the colossal and the immeasurable for us. Radiant beams shoot through the deep night of this region, and we become aware of gigantic shadows which, rocking back and forth, close in on us and destroy all within us except the pain of endless longing . . . Only through this pain, which while consuming but not destroying love, hope, and joy, tries to burst our breasts with a full-voiced general cry from all the passions, do we live on and are captivated beholders of the spirits." [10]

SYMBOLS IN DREAMS AS POETIC SYMBOLS

There are symbolic forms in dreams that have roots not related to the dynamic unconscious. Such

dream symbols can be categorized as poetic symbols. Their roots are something unknowable because they are as yet too subtle for the mind or time. The appearance of such newly encountered referent ideas that find expression in dream symbols was described by Jung. In (1964), he noted that ". . . the capacity of the human psyche to produce . . . new material is particularly significant when one is dealing with dream symbolism, for I have found again and again in my professional work that the images and ideas that dreams contain cannot possibly be explained solely in terms of memory. They express new thoughts that have never reached the threshold of consciousness" (P 38).

Aristotle ("On Prophesy in Sleep II") in his description of the process by which dream symbols are formed noted that "(In Dreams) . . . Mental pictures are like reflections in water . . . If there is much movement the reflection is not like the original, nor are images like the real object." One can derive from this a definition of dream elements as distorted representations not unlike the simple symbol.

Poetic symbols are not the product of a search to quiet affect but arise from man's search to know. They are not experienced as a metaphor, but as a concrete representation of the referent, much in the style of the Ancient Greeks who concretized their concepts of love and creativity through tales of their gods (i.e. Eros & the muses), and the Hindus who concretized Siva's rage in the fearsome head of Kirtimukka.

When there is not an abstract relationship between a referent and a representation, a repression based psychoanalytic symbol is not possible. Concrete symbolic linkages enable the creation of conscious representations built on traditions, social events and close familial networks of meanings that convey new-found experiences and insights.

SYMBOLS OF THE GRAPHIC ARTIST AS POETIC SYMBOLS

Wyant, the nineteenth century American landscape painter described (1866) the internal process by which his artistic sensibilities selected visual symbols to use to express, through a painting, an impression of a sunset conflated with the feelings and the thoughts that accompanied its viewing.

"I saw an effect of evening over the little lake or pond from which they get ice, and which is a meadow in summer. Now, that evening picture grew upon me so that I only had one day to rest, then by a

sort of force which is to me almost incomprehensible, I was dragged down to my easel & down was jotted my remembrance of that simple, but most grand effect of nature. For the pond, I submitted the calmest sea; for the walk on which I stood—a desert island on which is no vegetable thing that ever lived, except the bit of seaweed cast up on the sand. Lying and leaning on one elbow, his hand supporting a feverish head, is one lonesome man taking his last hopeful look into the joyous space of heaven, and then into the gloom which rolls like ghostly giants of another world, . . . thickening the air, mocking the sun by their deepening pall. It is the moment, when the sun has not yet set, but when the conflict between light and darkness is to me of all their conflicts the grandest."(P 8) Note that the reaction of the observer has added an affect to the facts of the scene. Exact photographic representation is inadequate to convey the artist's experience. This spiritual consonance between artist and twilight's blending of image and illumination (German-Stimmung) requires that the artist create a metaphorical representation, which adds affect to a representation. The seen scene is transmuted till it represents an image other than the referent, an image that was felt, not seen. The painted scene bathed in its special light is a product of a transmutation of the original view through the medium of the artist's sensibility into a communicative codification. This medium makes it possible for the artist to share his affective experience with the viewer.

THE ONTOGENESIS OF POETIC SYMBOLS

The creative use of words changes as a child develops. The prelatency child has the greatest latitude in spontaneous creativity. He finds new uses for words by extending and generalizing meanings. He has access to poetic and original concepts in using words. Rare usage is common in young children who have not yet been exposed to the superimposition of the rule that shared meanings of words have priority. The latency child has less latitude. Learned cultural limitations include socially dominated boundaries that are imposed on creative word use. There is in the latency child greater use of repression related symbols, which distort meaning as they represent. Latency age drive discharge is achieved predominantly through creative fantasy formation. In the latency state, inhibition of physical discharge of fantasy is a general characteristic. Normally discharge in masking fantasy that evokes inner feelings without influencing the world takes priority over direct communication and open assertion. The latency state child's fantasy achieves the discharge of the hidden and the forbidden through emphasis on symbolic expressions that hide meaning. Such symbols are effective in achieving drive discharge, though

often they are porous to affect. The latter occurs in the persecutory fantasies that characterize the age of latency.

Maturation of primitive sublimations, which had been manifested during the latency years, is a characteristic of the cognitive changes that introduce adolescence. Then symbolic forms become more communicative and serve the articulation of drives with reality. Projection associated with repression and symbol formation persists from the latency state, but appears in less obtrusive form. Symbols areselected which mask meaning so well that they may be used without creating anxiety. These symbols become the expression of sublimative artistic forms when the mechanisms that once supported the structure of latency and its evocative goals are freed of the task of creating fantasies that serve as the primary pathways for the discharge of drives.

Fantasy forming latency structures persist into early adolescence with a shift of emphasis away from evocation toward communication. This change underlies adolescent sublimative creativity. Culturally influenced aim-inhibited fantasies of latency are transmuted into object and discharge oriented socially encouraged fantasies. Such fantasies serve culture by binding peoples through shared stories and experiences. In addition, old myths and traditions are refreshed through retelling in modern modes. Beyond story telling, the next step is the inclusion of reality and real objects as manifest symbols in shaping the scenarios that involve drive discharge. This step provides the infrastructure for reality oriented future planning. An example of a transition that marks the changing form of poetic symbols from personal to communicative as a child makes the transition from latency to adolescence follows.

When R.B. was ten, she brought in the following poems. They are typical of the poems of latency.

That House is Really Haunted

That house is really haunted.
Ghosts come out at night.
Their howls and screams are scary.

My New Puppy

My puppy is very scared.
He was behind the chairs.
His mother is not with him.

These poems, which describe personal involvement, show displacement but no masking or dulling of the affects associated with conflicts involving aggression and separation, both of which are projected into the content of the poem. They are typical of the poems she wrote at the time.

At the age of thirteen she brought in a different kind of poem. Note here the absence of direct personal involvement.

> The sun rises shedding her golden light over hill and dale.
> She called out man and animal.
>
> Birds take wing.
>
> A new day begins full of sunlight and happiness.

She also began to write plays for school. The plays were similar in context to the dreams and fantasies that had caused her so much anxiety during the latency years. Yet now they were fun. Sublimation had begun in this area. In one play, Rat Fink Freddy is one of a band of robbers. He gets a woman to tell him where jewels are hidden while having sexual relations with her. The woman says, "You want money, I'll show you so much, you'll drown in it." The robbers are captured and go to prison where they are forced to exercise.

She continued to write poems. Some were hopeful; others continued the theme of attack.

A hopeful example, "The Morning Sun":

> The sun rises and sheds her graceful rays upon the trees,
> In the distance, the rooster crows to let everyone know
> that the sun has opened the day.

Sublimative projection transmutes personal fear fantasies into a poem depicting attack in the following example.

"They're Coming":

"They're coming! The British are coming over hill and dale.
They're coming! The British are coming to leave a trail of blood
and death to show their hate.

But no, no, we will withstand. Each man will make his stand.
Every man is his own sergeant when bloodshed is at hand."

In the latency years, projection had contributed to the formation of the young poet's fear fantasies. As she approached adolescence, with subtle changes her fantasies continued. They differed in that she herself ceased to be involved in the attack. The symbols from which her fantasies were constructed became sufficiently masked that they were no longer sources of anxiety for her. She was premenarchic. Her fantasies and fears about menarche became the source of the symbolized content of her poems and plays. Creative activities (sublimations) involving people and elements in the world became the phase-appropriate zone for the manifestations of projection associated with her use of repression in the production of her poetic symbols.

In the transitions of late latency-early adolescence, this shift of the objects in her fantasies from psychoanalytic internally derived symbols to reality objects as symbols is of primary importance. It prepares the way for future planning and the articulation of drive discharge with reality figures in the world. In adolescence, socially demanded inhibition of the aim of physical discharge of drives requires sublimation. Sublimation reproduces the contents of the creator's psyche in a symbolic form that obviates the need for direct expression of drives with a real object. This is achieved in poetry when projection of impulses to others in the service of the creative process seeks objects with an apparent reality that removes these objects from the characteristics and core affects that make them identifiable with the personal experiences of the poet.

In the sublimatory creativity of early adolescence, reality populated fantasies with their verbal or plastic representations become templates that will be used in later years for selecting love objects. Drive discharge through fantasy about objects with reality potentials creates models for object seeking. Sublimative creativity, manifested in fantasy, poetry, prose, art, and song about objects in reality settings eases the transition to future planning and falling in love, when the latter activities involve intent to communicate in place of evocation of inner needs.

The latency age child tends to use sublimation in creativity as a means of creating object representations to be used as targets for aim inhibited evocative drive discharge. Adolescent symbols

have transitional

characteristics that presage adult ones with their preoccupation with reality content and the intent to please (see Reinach, 1903, p. 265).

NOTES

1 Berry, F.(1965) "The Poet of Childe Harold" pp 35-51 in Jump, J.D. (1965) Ed. "From Byron: a symposium", London: Macmillan, as quoted on (p 376) of McConnell, F.(1978) Ed. "Byron's Poetry" Norton, N.Y.

2 See Unit 3, Section C Chapter 8 Re: Thomas Cole and the introduction of new symbols in society.

3 See Hindle, B.(1981) P 13

4 The etymological source for this material is Partridge (1958) except where otherwise noted.

5 See McConnell, Frank (1978) (p 24).

6 Ibid.

7 Compare Milton's "Life beyond life" for words, in his Areopagitica.

8 Letter to Anna Von Mildenberg dated July 11?, 1896.

9 Vivian Ueng -from program notes Sunday Evening Page 8, March 17, 1996 for Juillard Pre-College Symphony. This quote illustrates the use of music as a poetic symbol -note the highly personal internal response which is used as a basis for "truth".

CHAPTER 4
TRANSCENDENT SYMBOLS

TRANSCENDENT (MYTHIC) SYMBOLS

Transcendent symbols are cryptic representations, which are interpreted by devout believers to be manifestations of the transcendent immanence of deity in all things. The words and powers of gods are thought to be conveyed to man by the manifest forms of transcendent symbols. On the strongest level of belief these symbols are thought to have deistic forces as their source, to the exclusion of a contribution from the brain. Danielou (1991) presented the beliefs of those who respond to the power given to images by transcendent symbolism succinctly. He said, "True symbolism, far from being invented by man, springs from nature . . . itself. The whole of nature is but a symbol of a higher reality." (p 4) The unbelieving observer of the believer calls such symbols "Mythic Symbols". These are thought by said observers to be consensually validated culture elements that are used to shape the interpretation of new perceptions and reality to conform to culturally mandated preconceptions. In essence transcendent symbols can be seen to be poetic symbols that have been linked to a sacred imprimatur and handed down.

Religion is the realm of transcendent symbols. They are thought to be bearers of a higher truth and believed to represent absolute reality by devout believers. They have deep spiritual impact. Transcendent symbols at root differ in purpose and strength from such basic symbolic forms as simple, poetic, and psychoanalytic symbols. An exception exists in those situations in which the latter symbols are secondarily harnessed for spiritual representation.

Belief in the transcendence of symbols gives believers the strength to overrule, persuade and forgive fate. This strength is derived from belief in platonic dualism (See page 34.), a philosophy that sees the world as consisting of two components. These are an aimless materialism and a god guided world of the spirit. Transcendent symbols serve the latter formulation.

Transcendent symbols represent the world and works of the spirit. The world of the spirit

represented by transcendent symbols is a product of the creative power of gods. It explains the persistence of fate, and it enforces the schedules of doom that steer the material world. The sense that such representations are real is enhanced if the observer believes in the ancient principle of *simulata pro veris,* (representation is reality). This belief supports the transubstantial contention that properly sanctified images are themselves the "god".

The point of view that transcendent symbols exist as free agents, which are independent of the mind of man and carry universal expressions of the spiritual realm, is conveyed by the following quote from Andrae (1933). "He who marvels that a formal symbol can remain alive not only for millennia, but that it can spring to life again after an interruption of thousands of years, should remind himself that the power from the spiritual world, which forms one part of the symbol is eternal . . . It is the spiritual power that knows and wills, and manifests itself when and where its due time comes. (page 169[1])." The theory of the multilocal origin of symbols (V.I.), (as opposed to the idea that symbols have a single earthly place of origin and then migrate), is supported by Andrae's description of the sustaining habitat of origin of the transcendent symbol. The symbol is presented as a universal expression of the spiritual realm. Coomaraswamy (1977) applauded Andrae's ". . . idea of the symbol as a living thing, having a power in itself that can survive no matter what vicissitudes . . ." (p 345) The frequent observations that there is a universality of form to transcendent symbols are seen as evidence of an origin independent of the brain.

The latent contents behind spirits and gods are at first metaphors that explain the world. When conscious metaphor is denied a place in interpretations of natural processes for true believers in vital and young religions, manifest symbols lose their ability to function as representations. Instead they are interpreted to be core realities and the symbols in consciousness themselves are held to be gods.

One source of transcendent symbol meanings is experience, believed to have taken place during and between former lives. Impressions gleaned from such primordial experiences are held by believers to have been carried forth across the generations through the eternal memory that is implied by the presence of transmigrating souls. As Taimni (1980) described it, ". . . symbolism is the art by the help of which truths of religion and philosophy can be represented. "(p 16). The knowledge used for interpretation of these representations is an inherited structure, "which is the repository, between successive incarnations, of all the impressions of previous experiences . . ." (P 29)

Not all transcendent symbol theorists exclude a role for the brain in their formation. There are theories that the brain contributes prior experience and interpretation to the brain held memory elements that are used for deciphering symbols. Schwaller de Lubicz (1978) describes a theory that relates the characteristic of universality found in transcendent symbols to origins in the world of the spirit. He tells of the views of Heron of Alexandria,[2] and other Greek philosophers, "They acknowledged that inscribed in the soul was the universal knowledge that the exterior object awakens in the senses." (P 41) "Universal knowledge" supports the concept of origins for transcendent symbolic forms within human experience, in addition to deistic origins. Recall of human natural experience, as well as events said to have been observed during metempsychotic transmigrations and implied inherited memory can influence the interpretation of transcendent symbols. This portal for content is consonant with Freud'sidea of the inherited unconscious with its emphasis on the inheritance of acquired characteristics, and the collective unconscious of Jung. (V.I.), which holds the brain to be the carrier of ". . . archetypes . . ." which are inherited in the structure of the brain, as well as Plato's[3] belief, here quoted, that natural objects can remind one of forms experienced before incarnation. ". . . process of reason [is] . . . simply the recollection of the things which our soul once perceived when it took its journey with a god . . ." (p 55).

Shared structures in the brain that explain universal reactions to transcendent symbols are postulated by Freedberg (1998) who noted that there is ". . . a basic level of reaction that cuts across historical, social, and other contextual boundaries." ". . . which pertains to our psychological, biological, and neurological status as members of the same societies . . ."(P 22) This point of view will be explored in more depth in Unit 3, Section B, Chapter 6 "The Power in the Symbol".

MEN AND THEIR SYMBOLS

Symbol theories tend to be separated from one another by sharp divisions. These consist primarily of hypothesized differences in the nature and source of latent content. Psychoanalytic latent contents are related to derivation from repressed memory elements. Poetic symbols have latent contents derived from new awarenesses. Transcendent symbols represent gods.

All symbol theories agree on the nature of simple generic symbols. However when it comes to cryptic symbols, theorists tend to become parochial. Emphasis goes to one's own symbols with the

importance of other symbol types either reduced or denied. It is not unusual to read denials of the existence of psychoanalytic symbols in their work by artists (Magritte) and those who believe that "Earthly events are knotted to the cosmic."[4]

THE LIMITS OF THEORIES OF SYMBOLISM

All types of symbols, have realities beyond theory that appear to contradict the theory, confound the theorist and support his detractors.

Theories do not create symbols. They only provide approximate descriptions. The manifest symbol may be sufficiently removed in form from the shape of the latent symbol, for the manifest symbol to seem to stand alone, free of referent and prone to a "realistic" explanation. As a result the unconscious meanings of dreams can be denied; poems can be enjoyed for their rhythms alone and their meanings ignored; and the manifest forms of gods can take on new lives based on local antecedents and fresh adventures, which then become the basis for creating new mythic contexts and beliefs. God kings can be erased from temple walls and lost to history, making way for newer gods. Immortality is all too mortal.

Beyond theory but in actual function, manifest symbols can contain elements of simple and complex symbolic forms. The presence of one mode does not exclude the use of a manifest symbol in another mode. Thus a religiously informed dream may contain a forgiving deity whose psychoanalytic symbolic latent content is the father of the dreamer. (see Unit 3, Section B, Chapter 5) Poems of fear of blood in battle can relate to fear of menarche. (V.S. child's poem in Unit 1, Section A, Ch. 3). The usefulness of the form and meaning of a manifest symbol belongs to the eyes and attitude of the beholder far more than to the content and form of the symbol. With the exception that a few verbal, musical and visual images have the power to recommend themselves as symbols or as conveyors (evokers) of affect, the use of symbols is arbitrarily shaped by the mind of the beholder and his views of what a symbol is and can be.

The personal interpretations of the believing beholder of the transcendent symbol places the sources of the transcendent symbol's meaning in a spiritual plane outside the mind of the person who experiences the symbol. Cassirer (1953), a Columbia University professor of philosophy, remarked that ". . . every sensuous symbol is the vehicle of a purely spiritual signification . . .". (p 132) Such an

interpretation of the nature of symbols places their referents in a zone beyond the personal and divests the symbol of any connection to personal psychological referents. What is created is a representation, which though totally syncretic with its manifest symbolic form has no other referent than a message from a god. Jaspers, K. (1947) a philosopher, who began his career as a psychiatrist, proclaimed in support of "transcendence" (p75) that ". . . the reality of God is the measure of all things". (p 72) For Jaspers transcendence informs symbols with ". . . the infinity of the essentially real, . . .". (p62), while "Psychoanalytic interpretations on the whole turn into a grimace . . . suited to an era lacking faith." (p 55)

Foremost amongst the students of dualism as expressed in transcendent symbolism, who recognized the basic infrastructure of the psychoanalytic symbol but did not categorize it as a distinct entity were Weiskel and Eliade. Weiskel (1976) devoted himself to a study of the romantic sublime (see below) of Longinus. His wife described the sublime as ". . . that moment when the relation between the signifier and the signified breaks down and is replaced by an indeterminate relation." (p xiii) (Weiskel died early. His wife wrote an introduction to his book.) The experience of the sublime is a response to symbolic forms in the environment that threaten the dissolution of the self. Sublime symbolic forms transmute awesome elements into pleasant entities. This is a form of sublimation. Repression is recognized by Weiskel to be a mechanism involved in the creation of sublime elements. (p 41, p 185) He is obviously talking about entities identical with psychoanalytic symbols. A sharp pursuit of the latter concept is deferred in support of a seeking ". . . to expose the structure implicit in the act of 'joining' with the great." (p 11) and to delineate the ". . . structure beneath the vast epiphenomenon a of the sublime" (p 11), whose complexity invited elaboration inspired by the ". . . sense that something large and grand and sacred informed the world . . ." (p xiv).

Eliade (1991) was guided by a sympathy with the psychology of C.G. Jung (p 14). For Eliade symbols carry the impress of an ". . . imprinted memory of a richer, a more complete and beatific existence". The memory to which he refers is a nonhistorical archetype (p 120). It is derived from ". . . a paradisiacal stage of primordial humanity . . .", informs dreams and symbols and opens ". . . a spiritual world that is infinitely richer than the closed world of (one's) own 'historic moments'." (p 13) "Transcendent symbols are part and parcel of the human being, and it is impossible that they should not be found again in any and every existential situation of man in the Cosmos." (p 25)

ARE TRANSCENDENT SYMBOLS UNIVERSAL?

Transcendent symbol theorists see in the transcultural appearance of a manifest symbolic context, a blurring of cultural boundaries. Such blurring supports the idea of an universal referent with origins in the monocultural world of the spirit. One example of a universal theme is the presence of a vulnerable spot on the body of an otherwise invulnerable hero. (i.e. Achille's heel, Samson's hair, the soles of Krishna's feet, and Siegfried's back.) Such universal similarity is the characteristic of transcendent symbolism that gives support to the idea that transcendent symbols are entities independent of the viewer, with an origin in a zone of sources independent of a brain based memory. (See Volume 3 Chapter 3.)

Best known among the symbol theorists who recognized the existence of universal symbols and mythologies were Freud and Jung. Each created a theoretical literature that placed this easily observed phenomenon in the context of his own theory. Freud, as an Aristotlean monist was confronted with the task of bringing the universal symbol into the realm of natural phenomena. In essence his thinking ignored the existence of transcendent symbolic forms. Jung, as a Platonic dualist, set about finding as many confirming examples, of the influence on transcendent symbol formation, of a flow of thought independent of the mind of an individual man (i.e. archetypes) as possible. He searched myth, culture, dreams, and art, throughout the world in pursuit of this quest.

FREUD AND THE UNIVERSAL SYMBOL

Freud used the term "Psychoanalytic Symbol" as defined by Jones (V.S.) in describing the development of primary and secondary process thinking. In most of his other uses of the word "symbol", Freud limited the definition of symbol to universally appearing manifest forms, which represent latent content based on ancient human experience. For instance Freud (1900) noted that "Things that are symbolically connected today were probably united in prehistoric times by conceptual and linguistic identity." (P. 352). Freud called universal dream elements "archaic remnants", suggesting that they are a part of an inherited unconscious containing psychic elements surviving in the human mind from ages long ago. (see 1915-6 P. 167) Such universal symbols were understood to be used, but not created by, the "dream work".

The "dream work" included those functions of the personality that produce dream symbols. The dream work is akin to those ego functions that produce fantasy distortions of reality, and neurotic symptoms. In Freud's writings one must differentiate between "universal symbols" and the products of ego functions that mask meanings. Freud understood the universal symbol to be a component used by but distinct from the dream work. In modern usage, psychoanalysts follow the approach of Jones (1916) who postulated a symbolizing function, which used repression, condensation, and displacement in the creation of psychoanalytic symbols. Within this orientation, the existence of a symbol whose meaning is universal and transcends the boundaries of place and language is understood to be derived from universally shared human experiences in childhood.

A symbolizing function, which in early childhood processes the content of the personal past, was described in 1901. Freud noted, "We must not suppose that dream-symbolism is a creation of the dream work; it is in all probability a characteristic of the unconscious thinking which provides the dream-work with the material for condensation, displacement and dramatization." (p685) The latter defenses are forerunners of the concept of a non-cognitive ego.

Psychoanalytic symbol creation was seen by Freud to be the result of two processes. One entailed the delivery of the products of early life repression and denial, to the dream work for condensation, displacement and symbolization. The second consisted of a contribution to the symbolizing function of elements of memory whose origins were ancient.

The existence of static impersonal inherited universal symbols with roots in ancient days was fixed in theory by calling them universal symbols. The recognition of a mechanism for the processing of affect charged universal symbols, personal experience and memory opened the way for focusing of attention on dream symbols and their confreres, fantasy and symptoms at a distance from universal symbols. Dream-symbols could be viewed as dynamic products of ego functions, which along with symptoms and behavior could be traced to the functioning of an ego informed by memory of experiences with origins in the life of the person. This organization of observations and redistribution of definitions became the basis for an ego psychology that made possible a broad understanding of the influence of early life experience, personality structure, and defenses on adult mental functioning.

Freud sought to limit the reach of the envelope of possibility for the sources of symbol content to his concept, based on Aristotelian monism, that symbols are hereditarily derived from mankind's historical experience and retained in the brain. He attributed the characteristic of universality to symbolic forms based upon the following observation (1911)[5] ". . . dreamers speaking the same language make use of the same symbols . . . (683-84) . . . universal ones (p 684) . . . (which) extend beyond the use of the same language. (684) This implied that universal symbols had historical roots, extending back centuries before patients' individual experience began. Under the influence of the then current Lamarkian evolutionary theory of inheritance of acquired characteristics, it was possible to postulate a source of contemporary symbol content in the experiences of ancestors. Freud supported this conclusion with his observation that there was an innate inherited structure to symbol meanings themselves. He noted (1900) that ". . . symbols are stable translations, . . ."(P 151), an (1915-16) ". . . old intellectual endowment . . . about which, ". . . analytic experience has forced on us a conviction that even particular psychical contents, such as symbolism[6], have no other sources than hereditary transmission." Symbols have a ". . . genetic character . . ." (p352). Symbols are (19151916) ". . . an ancient but extinct mode of expression of which different pieces have survived in different fields . . ." (p 166). Thus Freud created the concept of an inherited unconscious. As late as 1938, he attributed the origin of the linkage between the manifest symbol and its referent to ". . . an ancient verbal identity . . ." (p 166). Undimmed was his belief expressed in (1900) that, "Things that are symbolically connected today were probably united in prehistoric times by conceptual and linguistic identity. The symbolic relation seems to be a relic and a mark of former identity."(P352) . . ."the ultimate meaning of the symbolic relation (is that) it is of a *genetic character"* (italics in the original).(p352) He felt that the existence of inherited fixed universal unconscious symbols gives an innate structure to symbol meanings.

In sum Freud viewed the characteristic of universality in symbolic forms to be a manifestation of a fixed internal hereditary mental structure. The contents of this memory structure persist without regard to variations in languages. They are constant in meaning. They are a spotty remnant of a once wider field of symbolic linkages. They are inherited remainders of a primitive language consisting of early manifest forms whose referents had been known, not latent.

Freud restricted his use of the word symbol to universally inherited manifest contents with universal latent meanings. These psychological products of the mind were he felt an archaic heritage

derived from the experiences of primal man.

JUNG AND HIS SYMBOLS

Jung used the word "symbol" when referring to many symbolic forms. These included symbols associated with repression, poetic symbols, psychoanalytic symbols and transcendent symbols. Jung (1964) felt that all symbolic forms have the potential to be manifestations of spiritual power. Jung regarded all symbolic forms as possible consistent manifestations of spiritual power which color or give universally shared form to all the symbols of mankind. He called these manifestations archetypes. He also recognized a specific symbolic form which he ". . . preferred to call . . ." motifs . . . that are typical and often occur. Among such motifs are falling, flying, being persecuted . . . etc." (p 53)

Jung (1964) viewed cryptic symbol formation as a primarily unconscious process He saw a need for poetic symbols, "Because there are innumerable things beyond the range of human understanding, we constantly use symbolic terms to represent concepts that we cannot define or fully comprehend. This is one reason why all religions employ symbolic languages or images. But this conscious use of symbols is only one aspect of a psychological fact of great importance. Man also produces symbols unconsciously and spontaneously in the form of dreams." (P 21)

He saw a need for poetic symbols, "Because there are innumerable things beyond the range of human understanding, we constantly use symbolic terms to represent concepts that we cannot define or fully comprehend. This is one reason why all religions employ symbolic languages or images." (p 21) He recognized the unconscious nature of psychoanalytic dream symbols, for the conscious use of symbols is only one aspect of a psychological fact of great importance. Man also produces symbols unconsciously and spontaneously in the form of dreams." (p. 21) He saw dream symbolism as an area of expression for images and ideas from zones of experience that transcend the experiences of individual lives. He noted that representations found in dreams cannot possibly be based on memory alone. (P 38)

THE COLLECTIVE SYMBOLS OF JUNG

Jung (1964) noted that "There are many symbols that are not individual but *collective* (italics Jung's) in their nature and origin. These are chiefly religious images. The believer assumes that they are

of divine origin and that they have been revealed to man. The skeptic says flatly that they have been invented. Both are wrong. It is true as the skeptic notes that religious symbols and concepts have for centuries been the object of careful and quite conscious elaboration. It is equally true, as the believer implies, that their origin is so far buried in the mystery of the past that they seem to have no human source. But they are in fact "collective representations", emanating from primeval dreams and creative fantasies. As such these images are involuntary spontaneous manifestations and by no means intentional inventions." (p. 55) Jung's (1918) concept of a «suprapersonal . . . collective unconscious" (p 10) had the following characteristics: there are no such things as inherited ideas (italics Jung's) . . ." only the ". . . innate possibilities of ideas . . ." which provide a ". . . definite form to contents that have already been acquired." They are the archetypes. As ". . . a part of the inherited structure of the brain, they are the reason for the identity of symbols and myth-motifs in

all parts of the earth."(p. 10) They are (1939) ". . . a wave that crashed on the shore of time and left a strip of foam." (p 526).

Jung (1964) described the archetypes or primordial images that occur in dream symbolism as ". . . elements that are not individual and that cannot be derived from the dreamer's personal experience." (p 67) They are ". . . representations that can vary a great deal in detail without losing their basic pattern." when they ". . . form representations of a motif ".(p. 67) In reports of clinical situations, there is clearly to be seen manifest imagery that appears to be preformed and intrusive into fantasy in people living centuries apart. Such findings could support Andrae"s (VS) concept of an extracorporeal repository of symbols that is independent of the brain and can shape the content of human thought. For instance a man who had had a vision and thought he was insane consulted with Jung. Jung took a 400-year-old tome and showed him an old woodcut depicting his "very vision." Jung said to him, "They knew about your vision 400 years ago." (p 69)

In sum, Jung's reported observations stretch the edge of the envelope of symbol phenomena toward a dualistic concept that includes a spiritual origin both for the latent content and the manifest form of universal symbols. Jung attributed referents and manifest symbols to the contents of primeval dreams and creative fantasies that are independent of individual experiences and "seem to have no human source." Jung viewed the characteristic of universality in symbolic forms to be the product of a fixed

inherited brain structure that persists without regard to variations in language and which contains constant meaning. It is a spotty remnant of a once wider field of inherited reminders based on primitive experiences.

Jung did not limit his use of the word "symbol" to universally inherited manifest contents with universal meanings. He recognized as symbols, representations with psychoanalytic (repression based, poetic expression of new insights) and transcendent (religious symbols expressing the content of spiritual sources) roots. He saw collective symbols as universally inherited manifest contents with universally understood meanings, which were an archaic heritage derived from the experience of ancient man.

VIEWS OF TRANSCENDENT SYMBOLS IN THE WRITINGS OF OTHER SYMBOL THEORISTS

Jones (1916) held that there is a "true symbolism" (P 90), which is to be differentiated from other forms of indirect representation. True symbols are ". . . re-created afresh out of individual material, and . . . stereotypy (Jones word for universal similarity) is uniformity of the human mind in regard to the particular tendency that furnish the source of symbolism."(p98) He saw the latent contents of all symbols as ". . . ideas of the self and the immediate blood relatives, or of the phenomena of birth, love and death." (P 102)

Freud, Jung, and Jones were physicians and therefore bound to establish a biological link in the form of brain function in any theory that explains a universal symbol content, which transcends the boundaries between generations. Other theorists are not so bound.

Eliade (quoted by Williamson (1986) spoke strongly about the strength and independence from the influence of man of an universal symbol. He noted that "history cannot basically modify the structure of an archaic symbolism. History constantly adds new meanings, but they do not destroy the structure of the symbol." (Williamson p 27) In keeping with this concept, Williamson (1986) adds "We must relearn something that has been lost for many centuries, the meaning and impact of deeply rooted icons-those symbols that Eliade calls "transconscious" images, ancient and fixed emblems that always remain aspects of the subconscious. Yet when such symbols become conscious, they are inevitably interpreted in the

prevailing genre of each era."(p 41)

The idea that universal symbols are not a product of the mind but independent entities capable of being influenced by man but not of his making, is strongly proclaimed by Bernbaum (1992) in his treatise on the symbolic meaning of mountains. Why mountains? "Because of their awe-inspiring power, mountains are prime places for this kind of encounter with the sacred. He quoted John Ruskin (p XXI) to the effect that «Mountains . . . revealed most clearly the truth that nature is the creation of God» (p 231). —a claim that has lead to the use of mountains in the works of painters of transcendence.

"With the rise of the Romantic movement at the end of the eighteenth century, mountains moved to the fore as the principle subjects of paintings designed to awaken the sense of the sacred." (p231) Artists portrayed landscape as symbols of the infinite.

There seems to be no question of this. Huntington (1966) in his study of Frederick Church, the American landscape artist described the artist's deep disturbance at the hands of the ". . . scientific revolution that had by 1880 all but triumphed in the intellectual world. (p 108) In 1883, Church confided that "I wish science would take a holiday for ten years so I could catch up." (p 108) "Origin of Species" had precipitated a fundamental intellectual crisis. "The Manifest Destiny proclaimed . . . in Church's paintings . . . was a faith in a providential plan." "Church's art was premised on a nature of design." Man was made to recognize the sublime and the beautiful in Creation, because the Creation existed for him." ". . . these qualities, . . . were revelations of the transcendence of the universe . . ." (p 109)

Nature as a transcendent symbol permeates a museum label for the picture "The Glory of the heavens" by William Keith 1838-1911 in the M.H. De Young Memorial Museum, San Francisco, Ca. The artist describes the process of creating a symbolic painting based upon a spiritual impression.

"The only thing a poor bewildered artist can do is seize in his mind some flash of sun upon a tree, some light of God in the sky, brood upon it, work it into his soul, and some day—suddenly, before he knows it, he has fixed his thoughts—God's thought he hopes it may be upon the canvass." 8/2/95

Transcendent symbols need not be visual in form. In Modeste Tchaikovsky's 1892 libretto for the opera "Yolanta", The heroine who is born blind tells of the use of symbols other than visual that carry the

message of God.

> "No, No for the eternal glorification of God, I need no light. His presence is infinite, without limits. In the night's perfume, in sounds, even in myself there can be found a good and invisible God. Can you see the chirping of a bird in a rose-bush? Or the soft murmur of a quick stream in the sand? . . . . to glorify god eternally, It is not light I need." (p 53)

(Condensed and translated from the French by the author.)

Goethe (1979/1796) presented a literary depiction of the universal Dualistic-Platonic Symbol. He says "It is a good thing when we can be justly pleased when inanimate nature provides a symbol of what we like and respect. It appears to us in the shape of a Sibyl who presents in advance a testament of that which has been decreed from the beginning of time but is only to become real in due course." (p37) This quote is not far removed from the philosopher, Susan Langer's (1942) comment that "Nature speaks to us, first of all, through our senses; the forms and qualities we distinguish, remember, imagine, or recognize are symbols of entities which exceed and outlive our momentary experience."

The concept of cross-cultural symbols based on migration rather than universal symbolism, gives an explanation that would put the concept of universal symbolism to rest if it were not that such symbols are keystones for belief systems that people are unwilling to surrender. (For more information about Universal Symbolism, see Unit 3, Section A, Chapter 2)

Goetz (1959), as a cross-cultural art historian, addresses the question of universally shared symbols with a challenge derived from the marked diversity to be found in the culture elements of geographically isolated areas. He noted that:

> "Popular slogans like Western individualism and realism versus Eastern mass mentality and mysticism prove to be nonsense when subjected to closer scrutiny. Rather it is a common geographical background which induces them to make use of the same stock of traditional forms and symbols, the same climate which inspires them to similar ways of self expression, however different their reactions may otherwise have been as children of early or modern, younger or decaying nations and civilizations." (P 10)

CONCLUSIONS

Symbols are memory moieties. As such these codifying and truncating abstractions, which reduce the boundaries of that which is recalled to the level of opinions and preconceptions, reduce newly

perceived realities to fit a weathered and antique, somewhat antic mode. Transcendent symbols are complex symbols, which have a potential to represent more than is inherent in their manifest content. Culture uses such a manifest symbol to give universal implied meaning to a thing or percept, in the process creating a door into consciousness for entities of thought.

Simple symbols communicate. Psychoanalytic symbols hide meanings and help in adjustment. Poetic symbols help cultures to grow. Belief in transcendent symbols influences billions of people. Transcendent symbols dominate and control mankind and its view of self, world and cosmos. They feed the content of culture by loading the interpretation of objects, used as manifest symbols, with universal implied meanings.

NOTES

1 Walter Andrae in "Die Ionische Saule, Bauform oder Symbol?» 1933 Schlusswort. as quoted by Campbell, J., from Ananda Coomaraswamy (1977)Page 346 and Zimmer (1945) Page 169.

2 Heron of Alexandria Definitions 136, 1-4.

3 Phaedrus

4 See page 88 in Giedion (1962).

5 From "On Dreams" 1901; section 12 from which this is quoted was added in 1911.

6 Note here the limitation of the use of the word "symbol" to those symbols, which have origins in "hereditary transmission". Psychoanalytic symbols with dynamic origins are assigned by Freud to the dream work.

SECTION B

THE ONTOGENESIS OF SYMBOLS

CHAPTER 5
THE ONTOGENESIS OF THE SYMBOLIZING FUNCTION

INTRODUCTION

The term "symbolizing function" refers to the actions of the brain mechanisms that produce symbols. The ontogenesis of the symbolizing function is a product of an interplay between the biological maturation of the brain and shaping developmental influences contributed by the environment. The process is characterized by vast, subtle, and complex detail, and complexity blurs the detail. It shrouds the nature of the maturation of symbolic forms from easy comprehension. As a result theorists are free to create impressions of the symbolizing function, which are shaped by disparate persuasions that support parochial goals. Both those who need to keep things simple and those whose thinking is served by complexity, derive something to champion and support their cause in the bewildering complexity that characterizes the ontogenesis of the symbolizing function. There results a panoply of preemptive explanations, which become awesome hurdles for those students of symbolism who seek the sources of the symbols of man in the workings of the brain. Such students must push tradition-laden explanations aside, to free the way for research designs based on the study of the repeatable, transmissible, and verifiable workings of the symbolizing function.

One preemptive explanation limits all symbols to the "simple" form. It posits the theory that there are neither unconscious aspects nor dynamic repressions during symbol formation. Only the idea that the mind produces simple transmutations is invoked. Those, who follow this approach, come to the study of symbol ontogeny prearmed with views of complex symbols that preclude objective study. Such theories conceive of symbols as elements of the personality that arise de novo at birth. "There is what represents, and there is what is represented. That's all there is to know". If there were any thought given to a contribution from an ongoing maturation of the mind to the construction of symbols in these theories, it would be only a token. Pathological alterations in the symbolizing function based on faulty ontogenesis are foreign to such theories. Symbol laden latency states are ignored and the age range six to twelve is construed to be a time period devoid of development and without a psychology of its own. As a result, in their concepts the role of the natural development of symbols in the control of affects and the evolution of

civilization tends to be unexplored.

Another preemptive hypothesis assigns the activation of dream symbols to the chance stimulation of memory traces in the brain by vagrant electrical impulses arising in the reticular ascending substance. In this hypothesis there is no place for the ontogenetic unfolding of symbolic forms.

Transcendent symbol theorists have elevated their symbols to the level of divine messages. In discussions of transcendent symbols, the contribution of ontogenesis is for the most part considered to be irrelevant. Instead, symbols are thought to appear full grown as gifts from the minds of gods. They are not seen to be the products of human mentation and brain function with its attendant ontogenesis. The deistically inspired manifest transcendent symbol comes to man from dreams or visions or the chance forms of nature. The sources and referents behind their latent contents are seen to be streams of consciousness that exist beyond the boundaries of mortal existence in places far removed from the material natural world of humankind.

Ontogenesis is of interest only to students of simple symbols and to students of psychoanalytic symbols. The studies of the former are best served by observations and reconstructions of events that occur during the first twenty-six months of life. The studies of the latter begin with the onset of the development of psychoanalytic symbols beginning with the third year of life. A knowledge of the development of psychoanalytic symbols aids in understanding the clinical characteristics and pathology of any manifest symbolic forms, which have been divorced from their referent by repression.

PHYSIOGNOMIC THINKING

Symbol ontogenesis has pertinence for theorists who study complex symbolic forms whose characteristics derive from stages in the maturation and development of symbols. The ontogenesis of poetic symbols for instance is linked to one of the vicissitudes of projection that is activated at puberty, (See Sarnoff 1972b.) and the paradigmatic roots of transcendent symbolism can be found in physiognomic thinking.

Physiognomic thinking (V.I.) is a cognitive process that attributes meaning and motivation to the movements or appearances of objects. It colors the syncretism that dominates childhood cognition early in

the first year of life. Regression of adult thinking to the ways of physiognomic thinking can result in attribution of identity, meaning, and motivation to the images, shapes, and movements of intrinsically inanimate objects, such as trees and the idols, which are used for worship. Physiognomic thinking represents a protosymbolic (primitive) stage in symbol ontogenesis. Kent (2000) described a possible neural substrate located in the amygdala for physiognomic thinking: "Increased regional blood flow has been demonstrated in the amygdala of healthy subjects in response to the presentation of fearful facial expressions." (p736.) This observation reinforces Damasio's (1999 P 62) observation that people without functioning amygdalas cannot judge negativity in faces.

PROTOSYMBOLS

Protosymbols are the products of symbolizing structures and functions, which begin to appear during the first year of life. They have characteristics of preverbal representations. (See this volume P 130.) Like the true symbol they can be perceived to represent something other than what they intrinsically are. They may be differentiated from true symbols by the absence of a clear conceptual boundary between latent contents and the manifest form of the protosymbolic representation. The face that is feared remains the face that has been misinterpreted. Physiognomic perception works through misinterpretation. True symbols work through displacement. Protosymbols when added to memory share with symbols the role of memory moieties that may carry false or altered data that will influence interpretation and participate in the symbolization of future perceptions and memory recalls.

THE ONTOGENESIS OF THE SYMBOLIZING FUNCTION

INTRODUCTION

The symbolizing function involved in the creation of simple and psychoanalytic (secondary) symbols normally grows in strength and complexity with each stage of development up to the age of 16. The symbolizing function's contribution to memory creates words or images, which enter memory as efficiently reduced representations of perception and experience. These are retained to serve later recognition, communication, and interpretation of stimuli, as well as for evocation.

At times memories under the impetus of drives or sympathetic stimulation rise toward consciousness. When this occurs after the acquisition of psychoanalytic symbol formation during the third year of life, symbol formation is available as a defense. Disquieting affect that accompanies the rising represented memory activates denial and displacement for the production of substitutes (psychoanalytic symbols).

The latter convey the represented memory in form so masked that diminished valence for attracting affect is generated.

The ontogenesis of the symbolizing function begins during the period of dominance of the affect motor memory organization. (115 months) "Affectomotor memory organization" refers to the organization of memory that dominates during the presymbolic stage of development. It is built around the ability to recall initial contact with experiences through the use of evocation of affects, perceptions, and bodily postures. Such recall is organized around sensory experiences rather than through words or abstractions. Correction of such recall through confrontation with verbalized conceptual contradictions is not possible.

Pettito(1991) noted that ". . . babbling is tied to the abstract linguistic structure of language and to an expressive capacity capable of processing different types of signals (signed or spoken)." Babbling can take place in the form of vocalization or manual expression. Babbling is an early manifestation of brain based language capacity. It is a primitive representation of the expressive capacity that can process the capacity for conceptualization into spoken and signed communicative manifestations. Babbling contains practice forms that will be converted to simple words once articulation becomes sufficiently mature.

Though simple words are available toward the end of this presymbolic stage, they are used primarily for naming. Verbally encoded memory (the use of words for retention of experiences and the communication of recall (simple symbols) is given gradually increasing priority as the child approaches 15 months. This is "verbal concept memory", (See Sarnoff 1976 P. 106.) It grows in usefulness till it dominates at 7-8 years of age.

Affectomotor encoded memory for experience is usually recalled in its entirety. This situation holds sway during the first 15 months of life. Later developed verbal and image encoded memory reduces to a

fraction the content of the original experience. All such reduced tools of recall are simple protosymbolic forms.

THE SHIFT FROM HAPTIC TO TELERECEPTIVE DOMINANCE

In the earliest experiences of the child, haptic sensation dominates. Haptic (close in, internal) sensations such as affects, proprioception, protopathic sensation, vibration, heat and cold, dominate in the recalls of affectomotor memory. They are not subject to external corrections. The haptically based initial world of the infant, is self centered, and without a remembered concept of the self immersed in a world of reality, to be used as a reference for interpretation.

During the first months of life, there is little in the memory to give interpretive shape to the diffuse incoming sensory experiences that are the phenomena of telereception, (perception at a distance), namely, incipient vision and hearing. As a result telereceptors are at first thinly cathected and relegated to unimportance. The gradual enhancement of stored items in memory, which can be used for the interpretation of visual sensation enables the creation of telereceptor memory based interpretations of perception. When these become stabilized and recognizable they contribute preconception and opinion to the interpretation of both haptic and telereceptor perception. Once fixed, they become subject to verbal confrontation, challenge and correction. The latter process provides an early paradigm for the intellectual verbal confrontations of secondary process thinking. The latter enhances reality testing and foreshadows the communicative corrections seen in tertiary elaboration (V.I.)

THE EMERGENCE OF TELERECEPTOR INFLUENCE ON MEMORY COMPONENTS RESULTS IN THE PASSING OF HAPTIC DOMINANCE

The appreciation for natural reality achieved through haptic body percepts contrasts sharply with reality testing acquired on the basis of telereceptive (i.e. visual and auditory) perceptions. The former sensations are highly personalized and are limited primarily to sensations from within the body. The latter sensations participate in the creation of a differentiated reality tested external world. Telereceptive dominance in organizing memory introduces reality testing, which supports recognition of the existence of the natural world. Haptic percepts only gradually come to be confronted by perceptions of the external world.

There is no way to validate consensually haptic percepts the way that one can use a witness to reality test shared experiences of vision and hearing. Haptic memory elements that participate in this form of perception are at first not sensed to be representations. Rather the retrieved memory is early on experienced and later on recalled as syncretic with the original experience or perception. Such a memory element is called a *syncretic protosymbol.* Syncretism no longer dominates memory when experience and memory can be *disjoined.* The ability to sense the difference between an event and the created differentiated memory of the event is a necessary step in the experience of being able to delay responses, chose reactions and create simple symbols. It underlies the ability to separate referents from representations. Once such separation occurs, repression makes possible the creation of psychoanalytic symbols.

THE AFFECTOMOTOR EXPERIENCE

What does the child experience as a characteristic of the affectomotor memory organization? During the affectomotor memory subphase of syncretic cognition, the non-communicative and non-verbal nature of affectomotor memory makes direct communication of verbally encoded observations of the inner experience of the presymbolic child's cognition impossible. The experience in statu nascendi, cannot be conveyed by the child. Even for the adult there are too few words for the communication of haptic experience to make possible the sharing of haptically oriented experience. Scientific insight into the nature of this process must be gained from other sources. One such source is the study of the mental functioning of persons with persistence of primitive preverbal cognition. Another source is reconstruction based on manifest regressions to this early stage in an otherwise healthy individual. Such regressions occur either as a result of psychological pressures or of physical trauma resulting in brain damage. The study of animal cognition is also of value.

A reconstruction of the mental experience of this aspect of the first year of life has been the target of a number of investigators. A synthesis of their work is presented here, in an attempt to offer insight into a child's memory function during "the syncretic period" when the symbolizing function has not yet developed to the point at which true communicative symbols are produced.

THE SYNCRETIC PERIOD

Werner (1940/1964) described the first stage of cognition in the child, the characteristics of which also form the ultimate stage of cognition in animals, as *syncretic* (p 53). Syncretic cognition presents to the child a view of the world in which all perceptions and concepts are experienced as fused. Sensations from outside and from inside the body boundary are not differentiated. Percepts and affects such as tense expectation (a forerunner of anxiety) are perceived as being a unit. The ambient world is a fused mass from which elements that stand out disrupt homeostasis and in the process generate affects. Though haptic, these affects appear to the child to be part of an outside stimulus rather than a response to it. There is no sense that the affect could arise from within the perceiving subject. Drive satisfying objects such as food stand out from the fused sensations of the ambient world. Hunger oriented tension is resolved without delay by eating. This creates a perception of a fused relationship between food and sensations.

SYNCRETISM AND AFFECTOMOTOR MEMORY

In the preverbal stage, memories are retained and recalled in the form of affectomotor states. The closer that representation comes to complete syncretism, the more does the process of representation recreate a "concrete natural situation" (p 253). There is no space for time delay.

Affectomotor memories and protosymbols go through a stage of first appearance and then succumb to maturational obsolescence, as a result of being overshadowed by increased cathectic attention to more mature symbolic forms. This process produces infantile amnesia for affectomotor memories. The infant's experience with symbolic forms derived from the earliest cognitive state in man, can be reconstructed from studies of regressions along the path of this developmental progression. In Werner's words (1940/64) "Whenever there is a decline in the power of the symbol, the genesis of representation is bared . . ." (p 252) A pertinent study by Werner (1940/64) described syncretic methods of representation without word symbol use. He observed ". . . in certain psychopathological conditions in which the symbolic function has regressed . . ." (Referring to a "symbol blind" aphasiac (P 152) patient reported by Head (1926) that there occurs in syncretic cognition, an ability to create "sensuous images" (p152) with a "loss of the ability to express schematic images derived from the realm of abstraction." (p

152) Such a patient's experience is limited to a "concrete life space and mode of action" (p 198) "they are bound fast to the eventual situation as it is experienced and are bereft of the capacity to execute an action according to a preconceived schema." (p 198) "Such patients have not forgotten words as such, but they are quite unable to use them . . ." (p 252) He refers to a type of aphasia in which "the intellectual ability to symbolize" (p 252) not the use of words for naming is effected. The use of conceptual and communicative symbolism is beyond the powers of these patients. They may be capable of knocking at a door before entering the room, but be unable, as a pure fiction, to demonstrate the act of knocking. (p 252)

"The function of representation is . . . much more primitive, the less intentional[ly] . . . and volitional[ly] determined it is." (page 253). Volitional behavior based on conceptualization does not occur during the stage of syncretism. There are no verbal concepts to lock plans into memory. There is no differentiation between subject and an object as a target goal. Therefore there is no context within which to orient action in affectomotor cognition.

A study of regression in dreams is another source of information about the experience of syncretic cognition. The mechanism of condensation by which two concepts (the latent content and the manifest content of the dream symbol) appear as a single representation in a dream symbol (i.e an human with the leg of a wolf) is a manifestation of regression to syncretism. Other examples of such fusion appear in mythology. Examples are metamorphoses and hybrid beasts (monsters and chaemera) such as the griffin or basilisk in Greek mythology and the makara in Hindu belief. Each of these examples give an idea of the capacity for fusion of images that characterize the earliest states of syncretic cognition. Persistence of syncretic thinking enables religious fusions in the creation of idols. The fusion of god and self experienced in mysticism[1] and god and image experienced in the transubstantial sanctifications of ancient Greek religion[2] are examples of symbolizations that offer insight into the nature of the early syncretic cognition of the child. A loss of differentiation between referent and representation occurs with transubstantiation. The process was described by Hall (1994) who noted that ". . . when an artist made an image of the sun, the moon, or a thunderbolt, it was the god himself that he was portraying." ". . . this kind of image goes beyond symbolism: it is a literal representation of a deity." (page X) "In the Dionysiac rites the Bacchantes, female devotees of Dionysus/Bacchus, frenziedly tore the beast apart and ate its raw flesh. This had a more mystical symbolism: they were consuming the god himself, just as they drank his blood in the form of wine. The bull's death released the god's power which passed to the worshippers".

(page 13)

These early symbolic forms can persist. Piaget (1945) observed persistent of syncretic thinking occurring between the ages of two and seven. As a result, "Perceptive activity, which being incapable of analysis and comparison, of anticipation and transposition, [left] the child passive in the presence of what he perceives." (p78)

The absence of a familiar object within the surround creates a reality that intrudes on syncretism. When experienced as a state of apprehensive expectation it becomes a forerunner of food oriented hunger feelings and the affects of separation anxiety. Both are evidences of disruption of syncretism. Werner (1960/48) hypothesized interference with syncretic cognition in a hungry ape. "If . . . for example, an ape . . . {believes} that he is about to get a certain food . . . , and then . . . {is} given something else he will be . . . "disappointed". ". . . the ape's representation of the anticipated fruit must not be thought of as an explicit idea. Rather, as is often the case among human beings, the prospective thing is anticipated implicitly in terms of a certain psychophysical state of tension, of a specific affective attitude. (p. 250) In ". . . syncretic representation; the object is represented (reexperienced) not explicitly, but implicitly by means of motor-affective behavior" (p 250). In this description of ape cognition, there is introduced maturation during symbol ontogenesis at the point that syncretism gives way to a self-object oriented world view. Sensations and perceptions can now be retained in the form of protosymbolic nonverbal abstractions that create memory banks, which can be used as representations for use in the interpretation and differentiation of new perceptions. The ape's reaction to food is an example. Hunger and recognition of the need satisfying potential of food cause fruit to stand out from the background. The introduction of focused emphasis on a real and wanted element in the world undermines the state of undifferentiated fusion of world and object that is syncretism. This undifferentiated ambiance is changed when objects, which satisfy need call attention to the world. Syncretism, the first stage of cognition for children, gives way to a differentiated world as the result of the introduction of such emphases. To understand the effect of experience and memory on syncretism consider the common experience of walking into a forest and at first only differentiating the trees one can name; Or consider the hungry man in a foreign land who is attracted first to the foods which he can identify on a laden table.

Syncretism seems on the surface to be a simple phase from which the child merely needs to emerge into a relationship with the differentiated reality of the natural world. This is not the case. Stimuli must be actively interpreted to form perceptions in memory of reality. Such interpretation requires a bank of stored acquired representations in memory (protosymbols and symbols) to create an interpretive context within which new perceptions can be understood.

The immature sensory apparatus of the syncretic phase has characteristics that distort sensory stimuli from the start. Perceptual distortions such as suppression and denial are innate to the nervous system. (V.I. "the physiology of visual suppression" in Chapter 10 this volume) Their presence creates inaccurate representations of reality, which are placed in the storage banks of memory. After *disjuncture* (See, this volume, Pp 119, 126.), these distortions contribute to faulty perceptions of the natural world. This process provides a paradigm for tolerance of later impaired psychic reality.

Results of research into the functioning of the visual sensory cortex has revealed details about the role of memory in shaping the interpretation of stimuli. Studying distortions of the field of view during visual processing, Maunsell (1995) found that there is selectivity in perception, which is self-determined and based upon prior experience. Utilizing "Microelectrode recordings from behaving monkeys . . ." (p 764) Maunsell showed that "neuronal responses in the visual cerebral cortex can depend greatly on which aspect of the scene is the target of the animal's attention." (p 764) ". . . while the early stages of the visual pathway provide a faithful representation of the retinal image, later stages of processing in the visual cortex hold representations that emphasize the viewer's current interest. By filtering out irrelevant signals and adding information about objects whose presence is remembered or inferred, the cortex creates an edited representation of the visual world . . ."(p 764) Memory elements that persist from the phase of syncretic thinking, can alter interpretations of perceptions of reality to the point that memories derived from them do not mirror a true image of the real world.

There are two types of impaired perception that may persist from infantile cognitive immaturity. These are physiognomic thinking and synaesthesia. These contribute to the formation of representations that fall so far off the mark in accuracy that they are not reproductions and therefore are symbolic forms according to the definition of D'Alviella. (V.S.) When these misperceptions become part of memory, the symbolic forms that they become contribute to distortions after disjuncture that influence life decisions

and perceptions down through the years. An understanding of physiognomic thinking and synaesthesia gives insight into the nature of the child's experience at the time of origin of the protosymbol memory banks that will be used in interpreting new sensations. Using this premise one can reconstruct childhood cognition as it comes to be influenced by the mature symbolizing function that produces word symbols. Insight into this process may be derived from a study of people who suffer from persistence of such early cognitive modes.

PHYSIOGNOMIC THINKING DURING THE SYNCRETIC PHASE

Physiognomic thinking refers to the apparent power of images to create a sense that they have animate life, in the eyes of an observer. The term was introduced by Werner (1940/64) who described physiognomic thinking as participating ". . . in our perception of the faces and bodily movements of human beings and higher animals. Because the human physiognomy can be adequately perceived only in terms of its immediate expression, I (Werner) have proposed the term physiognomic perception for this mode of cognition in general." (p 28) Arising during the syncretic phase, physiognomic thinking sets the pattern for later appearing transcendent symbols. Werner noted that during the phase of syncretism ". . . objects are predominantly understood through the motor and affective attitude of the subject (sic) . . ." "Things perceived in this way . . . even though actually lifeless, seem to express some inner form of life." (p 69)

THE SOURCE OF PHYSIOGNOMIC DISTORTION

The experience of physiognomic thinking in the adult gives insight into the world of experience of the syncretic child. Self-descriptions of artists . . . reveal such experiences. Kandinsky, the artist, saw the world physiognomically. He reported that "on my palette sit high, round raindrops, puckishly flirting with each other, swaying and trembling." (p 71 in Werner 1940/1964) As a result of physiognomic thinking, form can suggest animate motivation. Form and movement evoke responses from humans. This provides the basis for the "power of images" to evoke symbolic responses. Physiognomic perception is an antecedent of anthropomorphism (reading humanoid motivation into idols, animals and swaying trees.) This response is a primitive level of signal affect, which in later more mature forms, is an activating link in initiating the symbolizing process.

THE ORIGINS OF PHYSIOGNOMIC THINKING

At the inception of human cognition, there is no bank of remembered "symbols" to fall back upon. All perception is experienced as belonging to an undifferentiated surround. The interpretation of objects perceived through sight and sound (the telereceptor experience of the world) is informed by memories of recent and unchallenged syncretically diffused haptic sensations. Both self and nonself elements are included for there is as yet no boundary between the I and the non I. Touch, proprioception, fine sensibility, epicritic, protopathic, and erotic sensations are encoded in memory banks in the period before disjuncture. Since contributions to memory derived from haptic sensations are not subject to modification by confrontations, their derivatives in memory give rise to protosymbolic forms and reactions that contribute to misinterpretation of stimuli originating in natural reality. Therefore the initial interpretations of objects are free of reality constraints. The syncretism of childhood is similar to the cognitive style that gives to symbols that appear in dreams free reign to change form. As Kubie (1953) has noted ". . . in the dreams of sleep we . . . accept . . . visual pseudopercepts complacently as though they were real, precisely because no comparisons with "Non-I" reality are possible." (P 81)

In order to exist secondary process thinking (the system of thought characterized by realistic logic) requires disjuncture. The introduction of the object world into memory through telereceptor inputs established the basis for a line across which correcting confrontations derived from immediate reality perceptions can alter future interpretations of sensations in favour of reality testing. Failing this, there is persistence of haptic influence. This failure promotes a propensity for autistic personalization in the memory elements that create symbols after disjuncture. Haptic memories inform psychological responses to perceptions such as feelings of awe, tingling, and other inner sensations, which are attributed to telereceptively acquired images. Reality testing regarding haptic percepts contrasts sharply with reality testing regarding telereceptor sensations. Since they are experienced within the organism, haptic percepts cannot be challenged by external perception. There is no way to validate consensually haptic percepts. When experienced as an attribute of the syncretic global reality of the child, haptic sensations can influence the interpretation of motivation of movement and facial form in the natural world. This is part of the psychological infrastructure that produces physiognomic thinking.

SYNAESTHESIA DURING THE SYNCRETIC STAGE

Synaesthesia refers to an overflow of sensation from one sense to another. It can be understood to consist of cross modal associations. Gombrich (1956) described synaesthesia as a "splashing over of impressions from one sensory modality to another(P 366). An example would be hearing a sound upon seeing an image. Critchley (1994) defined synaesthesia as a ". . . break out from the confines of the recognized modalities of sensory perception, leading to an illusionary misinterpretation of sensory data . . ." (p 112) (The word, Synaesthesia is derived from the Greek; syn meaning union and aisthesis (as in anaesthesia) meaning sensation. It appears to have been recognized as a phenomenon as early as 1710. Synaesthesia dominates cognition in early childhood. (P 106.) It is an innate immature distorting factor in interpretation of sensation.

In synaesthesia, stimuli are reacted to by responses of sensation from neurons unrelated to the sensory modality through which the stimulus entered the brain's perceptual system. This influences the form of protosymbols by shaping the interpretation of natural reality, and in the process produces a distorted view of the world. An example is offered by Luria (1968) ". . . every sound . . . immediately produced an experience of light and color and sense of taste and touch as well." (p 24) For the naive child, these distortions are experienced as valid phenomena. Synaesthesia as an aspect of early childhood experience leaves memory traces of distorted perceptions—once or more removed from the referent. This is a feature shared with true symbols.

Synaesthesia is a characteristic of the early inputs of affectomotor memory. Displacement of sensation introduces an altered context to the memory of a perception or a recall. As a highly personal protosymbol it is a primitive form of simple symbol. An emphasized presence in early childhood presages tolerance for autistically tinged interpretation of stimuli in later life.

ADULT SYNAESTHESIA IN NORMALITY AND PATHOLOGY

Synaesthesia at any age implies the introduction of "illusionary misinterpretations" when differentiating self from object world. Synaesthetic perception can attribute a memory, which is interpreted under the influence of fused sensations to events in the natural world. Persistent synaesthesia refers to the influence of remnants of infantile fused sensations in adult perception. Such

capacity adds to skills of substitution, displacement, and condensation in seeking representations. Lack of these skills as occurs with damage to the angular gyrus (Wernicke's aphasia) leads to concept formation with impairment in finding words/symbols for representation of concepts. (see Solms (2000) p 99.) These capacities remain sufficient in healthy personalities to make it possible for the symbolizing function to shift from referents to representations in the formation of symbol substitutes.

Critchley (1994) has observed that adults with a gift for synaesthesia can ". . . receive a sensory impression, translate it into a sensory percept within the same sensory modality, and then, in the course of extracting from it an emotional appeal or some equivalent higher sensory recognition, invoke other sensory percepts" (p 112). These can involve ". . . unrelated and apparently disparate modalities of sensation; for example, the blast of a trumpet may awaken waves of golden sound." (p 112) "Somehow those subject to such synaesthetic sensitivity are able to conjure forth . . . imagery and sensation—which belong to different sense modes." (p 112)

Should the phenomenon persist in a dominating form, aberrant states such as mnemonism dominate cognition. The experience of synaesthetic perception in the mnemonist may be inferred from Luria's (1968) description of cognition in an adult mnemonist who encoded memory by using information derived from a technique like the shift in form that characterizes synaesthetic perception. The mnemonist had a perfect memory for visual and verbal percepts, but not necessarily for their conceptual meanings. He achieved a remarkable capacity for total recall by "converting meaningless sound combinations into comprehensible (visual) images" (p. 45). This complex process parallels synaesthesia, which the mnemonist had experienced extensively in early development in its simpler form. He was fixed at the sensory affectomotor level of memory organization. He could recall visual images of words. He could not recall their abstract meanings. He developed poorly the capacity to gather abstractions in memory so as to create a bank of abstract conceptions against which to compare new experiences. Never could he develop the abstract conceptual level of memory organization. "Thus, trying to understand a passage, to grasp the information it contains (which other people accomplish by singling out what is most important), became a tortuous procedure for S. a struggle against images that kept rising to the surface in his mind" (p. 113).

THE ROLE OF SYNAESTHESIA IN ACTIVATED MEMORY

Synaesthesia (cross sensory stimulation in which stimuli in one modality (taste) can activate memory elements derived from past visual experience can play a part in creativity. Proust's (1928) telling of the role of the taste of a bit of pastry in evoking a visual memory from time long lost is an example. (p. 66) He describes the passive evocation of a memory, in which taste sensation activated a visual image of a city. A cookie was eaten. The taste activated visual memory contents synaesthetically linked outside of consciousness. Taste served as an activating agent that dragged a visual protosymbol into the consciousness of a disjoined world. El Greco, while painting, obtained similar inspiration from the playing of a hidden orchestra. (Luria 1968 p 115)

DISJUNCTURE—THE TRANSITION FROM SYNCRETISM TO SIMPLE SYMBOL FORMATION

"Disjuncture" refers to the beginning of the use by the mind of the fact that need and fulfillment are not fused in the areas of aggression, sexuality, thirst and hunger. The state of fusion referred to is called syncretism. As a result of disjuncture mental substitution of alternative objects in fantasy can offer gratification in the short term. With the advent of disjuncture applied to zones of time, space, and memory, the syncretic fusion of self and object fades and capacity for delay of gratification becomes a factor in mental life. With disjuncture at first, as Kubie (1953) noted ". . . concepts and their related symbols overlap." (p.70) Then with developmental accumulations of learned skills, and acquired knowledge about the world, the child establishes a memory image, which approximates natural reality. This internal image of the world permits delay of reality gratification and the establishment in psychic reality of a boundary between the self and the world. Gratification in fantasy begins. Banks of knowledge, which are based on these internal world images become the sources of information about areas beyond the boundaries of the self. Manifest symbolic forms in thought and in fantasy—as well as memory panels needed for recognition and interpretation of new perceptions—are derived from these banks of knowledge. Disjuncture is the process at the very heart of emergence from syncretism.

Potential for delay of discharge or gratification of drives is generated when need and fulfillment need no longer be fused and delay is possible. Such a state exists after disjuncture for hunger, sex, and aggression. Delay itself readies a place for yearning in the field of awareness. Kubie (1953) in describing

the nature of the experience of unfulfilled psychic needs of the child in the preverbal early disjuncture period, commented that, "During this brief initial period . . . the infant experiences his psychic needs as changes in his vague sensory percepts of the parts, the products, and the requirements of his own body." (p. 72) This is probably an accurate description of the child's experience of the "intermediate zone of experiencing"[3] that is generated by disjuncture. The intermediate zone is not an empty space. In reality it is a zone of sensation and experience dominated by affects associated with hunger and a fear of regression to rejuncture with a loss of freedom of choice in adjustment to inner needs. The latter is associated with markedly discomforting affect. This is reconstructed from expressed fears of loss of boundaries in psychotic patients, especially those dealing with conflict related to mother child symbiosis. These discomforts can be obliterated briefly by drive satisfactions derived from substitute objects in reality such as Teddy Bears. Failing this, the space is filled by recreations informed by often errant memory systems, whose content has been limited by the nature of protosymbols (neuronal distortion, synaesthesias, and somatizations). In discussing this transition period,(ages 4 mos to 15 mos) during which the dawning of disjuncture introduces protosymbols, Kubie (1953) emphasizes the stepwise nature of the process. He noted that ". . . in preverbal stages of human life . . ." "the capacity for symbolic function remains . . . limited." (p 65)

Early on, telereceptor sensations contribute little to protosymbol formation. With the accumulation of banks of sustained telereceptor derived visual memory elements, which are connected for expression to elements from verbal concept memory, the verbal sharing of experiences with others becomes possible. Relationships between remembered concepts is disciplined into socially shared usages established by parent and child as the result of conventions arising from culturally determined ways of viewing the perceived natural world. These conventions are also protosymbols. They are called *symbolic linkages.* There is often no intrinsic connection between the elements of a linkage. The creation of true simple symbols, with shared meanings between concept and representation, and cryptic symbols whose manifest symbolic forms and latent content can only be established by free association, is derived from the bridges provided by symbolic linkages. For the psychoanalytic symbol, awareness of the connection between a concept and its representation is lost to consciousness.

In the early verbal child the symbolizing function produces images encased in words in the form of simple symbols often steeped in affect. These become tools for acquiring need fulfilling objects. An

example is the word ‘milk’.

Enhanced by repression at 24 months, the symbolizing function is set to prowl. It ferrets out words and ideas with discomforting affects and counters them with affect buffering symbols, which hide referents through the use of displacement. Imagery is created in the service of the avoidance of the uncomfortable affects of disjuncture. The world as it is seen by the child is altered. The symbolizing function produces alterations in sensed reality. Comforting fantasy landscapes that promise gratifications are created in consciousness. A false new world is expanded each day anew, ever evolving and ever influenced by sanction and support from others in the natural world beyond the self. Consensually validated rationalizations, myths that fill in the unknown and promise fulfillment for the future, such as the "big rock candy mountain", provide comfort in the deprivation prone world that opens to the child as a result of disjuncture.

SYNCRETISM AND PHYSIOGNOMIC THINKING DURING THE PHASE OF DISJUNCTURE

Man alone of all animals completes the transition from syncretic to repression enhanced symbolic thinking. Thinking during the transition stage of disjuncture is characterized by the development and use of late protosymbols.

Initially protosymbols are the products of errors in the perception of stimuli due to immature cognition. Later in development protosymbols are products of alterations in memory centered symbol content, produced by psychological mechanisms such as displacement, during disjuncture.

COGNITION DURING DISJUNCTURE

Reconstruction Based Upon The Experience Of Children And Adults Who Have Retained Or Regressed To The Emergent Phase.

Disjuncture occurs late in evolution and early in ontogenesis. It is accompanied by diminution of the contribution of synaesthetic experience to memory. Loss of syncretism between drives and objects, concepts and protosymbolic representations and bodily sensation characterize disjuncture.

The formation of true symbols begins with disjuncture. The cognitive development that takes place in the symbolizing function during emergence from syncretism was described by Werner (1940\64) as "The function of representation . . ." ". . . which expresses itself in the capacity for communicating a cognition by symbolic formulation (gesture, sound, writing, drawing), moves through a course of development from a syncretic (implicit) symbolism to one that is pure and detached." (p 250) The preverbal ". . . child is undoubtedly conscious of the symbolic values of language between the first and second years . . ."(p 250). However in the earliest phase of emergence from syncretism, ". . . language still permits a . . . use of syncretic representation (i.e., representation embedded in concrete motor-affective activity) . . ." (p 511) Here lies the paradigm for recall through regression to the affectomotor reexperiencing of somatic sensations that occurred at the time of object loss. This process underlies many forms of somatization.

THE PROTOSYMBOLIC PERIOD

Remembering through representation utilizing coordination of verbalization with concrete affectomotor (somatic) activity is an early form of protosymbol. It dominates early word use in the protosymbolic period. An example of this would be experiencing original sensations together with words. This occurs with verbalized rage.

In protosymbolic communication, language is limited to the role of a concrete instrument for obtaining need satisfaction. For example, a child points at a cookie and says cookie simultaneously. Words are synchronized with action. Concepts and words move to the center of the developmental arena. During this first stage of the acquisition of words for naming, the name and the thing it represents are felt by the child to be aspects of the same phenomenon. Language is not used to express abstract thought on a communicative level.

When caretakers delay response in late childhood, they open the door to abstraction through the introduction of "no" and delay tactics that force the child to use words for communication. Words come to be more than servant-like (syncretic) extensions of the child. They become differentiated objects with which one can influence. Children learn to use naming words in the service of requests and concept words in the service of communication. This implies the ability to influence others who are recognized as

beings separate from the self and capable of being influenced. Word usage expands to permit communication to others within a flexible world with future potential for change in response to verbal demands and planning.

NOTES

1 See Underhill (1955) p 413 etseq.

2 See Harrison (1903) pp490-91.

3 See Winnicott (1953) p 239.

EARLY WORD USAGE

Sandler (1962) described a transition, which begins with transient syncretic cognition and ends with enduring existence for images and associated concepts. Transient syncretic cognition involves momentary sensory ". . . images (that) are at first initially indistinguishable from experiences of need satisfaction."(p133) "(E)nduring existence" involves an image that can persist after the stimulus that initiates it has ceased. From images that can persist there can be developed representation based on stored banks of enduring symbols "constructed out of a multitude of impressions". (p 133) Enduring existence (called by Sandler "representation" (page 133) is needed to produce the sustained and permanent thought content to which words can be attached. This sets the groundwork for the transition from a mental *life* of immediate need satisfaction to a mental life consisting of preparation for need satisfaction based on memory and preinvolvement in time with a conceptualized need satisfying object. According to Piaget, such enduring representation cannot be well established before the 16th month of life, when symbolic play with simple symbols is established.

Drucker (1979) described the transition that marks the phase of emergence from syncretism that characterizes the two stages in early word usage. The earlier stage is called "the "endowing process." The term refers to the acquisition of mental representations. By the term ‚endowing' [she] refer[s] to a psychic operation in which an aspect ofpersonal experience is imbued with subjective ‚meaning,' however organized or mentally represented. No requirement is made that the symbol thus created be communicated nor communicable, nor that it could be expressed tangibly. (p 35) The later stage is called the "representational one" (p35) In the representational stage, the communicative potential of words that share meaning through convention is introduced. Drucker's transition, which occurs during the second half of the first year of life is a paradigm for the shift from evocative to communicative symbols that marks the cognitive shift implicit in the move from late latency to early adolescence, (see below) which supports reality testing and sanity.

Reconstruction of cognition, during the presymbolic period of the phase of emergence from syncretism, may be found in Werner's (1940/ 64) comments on adult cases with cognitive regression due to cerebral trauma reported by Head. One such case was that of a man who suffered from symbol

aphasia. Essentially these people are bereft of mature symbols. (P 198) They retain word representations. Their words are used for naming but lack a communicative role and cannot be used to imply the future. Such words are evocative simple symbols. Werner noted that the aphasiac who is *symbol-blind* is ". . . forced back into a more primitive, concrete life space and mode of action. [Locked into] the confines of the immediate event, and . . . limited [in] the ability to behave in terms of an anticipatory scheme of action." (p 198) ". . . action requiring some sort of prevision becomes increasingly disrupted . . ." They are bound fast to the eventual situation as it is experienced and are bereft of the capacity to execute an action according to a preconceived schema. (p 17) or be influenced by the implications of action for the future.

The stage of development described by Drucker and by Werner establishes a developmental line along which regressions produce the clinical manifestations seen in children and adults who regress to an affectomotor level. This is seen in periods of psychosis, certain psychosomatic conditions, posttraumatic states, and during intoxication. Claims that symbols improve during intoxication with certain drugs lose sight of the fact that the symbolic forms experienced are protosymbols with little integration into a world containing communicative symbols and a future. Cathexes (attention energies) are limited to self and the here and now in the areas of space and time.

Sandler's emphasis is on need gratification while Drucker places emphasis on the acquisition of the communicative function of symbols. Sandler's transition occurs earlier in development than Drucker's transition. Drucker (1979) describes a line of development that takes a child's use of symbols from an evocative to a communicative mode, She begins with syncretic (momentary) images, then takes us through Sandler's "endowing existences" (persistent images) and then leads the way to simple symbols used in a communicative mode.

PLAY AND DISJUNCTURE

PASSIVE AND ACTIVE SYMBOLIZATION DURING EMERGENCE FROM SYNCRETISM

Physiognomic thinking is a forerunner of passive symbolization. Physiognomic symbolization starts with the use of awe-inspiring stimuli as automatic activators of reflex responses. The process is syncretic.

Passive symbolization relates to acquired response to external stimuli. Active symbolization refers to the creation of symbols in the interpretation and communication of memories and perceptions. Physiognomic and passive symbolizations are earlier in evolutionary and ontogenetic origin and development than actively produced symbols.

Many animals can play. The larger the brain, the more play is possible. In playing, the animal utilizes the capacity to separate needs and drives from their specific satisfying objects. Such schemata of behavior, which are independent of immediate gratification, are disjunctive. The ability to play is a manifestation of disjuncture. In play, energies are diverted from fixed patterns of drive gratification (i.e. syncretisms).

Initially the relationship between drive and object is a syncretism. It is hard to conceive of breathing without including air in the concept. No disjuncture of respiratory need from its object of desire is possible. Drive object disjuncture is limited to the expression of hunger, sexual and aggressive drives, whose discharge can be delayed. It is also manifested in support of the denial that is mobilized to deal with the force of drive equivalents such as feelings of love and fear of death. In the latter case, eschatology fills the empty space created by the otherwise unanswered question, "Is there life after death?" Drive object disjuncture establishes a zone of flexibility when obligatory drive objects are lost. The blank check produced becomes a playground for the symbolizing function and for creativity. Within this zone, displacement, condensation, and delay can result in the production of substitute representations, which attract the child's attention from reality and become the objects of play.

Active symbolization develops with the appearance of disjuncture. In both phylogenesis and ontogenesis, play symbols are direct substitutes for gratifying elements. They are a primitive form of symbol.[1] Cryptic (complex) symbols eventually become the highest evolutionary derivatives of the process of drive object disjuncture. With the development of the capacity to form cryptic symbols, the stage is set for the emergence of man, a being capable of thinking in contexts of disjuncted future time.

With disjuncture, drive discharge is freed from syncretic response. It becomes associated with fantasy and symbolic play objects. At about 26 months, manipulation of three-dimensional toys as ludic symbols to represent fantasy concepts extends the coordination of schemata to include drive discharge

fantasy play. At about eleven years of age fantasy derived play objects are replaced by fantasies about real people as objects for the discharge of drives. The transition is called ludic demise. (V.I.) It parallels an increase in reality testing.

PHYSIOGNOMIC SYMBOLIZATION DURING EMERGENCE FROM SYNCRETIC COGNITION

The form of found objects conveys meaning based upon physiognomic response. Resemblances to familiar or dangerous forms gives power to new images. It is not uncommon for a young child, as a neophyte symbolizer, to utilize objects found in the environment as symbols around which to build distorting fantasies. The use of real objects as symbols precedes the use of spontaneous verbal symbols in the creation of distortion fantasy. (i.e. fantasy with controlled affect and content and that stifles unbridled affect),[2] This phenomenon is a paradigm for the early latency child's use of found symbols, encountered in fairy tales and stories, for the discharge of his own drives. Because he adapts rather than actively creates the symbols, the process is called passive symbolization. Symbols and tales passively acquired become prototypes and precursors of the spontaneously produced masking symbols and fantasies in the state of latency. The use of passive symbolization becomes the basis for cultural capture in latency and conformism in later years.

COORDINATION OF SCHEMATA
[THE ROAD FROM THUMB TO FANTASY]

Piaget introduced the concept of motor patterns called schemata which become coordinated with each other in such a way that they can substitute for one another in the expression of a drive. Piaget's theory of the coordination of schemata affords a point of contact between motor activity and drive discharge, through which drives can cross a bridge to discharge through substitute activities and objects. Such substitute manifest activities and objects have a potential to serve as do true masking symbols. New schemata used for libidinal drive energy discharge can become linked to older schemata, They offer through displacement of function, a pathway for drive discharge, when the older schemata becomes unacceptable. The arrangement resembles a relay race in which a baton is carried through a whole race by a progression of runners. Handing on of the drive is a form of displacement. The availability of substitute discharge pathways permits delay of gratification. The original object, if forbidden or conflict

prone, may be set aside to make ready a space in time and place, where wishes can search and play.

There follows a description of the series of coordinations of schema that takes need fulfillment from sucking to fantasy. While a child is at the breast or bottle, the pleasure that he experiences is obvious. During nursing, his hand plays with mother's hair or clothing. The thumb is sucked while the blanket is stroked. When the breast or bottle is removed, the hand continues to search for comfort using fingertips to rub hair or clothing. When the hair ceases to be available. Substitutes such as a blanket or fuzzy strip rubbed between the fingers continue to be associated with pleasurable sensations. Then a new schema, used to take over the discharge function of sucking and finger play, is introduced. Responsibility for drive discharge function shifts from physical to mental activity and from affectomotor concepts to simple word symbols as the result of reading bedtime fairy tales. Then fantasy using simple symbols and words, which represent need satisfying objects are introduced. Fantasy now can replace suckling and finger manipulations as a means of drive gratification. It has the advantage of taking place in precincts of the mind beyond a mother's reach.

In healthy circumstances the strength of old motor schemas is dissipated and verbal symbol loaded fantasy becomes the dominant pathway for drive discharge. Psychoanalytic symbols add cryptic representations of lost objects. New objects sought in these fantasies are cryptic substitutes for lost objects. A paradigm for adjustment to loss through realistic object seeking involving available new objects is introduced. In latency they can even serve covert discharge of tensions through the acquisition of patterns of fantasy derived from passive participation in the reading of stories. In early adolescence they become templates for planning the future and finding objects for love and comfort in reality.

In less healthy circumstances, the pleasure driven cathexis of hair, blanket or any other element of the original syncretic phase unit persists. Objects involved in such persistent attachment are called transitional objects. Their persistence underlies the development of a fetish. At the very least, a paradigm is established for adjustment to loss through maladaptive attention to thoughts and behaviors, which echo the past and foreclose the future.

Literature and clinical experience are mines for incidents of transitional object related unresolved mourning. Examples are Tennyson's "Enoch Arden", Schiller's "Ritter von Togenborg", and Ruppert

Brook's "Dust".

A related clinical extract follows—

> Saddened by his wife's death, Paul, a professional man in his early sixties spent his days wandering about the places they had loved. Foremost amongst these were great halls where their joy in music
>
> had been shared in squandered abundance. They held hands at those great themes, which in privacy accompanied their acts of love. Years passed before he turned to the living for his future. By then his time was short.

DISJOINED DRIVE DISCHARGE PROTOSYMBOLS

TRANSITIONAL OBJECTS, SUBSTITUTE OBJECTS AND FETISHES

Protosymbols are primitive symbolic forms, which are not wholly differentiated from their referent. Included in the group of protosymbols are innate responses to stimuli, synaesthesias and the intuitive interpretations implied in physiognomic perceptions. Protosymbols emerge in statu nascendi before true symbols develop. They may be observed in later life as persistent preverbal elements and during stress induced regressions to primitive forms. Protosymbols are not symbol precursors as much as they are epigenetic products of the maturing factors and forces that will eventually give rise to symbols. Abnormalities in the surface manifestations of protosymbols do not presage abnormal symbol formation. An intermediate form of early symbol is body organs or functions that are used to represent affects or other organs (i.e. tears for sadness).

Yahalom (1967) addressed the question of differentiating late protosymbols from symbols proper. He established a theoretical differentiation between substitute objects, fetishes, and transitional objects, and simple objects used as true symbols. The former are not differentiated in the child's mind's eye from the referent, (p 380) though they may serve as a forerunner way station on the road to the creation of true symbols. The absent parent can be replaced by a protosymbolic object, which because disjuncture is not complete, is not wholly differentiated in the child's psychic reality from the parent. Simple ". . . symbolic objects *are representational"* (italics his) (p 380). A functioning observing ego can recognize this. The essence of the simple symbol is that it is a representation that can be differentiated by the creator of the symbol from the referent (latent content).

Once there is disjuncture, it becomes possible to feel deserted by others and become aware that one is alone. There develops new attention to telereceptor sensation. The fact that telereception can be shared, validated consensually, communicated and used in the construction of symbolic forms results in the intrusion of reality testing into symbol formation and fantasy. This causes symbols to be reshaped so that they both represent latent content and mutually agreed upon conscious meaning. Repression of recognition of the relationship between the referent and the representation creates the psychoanalytic symbol.

LATE PROTOSYMBOLS THAT PLAY A FORERUNNER ROLE IN THE ONTOGENESIS OF SYMBOLS

An important step during the first year of life is the development of the capacity for spontaneous recall of the image of a mother who is gone. Some theorists suggest that when the recalled image of the parent is recognized as not present in reality, an empty space is recognized to be present by the child. I prefer to think of this space as an affect lined cavernous need. The need space which the awareness of a mother's parting leaves in the consciousness of the child serves as a canvass upon which the child can create images to be used for comfort. There are three such entities. These are transitional objects, fetishes and substitute objects. The new image recruited to fill the void becomes a protosymbolic substitute for the lost object, whose presence staunches needs. Recognition that this *substitute* object representation is separate from the lost object would be necessary for the creation of a simple symbol to represent it. Repression of this recognized link produces a psychoanalytic symbol.

Normally the emptiness is filled by the presence of objects (smooth cloth, fuzzy toys) that serve the feeling imagery that attempts to fill the need for the lost object with subjective remnants of a syncretic yesterday. These are transitional objects, which eventually may progress to serve the mental images that strive to place newly cathected substitute objects in fantasy contexts. The latter fantasies presage the symbol populated fantasies of the late three year old, which in turn presage the discharge mediating fantasies of the latency age child, which in turn presage the adolescent fantasies which shape choices from the people populated realities of maturity.

A pathological turn is possible here should the transitional object not become disjoined from the subjectively experienced syncretic self-world unity and not go on to serve communicative needs. Instead

it becomes locked in place and becomes a fetish. This process was described by Winnicott (1953), who noted that "Transitional objects [in contrast to substitute objects], may eventually develop into a fetish object and so persist as a characteristic of the adult sexual life." (see Yahalom, 1967, p 380) A fetish is defined as a possession or part of a loved object, which is used as a sexual stimulus or object (i.e. a shoe or underwear). Persistence of odor is important. Merck Manual (1987) describes fetishism as "The use of nonliving objects as the preferred exclusive method of producing sexual excitement . . .", ". . . the fetish is required for erotic arousal. Commonly used fetishes are female undergarments, shoes and boots-less commonly, parts of the human body such as hair or nails." (p 1498). Hinsie and Campbell (1960) described the use of the fetish thusly: "Persons who "are unable to love a real person to whom they are attached, may carry out all the pleasures of love through the agency of some object belonging to the loved object. A lock of hair, a handkerchief, a shoe, a glove, anything, may be looked upon as the reembodiment of the loved one." (p 297) Yahalom noted protosymbolic qualities shared by this concept with Greenacre's 'somatopsychic structure' which serves as an image but not a symbol." (p 380)

A COMPARISON OF SUBSTITUTE OBJECTS AND TRANSITIONAL OBJECTS

Substitute objects (new loves, and realistic future goals) have the potential to attain the status of a symbol associated with communicative potential and reality roots. Transitional objects (blankets, hair, thumb) have different roots and directions. They are evocative and are more shaped by past impressions than are substitute objects, which look to the future for its sources.

The transitional object is a remnant of the parent-child syncitial fusion unit that exists during the early months of life. In the absence of the parent, some components of that fusion persist. They perpetuate the unit in the child's mind's eye and protect the child from a sense of loss. The substitute object is experienced by the child as differentiated from the parent-child syncitial unit. The transitional object is a persistent part of the syncitial unit. Transitional objects are remnants of a comforting complete entity, bits of which are left over as comforting souvenirs at the point that disjuncture becomes possible. As fetishes, they have the potential to serve as a narcissistic tool for sexual expression in the absence of a differentiated object.

Substitute objects replace the lost object with representations that being new, are changeable and

representational. They offer the possibility of useful adaptive future adjustment. Transitional objects and fetishes being drawn and sustained from the population of the syncretic world, are backward looking and reinforce narcissism. A memory element experienced by the child to be an extension rather than a representation of a referent for the lost object is a transitional object. Transitional objects are old, unchanging, timeless and are not representational. Rather, they, like dried roses, are backward glancing perpetuations of a lost yesterday. They are as adaptive as a teddy bear at a college interview. Substitute objects are primitive symbols, sought out as objects to represent latent contents, which are drawn from a world that lies beyond the self and futureward in time. Substitute objects are representations that provide a new form to replace a lost object. This process of replacement is paradigmatic for the adaptive replacement of fantasy symbols by reality elements in the development of future planning in early adolescence. Substitute objects become symbols when there is disjuncture and when the memory banks that are used for interpretation turn stimuli into perceptions and personalized memories that can be experienced by the child as separate from that which was the parent child syncitial unit. As Yahalom (1967) has noted such "*mental representations* . . . make possible mankind's unique ability to form and use symbols." (p 382) The formation of representations is part of the capacity to find "meaning in sensation". "Texture must become feeling; sound must become listening; sight must become seeing . . ." (P. 382).

In a panel (Hartke 1996) that dealt with symbols and psychic reality, (including Hartke (1995), Blum (1995), Gibeault (1995), and Mateu (1996), the concept of an empty space where once there had been need gratification is taken as the starting point for the understanding of the ontogenesis of symbols. The empty space is filled by the creation of an object conception, which in memory becomes a substitute for the object in the development of one's personal psychic reality. Memory elements are created which compensate for lost or absent objects. Such memory elements can become referents, which manifest symbols later represent.

From the standpoint of a Child Psychiatrist, painful affects of loss characterize the first subjective experiences of this space. To compensate for such affects, concepts and images that promise need satisfaction are generated. In psychic reality they provide a haven from discomfort. These ideas and images are neither subject nor object. They retain the potential for gratification of the original syncretic unit. This is a product of the child's impression during the early years of cognition; the word and the

thing it represents are considered to be one. The non me intermediate space grows between self and world during the phase of disjuncture when the object can be experienced as gone. If part of the lost object is evoked or recreated as the result of poor or repressed reality testing, a transitional object is invoked. Where the sense of loss is diminished by supplies from present reality, it is a substitute object to which the child is responding.

WHEN PSYCHIC REPRESENTATION BECOMES A SYMBOL, WHICH IN TURN BECOMES A REFERENT.

Ability for persistent recall of the object when out of sight is a preliminary step in the creation of the psychic representation (referent) to which symbols refer. Memory and manifest symbols both contain representations. A mental representation in memory can be considered to be a thought symbol. The lost object is represented by an idea, which is perceived in the mind's eye. It is a preliminary step in the creation of a simple symbol, which is an idea given a form that can be perceived in one's consciousness of self and other. When a memory trace finds expression in words, it becomes the spoken word representation for the referent. A memory trace (not the subject and somewhere short of the object) when placed by the child in a space between the zone of memory and natural reality promises a reexperiencing of gratifications experienced with the lost object. This phenomenon occurs when departure of the caretaker and separation can be perceived by the child. In times of need the representation moves from memory to manifestation in the form of a transitional object such as body parts or a preexperienced object found in the natural world, such as the thumb or a blanket (transitional object), or in a newly discovered substitute object that lends itself to an exploration of future reality such as new caretakers (teachers) and friends. Substitute objects are forerunners of manifest reality-based symbols. Simple symbols first appear when self-object differentiation provides a sense that referent and manifestation are separate.

Early cathexes of objects in response to loss provide a paradigm for the direction of cathexes that occur when loved objects are lost by adults. At first, during mourning the lost love is recalled intensely. One of two further responses may occur. On one hand there may occur pathological extended mourning in which there occurs enshrinement of the lost love including saving locks of hair, a search for shared melodies and avoidance of new partners. Memory of the lost love attempts to recall her from oblivion. Such pathological mourning echoes the child's link to the transitional object. On the other hand in a

healthy resolution of mourning, old memories fade and real world objects are sought. Like Antaeus who regained strength from contact with his mother, the earth, memories need contact with their source to refresh their strength. With the extended absence of the original need-gratifying object, the mind goes in search of a new real world object as a substitute for lost love (communicative symbols). The new relationship soon ceases to be a substitute and takes on a life of its own. Through practice the newly found symbol becomes the new object, offering need satisfying characteristics of its own and generating new hopes in place of the memory of old objects.

Transition in the nature of the mind's symbolic use of the manifest world is central to the process of mourning. It contributes as well to the process of change in psychotherapy. The need satisfying characteristics of older and original love objects influence the selection of the symbols, which represent a lost parent in transference and in finding new love objects. Primary objects such as parents and close family members (see Jones 1916) and body parts serve as the initial source of the referents for simple symbols. Only at the point of recognition of sensations of unrequited need in the "empty space" does the referent expand its base to include sources from beyond the self.

Jones' (1916) description that says, *"All symbols represent ideas of the self and the immediate blood relatives . . ."* (Italics his) suggests an ontogenetic hierarchy. The earliest referents for symbols are organs and body parts (Ferenczi 1912 p 279). With disjuncture, memory stored referents expand to include telereceptor realities. In the panel referred to above, these materials are most strongly suggested by the work of Gibeault (1995). Memory derived from sensations expands. The content of referents includes realities, which as in the case of dream elements can also serve as manifest symbolic forms.

The timing of the acquisition of external images as memory elements to be used to represent another referent symbolically in the absence of direct sensory stimulation from the object, was identified by Piaget (1945) as occurring at the end of the sensorimotor period. That would be at about 18 months. (p 97) At that time the source of elements to be used in representation goes from haptic affectomotor feeling of loss to better defined mental representations of the lost object. These substitute objects are symbolic forms, which stand at the brink of true symbols. Creative utilization of the substitute object follows. This refers to the image of the parent being symbolized in consciousness by a reworking of memories associated with it. The referent goes forth from the mind to the world, through a symbol, which

bears its escutcheon.

As life progresses symbols take on the coloration of new experiences. Old referents become dim memories. They seem to have been left in the past. In reality they are not completely left behind. In the form of memory moieties they themselves serve as internal abstract symbols for the lost object. They inform the selection and interpretation of manifest substitute objects. They interpose an abstract step between the latent content and the manifest symbol. They are different from the transitional object of Winnicott. They do not consist of continuing physical remnants of the old relationship. They are derived from the products of an abstracting internal step, which creates referents out of memories of the lost object.

Such internal representations are determined by the content ofintrojects. These are accumulations of affectomotor experiences of loved objects, which coalesce to produce memory for the objects. They offer memory based content about lost ones, which guides the shape and selection of symbolic representation of parents. They create a prexisting informational matrix through which symbols, which evoke or communicate to achieve drive discharge, can reassert affect related content. The contribution of the memory content to the final form of the true symbol, is ultimately limited in its influence by the reality of the natural world.

DEAFFECTIVISED WORDS

MEMORIES ALTERED BY DIMINUTION OF THEIR ASSOCIATIONS WITH AFFECT

A memory moiety which retains content without affect though similar to the original experience offers to conscious awareness only a partial memory for the total experience. Removal of affect is a necessary step in the development of memory referents and a necessary step in the production of effective cryptic symbols. Failure of this step produces the affect porous symbol (q.v.) True symbolism appears when there is removal of affect accomplished by displacement of cathexes to a substitute representation.

A symbol is an affect binding representation of that which is not in the focus of conscious awareness (see Gibeault 1995). Ideas and words that remain unchanged in content with altered associated affect,

are sufficiently modified to be identified as a symbolic form and not as a quasi-accurate representation.

In the formation of simple symbols, there is a need to isolate the referent from the affect that would make it a complete but discomforting memory. If this were not the case, affect would interfere with the ability to think clearly and to learn. For a word to become a simple symbol used for communication, it must loosen its connection to affects that distract from the shared logic of society. This process (deaffectivization) begins at the end of the first year of life. A simple example of the deaffectivisation of words as it appears in adult life would be the neutral presentation of unpleasant content isolated from affect during medical lectures. When through isolation, a memory is shorn of its affect, verbal representation becomes possible in place of unaltered affectomotor recall. On the other hand, cryptic and psychoanalytic symbols are formed when affect is diminished by changing the word used for representation to one that is more neutral.

Words that serve to convey memories become more neutral as affects diminish. Early in this transition, words retain remnants of the affect they represent. (see Ferenczi 1911, pp. 139 and 145). The affect-laden meaning of words succumbs to an "infantile amnesia" at about six years of age. At that point use of words for neutral communication moves to center stage. When affect is removed from word representations of natural things greater neutrality and clarity can be brought to bear in solving problems related to the management of reality.

In the child who is developing normally, improvement of the apprehension of reality, as culturally defined, is contingent upon a shift in the emphasis of the cognition used in memory from affectomotor hallucinatory memory to a memory organization based on verbal conceptual elements, which are susceptible to secondary process confrontation based the verbal challenges of others.

Such cognition (verbal conceptual memory) dominates from 6 to 8 years of age. At 8 years challenges by socially clued reality, based on the intrinsic nature of natural reality, becomes a part of secondary process dominated confrontations. The development of cognitive memory based on abstract concepts begins at about eight and strengthens till at eleven to twelve years of age, proverb interpretation based on abstract cognition becomes possible.

Deaffectivization of words is emphasized in the latency period. The fantastic objects that populate

early latency imagery have more in common with primitive emotionally charged words than with affect neutral words. With the onset of late latency, words with a less charged tone representing neutral reality objects are introduced as fantasy objects.

In adolescence, thought links to fantasy can be reduced. The objects chosen to populate fantasy tend toward realistic affect neutral ones. With this change in the nature of its symbols, fantasy is converted to future planning in which the future is organized with a focus on the future and reality.

REAFFECTIVISATION AND ART

In the creation of an art form highly charged personal latent content is hidden behind seemingly neutral symbols. This is achieved when Psychoanalytic symbols are created through displacement, to a representation, accompanied by diminution of affect. In the appreciation of art, reattachment of affect to a symbol is an important concomitant. In presenting a symbol laden story on the stage, the addition of music reasserts the capacity of the symbol to evoke affect in the listener. This creates a more effective simulacrum. The production of movies, operas and plays can be made more effective and compelling when empathy and catharsis in the audience is encouraged by the use of music and metaphors for affect which restore the power of affect to the symbolic image. Music, melody, and verbal rhythms reaffectivise symbols. The world they create through symbols is a world with an intensified capacity for reparative mastery, discharge, and catharsis through art.

PSYCHOSOMATIC REPRESENTATION

A protosymbol, found within the affectomotor memory organization consists of manifest bodily sensations (affects) or organs of the child's body. The latent content that they represent consists of other affects and organ functions. Examples of such protosymbols are tears, which express sadness, and bowel discharge which expresses fear or rage. These are a part of childhood experience, which provide a template for regressed or displaced expressions of feelings in later life.

SYMBOLIC LINKAGES

A symbolic linkage contains a referent and a protosymbol. It consists of a personalized connection

between an idea or memory as referent and a verbal or material element that could be used as a symbol. Displacement uses symbolic linkage as a guide in finding the manifest symbolic forms to use as a representation for a referent. A paradigm for this exists in incorporation and in diffuse primitive early synaesthesias. Incorporation refers to identifications with parents based upon memory traces of parents experienced in terms of body sensations including distorting synaesthesias, skin contact, odors, and cleansing. Symbolic linkage between parents and body parts are established through incorporation. Memories established through the evocation of incorporative sensations and synaesthesias set up symbolic linkages that permit aggression aimed at the parent to be turned upon the self (masochism or suicide) as a representation of the parent, or expressed through the organ substitute (asthma and mucous colitis). Aggression, guided by this regression to personal somatic protosymbolic representation, is directed toward the self.

For example, Marla was a fifty four year old married female diagnosed in 1955 as having an Involutional Depression. She had been admitted to a psychiatric ward following an unsuccessful suicide attempt. When asked for the reason for her suicide attempt she spoke of herself as deserving death because she was a thief. No supportive information could be obtained. Her father with whom she identified had been imprisoned for theft.

DISJUNCTURE AND THE CREATION OF TRUE SYMBOLS

The presymbolic cognitive period ends when haptic dominance passes, telereceptor based confrontation enhances reality testing, and syncretism gives way to disjuncture. Confrontation and an ensuing correction of impressions to conform with shared societal concepts accompanies disjuncture at the end of the first year of life. This foreshadows the transition from evocative to communicative symbolization that befalls the psychoanalytic symbol during late latency, early adolescence. The affectomotor memory system is associated with excellent rote memory for preverbal experience. The acquisition of verbal memory interposes an additional layer into the memory systems. This new verbal complexity adds to fragility in the accuracy of evocation and recall of events and affects. Images and words can be remembered without accuracy in the recall of meaning. An example of this would be a child who can recite Shakespeare by rote or the recall with altered affect, which characterizes and makes possible psychoanalytic symbols.

Having reviewed the ontogenesis of the structures and functions that produce symbols, we turn in the next two chapters to the ontogenesis of the specific symbolic forms that are generated over the years.

NOTES

1 See below, symbolic play of Piaget, the ontogenetic equivalent of the phylogenetic play symbol.

2 In the chronology of cave art, stone shapes are adapted to create representational forms earlier than the creation of art on flat surfaces. This is an early manifestation of the persistence of physiognomic thinking in symbol formation (active and passive symbol use) and explains in part the power of images.

CHAPTER 6
THE ONTOGENESIS OF SYMBOLS FROM BIRTH TO SIX YEARS

REVERBAL COGNITIVE MATURATION LEADING TO WORD USE

During the mid months of the first year of life, maturation in perceptual awareness accompanies waning of syncretism and synaesthesia. One product of this waning is the loss of the sense of timelessness. This change underlies the acquisition of the experience of memory as a retained affectomotor experience (remembered early perception) in the context of time passing. Such sensory memories contribute to the body of retained experience that influences the template by which new perceptions will be categorized or judged. Using earlier impressions as a source, memories shape the representations used to interpret the world. Affects associated with recall of these memories activate denial. Substitute formations (symbols) to which attention is directed in response to denial populate the memory contents that shape conscious psychic reality. Fluidity characterizes interpretations, which are based on affectomotor memory. Fixing of concepts awaits the dawn of words, whose ability to fix meanings leads to the mutually agreed upon interpretations of perceptions that characterize verbal memory systems.

THE DAWN OF WORDS

The forms of a child's words begin with sounds (babbling), which signify concepts and things. Evidences of such non-verbal representation occur before eight months. The inner experience, occupying the mind of the eight-month-old, expressed in these representations are feelings, visual images, affects, and ideas without words such as you will find while searching for an inexact cognate word when trying to go from one language to another. Such elements exist from the time the child has the capacity for recognition recall. This was underscored by Barinaga, (1995) who pointed out that ". . . human infants, . . . recognize individual vowels and consonants common in their language before they learn words, phrases, and sentences."

We can only know of the nonverbal child's capacity for concept formation when there is some

evidence, which impinges on the world, such as a planned action that will produce an effect on the environment. An example of this would be crawling up a stair to obtain a favorite toy. Once established, the concept is linked to a found or remembered sound, or to a word or phrase used by a caretaker to represent the concept or action. Linked to the concept, the word becomes the representation.

For the most part words are passively acquired from older verbally proficient people who eagerly await a child's acquisition of the ability to use words for naming and later for communication. Spitz (1945) described the importance of this interest by the parent for infant survival. Without this attention no word use is developed and the child suffers developmental arrests, depression, inanition and even death.

PERSISTENT PRESYMBOLIC NON-VERBAL THOUGHT PROCESSES

At the end of the first year of life, words are introduced for thinking, remembering and communication. They quickly achieve dominance in these areas. In spite of this, preverbal thought processes steeped in haptic cognition persist. They provide mechanisms for automatic responses that are ever at the ready to push aside verbal logic (telereceptor cognition oriented), encouraging impulsive behavior and emotional reactions. Verbal activity alone permits access to conscious reflection.

Preverbal mental activity exists beyond the realm of conscious reflection. Preverbal thought processes assert themselves during states of regression, psychoses, intoxication, and creativity. They appear as a component of the dominant visual aspect in dreaming. In regressed selection of sources for planning and the formation of concepts priority is given to sensation over words. Freedom from verbally encoded logical limits on thought and behavior is produced. Such thinking, which is characteristic of preverbal mental functioning, gives rise to fight or flight behavior. It facilitates application of the illogical healing balms of fantasy that soothe wounds which follow in the wake of the child's felt loss when he becomes aware that his unity with the world, which is associated with syncretism is a false perception; and he realizes that parts of the syncretic unit are beyond one's control; and once unchained, can wander off.

STAGES OF WORD USE

At the earliest, word usage is acquired through a two-phase process. This consists of two stages beginning toward the end of the first year of life (6-8 mos.) These phases were described by Drucker 1979). The earlier stage, ". . . the "endowing process" refers to the acquisition of mental representations that imbue personal experience with subjective ‚meaning,' however organized or mentally represented. During the first phase, there is absence of the frozen state associated with words, which results from a ‚locked in' communicative shared meaning. The preverbal child who has achieved remembered non-verbal affectomotor concepts is capable of making spontaneous poetic recreations of a world drawn from remnants of experience. Freud (1961b) in described this phenomenon, wrote, ‚Every playing child behaves like a poet, in that he creates a world of his own . . ." Emerson opined that "Every word was once a poem".

The later stage was called by Drucker (1979) a ". . . representational one . . ." (p35). At this stage, words are drawn from parent provided vocabulary banks, which by convention are linked in meaning to the memory encoded conceptual patterns of the endowment phase. These become the simple verbal symbols, by means of which validatable and reliable communication between minds becomes possible.

The capacity to produce spontaneous yet universally understood verbal representations for thought contents is a characteristic that is achieved with the transition to Drucker's representational phase. This development is illustrated in the following clinical vignette.

The parents of an eight-month old child had an intercommunication system, which permitted them to hear in their bedroom, sounds emanating from their child's room. It had been explained to the child that if she would say "Mommy" her mother would come to her. Recognizing the word was easy for her. Finding the word when she needed it was at first beyond her. One morning she awakened early and started to scream "Wa Wa". There was no response. She stopped and tried a series of sounds. She said, *"Upup, ah-ah, umwa, ee-ee, ma ma, ur-u. "* Then she stopped and returned to *"ma ma"*. She repeated the word with obvious delight. She had recognized that for which she had been searching, some consensually accepted verbal signifier for the thought concept (personal experience endowed with meaning) she wished to represent.

Actions and experiences that are endowed with meaning, and the words that come to represent them, are the earliest communicative forms of representational symbolism. The recognition of the sound of a mother's footsteps that quiets the crying infant is a very early example of this.

At Drucker's second stage (representation), the child first learns to use the verbal signifiers of others. At first, he is limited to recognition recall of signifiers. Through this skill he can point to people and parts of his own body when they are named. He cannot yet retain words for spontaneous recall. Recognition recall is paradigmatic of later conformance to schemata and social patterns encountered during acculturation.

Then comes spontaneous recall in which words, learned for passiveuse, are adapted to be used for active symbolization adapted for use in the representation of thought content. The ability to adapt schemata of thought such as fairy tales to the process of creative symbolization begins as part of this process. As a result, culture tinged fantasies will soon serve as patterns for the active discharge of personal tensions. Creative symbolization reaches its height in latency play. It persists in dreams. The relationship of spontaneous fantasies to the latent fantasies they represent is to hide their meaning while they represent them.

Toward the end of the first year, the first spontaneously produced verbal symbol is usually a vocal signifier determined by convention. It is not an integrated organic part of the expressed inner content. This signifies a child's readiness to move from memory based on affectomotor experience to memory organized around verbal concepts. At this time the objects in the child's environment are used in play as recruited concrete representations (i.e. simple symbols free of distortion) to be used for the expression of latent fantasies that serve needs.

CONCEPTUAL MEMORIES

Conceptual memory is defined as the ability to evoke recall of learned patterns in the form of verbal signifiers, such as words and related symbols. It follows the dawn of words. Conceptual memory increases gradually, but never fully replaces affectomotor memory or dynamic-physiognomic contents, which are often reactivated at times of stress and ritual.

Memory based on verbal concepts may be divided into: intuition derived early verbal content memory which is based on the primitive verbal precursor contents of Drucker's endowment phase: verbal conceptual memory, which consists of recall of earlier experiences through socially dictated verbal schemata of naming: and the relatively late-appearing abstract conceptual memory, which is constructed from memory moieties, i.e. symbols derived through associative linkages based on similarities. These include superficial similarities between objects in support of concrete symbol formation (about 15 months) and psychoanalytic symbol formation with the advent of repression (about 26 months) Recognition by the child of similarities among verbal concepts, reflecting an high level of abstraction becomes increasingly evident in the production of symbolic linkage formation (about 11 years), when the ability to interpret proverbs begins.

DYNAMIC PHYSIOGNOMIC THOUGHT

Smith (1979) refers to the term "Dynamic-physiognomic thought" (p.19) (used by Werner (1948) and Werner and Kaplan (1963) to characterize the nature of persistent non-verbal thought in children between the years of 1 and 6. Such thinking characterizes the thought process of the system unconscious, a psychic structure that is established when repression becomes strong at 24 months. Dynamic-physiognomic thought is also found in those with impaired or poor verbal skills. Many of the characteristics of Freud's "Primary process" and Piaget's "prelogical" thinking have roots in dynamic-physiognomic thought. Motoric and sensory phenomena and qualities of affectivity, expressivity, and energy are used in creating concepts, "In contrast to objective or technical thought, (Dynamic-physiognomic thought) appears loose, willful, and weak at organizing logical systems of category and causality." (Smith 1979 p 19) Pathological highly subjective links of intuitive perceived similarity (i.e symbolic linkages) between referents and representations produce evocative and highly personalized symbols of psychosis and poetry. These have origins in dynamic-physiognomic thinking.

CONCRETE SYMBOLIC REPRESENTATIONS

With the development of verbal concept memory, and the start of the use of words for communication, (available by one year), one can observe the capacity to deal with objects in a manner that connotes nothing more than the object. The object concretely represents itself to the child and

nothing more. Blocks are piled on blocks as blocks. Seaweed is seaweed. The manifestations of acute emotional disturbance at this time, with this cognition, are anxiety, somatic symptoms, and sleep disturbances. Neurotic symptoms await abstract conceptual memory.

THE ONTOGENESIS OF SYCHOANALYTIC SYMBOLS

SYMBOLS BASED ON ABSTRACTIONS

Abstract conceptual memory is defined as recall of experiences through verbalized abstract concepts representative of the intrinsic substance of things and events. Such memory is based on abstract interpretations of concrete events, abstract interpretations of sets of abstractions, and complex psychoanalytic symbols based on abstract symbolic linkages. Psychoanalytic symbols develop as the outcome of a series of steps that parallel the cognitive stages of development that inhabit the gap between simple and complex symbols.

STEPS IN THE DEVELOPMENT OF PSYCHOANALYTIC SYMBOLS

Step one involves the time when there is no capacity to form symbols. Piaget places this at zero to fifteen months.

Step two involves the time of the development of precursor capacities in symbol formation. Piaget places this at fifteen to twenty-four months. The precursor capacities are four in number: 1. There is the capacity to perceive similarities on the basis of few and superficial cues. This is necessary for the mind to be able to establish verbal mental linkages and perceive abstract relationships between objects. 2. There is the capacity for condensation and displacement. Symbol formation proceeds through linkages made possible by this awareness of similarities. The products of this transit through linkages are the early protosymbols. They are unstable and facultative at first. They do not provide consistent and reliable pathways for instinctual drive discharge. 3. There is the capacity to delay. This vital element is a derivative of disjuncture. Only with the establishment of the capacity to delay is time provided for the objects sought for discharge of instinctual drives to be modified along the lines dictated by condensations and displacements. 4. A need to protect self or primary object from aggressive urges, is necessary as the

motivation for displacement.

When the four factors just described are present, the budding personality is ready to establish true symbol precursors. They take form through mental linkages, which are constant and obligatory such as mother-nurse, penis-bird, father-king. Displacements are obliged to go through such fixed pathways in the centrifugal direction of objects more removed from the self. This is motivated by the need to protect referent primary objects. It is from this rich ore that the fantasies of the controllable world are created. In addition through these symbolic linkages, substitute objects for drive discharge are made available. Symbolic linkages are the basis of conscious substitute representations such as the double entendre, metaphors, and similes, e.g., 'Thy two breasts are like two young roes that are twins . . . '.

Step three involves the development of symbolic play. Symbolic play is introduced when concrete objects used in play take on the specific characteristic associated with the use of words that is described above; namely, they are seen as themselves at the same time that they begin to bear a second meaning. Piaget (1945 p. 97) saw the first examples of this ability to bring ideas unrelated to an object to the interpretation of an object in 15 month old children. For his subjects the object comes to represent something besides its concrete presence (e.g. in play, a child punishes a doll for being naughty). The connection between the object and what it represents remains conscious. Piaget first called this type of activity symbolic play. It is well exemplified by the child who places one block upon another and describes this as 'a child sitting on the toilet'. An object (seaweed) can mean something else and the child is aware of it.>

From fifteen to twenty-four months, the child *knowingly* deals with play objects (toys) in a manner that imparts convention-derived meanings to their interpretation. These are the characteristics of the simple symbols used in symbolic play. Before the third year of life, symbols occur which are of a conscious metaphorical and generic type, such as flags representing a nation. During the first half of the third year of life symbols with unconscious meanings appear.

PIAGET'S SECONDARY SYMBOLS

Piaget recorded a step beyond the level of symbolic play. Here the connections between the referent

and the manifest symbol are repressed. They are unconscious. Piaget called this 'secondary symbolism'. He defined it in the same way as defined by Jones (See this volume P 58.) Secondary symbolism develops during the period from two to four years of age. In reviewing his direct observations of children at these ages (1945 p 177 et seq.), one can find few symbols, in Jones's sense, before the age of three. Piaget points out that at two, the child seems to be aware in part of the linkage between the symbols and the thing represented, but some of the link has been lost. According to his observations the personality structure necessary for the formation of psychoanalytic symbols can exist at twenty-four months. At twenty-four months, the child could have *unknowingly* used play objects in a manner that imparts meaning foreign to the intrinsic qualities of the object. Through this capacity the child could express otherwise threatening and frightening feelings and thoughts. This is a direct precursor of psychoanalytic symbol formation.

Step four includes the development of Psychoanalytic symbols. This occurs when the dual representation potential of words and objects is harnessed to serve instinctual need, when a relatively weak form of repression comes into action (V.I.) during the first half of the third year of life. At that point, the connection between referent and representation can be excluded from consciousness, and a representation introduced, which has less valence for attracting affect than the referent.

The establishment of this resource precedes the creation of cryptic symbols, one of whose meanings appears to be hidden. Piaget's concept of secondary symbolization includes such symbols. Two factors mature sufficiently at 24 months to transmute symbolic linkages into true psychoanalytic symbols. The first is repression. By repression, I refer to the fact that the link to the referent is made unavailable to consciousness. The second is reality testing. Sufficient enhancement of the capacity for reality testing has to reach the point that makes possible the maintenance and support of sufficient distance (disjuncture) betweenthe signifier and the signified that they appear to be unrelated. This function supports the intellectual cathexis of symbolic forms that belong to the world beyond the self. This is necessary to maintain the conscious denial of the relationship between symbol and referent. For instance a tower and a phallus can be linked on the basis of superficial similarity. One can symbolize the other. Anxiety may be avoided through the repression of this similarity. This is further enhanced by the reality-supported rationalization (secondary process confrontation) that they are not at all alike since there is such a realistic difference in size. Thus reality testing supports psychoanalytic symbol formation. Psychoanalytic

symbols may be subdivided into fantasy symbols, ludic (play) symbols and oneiric (dream) symbols. (See this volume pp. 160 and 163.) The differentiation takes on importance during late latency.

One of the most striking clinical manifestations of maturation of the symbolizing function during the third year of life is the appearance of a symptom, a psychic reality, or a mode of behavior the meaning of which is derived from a symbolized referent. Newly acquired symbolizing skills provide such means for a more sophisticated way of expressing conflict. They express early childhood conflicts and fantasies in new ways. An example of such a phenomenon is the sudden appearance of phobic symptoms during the first half of the third year of life. (See also Foulkes (1999) and Domhoff (2003).)

LITTLE JAN

There follows a report on a clinical manifestation of maturation of the symbolizing function that appeared at twenty-six months. A phobia appeared the meaning of which was derived from a symbolized referent. Newly acquired ego skills provided this child with a means for more sophisticated ways of expressing early childhood conflicts and fantasies in new ways.

Jan, age twenty-seven months, was brought to my office because of bad dreams and the sudden appearance of a fear of seaweed.[1] The child was the constant object of her mother's attentions. The child had become a highly verbal youngster speaking full sentences at twenty-four months. She had no substitute objects. From the age of twenty-two months, the child had awakened repeatedly on any given night, crying and afraid, but unable to explain her distress. She could not describe any related dream nor thought. Daytime fears first appeared at twenty-six months with complaints about, and fear of, children who wore Batman masks. At twenty-seven months concern about separation from the mother became intense. She refused to stay with a baby sitter whom she knew. The parents had to remain with her until she fell asleep. Intense fear of separation from the mother became manifest. The parents and the child went to visit the grandmother the following weekend. On Friday she seemed happy and unafraid. She went to the beach and enjoyed playing in the sand and water. She remained highly sensitive to separation from her mother. On the next evening, still with the parents at her grandmother's house, she became afraid when her parents left for the evening. The next day the family went to the beach. The child went down to the water's edge. She enjoyed facing the water from within the protective frame of

her father's legs. As they walked away from the water she insisted on being carried to avoid touching the 'green stuff' on the beach.

The next day she went to the beach with her mother, who led her to the water's edge. Suddenly she reached for her mother in terror and insisted on being held out of the water. Seaweed at the water's edge had drawn her attention. 'Carry me', she said. 'Why?', asked her mother. 'What's that?', she asked. 'Just seaweed', said her mother, 'like spinach, like lettuce, like grass'. She picked up the seaweed and showed it to the child. The child recoiled in terror. She insisted on being carried across the sand and on leaving the beach. She would not touch the sand or water. Her parents provided her with a small plastic wading pool at the grandmother's house. The child enjoyed it until some grass got carried into the water on her feet. She then refused to use the pool. The parents went out that evening to dinner. That night the child awoke from sleep several times crying hysterically. She had awakened thus on occasion from the time that she was twenty-two months old. This time there were new features to her behavior. She kicked her feet in the air, using the motions she had used to get her feet out of the water that afternoon. For the first time she could tell what had awakened her. She said that she was taking her feet out of the water away from the green stuff. She could not describe what she feared.

The next day, the distraught parents brought the child to my office. With the mother present I asked the child about her dreams. Highly verbal and still very much impressed by the dream, she told me that she was trying to take her feet out of the water away from the seaweed. 'I'm afraid of seaweed.' I asked, 'What are you afraid of with seaweed?'. In response her body shook with hysterical sobbing. I asked, 'What are you afraid it will do?'. She cried more. 'Are you afraid it will hurt you?' 'No', she said. 'I'm afraid it will hurt Mommy.'

To myself I thought that seaweed does not have hostile affects but that little girls do. I asked the child if she were the seaweed. 'Yes', she answered. 'Are you ever angry at Mommy?' 'Yes', said she. 'When she goes away.' The child had projected her own hostility onto the seaweed. I went on to explain that children do feel anger when mommies go away and that children have a right to feel angry and that it is good to be able to tell mother and that she can be sure if she tells mother, mother will not be angry at her.

What had happened between the twenty-fifth and twenty-eighth month of age was a shift in the

way that she expressed her conflict about separation from her mother. The conflict was the same before and after the development of the phobia. Early on she directly expressed her feelings of anxiety, fears, and thinly masked hostility. After 26 months she expressed these feelings through her phobia. Her frightening aggressive feelings toward her mother were projected onto a symbol, seaweed. She expressed her anxiety over her own aggressive feelings by displacing the anger onto and creating a fear of the power to harm with which she had endowed the seaweed.

The child had experienced a change in her symptom picture as the result of the maturation of a higher level of ego function. This included the ability to form and use symbols. Apparently her capacity to form psychoanalytic symbols, (i.e. symbols associated with the displacement of affects from referents to representations) first appeared at about 26 months. Though the child suddenly looked sicker, emotionally she had made a step forward. Her phobia represented the development of the capacity to form symbols, which were separated in conscious awareness from their referent.

Kubie (1953) has noted that adult psychopathology often contains distortions in representation based on paradigms, which could not occur in the human infant before symbolic functioning begins. This finding would be in keeping with the finding that repression based symbolization first develops years after birth. A study of early childhood case reports from the psychoanalytic literature supports this concept. It sets the timing of the first appearance of symptoms based on symbolic forms displaced from their referent, early in the third year of life. This is in keeping with the findings in little Jan and make clear that her experience was not an isolated occurrence.

The earliest age for which treatment of a "phobia" has been reported in the psychoanalytic literature was Max Wulff's (1928) "A Phobia in a Child of Eighteen Months" . A true symbol shaped by repression and underlying the phobia was not described. The eighteen-month old girl was reported to have shown signs of anxiety early one evening, crying, ‚Mamma, don‘t give Lichen away‘. She clung to her mother and showed clearly signs of uneasiness and anxiety. This happened several days in succession. Then she began having anxiety attacks both day and night. Her anxiety increased whenever anyone knocked on the door. She had fears of the dark window, church bells, and the sound of passing motors but no exaggerated fears in relation to a relatively neutral object. These fears are examples of the phobic avoidance and anxiety reactions commonly seen in children at this age in response to general

perceptions which stimulate drives and affects without the interposition of displacement and symbolization. We see in the experience of this eighteen-month-old a parallel to the first stage of little Jan's illness and to Piaget's symbolic play. The capacity to manifest emotional disturbance through displacement of aggression to representation separated from the reference by repression was not seen.

Further information comes from a paper by Editha Sterba, (1949) "Analysis of Psychogenic Constipation in a Two-Year-Old Child" . At sixteen and a half months, the child, a boy, showed anxiety when his mother talked to a stranger. He would not go to sleep alone, awoke screaming during the night, stood up in bed, and when his mother came, clung to her and looked anxiously around the room. He cried whenever his mother began to leave during the day. He developed constipation so severe that all bowel movements had to be assisted by an adult. He was taken for treatment at twenty-six and a half months. He took an interest in little wooden balls in the playroom. The therapist said, "I can do something much better with the ballies". She loaded the sleeve of her blouse with them and let them fall. He wanted to do the same; but after loading up, he became pale, thoughtful, and silent and said, 'I don't want to take the ballies out'. He kept them in his sleeve for a half hour. He asked the therapist to take them out. This clinical incident at twenty-six and a half months illustrates a transition phase between symbolic play and true symbol formation. The child dealt with the balls as though they were something else. We cannot tell if the connection was conscious.

Wulff's case illustrates the nature of symptoms before the development of the capacity to develop psychoanalytic symbols. Children can only develop anxiety, sleep disturbance, and somatic symptoms at that point in development. Sterba's case illustrates presymbolic emotional reactions (anxiety and somatic symptoms), which transition into expression through psychoanalytic symbols with the onset of repressive activity by the symbolizing functions of the ego, at twenty-six months.

Melitta Sperling (1952) reported the case of a girl who manifested a transition to the use of psychoanalytic symbols during treatment, which had begun at twenty-three months. In Sperling's case one can see the phenomena seen in Jan. First there was the typical emotional response (anxiety and somatic symptoms) before the development of substitute symbol formation. Then there was the appearance of a phobia at 26 months accompanying the development of the symbolizing function.

Sperling's patient's chief complaints were at first attacks of paroxysmal tachycardia for which no organic cause could be found. The child would grunt and assume a crouched position. At twenty-six months, following the birth of a brother, a sleep disturbance appeared. Nightly she would wake up in fear and scream, 'A doggy (a kitty or a fish) is biting my finger'. The child carried these fears into the daytime. She avoided feeding her doll because she was afraid the doll would bite her finger and swallow it.

True symbol formation occurs when a symbolic linkage is unconsciously utilized as a pathway for the displacement of drive energies from the body or primary object to the word representation of the linked environmental object. The symbolizing function effects the discharge of drive energies in such a way that endangered object representations are spared. Apparently the appearance of the fourth step occurred in Jan at the time she was in conflict over her anger at her mother during a period of separation. In effect a new bottle had been provided for old wine. That which had been presented in anxiety and night fears was now presented in phobias and dreams from which she awoke. Other cases from the literature show us this transition to the use of symbols and phobic symptoms as a means of dealing with conflicts during the third year of life. Variations in the timing depend upon individual variations in children. The course of nonpsychotic human psychopathology in early childhood is marked by a transition from diffuse representations of anxiety to the development of neurotic symptoms during the first half of the third year of life.

The ease with which the child was able to respond to the interpretation of the meaning of her symbol-determined symptoms is typical of the way children can perceive and confirm the unconscious meaning of their symbol-determined symptoms, when these are pointed out to them. Piaget observed that the intensity of the repression of the awareness of the connection between the symbol and what is represented increases with age. A parallel transition can be observed with symbol-determined symptoms.

In the case of Jan, conflicts related to the oral phase formed the basis for her first symbols even though they occurred during the anal phase. The child had evidently failed to resolve conflicts related to orality and separation and so still had them to deal with during the time period of a later phase. Unresolved oral-sadistic conflicts may carry over into the period when symbol formation occurs.

NOTES

1 A more complete presentation of this case can be found on page 94 of Sarnoff (1976)

CHAPTER 7
THE ONTOGENESIS OF SYMBOLS FROM PRELATENCY TO THE ADULT YEARS

LATENCY AGE SYMBOLS

Four-year-old children are buoyed by a sense of omnipotence; they have a feeling of being invulnerable. They speak unguardedly even though they have had the capacity, available since 26 months of age, to alter the impact of their words. The altering skill is achievable through the use of masking psychoanalytic symbols to adjust word choice to social needs.

At six years of age, with the acquisition of sufficient ability to support behavioral constancy, the situation changes. Socially acceptable verbal choices are chosen. They dominate speech, and behavior responds reliably to social needs. Symbolizations replace unguarded drive expressions, which, though still active, are relegated to the system unconscious.

During The age of latency (6-12 years) the child's sense of omnipotence is overwhelmed by an awareness of humiliated smallness. This is produced by the addition to oral phase problems such as fear of loss of love, of phallic phase sources of conflict such as castration fear, and the incest barrier. Provocative speech is avoided. Fantasies that involve parents in sexual and aggressive contexts become unbearable.

Poor reality testing in the area of response and an intensified impact of reality in the interpersonal area introduce conflicts that cannot be resolved in reality. The age appropriate cognitive function of the early latency child enables the resolution of this conflict through the intensified use of repression, fragmentation, and displacement. These defenses produce psychoanalytic symbols. The synthesis of such symbols into distracting fantasy patterns, becomes a primary adjustment technique in childhood.

THE CONCEPT OF LATENCY

The process of adjustment by discharge of drives through the capacity to create and use symbols and fantasy first begins in the third year of life. It remains a primary modality until the development of

adult organs for sexual and aggressive functions with entrance into adolescence. The part of the ego involved in these activities is called "the structure of latency" (see Sarnoff 1976). It consists of the function and effect of cognitive potentials, which dominate adjustment from 6 to 12 years of age (the age of Latency).

The typical latency age child is capable of periods of educability during which he is calm, quiet and compliant. Sexuality is expressed in fantasy through the symbolizing function. Drives and conflicts are processed in states of latency through internal mechanisms, leaving the child free to adapt comfortably to society, which in turn expects little in the way of contribution from the child.

As the child passes through the sixth year of life, the threatening nature of Oedipal concerns during the phallic phase calls into action regression as a defense. As part of this regression a recathexis of anal-sadistic drive energies occurs. This does not result in manifest sadomasochism. Ego mechanisms, which involve restraint of impulse, blunt it during this period producing calm where aggression would have been expected. Provocative aggressive stimuli from peers and environment, which could alter the child's attempts at calm demeanor, are buffered by the fantasizing function of the ego, which produces cryptic symbol laden fantasy play to invoke distraction, and prevent disruption. These play fantasies routinely contain highly symbolized sadomasochistic content. Cops and robbers, war stories, kidnappings, and cruel elements in fairy tales are examples of this. Manifestations of masochism during the early latency age period primarily take the form of such fantasies, or are experienced as hostility projected through interpretation into relations with peers. This is often actualized as being "picked on".

Whether masochistic fantasy is reinforced by actualization or dissipated, it is subject to the modifying effects of the phallic phase. Progression through phallic-phase interests (competition, object-relatedness, penetrative urges, oedipal concerns) and parentally encouraged progress in cognitive development aids in the neutralization of drive energies. There results a lessening of the energic cathexes of masochistic fantasies to the benefit of more mature functions.

The older the child, the more realistic and external are the sources of the symbols called upon to represent these masochistic fantasies. There is a veritable march of age appropriate symbolic forms, ranging from early latency amorphous danger figures (demons) to reality-based threats (potential

bullies), in the selection of fantasized persecutors. Such fantasies discharge drives and master conflict on a symbolic level, in the manner that a novel, a play, a fulfilling dream, or a daydream offers one a cathartic resolution of conflict.

As a result of the discharge function of latency age fantasy, the latency age child has the potential to function and learn in a state of calm, cooperativeness, and educability. This is referred to as the "state of latency", the clinically observable traits of which dominate behavior from 6 to 12 years of age. The process and the time frame associated with such resolution through symbols are called latency and the latency period.

FANTASY PLAY DURING LATENCY

Fantasy play as a form of psychic activity dominates adaptive drive discharge from late in the third year of life to the end of the latency period (twelve years). As early as 26 months of age there had been evidence of the development of a precursor of the structure of latency in the form of fantasy distortions in dreams and play for conflict resolution and drive discharge (see above—Little Jan). These beginnings at 26 months can be roughly correlated with the simultaneous ontogenetic appearance of distortion dreams and psychoanalytic symbols. The presence of psychoanalytic symbols in distortion dreams and play implies latent content, which is not immediately available to the conscious awareness of the dreamer or to the player at the time that the manifest form of the symbol is being experienced. During therapy sessions primary drive discharge through the dreamlike ludic symbols of fantasy play diverts energies from dream reporting to fantasy play in the early latency years.

The symbolizing, mythopoetic, and fantasy producing function of the ego is one of the primary building blocks of ego structure in latency. No matter what other mechanisms or adjustment patterns the child may have, this aspect of the structure of latency provides a defense of last resort, particularly in dealing with the interface between the drives and the world. The child is poorly equipped, both in stature for using aggression effectively, and in the availability of a mature primary sexual organ for the expression of his sexual drives. In the absence of these resources during the latency years, the symbolizing function in the service of fantasy provides an organ for catharsis and for discharge.

The work of the structure of latency during the age period 6 to 12 in developing manifest fantasies, which distort the latent fantasy to the point that its content is unrecognizable and its affect unfelt, depends heavily on the capacity to form masking symbols. This in turn depends upon the acquisition of abstract thinking, delay, and repression.

SYMBOLS AND AFFECT

It is not the content of the latent fantasy alone that calls into action repression, which forces referents out of conscious awareness. Associated affect is the active element. Psychoanalytic symbols are not binary units consisting of a referent and a representation, as is the case with simple symbols. To understand the workings of psychoanalytic symbols, a third factor, affect, must be considered. Affect completes the representational triad of the symbol. The representational triad consists of referent, affect and representation. (see Sarnoff 1976 p 159) The strength of the affect associated with the referent is the primary element that makes it a target for repression. The valence for attracting affect of the representation is inversely proportional to its capacity to serve as a masking symbol. Concepts and words without affects are not turned into symbols. Referents without affects do not to complex symbols go.

Verbal concepts, that are encoded in memory during prelatency, drives, and their associated high charges of affect, are defensively excluded from consciousness to a greater degree, when latency begins. There is little hope for return to awareness until adolescence begins. They take up permanent residency as the referents for which the manifest fantasies of the state of latency serve as masks. Manifest symbols that have other meanings are utilized to represent them. Their latent import becomes hidden to such a degree that painful affects are lost to consciousness. Repression of the link to incestuous objects and manifest symbols, which is used as a fantasy element, produces neutral representations. A representation of the referent may persist in consciousness if shorn of affect by the mechanism of isolation. In this circumstance the referent is permitted to persist as a conscious element. This special symbolic form, the deaffectivised word or object, makes possible the persistence of relationships with parents in spite of latent rage.

Recourse to the use of symbols as discharge agents hide true meaning. As a result direct access to working through, recognizing, and modifying of distortions through the correcting and validating effects

of the confrontational aspect of secondary process thinking is lost. It is common for a child, one leg of whose ambivalence to a parent is repressed, to reject an interpretation of anger at the parent with the statement that it can't be so since the parent is so loved. One of the roles of the child therapist is to seek the reversal of this process through interpretation of fantasy and symbol. In the latency-age child, this requires recognition that the symbolizing function and its derived fantasies serve as an organ for the expression of otherwise inexpressible aggressive and sexual drives. Play expressing these fantasies is often the sole conduit that brings insight into conflict into the psychotherapeutic dialogue. This process is not limited to latency, though it is at its height as fantasy play during the latency years. For instance dream interpretation of psychoanalytic symbols occurs during all subsequent ages.

Faced with humiliations or tasks beyond his ken, the child with an effective structure of latency can always turn inward for comfort. There he can fall back upon a web of symbols, which, woven into a kind of mythic map, can be used as guide to a fantasy land where his power and self-esteem are reinstated. Thus restored, his energies are freed to pursue the business of the day. Personal fantasies and myths are evoked that may be used to organize play while releasing the child from tensions that would interfere with his capacity for calm, pliability and educability. A child whose symbolizing function can support such a "latency" enjoys the symbolic content in movies, plays, and TV programs. A child with impairments in the symbolizing function watches TV for the affect and the excitement of its fights and noise. To evaluate this difference, it is only necessary to ask the child to tell you about a favorite TV show or movie: the child with an immature symbolizing function will tell of excitements, while the child with mature symbolizing will tell the story.

THE SYMBOL TRANSITIONS OF LATE LATENCY

The latency age period is marked by constant maturational change, consisting of a remarkable forward flow of specific growth in physical, physiological, psychological, and cognitive areas. In step with changes in age, size, and reproductive potential, there are transitions in symbolic forms that support the shift to reality and object relations as the zone of effectuation for problem solving and for seeking partners.

LUDIC SYMBOLS

The persistent characteristic which defines the latency period psychologically is the existence of the structure of latency as a manifestation of the cognitive capacity to utilize Ludic (play) symbols in waking periods—as dream (Oneiric) symbols are used in sleep—to master trauma and instinctual stress. Ludic symbols are psychoanalytic symbols used to express referent content through fantasies in play. They appear initially during the first half of the third year of life. *Ludic demise* means a fading of the use of highly symbol-based fantasy play as an outlet for drives and as an arena for the resolution of early longings, traumatic experiences, and the reorganization of behavior. Most of these longings and experiences involved the parents.

The term "Ludic" was introduced by Piaget in 1945. The word "ludic" is derived from "Ludens", the Latin word for play. In late latency, maturation strips the fantasy symbol of much of its discharge potential (ludic demise). As play (ludic) symbols mature, they become less evocative and more communicative. When the use of the ludic symbol diminishes (at about 12 years of age), one of the most important steps *(ludic demise)* in psychological readiness to begin adolescence has begun.

"Ludic demise" refers to a decline, from 11 to 12 years of age, in the ability to use playthings as ludic symbols through which drives can be discharged. It is associated with decline of the influence of the structure of latency; and the shift from focus on the "reality" one can feel to focus on the "reality" one can touch. Hidden meanings in play practically disappear. Primacy shifts from play (ludic symbols) to the dream (Oneiric symbols) in early adolescence as the vehicle through which evocative psychoanalytic symbolic contents can be detected by the therapist. Spontaneous dream reporting becomes a primary source of data when this happens.

Clinically, ludic demise may be detected both in the therapy situation and the diagnostic interview: the child simply prefers to talk, and disdains or eschews use of the playroom or toys. This observation has had a direct influence on the office setting for my professional practice. I have both a consultation room and a playroom. They are connected, and free movement between them is usual. At the beginning of each session I provide access to both, giving the child a choice. The child who has moved away from ludic symbols is under pressure to handle stresses and affects generated by object relations difficulties and the environment directly. Therefore verbalization in the consultation room is chosen.

In the ongoing psychotherapy situation, it is possible to observe the transition that is ludic demise. Usually there is a period of some months during which the child is unpredictable in his choice of room, and may even wander between them as the forward movement of his cognition ebbs and flows. There is no question that during the transition, unresolvable stress situations produce regressions that reactivate play as defense. Yet there is a point beyond which regressions to the use of play symbols are rejected. At this point reactive depressions, temper tantrums, rages, and frank attempts to manipulate as techniques for avoiding affects are emphasized. Fantasy becomes less effective as a latency defense, and play therapy begins to lose "play," which is the very source of its name and the therapist's primary means of communication with the secret and unconscious world of the child.

ONEIRIC SYMBOLS AND UDIC SYMBOLS COMPARED

Dream (oneiric) symbols and play or waking-fantasy (ludic) symbols are very similar in structure and function. Impairment in one may indicate impairment in the other. Ludic symbols are normally used during latency, but not after the onset of adolescence. This explains a major difference between psychotherapy in latency and adolescence: oneiric and ludic symbols can be used interchangeably as information sources with latency-age children. In adolescent treatments, verbal free association and dream reporting take center stage. The adolescent rejects Ludic symbols. The latency child lives by them. ludic symbols are constructed primarily out of objects with physical dimensions with limited ability to metamorphose and which contribute meanings alien to the child's conscious play intentions. Oneiric symbols are primarily visual images. They are freely malleable and through metamorphoses and substitution can be changed to suit or to disrupt any conscious scenario. There is less control by the dreamer over the oneiric symbol. It is more apt than the ludic symbol to permit breakthroughs of affects that betray the dreamer to secret stresses associated with the referents that the dream represents. Therefore, nightmares are common in dreaming, and rare in playing with toys.

LATE LATENCY

The first stages of emotional growth that mark the beginning of the move away from the ego organization of latency are manifested in a change of cognition. There is a shift from self-cathexes and intuition to an intensified cathexis of the object world and reality testing. Foremost among the mental

elements involved is the shifting, into the service of object ties and reality testing, of certain symbolic forms. These include the shift of the waking arena for the expression of fantasy away from latency symbols (ludic demise) toward communicative symbol-based objects in reality. This differs from the use of parents as subjects of latent fantasy activity that occurred in the prelatency period.

The transitions at the adolescent brink are: cognitive—(i.e. evocative to communicative symbols and speech), Physiological—(i.e. the appearance of orgiastic potential), and Psychological—(i.e. Ludic Demise). A shift from self cathexes and intuition to an intensified cathexis of the object world and reality testing and a shifting of symbolic forms into the service of object ties and reality testing, the appearance of communicative speech and the appearance of tertiary elaboration results. The acquisition of the latter cognitive skills paves the way for the acquisition of the ability to fall in love.

THE SHIFTING SYMBOL MODES OF LATE LATENCY THROUGH EARLY ADOLESCENCE

All symbols at all stages of development have the potential to serve in both evocative and communicative modes (See Sarnoff 1987 p 47). The symbolic forms that are most important in the latency years are evocative mode symbols. These are symbols influenced primarily by drives and inner life. The forms that are most important in adolescence are communicative mode symbols, such as the symbols involved in aesthetics, creativity, future planning, and pursuing love objects. These are symbolic forms influenced primarily by communicative needs involving the real world and love objects. A shift to the latter more mature symbolic forms is an indicator of emotional health. The shift in the dominant polarity of symbols from the evocative to the communicative mode is an early sign of the shift from latency to adolescence.

The needs of the audience determine the nature of the communicative symbol. Communicative speech is verbalization tuned to the listener's needs for empathy, clarity, and completeness in the words of the speaker. The beginnings of tertiary elaboration, which is verbalization shaped by a knowledge of the background, point of view, and philosophy of the listener, is also a source of insight into the inner workings of the communicative mode.

Communicative symbols represent a victory for altruism, reality testing, and non-egocentric

influences. These symbolic signifiers work for the benefit of object relations. Through communication and transformation, fantasies are modified by changing their symbols and symbolic forms to match the will of the world. When such contact with reality is achieved, past traumas can be de-emphasized, reparatively mastered, and processed. The communicative symbol dominates art and therapy from the beginning of adolescence. It is in turn dominated by society.

The symbol in the communicative mode takes into account the real world and the needs of the audience in the selection of the signifier, i.e., communicative symbols are shaped by choices based upon consensual recognition of meaning. Therefore, they play a significant part in communicative work, art, and writing as well as character formation.

For the most part, prelatency fantasy style emphasizes the use of symbols for the evocation of inner needs and feeling states. This use of the evocative polarity is continued in latency augmented by markedly distorted manifest symbols. Adolescent fantasy style and its mature cognate, future planning, shows a return to the direct representations of prelatency using symbols in their communicative and adaptive polarity.

THE MARCH OF FANTASY STYLES

In dealing with stress, distorted representations are available for the formation of manifest symbols and fantasies from as early as twenty-six months of age. However prelatency fantasy style usually consists of relatively direct manifest representations of core fantasies. Sexual role oriented wishes are expressed with direct representation of the parent as the object. (e.g. "When I grow up I'll marry daddy.") Latency fantasy style, as the result of intensification of the strength of repression, emphasizes ludic symbols. The fantasy activity of latency is characterized by marked displacement and symbolization. Vast distances are created between the latent and manifest contents (unconscious and conscious) of fantasy. The parent becomes a king in a distant land or an amorphous monster. Sexuality is represented as aggression and can even appear as hostility. Core fantasies are expressed through symbols distorted by the structure of latency. With the advent of ludic demise communicative symbols move to center stage producing the fantasy style of early adolescence. At that point, recruitment of real objects occurs. They serve as symbols to be used in fantasies that pursue resolution of the current and future needs of the child.

During late-latency through early adolescence, a dearth of play symbols and increased drive energies confronts the growing personality with a new challenge. Achievement of mature object relations involves a final resolution of that part of the prelatency parent child relationship that did not succumb to fantasy working through and improved reality testing. The best outcome occurs when the unresolved bonding involved, surrenders to the "*removal*" of the child's cathexes from the parent to a peer. Less happy are the outcomes in which unresolved prelatency object ties, often pathological, become a model for relating to significant peers, and a prototype for other attachments.

With the advent of puberty, there bloom new elements within the relationship. The insecure child on entering puberty opens the door to new supplies for self esteem based on the fact that the parent finds the child to be newly interesting and lovable. The child's maturing physical attributes invite the parent's admiring glances, which in turn enhance the child's confident sense of sexuality. Intimate interpersonal and heterosexual relationships with peers are patterned on relationships with the parent of the opposite sex. Ego fulfillment boosts self-esteem, and alters the patterns of referents for interaction with others. It is the parent child relationship that occurs between ludic demise and removal that informs adult choices. Remnants of that relationship shape the symbolic representations that intrude upon and guide recruitment of new objects for playing out old scenarios and shaping the realities of future relationships.

DEVELOPMENTAL MARCH OF SYMBOLIC FORMS IN EARLY LATENCY

Symbolic forms change as the child matures. In earliest childhood the sexual drive found outlet through a parasitic protosymbolic arrangement whereby other organ functions, such as sucking with the mouth to obtain food, were also used as a pathway for sexual discharge. Such a parasitic arrangement is called autoerotic. Subsequently, excretion and manipulation of parts of the body, including the genitals, served in a similar capacity vis-a-vis the sexual drive. With the development of conceptual thought during the period of18 months to 3 years, concepts (both affectomotor and verbal) provide an erotic substitute discharge pathway, in the form of fantasy symbols. Latency-age sexual expression through symbolic forms are attempts on the part of the organism to express drives in the absence of a mature physiological organization for discharge, namely an exclusive effector organ and an object in reality.

In the normal transition of symbolic forms that lead into the latency period, symbols tend to take on the characteristics of amorphous images such as ghosts and robbers who might break into the home. Their very vagueness helps to hide their latent meaning (usually hostility projected onto parents) of masking manifest persecutors or adversaries. Ghosts are typically chosen for their dissimilarity to parents, The appearance of parents or animals as symbols at this stage is a sign of immaturity.

We turn now to the developmental march of persecutory symbols. The primary developmental direction of the march of symbols through the latency period moves the latent source of fearful manifest symbolic forms away from the inner world of the child and replaces it with a content populated by reality-based imagery. Creatures with human form come to be feared, a condition that foreshadows the step of giving up toys in favor of people in the fantasy creation that follows ludic demise.

Because of the frequent developmental changes in the defenses and cognitive functions of latency, symptom changes often occur. For this reason, one must be on guard not to attribute a new symptom to the nearest stress, or to view the disappearance of the symptom as the result of a therapy.

The manifest forms of symbols themselves undergo changes with growth. It could be confusing if one were to lose sight of the phase-specific normalcy of symbolic forms chosen, and as a result judge the child by adult standards. The fantastic persecutory symbol of early latency is most often a normal finding.

There is an age related march of persecutory objects used as symbols, which is normal. The first psychoanalytic symbols associated with neurotic fears and pathology appear during the first half of the second year of life (approximately 26 months). They take the form of animals (zoophobias i.e." Little Hans") or rarely, plants (phytophobias). The latent content referents associated with these symbols are affects such as anger or people such as close family members (ie. parents or sibs).

Fears that were manifest in the first year of life and persist through the third year should be differentiated from these. Such early childhood fear gives rise to phobic avoidance reactions involving fear of large animals, fear of the dark, fear of being alone, and fear of high places. These can be attenuated by behavior modification techniques, such as directing the gaze away from the precipice as a response to fear of heights.

There is an enhancement of fantasy and play activity utilizing ludic psychoanalytic symbols for the resolution of conflict that occurs with the advent of "latency" at about 6 years of age. Much of this use of symbols is pleasant for the child and is experienced as under the child's control. Concomitant with this enhancement of fantasy play, infantile phobias such as the zoophobias resolve. The projection of introjects, which underlies the zoophobia persists in the manifest content of the bedtime phobias and the fears of amorphous attackers from the darkness. This is an early manifestation of a phase in which projection in appropriate doses is constructive. When limited in intensity, night fears are part of the *normal neurosis of latency.* Intensification and expansion of the phenomenon that involve these fears in dreaming and day fantasies, is an indicator of current conflictual problems in the child. The absence of the normal neurosis occurs in childhood schizophrenia. (Bender 1970)

MIDLATENCY AND SYMBOLS

During midlatency (about 7V to 9 years of age) there is a change in the objects that are chosen for manifest symbolization and incorporation into fantasy. There is a shift away from amorphous, internally conceived and informed monsters such as the formless ghosts, which appear in night fears. Manifest symbolic forms become humanoid, (i.e. witches). Persecutory symbols become more anthropomorphic. Reality elements are utilized to actualize the feared fantasy objects that occur in phobias. Such external reality elements are used to rationalize symptoms. This change in manifest symbol content occurs at its earliest with a cognitive shift at 8 V years of age. [In this regard, see also Anthony (1959) and Piaget (1945).] The move is necessary and normal, and presages a normal shift into adolescence. This shift is a manifestation of the increase in reality testing that is associated with the move from intuitive responses to stimuli to the use of abstractions based on memory modified by external reality (Piaget's "concrete operations"). Symbols that do not hew to this developmental line tend to be affect-porous and interfere with the function of the structure of latency, which becomes useless except as a template for future planning, when with early adolescence, real people are recruited to serve as symbols in fantasy derived scenarios. The latter is especially so for those fantasies, which serve to discharge drive energies linked to forbidden objects and forbidden wishes.

LATE LATENCY—EARLY ADOLESCENCE, AND SYMBOLS

During a period concurrent with late latency (the time from 9 to 12 years of age) a process is initiated in which maturation moves the march of persecutory symbolic forms toward completion. As part of the process of ludic demise, fantasy formation involving threatening fantastic imagery is replaced by fantasy formation involving threatening realistic images. Threatening anthropomorphic figures, which have become more human by the age of 12, may still exist as latent content. Manifest symbols come to be newly modeled in psychic reality by the characteristics of real people. Fantasy continues to be woven around these new manifest symbols under the guidance of personal wish determined motivations.

The completion of the shift, from fantasy objects to reality objects as manifest symbols, is a characteristic of adolescence. Then the drive discharge mechanisms of the ego undergo a transition from seeking fantasy symbols for evocative expression to seeking accurately perceived reality data to provide the rational feedback needed to populate realistic plans for the future. The loss of fantasy based ludic symbols coincides with this transition to real objects, which fulfills the maturational reproductive imperative that puberty imposes on a life. This occurs at a time when the ultimate goal of the drives replaces simple discharge with procreation in reality.

Transition from real people who have been distorted by fantasy to real people who are realistically interpreted and who contribute the influence of their own needs to the framework of the relationship is a normal step. Failure to achieve this step is crippling. Fixation before the point of transition to a feared real object, which can be validated, leads to constant fear as in agoraphobia, and adolescent shyness.

PERSECUTORY FANTASIES AND LATENCY AGE PHOBIAS

In common parlance, phobia refers to a fear of a specific object or situation. This fear is sufficiently great to cause the subject of the fear strenuously to avoid contact with the feared object or situation. Phobic avoidances such as that which result from fear of horseback riding or fear of a fall from a horse could be fit into this definition. The specific medico-scientific term phobia implies the existence of a more complex condition than such a phobic avoidance reaction. Psychoanalytically informed terminology implies by "phobia" the existence of a feared object, which is a manifest symbol for a referent whose identity is unknown to the subject of the fear. The subject, or patient, has his conscious awareness

diverted from the feared object by repression. In place of the feared object, and hiding it, the mind itself creates the symbol. The manifest symbol is related to the hidden referent through some cryptic, often abstract bridge. Avoidance of the symbol makes possible continued contact with that which is the true object of fear.

THE PATHOLOGICAL IMPLICATIONS OF PERSECUTORY FANTASIES IN THE LATENCY AGE CHILD

An exaggerated use of projection as manifested in persecutory fantasy, though creating much pain for the child does not preclude a normal and healthy adult emotional life. It is difficult to predict adult pathology solely on the basis of adjustment destroying *nocturnal* manifest fear fantasy symbols in the Latency age child. There are yet to occur events and relationships that will influence the transformations of cognitive skills and ego functions in Late-Latency Early Adolescence. Whether the persecutory fantasies will be transformed into art by sublimation or will cast the youngster and the adult he is to become into a narcissistically dominated world of fear depends on adolescent experiences such as encouragement or discouragement of removal, the adventitious coming true of a fantasy or one of its derivatives and the innate potential of the child to cathect reality more strongly than his own inner fantasy life. The latter can be evaluated while watching a child play. If the child's emphasis during play is on the communicative aspect of his play symbols rather than excluding others from knowledge of their meanings, the prognosis is good. The presence of a thought disorder in the content of the fantasy is an ominous sign. (see Despert, J.L.(1940).

In the absence of contradictory evidence, the presence of dominating *daytime* persecutory preoccupations in the Latency age child points toward an impairment in the symbolizing function. One expects the fear fantasies of childhood to be better symbolized and masked, or at the least reserved for the hours before sleep. It is considered to be a sign of poor functioning during Latency for a child to focus full attention on persecutors, and to change the pattern of life, to withdraw, to hide, or to avoid playmates because of teasing and persecution at the hands of peers.

Children normally recognize bullies and seek associations elsewhere giving little heed to mean ones once they are out of sight. Children who have difficulty in dealing with their aggressive feelings and project them into persecutory fantasies, are drawn to be with bullies, bullying and being bullied.

They migrate to the strata of society in which symbol driven aggressive interactions dominate in the relationships between people. Such a state of affairs presages difficult sadomasochistic object relationships in adulthood. The predictive value of such behavior is not foolproof. One can predict the fantasies that will dominate the adult from the fantasies that dominate the Latency years. One cannot predict the defenses and quality of strengthening of cognition that will be interposed during the developmental stage of early adolescence. Only that information can inform us if persecutory fantasies will be the basis for neurotic fears, philosophical systems, or a transmutation into creative structures through the mechanism of sublimation.

Preoccupations with persecution in the Latency age period are not always predictive of a borderline adjustment, if sublimatory strengths can drain them of their venom. Individuals lacking such a felicitous endowment and having a penchant to repeat painful traumas (strong repetition compulsion coupled with maturational lag in the shift from evocative to communicative symbols coupled with intense narcissistic cathexis of fantasy in preference to reality) will find their life at every turn dominated by their paradigmatic world view. Where circumstances do not provide the culprits, neutral situations will be enlisted in the service of the dominating fantasy theme. In the Latency years the preeminent role of fantasy and the cruelty of children combine to provide an array of early warnings that tell of masochistic patterns on the march which are ready to assert hegemony in the fast approaching adult world. In the absence of data on the sublimatory capacity of the child, psychotherapeutic intervention is indicated where persecutory fantasy is persistent and crowds out other mental content. We should err on the side of safety.

PHOBIA IN LATE LATENCY THROUGH EARLY ADOLESCENCE

With the step over the threshold into early adolescence, real people are recruited to live or play out the child's fantasies. Persecutory figures are drawn from the truly real, such as people in the environment. The symbols consist primarily of realistic figures who could have an independent existence. In the circumstance in which, the child's relationship to recruited reality takes on a life of its own, evocation can give way to communication and fantasy can give way to object love. The closer that the child gets to such expressions of instinctual energies with real people, the greater is the chance that he will manifest his forbidden wishes utilizing real world elements as symbols. Conversely, as real objects

become more in evidence as objects of drive discharge phenomena, more and more do real objects vie for the instinctual energies. The introduction of the needs of the real object undermines the distorting influences of symbols and fantasies. Character is established when fixed patterns of fantasy used for drive discharge find expression with real objects.

THE ROLE OF SYMBOLS IN THE MANAGEMENT OF AFFECT

SYMBOLS AND AFFECTS SUCH AS DEPRESSION DURING THE LATENCY YEARS

The latency age child has an organization of ego defenses that stifles uncomfortable affect through repression of the thought content associated with it, and distraction of attention to symbols. This characteristic of the period 5 through 12 1/2 years of age limits overt depressive moods. Latency age depression when manifest is usually short-lived. Usually latency age depression appears in a masked and cryptic form. Substitute symptoms such as generalized itching, sleep disturbances, poor school performance, manipulative temper fits, hyperactivity and psychosomatic symptoms appear. Uncomfortable affects are removed from awareness through dismantling and fragmenting of fantasies that had served as moieties to carry uncomfortable memories. This distancing from affect is achieved through displacement of latent fantasies, which have been broken into parts and reformed through symbol formation to more comfortable symbols. The affects of these manifest fantasies are far removed and dissociated from the latent fantasy's depressive affects, which had been a response to earlier stresses. These symbols are regrouped into pleasant mastery-oriented fantasies. This function results in discharge of drives and mastery of humiliating experiences without clinically uncomfortable affects. Successful psychoanalytic ludic symbol formation can serve as a defense against uncomfortable affects such as depression. In this regard see Sarnoff (1986) Page 222. For this reason, manifest depressive affect becomes strikingly more apparent clinically after the age of twelve and a half, with the completion of ludic demise.

PUBERTY

In late Latency—early adolescence, there is a noticeable increase in drive energies above the levels experienced during the Latency period. In males, erections become more frequent. Minor bodily changes

portend the beginnings of maturity. Sexual fantasies become more intense, and more overt. Fantasy contents begin to relate to planning around the search for objects in reality to be used for the discharge of drives. In content, the earliest of these fantasies entail looking, seeing, and fulfilling one's curiosity about the form and appearance of the mature male and female. This curiosity relates to the parents and the future self of the child. Since parents are forbidden objects, the child must displace curiosity to peers and interests to real people as symbolic forms for use as substitute formations (symbols).

The passing from dominance of ludic symbols stops play with toys. It does not stop symbolized fantasy activity within the mind, which informs play involving one's or a partner's body. Excited play using movement of the whole body is a masked manifestation of masturbation. With puberty the addition, of a sexually expressive genital, channels erotic fantasy into frank masturbation.

EARLY ADOLESCENT MASTURBATORY FANTASY AND ITS SYMBOLS

In the sexual sphere, the work of adolescence consists of: (1) the undoing of latency constraints; (2) disengagement from latency fantasy activity as a primary organ for sexual discharge; and (3) the integration of thought, action, drive, and object into an acceptable pattern for discharge using a new primary organ. One of the primary steps in this process is the rapprochement of symbol dominated sexual fantasy and genital masturbation so that both occur in concert.

Through masturbation with fantasy utilizing psychoanalytic symbols resident in the mind and free of the world's restraints, the maturing organism learns to test, experience, bear, and finally enjoy the welling sensations of orgasm, before he is called upon to experience them after having established a relationship with a person in reality. The content of concurrent masturbation fantasies provides patterns that color the search for a life partner.

PROJECTION AT PUBERTY

At puberty, the mechanism of projection, so prominent in the discomforts of the latency years, comes into the service of object seeking. Repression consisting of projection associated with symbol formation during latency gives way to denial associated with the attribution of motives to real figures during early adolescence. The search for objects in reality is propelled by puberty. As a result of the strengthening of

projection consisting of denial and displacement to real objects, fantastic interpretations of reality can be checked against reality itself.

Puberty in this circumstance enters the developmental scene bearing a two edged sword. Puberty's hormone driven object oriented push to establish a bridge to the object world and communication with reality is confronted with a converse thrust. The latter consists of pubescent bodily changes, whose presence enhances narcissistic cathexis of self, including ideas and fantasies. The use of fantasy symbols for the discharge of drive in the absence of an external object is part of this. Drive discharge through symbols and without objects is reinforced. The latter is an example of inward turning narcissistic fantasy in the absence of object relations *sui generis*. Regression to narcissistic fantasy (denial supported by displacement and symbol formation) confronts outward seeking projection (denial supported by displacement to real objects). In the tug of war produced by the influences of these two aspects of puberty, projection serves passively as a two way street serving both the inward turning and outward seeking contradictory needs of puberty.

INWARD TURNING INTENSIFICATION OF NARCISSISTIC INVESTMENT IN FANTASY WITH PHYSICAL CHANGES IN PUBERTY

Around the time of puberty, the shift in objects used for fantasy drive discharge transitions from fantasy objects adapted from reality elements to real objects with their own demands. This characterizes the healthy development in object relations that is the introduction of reality objects into fantasy thoughts. The step in moving from late latency to early adolescence requires the recruitment of reality objects, first to populate fantasy and then to provide partners in reality as the child moves into adolescent and adult life. An upsurge of narcissism in early adolescence interferes with this step.

REMOVAL

The shift of interest from the parent to the peer as symbol occurs as part of a lived-out fantasy. The shift is usually referred to as removal (Katan 1937). This takes two forms. The first, and by far the healthier, form of removal occurs when the adolescent discards infantile fantasy because he no longer needs or uses it for seeking sexual gratification. The second form of removal refers to the circumstance in which the fantasies, which dominated the parent-child relationship of prelatency inform new

relationships with selected peers (boyfriend or girlfriend). New partners are treated as though they were parents. Such relationships are dominated by a *living out of neurotic fantasies.* Total involvement in the relationship with a peer can become so intense that the child in treatment can lose cathexis for therapy and drop out. The fears, sensitivities, and patterns that constitute the new relationship are strongly influenced by the prelatency fantasies that involved the parents and the transference in therapy.

PROJECTION AS A BRIDGE TO THE OBJECT WORLD

Projection is a complex form of displacement, which in every phase of development distorts the relationship between the self and differentiated objects. Projection changes when maturation shifts symbol formation to the communicative mode.[1] When love objects are first sought, a communicative bridge to the object world is established through the reassuring narcissistic belief that the new object can be forced into the mold of one's personal wishes as though it were an extension of the self instead of something with an existence of its own. A sense that the object is under one's control is felt by the maturing child. Even though the wish that is projected onto the new person may be hostile and generates fear, it is reassuring that it is sensed to be under one's control. It is not as much to be feared as the uncontrollable possible motivations of the new object. (The devil that one knows is less to be feared than the angel who comes as a stranger.) Under this circumstance, projection of a familiar fantasy opens a bridge, across which the object world can respond with correctives based on its realities, that modify the subjective symbolic world image of the maturing mind.

THE ABILITY TO FALL IN LOVE

The shift in emphasis from evocative to communicative symbols, and the appearance of communicative speech and of tertiary elaboration (P 184, this volume) paves the way for the acquisition of the ability to fall in love. This is defined as the ability to include the needs of the loved one in the future planning of the lover on the level of preconscious planning. Mature love requires a shift from dependence of the mind on reality one can feel to articulation of conscious awareness with the world of reality that one can touch and share.

RETURN OF PRELATENCY FANTASY DURING EARLY ADOLESCENCE

Children are thought to "enter latency" as a result of an anxiety avoidant need to repress prelatency fantasy (i.e oedipal urges). The repression is held in place by symbols cryptically encoded to represent those wishes in a masked form. Many, but not all of these urges are held in check in the process. In entering adolescence, the child must reconfront with symbols drawn from reality, the demands of these fantasies, and the underlying urges and conflicts that had been only temporarily resolved through fantasy based symbols during the latency years.

FROM DREAMING TO FUTURE PLANNING IN ADOLESCENCE—THE STRUCTURE OF LATENCY BECOMES FUTURE PLANNING

As adolescence approaches, manifest symbols emphasize the communicative mode. More and more they come to be selected from reality elements. As a result, fantasies become more articulated with elements from the future and the real world, and the role of fantasy becomes less a medium for discharge and more a source of remedies in the form of future planning.

In the earliest stages of this process, the child's vistas expand to include the professions that have high visibility for children. Doctor, nurse, teacher, coach, fireman and lifeguard become the professions that children favor in constructing fantasies that fulfill an inner need for adult power. They are played out in make-believes and may be accompanied by breakthroughs of excitement. With a shift of emphasis to the communicative mode in symbol selection and the advent of ludic demise, occupational fantasies become more circumscribed. They cease to be a source of momentary present excitement, and are replaced by goal directed enthusiasm about the future. They become part of the bridge that leads one toward the object world in reality. Publicly proclaimed ambitions take shape from influences that are rooted in reality. A boy with a low academic average cannot hope to achieve professional status. The short boy defers to others his hope to play professional basketball.

Mature sexuality first appears during adolescence in the form of *prospective fantasies.* These differ from those seen in latency in that their contents are reality oriented communicative symbols. They are frankly sexual and they contain considerations for the needs of the loved object. The symbols in these fantasies are so close to reality that the thought process might better be called future planning than

fantasy. However, their roots are in the unconscious drives and their symbols are much influenced by need to express these drives. This high component of the evocative mode makes their inclusion in the category of fantasy mandatory. Their claim to being considered future planning is based on the extent to which the communicative mode influences the choice of the manifest symbolic forms which lock into the real world, where they are tested for feasibility and are included as the source of symbolic representations. As such, they become stepping-stones over which the evocative child may tread with a sense of foreknowledge into the world of real objects. The contributions of the evocative mode and the communicative mode do not add up to 100. The total is infinite. The influence is that of balance and counterbalance. Although the physical changes of maturation (orgasm readiness, genital enlargement, etc.) make satisfactory sexuality possible and provide the sexual drive with an organ for discharge to be used independently of other functions, mature sexuality is incomplete without integration into future planning fantasies of the social contexts, symbols, settings and conditions that make acceptable and possible sexual encounters with love objects.

EARLY ADOLESCENCE, PUBERTY AND SYMBOLS

In dealing with unconscious drive discharge during early latency, communicative speech symbols, though available, are de-emphasized by children, who prefer to use ludic symbols in play. The latter are the tools through which gratification of drives through fantasy can occur. Real objects are not required and are hardly needed.

The basic shift in symbolic form to communicative symbol that occurs in late latency is influenced by enhancement of reality testing. This includes the loss of waking play symbols as drive discharge elements (ludic demise), and awareness of the communicative and gratification potential when using real objects for drive discharge. Real objects are needed when the arena for drive expression is extended into the world.

Maturational improvement in reality testing and cognition (e.g. improved reality testing, ludic demise, increased drive, social pressures, improved abstraction ability, and reinforcement of object influences through sexual maturation) permanently deprive the child of the use of fantasy symbols as the sole means for solving problems.

Late latency offers a transition into adolescence. Whereas the latency-age child conceives of a word as a symbolic means for expressing his drives, the adolescent conceives of words as a communicative tool in seeking love objects, overseen by an internalized representation of the loved one. Narcissism is expressed and conquered all at once when the object to be pleased can be incorporated as part of the self.

With the beginnings of adolescence, relatively undisguised manifest sexual fantasies derived from prelatency fantasy content appear. The overtness of these fantasies is derived from alterations in cognition. Cognitive alterations (such as the "march of symbols", and passing of the "structure of latency", shift from evocative to communicative symbols) mandate that there will be changes in emphasis, choice of symbols, and the organization of defenses brought to bear on the latent content of fantasy. Memories of events, traumas, and fantasies of the prelatency period are seen through adult "eyes." They are shaped into symbols that convey these influential memories. The children are propelled toward fantasy that can be articulated with reality. Behavior consonant with the cognitive capacities, cultural demands, and the expectations of their peers result. These impressive changes in the use of communicative symbolic forms occur at puberty, when a forward thrust in the use of object oriented communicative symbols is intensified by menarche and the first ejaculation.

Sexuality undergoes a maturation and development during early adolescence that prepares the child for the requirements of adult life. In the successful adolescent, sexual energies pass from pleasurable discharge, concentered all in self, through outlets using fantasy channels (evocation using psychoanalytic symbols), to end up using genital organs specifically developed for the communicative discharge of the drive. Biological maturation readies the genital organs. Culture and cognitive maturity define the limits and effectiveness of their use. Success is indicated by the extent to which a loved object is found in reality and the degree to which fulfillment of the needs of the self and its drives also satisfy the needs of the object. This maturation of internal cognitive structures during the transition from latency to adolescence strengthens the use of communicative symbols, a process, which enhances object relations. Another source of intensification of the use of object oriented communicative symbols is the psychological experience of puberty.

IMPACT OF AND FIRST EJACULATION ON SYMBOL FORMATION

A prime psychological feature of puberty is the "enablement" of adult sexuality, through the enhancement of communicative symbolic forms. Communicative speech is necessary for the establishment of a relationship. The open door for object ties is enhanced by the impact of menarche and the first ejaculation. These processes announce the coming of age of organs for use in an activity that requires a partner and that perpetuates society. Reality oriented object relations is facilitated, and as a result there is an increase in the use of straightforward words (simple symbols) in the search to find expression in and gain satisfaction from reality. The normal early adolescent strives for reality interactions. Characteristic adolescent unreality relates not to the symbolizing elements that he uses but in his concept of the future impact of his words and actions on his future life.

In acquiring the organ resource recognized by society to be needed for adult sexuality, the menarchic child gains the potential for sexual communication on a non-verbal organ level that involves a causative action with a powerful outcome. This new potential is broadcast to her social group through ritual and custom (See Hart and Sarnoff 1971.), which proclaim them to be ready objects for the urgent needs of males. The first ejaculation is more privately experienced and goes unheralded. The move toward objects is a more private decision for boys. The individual boy is impelled by these maturational pressures toward a dissociation of masturbatory fantasy from evocative symbols to an increased articulation of drives with reality objects and action.

The child is forced to turn inward for discharge of drives in latency. The inward turning is forced by the absence of an available physical mechanism (ejaculation) for the outward expression of sexual drive towards objects. Latency style fantasy play draws cathexes into expression through the primitive body-self symbols of late-latency. With the onset of the first ejaculation, an organized discharge pathway involving reality, becomes available. This introduces an enhancement of reality influences on fantasy content. The symbols used in these fantasies are selected on the basis of their ability to introduce reality elements to fantasy content. As a result fantasy gestures for problem solving are transmuted into conduits for future planning. Indeed fantasy gives way to interpersonal acting out of fantasied trial action during the passage through adolecence. Clinically an increase of talkativeness relating to problem solving and event reporting is often seen in sessions with menarchic girls.

For boys, the first ejaculation (See Sarnoff (1976 P82-84.) is associated with a diminution in tendencies to act on poorly displaced and symbolized fantasies. The first ejaculation that is recognized by the boy, opens a potential for increased contact with reality and the object world. A new factor has been added to the child's reality that makes sense of the plangent urges, which pressing goallessly, had confronted the child with a mystery of life whose solution up till this time had been discharge through symbol formation and fantasy. Knowing what one is here for, opens the door to sexual endeavors in reality, for which the transmutations of the symbolizing function have readied the child. Long-developing changes in the symbolizing function are organized to create the communicative symbolic structure that supports the effective adult emotional sexual apparatus. As a result, drive discharge is offered release in a reality context that exceeds evocative symbols in efficiency and productivity. The way is open for the participation in the release of sexual tensions with real objects.

Boys who are conflicted about ejaculation, usually on the basis of severe castration anxiety and girls with strong internal sexual prohibitions, may fail to achieve a consistent shift from narcissistic, poorly symbolized sexual fantasies, associated with latency-style acting out of the fantasies, to articulation of drives with reality objects.

ON THE COMMUNICATIVE POTENTIAL OF SYMBOLIC FORMS IN EARLY ADOLESCENCE

Age-appropriate increase in overt sexual activity is both an outcome of an increase in sexual drive and the product of a decrease in the influence of latency defenses, which had diverted drive energies into symbolized fantasies. Cognitive maturation both pushes the child toward reality objects and opens the door to anxiety and fear about growing up as the result of the articulation of fear fantasies with reality. Retreat to the use of evocative fantasy as a means of discharge for sexual drive tends to be slowed and impaired as the result of early adolescent maturation. With the advent of puberty, symbolic distortions decrease during the formation of fantasies. The reality orientation of manifest fantasy increases as a result. Overt masturbatory fantasies become potentially fear-inducing and a cause for retreat from overt sexuality when they attribute leftover dangers to the nature of newly sought reality. The child therapist must be careful, in exploring the less symbolized fantasies of early adolescence that panic reactions are not induced when object-finding is encouraged through the analysis of fear (masturbatory) fantasies that inhibit social growth. Here one proceeds with care. For example, a 14-year-

old girl with a masturbation fantasy that revolved around being raped was caused to retreat from dating situations by her fear of the aggressiveness that she projected into sexual situations.

The shape and direction taken by love seeking fantasies, are guided by the loved object's needs. Fantasies of reality pursuits and actions are informed by those demands of the object that have been newly set into the conscience of the love seeking youth. The acquisition of ideas involving the love object's needs is developed in the way that the tertiary elaboration of dreams alters the dream in its telling to conform to the expectations of the dream interpreter. As a result, a mark is left on the tastes and choices of the adolescent that transcends the moment and colors future concepts of ways to approach potential mates.

Projection of wishes onto the new object, recruited to play out a role in a fantasy, extends the boundary of the child to include the new object. Aspects of the object become a part of the self. If the real object so chosen is then to be wooed, won, and held, its expectant and powerfully influencing wishes must become an influence on the future planning of the love seeking child before the planning fantasy enters consciousness. Fantasy must be changed to suit the needs of the loved one.

RESPONSE TO PRELATENCY FANTASY ACTIVITY

One of the major achievements of a successful early adolescence is the resolution of fixations to oedipal and preoedipal fantasy structures. The persistence of such patterns results in evocatively oriented symbols, which color the fantasies whose acting out in adults result in repetitive painful relationships. These guide, even lock, in place the patterns of drive discharge that become characteristic for a given individual.

By the age of 18, there are available on a maturational level the capacity for realistic evaluation of others; reality-bound object relations; the capacity for object-bound sexual relations; sufficient judgment for independent functioning, and physical size and strength for self-support and marriage. Psychological factors can have slowed the development of any of these elements. For instance, neurotic inhibition can delay the onset of sexual activity and have carried neurotic patterns of object relations to peers when "removal" of cathexes from parents to peers occurs. Experiential factors may have deprived the

adolescent of realities against which to hone skills. For instance, military service or a college with an unbalanced ratio of boys to girls may delay dating or integration into the community. Social factors can cause a delay in implementing the possibilities made available by appropriate development at this time. For instance, the individual who is ready for marriage may have a career ambition that requires that marriage be delayed in order to complete necessary education. By late adolescence object seeking is a serious matter. Sustained relationships are expected. If reality objects cannot be found to fulfill evocative fantasies, redisplacement and recathexis of referents results. There follows a reactivation of prelatency symbolizations, with the return of neurosis described by Laughlin (1967)

LOSS OF NEUROSIS IN ADOLESCENCE

Laughlin's (1967) observation requires notice here. He pointed out that within the general population neurotic symptomatology lessens remarkably during adolescence, only to reappear in the early twenties. From the standpoint of symbol ontogenesis, there is a shift to communicative symbols in the search for objects that results in reduction in the use of psychoanalytic symbols and the neurotic symptoms that they support. A search is initiated for objects in reality, which deflates the power of internal prohibitions. Internal prohibitions had, in the latency years, forced repression of wishes producing a shift of objects to symbols in place of seeking gratification in the world. Such prohibitions lose power when their agents, psychoanalytic ludic symbols, are lost, permitting direct venting of drive energies toward tempting or offending objects. This obviates the need for the defensive production of psychoanalytic symbols. Adolescent persistence of internal prohibitions occurs when there is an absence of availability of objects in reality, inability to give up newly found love objects who have then been lost, social restraints, and the loneliness invoked by poor innate object relationship skills. The ability to use psychoanalytic symbols in discharge fantasies hovers ever present after twenty-six months. It surfaces in the infantile zoophobias, the normal night fears of early latency, and the persecutory fantasies, somatization reactions, and obsessive-compulsive symptoms of late latency. It is ever lurking and ready to come to the surface when the balance of influences (level of anxiety, availability of objects, internal prohibitions, outcomes of exploration of reality in search of love objects, social pressures, innate capacities for object relations) favors them. The return of neurotic symptoms in the twenties relates to the shift in the balance of power that occurs when life events squelch drive expression or internal

prohibitions are reasserted in the late twenties with the intensification of the influence of parental imagoes.

ADULT SYMBOLS

Adult thinking deals primarily with non-symbolic world realities. The chapters of Vol. 2 will deal with failures in this endeavor and the pathological symbols that are generated in response (i.e. the evocative symbols that populate masturbatory fantasies and contribute narcissistic coloration to fate neuroses). In this section we will deal with the average expectable vicissitudes of late adolescent and adult symbols.

The healthy psychoanalytic symbols that persist into adulthood are: oneiric symbols, which go unchanged for a lifetime, ludic symbols which persist as a talent in artists, poets, playwrights and child therapists, and actively generated symbols that populate future planning. The psychoanalytic symbols that continue into adulthood as pathology (i.e. phobia) become muted elements in adolescence that succumb for the most part to the influence of reality. They persist in adolescence but with less global impact.

PASSIVE SYMBOLIZATION

Through passive use of other's symbols, one's own fantasies can be discharged. The creativity of others such as writers, poets, composers, and artists can be used to satisfy needs served by the personal symbolizing function. This type of symbol usage becomes more intense in use and usefulness as the years of development pass. It is first experienced passively as external to the self and unrelated to one's creativity and responsibility. It achieves enhanced importance in adulthood, as the manifest symbol comes to be more and more drawn from a context whose source is cultural and external. Projection is supported by the apparent external locus of the manifest symbol elements. Stories in which the hero can be covertly identified with the child's own self, such as the myths of a culture or the characters of a video game, provide ready-made heroes for fantasies that challenge the child's sense of smallness with dreams of glory fulfilled. Peller (1958) has noted that in early latency "daydreams become an essential release. Finding his own

daydream woven into a story multiplies the release. . . . [The] child can enjoy his own, his personal fantasy without feelings of guilt, shame, reproach" (p. 57). Clinically this potential presents a major pitfall in child therapy. The child who responds to requests for information about his fantasies with a repetition of a Batman (TV) episode seen just the hour before, may be revealing the source of his identifications but the nature of his own personal fantasies and the symbols of which they consist are often excluded from the session.

PASSIVE MASTERY AND PASSIVE SYMBOLIZATION

Through myths and cultural capture of the mind, the mechanisms of the structure of latency are adapted to provide passive identification with tales and legends characteristic of the child's social group. Ethical patterns conveyed by legends are incorporated into superego contents. The structure of latency persists beyond latency in the form of this psychological mechanism. Through it, books, plays, and works of art can be enjoyed and used for drive discharge and catharsis. Through it, the adult finds a mechanism for acquiring acceptable tension discharge and in the process imagoes for cultural patterns of function and beliefs to guide his life, his mores, his opinions, and his social reactions for a lifetime. The use of the symbols and fantasies of others for the discharge of drives in latency is called passive mastery. Its persistence into adulthood is called passive symbolization.

THE DEAFFECTIVISED WORLD; A SYMBOL THAT REPLACES REALITY

A deaffectivised image of the reality of danger often occurs in the early years of the third decade of life (early twenties). An alternate view of the world is created in which there is little danger. This image can be sufficiently removed from reality to constitute a symbol shaped context. From this memory moiety a pseudoreality can be created in the mind's eye, which encourages immoderate or dangerous behavior. This self-created conscious world can serve as a game board on which narcissistic fantasy may be played out. By 30 years of age, when the bland deaffectivised pseudoworld of the daredevil, or adventurer is repopulated with reality stress as the result of increased responsibility with accompanying intensification of obsessional mechanisms, affect returns. The real risks of situations are recognized and appropriate fears are generated giving rise to changes in life style. Clinically I saw this phenomenon in Air Force pilots who faced peril with no fear of flying or awareness of danger while in flight during their

twenties, who after thirty years of age were overtaken by the danger of their mission when marriage, children, and the deaths of friends awakened them to a reality, whose uncertainty now awed them. Unable to admit their new-found fear as a result of military obligations, they regressed to the expression of their need to withdraw from flying status in symbolic symptoms such as loss of depth perception, which made it impossible for them to land a plane. (See Sarnoff 1957.)

OBSESSIONAL MECHANISMS CAN SERVE IMPLEMENTATION OF THE CULTURAL EGO IDEAL

There is a commonly manifested intensification of the effect of the cultural ego ideal on the life of the individual that begins at 26 years of age and is completed in the early 30s. The part of the ego that implements superego demands, acquires sufficient strength to override the demands of the id in its relations to the world. A reorganization and intensification of the use of obsessional mechanisms diverts drives into symbol-based symptoms. This makes possible the development of inhibitory control as part of character.

A clinical example follows.

A woman of 30 presented herself to a university clinic. She complained of a severe fear of open places that incapacitated her. She was unmarried. She described herself as having been a "man's woman." That is, she had made herself available to a number of men of her acquaintance in the jazz music field for sexual intercourse under conditions of "equality". She was now living with a girl friend. She had obtained a job. She had stopped her promiscuous sexual activities. She had said it was "time to settle down." She then developed her agoraphobia.

Having described the basic symbols and the vicissitudes of symbolization that occurs with maturation and development over the years, we now turn to the study of the neuronal infrastructure that underlies symbol formation and the characteristics and functions of symbols associated with specific neuronal circuits.

NOTES

1 Projection is a mechanism of defense that is most often associated with pathological states. Prohibited urges and wishes generated within the self are projected onto others. Even an acceptable urge, such as anger, when it exceeds the tolerance of a person, may be

assigned (projected) to someone else. This produces distortions of perceived reality. The role of projection in the production of impaired reality testing tends to give projection a bad name, which is not necessarily well earned.

SECTION C

THE BIOLOGY OF SYMBOL STRUCTURE

CHAPTER 8
THE SCIENTIFIC STUDY OF SYMBOLS

SYMBOLS, CONSCIOUSNESS, MIND, AND BRAIN

INTRODUCTION

The symbolic forms, which are accessible to scientific study, are the natural (simple and cryptic) symbols. They can be defined, their characteristics described, and their existence recognized by scientifically trained workers. Once symbols are so identified, it should be possible to explore the multiple brain locales in which are situated the mental functions that produce the characteristics of each natural symbolic form. The multiple forms in which natural symbols are present (simple and cryptic) require more than a single anatomical venue.

Transcendent symbols as understood by those who live by them are not thought to arise in the brain. Rather they are assigned origins in a zone of spirit and deity, which exists beyond the boundaries of the self, the brain, and the mind. Transcendent symbols are thought to be inaccessible to scientific study. Any hint that they are cultural adaptations, similar to those of natural symbols, is denied.

SYMBOLS AND BRAIN SCIENCE

In the works of those who study the brain in hopes of identifying the lair of humanity with its multiple thought skills, mention of symbols is rare. The neuroanatomical localizations of the brain mechanisms that produce cryptic symbols have been little explored. There are two reasons for this. In the first place, brain scientists tend to define behavior with emphases limited to functions, which had been localized to areas of the brain early in the researches of their newly developing science. Such functions are simple reflexes, sensation, and the organization of space. They are less complex, less abstract and less protean in form, than the clinically manifest symbols that are found in health and pathology. In the second place the word "symbol" is tainted for scientific use. A vast majority of the billions of people on Earth define symbols in terms of Heron of Alexandria's scientifically unacceptable description of the

transcendent symbol, which is, "[An] . . . external object that wakens in the senses universal knowledge inscribed in the soul" (see Schwaller de Lubicz 1978 P 41).

EXPLORATION OF ANATOMICAL STRUCTURES WHOSE FUNCTIONS PRODUCE NATURAL SYMBOLIC FORMS

There are two natural symbolic forms, simple and cryptic. Simple symbols are found in straightforward vocabulary. Cryptic symbols are the symbolic forms found in poetry, phobia, and dreams. These are symbols, whose venue of origin is devoid of any taint of transcendence. For them, a scientific identity can be established according to the principles of the Aristotelian monistic world of science. One can study brain mechanisms and associated psychological defenses that give rise to such symbols. The anatomical localizations in the brain for these symbolizing functions are the seat of symbols in the brain.

Simple and cryptic Symbols and their underlying structures and functions mature and grow with the brain. They have a phylogenesisand ontogenesis that parallels that of the brain. They have regressed forms that follow the brain's decline in states of pathology. (See ontogenesis chapters above.) Their existence stands the test of scientific scrutiny, which, demands that an entity to be valid must be verifiable, transmissible, and repeatable. This means that the entity can be proven to have existed, can be reported to another person and can be caused to recur at will under a predictable set of circumstances. The repetition of the phenomenon must be a shared experience. Implied is the ability of a cognitive entity to be causal in effecting the environment and to have an existence, which is independent of the vocabulary that describes and communicates it. The sources of its content are to be found in perceived reality and in memory for perceived reality. Such entities amongst symbols are the simple, poetic and psychoanalytic manifest conscious symbols.

TRANSCENDENT SYMBOLS

Scientists and students of transcendence have clashing explanations for transcendent symbols. The scientific explanation for the existence of transcendent symbols holds revelation and traditional learning to be a product of inner psychological needs and transcendent symbols to be a form of cryptic symbol.>

One cannot study scientifically entities whose existence is denied recognition by science. Unless one works with a symbol, whose theory of origin is free of transcendental dualism, one cannot theorize

about that symbol as an object of scientific study, for which origin in brain function can be postulated. The origin of the idea of transcendent experience is seen from a scientific orientation to be a figment derived from the projection of a hope. Students of transcendence find support for its spiritual origin in the fact that man's need to explain the sources of awe is not satisfied by the what and how answers of science. Transcendent symbols persist because of man's need to find expression for concepts, which though abstract, appear to be concrete and capable of being physically causal. Examples would be life's beginnings and the adventures of the soul after death. If all the potential knowledge that science is capable of uncovering about the multiform faces of these abstractions were uncovered, there would still be unanswered questions about the nature of the first mover[1]. Religious belief would not be extinguished.

Transcendent symbols are assigned origins in memory. The pertinent memory content is derived from that which is taught as revealed. In turn the origin of such infused knowledge arises from mystic experience derived from the experienced words and wills of deities. This point of origin lies beyond the boundaries of scientifically defined reality and is beyond the power of science to explore. The study of transcendent symbols is the province of spiritual and transcendental loyalists who recognize in their definitions that transcendent symbols do not have a locus of origin in the brain. For transcendentalists recognition of meaning for symbols is derived from traditional teaching about universal knowledge inscribed in the soul. Such knowledge is based on direct personal and private experience of sights, senses, and auditions, whose origins are imputed to a spiritual flow in worlds beyond man's boundaries. A point of entry from this "beyond" is posited.

From a scientific point of view, transcendent symbols are understood to be manifestations of simple, poetic and psychoanalytic symbol constructions. The search for the anatomical origin of symbols must be limited to simple and cryptic (poetic and psychoanalytic) symbols. The pursuit of an anatomical locus of origin for transcendent symbols can be likened to a search for diamonds in the glistenings of the firmament.

SUMMARY

Scientific hypotheses about the anatomical brain origins of symbolic forms must be limited to the

simple, psychoanalytic and poetic groupings of symbols. Simple symbols have conscious links between representations and referents. Affects are little involved in their production. Their unitary meanings fit well their primary role of serving communication. Natural masking cryptic symbols, by definition, are derived from referents whose meanings are retained in zones excluded from consciousness. Cryptic symbols are used to explore new insights, inform abstract conceptual memory and protect the borders of the system consciousness. Their multiple meanings encourage philosophy and underlie reflective consciousness. Affects are strongly involved in their production. The alteration in the intensity of affect that results from the displacements that underlie cryptic symbol formation is necessitated by the need to counter the impairment of adaptation and function, which would occur if strong affect were permitted to enter consciousness. The search for their locus of origin in the brain must include affect regulation areas.

NOTES

1 An Aristotelian reduction (E.B Search)

CHAPTER 9
THE INFLUENCE OF NEUROCOGNITIVE COMPARTMENTALIZATION ON SYMBOLIC FORMS AND AFFECTS: DREAM SYMBOLS

INTRODUCTION

It is possible for that which is conscious in one cognitive system to be unavailable to another system. Indeed it is common for the symbols of one system to be unavailable to another system. This is typified by the experience of forgetting dreams and psychotic hallucinations when awakening or returning to reality.

Boundaries between cognitive organizations are characterized by incomprehensibility of symbol content in at least one direction across boundaries, restriction of the reality testing of one system, from penetrating into the reality testing of the other (see Unit 1 Sect C Chapt 11), and memory lacunae in one system for events that were experienced when awareness was focused in another system.

HYPNOSIS

There follows an example of a boundary between cognitive systems. The systems described are those found in an hypnotized state and a state of hypnotic suggestion while awake.

The setting was a cocktail party. The subject was a 24-year-old woman who volunteered to be hypnotized by a young man who wished to demonstrate his skills at hypnosis. Induction of the hypnotic state was achieved through low-key verbalization. During hypnosis, the girl was induced to sit, stand and turn around at the command of the hypnotist. At the end of the demonstration, the hypnotist said, "When I clap my hands you will awaken. Ten minutes later someone will say ‘cat’. At that time, get up and go into the bathroom." At the appointed time the word cat was said. She stood up and headed toward the bathroom. While she was on the way, I intercepted her. I asked, "Where are you going?" "Toward the bathroom", she answered. "Why now", I asked. She looked bewildered. She then said, "I don’t know." In later discussion she made it clear that she had no wakeful recall in simple symbols for the events in the

cognitive compartment of the hypnotic state, which had persisted in its own zone of memory and had been recalled in action in the post-hypnotic state.

CRYPTIC SYMBOLS AND COGNITIVE SYSTEMS

Cryptic symbols may be seen as couriers which carry information in masked form between otherwise non-communicating cognitive compartments. The information carried in one system is opaque to the sensory systems of other cognitive compartments. A cognitive compartment consists of a memory section with a sensory system dedicated to conscious awareness. There is for instance a cognitive compartment for each given level of wakefulness and each stage of sleep. Each compartment has its own way of defining reality and a dominant way of organizing thought (i.e abstraction) for use in formulating symbolic linkages. For instance, REM dreaming uses visual representations of concretely established connections such as puns to organize representations and referents.

There are age specific cognitive systems. Latency age fantasy play uses three-dimensional toys as concrete representations of significant figures, and encodes in memory abstractions about concrete experiences. Adults encode abstractions about abstractions in creating memory. It is difficult therefore for adults to remember or understand the creatures of memory that populate latency age play so encoded. Adult thinking uses words for achieving conscious representation in the mature waking memory of mature cognitive systems.

The differences between the cognitive compartments of various ages is so great that special training is required for one to be able to interpret his own recalls from childhood or for a child psychiatrist to understand the many communications contained in childhood play. (See Unit Two, Section C, Chapter 6.) With proper training, a therapist can use cryptic symbols therapeutically. They mark the places where one may find repressed sources of discomfort or neglected past realities, which have been hidden in cognitive systems of memory beyond the reach of current waking awareness.

INTERSYSTEMIC TRANSMISSION OF MEMORIES

Remembered images are perceived in distorted form in the cross boundary perceptions of other cognitive systems. This distortion creates a barrier to intersystemic understanding. The distortion may be

produced as the result of a number of factors. Some examples follow. There are natural maturational alterations of memory and cognition such as that which causes infantile amnesia. According to Schachtel (1949) such amnesia results from loss of memory for early experience due to difficulty in the capacity to recall or recognize on a concrete conceptual level that, which had been encoded on an affecto-motor level. (Pages 160-1.) There is also the difficulty experienced in adult psychoanalysis, with its emphasis on words and abstract concept memory, in recovering the conflicts of latency that were at the earlier time experienced in consciousness through displacement to play symbols. There are transformations through psychoanalytic symbol formation that hide affectively strong urges and meanings. Another example of maturation effecting memory is the observation of Jacobs and Nadel (1994) that ". . . we are unable to remember traumatic events that take place early in life because the hippocampus has not yet matured to the point of forming consciously accessible memories." (p 57)

Intersystem recognition of memory contents falters because contents have been codified for memory at levels of cognitive organization other than that of the zone of awareness, which it is entering, resulting in poor recognition. Memory blurring alterations of the symbolizing function associated with a given stage of sleep may not offer recognizable meanings when remembered in waking consciousness. Alterations in the symbolizing function typify a given stage of sleep.

OTHER FACTORS THAT ALTER COMPONENTS OF MEMORY

Memory impairment may also result from traumatic alterations of cognition, or result from the natural waning of retained memory elements over time, which offers only partial recall. Activation of alternate brain cognitive organizations (visual memory) occurs as the result of closing off of influence from another part of the brain. This occurs with the blocking of signals of retinal stimulation during eye movement, especially during REM sleep. The eye does not transmit light signals while moving. A shift of inputs to awareness that emphasizes visual memory occurs. This shift to the visual memory system is reinforced when acetylcholine dominates chemical transmission as occurs in REM sleep. Sensory deprivation that excludes the influence of the world shunts the source of the manifest symbol closer to internal influences. This explains the dominance of nonverbal visual content in dreams. Cognitive changes occur when anxiety produces different degrees of regression to primitive levels of secondary process involvement. Symbol inducing anxiety with a high level of intensity produces greater

displacement and masking during the formation of manifest symbols.

Let us look more closely at exclusions from consciousness associated with cryptic symbol formation. Referents in memory, whose contents at the time of origin were linked with strong drives and intense affects, are most likely to be distorted through displacement into symbolic forms. The original referent is masked and its affect blunted. As a result, its latent meaning becomes unrecognizable to conscious waking awareness. Once they have been converted to symbols their meanings are masked beyond recognition. As a result referents in the form of highly charged and troubling images are protected from being identified or worked through in waking consciousness.

When the symbolizing function is healthy and unimpaired, the symbols it introduces into consciousness are muted and hardly recognized manifest representations of highly charged referents. Access to referent is blocked. In their manifest forms such symbols have sharply reduced valence for attracting affect and have no need for further displacement to retain their place in consciousness. The effects of conflict on neutral areas of functioning are reduced. As a result the conflict free sphere of the ego is protected from intense affect that would distract it from adaptive behavior. When the symbolizing function is impaired, and the Ego functions associated with the symbolizing function falter, symbols become relinked to affects. An example of this is a phobia in which the manifest symbol (i.e. an animal) is feared in consciousness.

There is internal pressure to master traumatic experiences (i.e. seduction, brutalization, humiliation, overwhelming affect etc.). This pressure becomes apparent in a compulsion to reexperience or repeat traumas. Such disorganizing pressure activates defensive symbolic imagery, especially in dreams. To an overriding extent the pressure of trauma fuels the symbol-based distorted perception of reality that is produced by the intrusion of memory based imagery on the process of interpretation.

REALITY AND SYMBOLS

The compulsion for repetition of affect-laden imagery in the form of symbol and fantasy derivatives is not conducive to successful adjustment. The repeated disruptive symbolizations seen in fate neuroses, traumatic neuroses, and traumatic dreams are examples. Furthermore, essential to the nature of severe

mental illness is the failure of the individual to recognize that manifest images and symbol contexts, which once having been experienced, become a part of memory are not reality but are false impressions which have a potential to distort future perception, creating the content of a new sense of reality and undermining reality testing. Subjecting external perceptions to such distortion produces false interpretations, which are in turn experienced and remembered as real. In the history of Psychiatry, this has long been known. Aristotle (On Memory and Recollection Volume VII) described the situations, "ecstatics spoke of their mental pictures as if they had actually taken place, and as if they actually remembered them. This happens when one regards as a likeness what is not a likeness." (P 297) also see above: D'Alviella. The capacity to have false memories resulting from the interpretation of symbolic distortion as remembered reality is one of the vulnerabilities acquired by mankind with the development of symbols.

Manifest symbols remembered as past reality can distort and influence later perception, and overpopulate the fantasies that motivate action. Their disparate contents become the infrastructures of simultaneous contradictory parallel realities (See below Unit one, Section C, Chapter 11.) They are germane to an understanding of many forms of impairment of reality testing. For these reasons, the origin, development and nature of symbols, both healthy and pathological, are worthy of the attention of those who work with the mentally ill.

CRYPTIC SYMBOLS AND TRANSFERENCE

Perceived reality consists of interpreted content. It is possible to remember thoughts, words and events with and without affect simultaneously. Latent contents that take a path to consciousness through the hippocampus are free of conscious affect. As a result a memory without affect can be cathected producing a symbol, which distracts attention from its identical affect-laden counterpart. Such bland manifest elements are symbols by definition for they can represent without being an exact reproduction. The true referent (latent content) form of such symbols is accompanied by affect. This is manifested clinically in the resistance shown by a patient who recalls experiences without affect, and can say in response to an interpretation that identifies its affect charged latent content, "I know that, so what." Such isolation is rare in transference reactions. For this reason, the affect charged way of remembering that, which is called "transference" is encouraged in dynamic psychotherapy. Latent contents that find their

way to consciousness through the amygdala are linked to conscious affect. (See Unit One, Sect C, Chapt 10.) This circumstance generates affect-masking symbols in consciousness in response.

PARALLEL REALITIES

INTRODUCTION

Parallel and often contradictory realities are a clinical manifestation of coexisting non-communicating conscious cognitive systems with their individual associated memory systems and symbol nets. The concept of dissonant infused realities is exemplified clinically by the dual realities of Western culture. (See Unit One, Sect. C, Chapt. 11.) Awareness of the existence of parallel realities in the thought of one person is not new. The concept was explored in the thirteenth century by St. Thomas Aquinas. In resolving the issue of conflict between natural and infused realities, Aquinas established the philosophical basis for the coexistence and differentiation of natural and transcendent symbols. More recently Freud and Schachtel have described such states in the study of perversions and amnesias.

Freud introduced a related concept, the splitting of the ego, in 1938. This term describes the existence of concurrent states of consciousness in one person containing mutually exclusive realities, which are unknown to one another. This occurs ". . . (where) there is a conflict between the demand of the instinct and the command of reality." This conflict is solved by the repudiation of reality in the service of persuading oneself that there is no reason for fear. "[Theego] . . . replies to the conflict with two contrary reactions, both of which are valid and effective . . . . [It] rejects reality and refuses to accept any prohibition; on the other hand . . . [it] recognizes the danger of reality." "The synthetic function of the ego, . . . is liable to a whole series of disturbances." (P373 CP)

One may theorize conversely that an adaptive dissociative function of the ego exists. It serves adjustment through establishing dissociated independent cognitive systems, which do not have easy access to one another's content. In such separated systems, remembered, natural realities may be held at a distance from contradictory fantasies, which are derivatives of instinctual wishes. Freed from challenge and distortion by instinct driven fantasy content, knowledge based on reality information is available to be applied to neutral activities. The dissociation of sensed realities into multiple entities is a product of

the use of incompatible symbolic linkages as the basis for symbol formation. Clashing symbolic linkages, derived from incompatible levels of abstraction and from systems of truth based on dissonant infused realities, can support more than one interpretation of reality in consciousness, as well as a conscious truth and a contradicting truth retained in memory simultaneously.

The concept of incompatible levels of abstraction was cited by Schachtel as part of his explanation for the paucity of memories recalled during the latency age period and adulthood, which depict experiences before the age of six. This is called the Infantile Amnesia. Schachtel (1949) explains the amnesia for infantile events that appears with latency thus: "The categories (or schemata) of adult memory are not suitable receptacles for early childhood experiences and therefore not fit to preserve these experiences and enable their recall" (p. 9). [see Sarnoff 1976 P 160]

There are other examples of cognitive dissonances, which create barriers to recalls between cognitive memory systems. Adult memory retrievals, tuned to abstract conceptions, are not receptive to memories, which had been encoded through affectomotor or verbal conceptual modes during earlier stages of life. (see Sarnoff 1976 P 118) As a result, there is a paucity of adult memories representing emotional experiences and fantasies encoded in memory through verbal concept memory during the latency age period.

COGNITIVE SYSTEMS AND THEIR SYMBOLS

There follows a description of the cognitive systems and associated symbols that develop during human ontogenesis. Because each developmental system encodes in memory quite differently, communication between the systems characteristic of respective age groups is limited. Special techniques are required to bridge the gap. As a result men are separated from direct awareness of their own painful past experiences and conflicts. The "lost" contents are not totally gone. They find alternate pathways to awareness in the symbolic forms of dreams, fantasies, character traits and neurotic symptoms.

Ontogenesis of the recording and recall aspects of memory, learning and symbol formation occurs in five stages.

First stage learning is present at birth. It involves the acquisition of nonconceptual reflex patterns.

This is the cognition found in reflex responses.

Second-stage learning begins soon after birth. It involves the acquisition of the ability to evoke recall of learned patterns of affects, perceptions, and bodily postures associated with the initial learning experience. This is called affecto-motor hallucinatory memory. It is the basis for affecto-motor cognition and imitative recalls.

Third-stage learning, which occurs between six months and six years, involves the ability to evoke recall of learned patterns in the form of verbal signifiers such as words and related symbols. The transition from affecto-motor hallucinatory memory to verbal memory has been emphasized in the works of Ferenczi, and Schachtel (see above) in relation to the infantile amnesia for earlier experience, which is an important phenomenon of early latency.

Verbal memory has its own subdivisions. At first, associations and symbolic linkages return in concrete verbal memory. Later, intuitively determined symbolic linkages provide the basis for the formation of symbols. (see Woodward/Piaget) During early latency the effect of repression on verbal and symbolic styles of memory push awareness of the content of earlier forms of memory into shadow. This results from the increased effectiveness of symbolizing techniques in limiting affect and stabilizing adjustment. There is sufficient strengthening of psychoanalytic symbolization to produce a psychic structure in latency, which can process and dissipate disorganizing content through displacement, using symbolic linkages as their base. These mechanisms support calm, pliability, and educability by about age six.

Fourth stage learning starts about six years of age. Then the verbal symbolic linkages, which underlie symbol formation, provide symbolic linkages based on conventions and abstractions, which organize concrete perceptions. Memory at this age involves the symbolic recall of earlier emotional experiences through socially determined verbal schemata for naming. (i.e Power is a policeman.)

Fifth stage learning creates a cognitive system at twelve years of age through which reflective interpretation and symbolic linkages can be based on the acquisition of abstract concepts representative of the intrinsic substance of things and events. (I.E. Knowledge is power.) The latter skill (Abstract operational thinking of Piaget: ability to reason abstractly about recalls encoded in memory as

abstractions) as a memory function has antecedents that occur between six and eight years of age. (See Sarnoff 1976 page 118). At that age, memory begins to acquire abstract intrinsic information about things concrete. That information will be used at 12 years of age when it can be recalled through cryptic symbols whose links to their referent follow channels of abstraction. These cognitive systems can be so different that a communicative barrier between them develops.

BARRIERS BETWEEN COGNITIVE SYSTEMS

A barrier to awareness between cognitive systems occurs when there is a dissonance in the nature of the symbols used to represent referents. This occurs when the organization of awareness cannot integrate the symbols of one system with another. An example of such memory interference is the loss to adult memory of the symbolized fantasies that are used for expression and resolution of conflict in the latency age child. They are unavailable to the adult, for whom there is preference for memories that are recorded and recalled through verbally encoded abstractions.

LUCID DREAMING

CRYPTIC SYMBOLS AND THE BOUNDARIES OF COGNITIVE DOMAINS (WHY DREAMS ARE NOT REMEMBERED)

The awarenesses that one experiences in sleeping consciousness are populated by evocative dream symbols. Such symbols represent emotional problems of waking consciousness that have been either separated from affect or excluded from waking consciousness. Remembering manifest dreams while awake is an example of a crossing of a boundary between cognitive domains. The longer one is awake the stronger becomes the boundary till even the manifest symbol fades from waking consciousness. This boundary is weakened by the supine position. Therefore a useful key for opening the boundary's gate is free association while lying on a couch. The referent latent content of a dream, whose manifest content is reported after sleep and while fully awake, is otherwise not immediately available to waking consciousness.

Cryptic symbol formation is amongst the mechanisms that support the establishment of boundaries between cognitive enclaves. The evocative cryptic symbols of dreaming serve a cognitive organization

that exists independently of communicative consciousness and latent referents. The distortion produced by symbolization muffles the effects of latent referent affects and reality stimuli, which would disturb sleep.

Experiences, especially those associated with too strong affect, are recorded in memory. They are not always available to waking consciousness. Dream experiences that are recalled during arousal from REM sleep can therefore slip from later availability while awake. Awakening from the cognitive domains of sleep or recovery from the cognition of psychosis requires a shift in the cognitive organization that feeds consciousness. There is a resulting loss of data. Dreams are hard to remember. As dreams are forgotten, their symbols are lost to be replaced by the symbol nets of the communicative organization of waking consciousness. This is a form of repression.

Content loss associated with a shift to another cognitive system can be undone. Free association to a recalled dream's symbols brings into waking conscious focus the connections of the symbols of dreams to their referents. This is an undoing of repression, which brings conflict areas and painful memories that would otherwise remain out of waking consciousness into awareness. There they can be addressed and worked through. This is the work of Psychoanalysis.

When active conscious waking cognition is experienced during dreaming, there occurs a conscious sensation that one is dreaming. Such a phenomenon has been considered by some researchers to be sufficiently unusual to be reported and to be given a name "lucid dreaming" (see Freud 1900 (P. 571) LaBerge 1985, 1990) A "lucid dream" is a rare type of dream in which, in spite of minimal sensory contact with the outside world of wakefulness, there is sufficient self reflective awareness for the dreamer to know that he is dreaming. Within such a dream experience, he is capable of initiating changes in manifest content. Contact with latent content may occur.

SLEEP STAGE COGNITIONS AND THEIR DREAM SYMBOLS AT DIFFERENT DEPTHS OF SLEEP

Thought processes associated with one cognitive organization tend to be opaque to (beyond the comprehension of) other cognitive organizations in the same person. Berger (1969) noted that, the nature and characteristics of dream symbols vary with the duration and stage of sleep. Cognitive styles

change with these variables. Berger's (1969) description of a dream in this context is «. . . an experience involving vivid multisensory imagery, frequently of a bizarre and unreal nature, in which the narrator himself is often involved.» (p23) The ebb and flow of the degree of symbolic distortion during sleep in consonance with the changing depths of sleep is not fully established on a scientific level. There is strong anecdotal evidence to support a stage-linked variability.

Memory bound networks of referents occupy the mind during sleep. Among these referents those with a high valence for affect have a potential to produce anxiety and to interfere with sleep. Preservation of sleep requires symbol formation and intercognitive system awareness boundaries. These are created, when representations come into sleeping awareness changed in recognizable form to less affect charged manifest symbols. The manifest characteristics of such symbols are defined by the depth and stage of sleep of the dreamer.

MEMORY NETWORKS AND REFERENTS

In dreaming, the experienced manifest symbolic image is made available to consiousness, when there is limitation of reality impingement on the ego and internal memory network contents become the source of content. The decathexis of the world of external reality during sleep forces a shift in the source of dream content away from current reality. Preferences for source are derived from internal perceptions based on the internal symbol nets used in imagining, hallucinating, daydreaming and play. The symbolic content of sleep dreams, especially during REM sleep emphasizes visual telereceptor symbolic forms.

Cartwright (1990) noted that dream referents are grouped into clusters of related concepts. Symbolic linkages are generated from the connections between members of such concept clusters, which tend to persist through the night. Displacement and condensation guide referent meanings in forming manifest derivative symbols. From these dreams are woven. She pointed out that ". . . dreams from the beginning to the end of the night often have repeated images activated not randomly but in response to some persistent issues." (p 187) Emotional connections, made up of earlier memories, are ". . . lit up selectively when the brain is activated in REM [see below] sleep." (187) The network of symbol referents that comes into play is determined ". . . by the type and level of affect carried over from the day."(147) Antrobius (1990) describes similar "Neural Nets".

PROBLEM SOLVING FUNCTIONS OF DREAMS

Need for defense against referent networks, whose unmodified content would rouse from sleep, impel the formation of the consistent manifest symbol types that typify specific EEG arousal states. (see below) Dream symbols bind strong affect by creating displaced discharge channels, whose diminished affective force is congenial to persistence of the sleep state. Most reported dreams (REM dreams and deep sleep arousal dreams) are generated in response to distressful mental content that would have disturbed sleep. Kramer (1990) noted that ". . . dreams may subserve a problem solving function. . . . the dream may succeed or fail *to contain the emotional surge* that leads to the arousal /awakening that is the hallmark of disturbed dreaming." (Page 193) ". . .the dream subserves a selective affective regulatory function".(Page 193) Most dream symbols have less valence for attracting affect than the referent in memory. Those who work with symbol theory regarding the sublime (See Burke (1757). make a similar observation. The production of the sublime image serves to bring strong affects under control through displacement. When words are associated with percepts and affect representations, psychoanalytic symbols serve as a mechanism for resolving or processing the affects.

DREAM SYMBOL REFERENTS LIE MOSTLY IN MEMORY

The retina does not see for the dreaming brain. (See Pompeiano (1970)) The eyes of the dream are inward turning eyes that browse amongst the attics and storehouses of the mind. There they find traces of perceptions and memories, which have been gathered up and organized through linkages of similarity into nets of symbols. They are there stored in associations along neural nets of the associative cortex. Some representations of such traces press toward awareness, propelled by need for drive discharge or by needs to process and put to rest recent troubling events, traumas and residua of cares of the day. Those representations which have moved closest to awareness lose access to consciousness should they produce excess affect. They are displaced by psychoanalytic symbols, which are called into play to express a drive or a fantasy gratifying need, while generating little in the way of the strong affects associated with their referents which would otherwise disrupt dreaming while asleep.

THE FORMATION OF CRYPTIC SYMBOLS RESULTS IN ISOLATION OF CONTENT FROM AFFECT

The mental mechanism of isolation separates new dream ideation from related affect charged ideas and concepts. Isolation neutralizes the affect referents with affinity for strong affect that would have attached to new ideation by association. This prevents new ideation from being pulled into a disquieting vortex of infinitely expanding discomfort. This function is often visualized as the intrusion of an impenetrable wall between idea and memory. A less mechanistic means of conceiving of such a result would be the idea of the creation of a symbol to hold the affects of the concept in a bay of cognition that is not available or disturbing to the reflective workings of the mind. In this context, the content can be called to consciousness with lessened affect. The personality, which meets its fantasied nemesis only in dreams, is freed to function free of anxiety in waking life. (see for instance, Crapanzano's Case of Tuhami (See Unit 3, Section B, Chapter 5 in which feared waking sexuality is both expressed and defended against by limitation of feelings of passion to a symbolic dream lover.)

SYMBOLIC FORMS THAT ARE CHARACTERISTIC OF SPECIFIC LEVELS OF SLEEP

The level of wakefulness of a person can be studied through recording the electrical activity of the brain (see Gibbs and Gibbs 1951) in the form of Electroencephalographic (EEG) waves. There are specific characteristics of the patterns found in each stage of wakefulness and in the four stages of sleep. Similarly, there are characteristic patterns for the symbols that typify the mentations that accompany the various levels of wakefulness and sleep.

AWAKE

There are two dominant EEG patterns when awake. Both are domains of reflective awareness. One, the *beta wave,* has low voltage with a frequency of 14 waves per second or greater. This pattern shows poor frequency and amplitude consistency within these ranges. This waveform is associated with attention. The second, the alpha pattern, has moderate voltage amplitude with a frequency of 8 to 12 waves per second. Alpha pattern shows good frequency and amplitude consistency within these ranges. This waveform indicates a mind at rest.

DROWSINESS AND HYPNOGOGIC SYMBOLS

In states of drowsiness, EEG wave frequency slows. Waves of moderate amplitude at a frequency of 4 to 6 waves per second begin to fill the recording. These are called *theta* waves. Drowsiness is associated with hypnogogic symbols.

HYPNOGOGIC SYMBOLS

Silberer (1909) studied hypnogogic symbols, which are symbols that occur as one becomes drowsy while on the way to sleep. They can occur while talking to another person, as in Psychoanalysis when either patient or therapist experiences a sense of drowsiness. They sometimes contribute to a sudden and inexplicable change in the content of an ongoing verbal interchange. Silberer viewed symbol formation as the product of a regressed (i.e. altered) state of consciousness).

Hypnogogic symbols can be studied for their meaning by the mind, which produces them, for that mind is still aware and semiawake. These symbols sometimes cause full awakening, not as a result of a porosity to affect or poorly displaced terror content, but because they give evidence of a change in the state of consciousness.

Silberer called such Symbols "Autosymbolic" (p196) a term derived from Automatic Symbol formation. In his analysis of these symbols, he relates their psychology to that of dream symbols. He identifies their sources in conscious material, as well as functional and somatic phenomena experienced prior to the hypnogogic state. The examples he gives of manifest content contain haptic elements such as heat (p 202), position, swallowing (p206), in addition to visual representations. They often occur in drowsy people during films or opera performances that fail to hold attention. For example, an operagoer dwelled on the scenery in a production of the opera Aida, whose singers had lost his attention. The mock statues and carving in stone elicited associations to a carving in sandstone of a face that he had purchased near Karnak in Egypt for about seven dollars. He entertained only a hint of the idea that it was other than a souvenir. A museum curator to whom he had shown the carving explained that there are families in Egypt that have for as long as two hundred years pursued the hereditary craft of carving excellent copies of ancient Egyptian art works. He thought of how one expert to whom it had been shown, inferred that the piece had never been in Egypt. By this point he had begun to enter into one of a series of

drowsy states. As his sensorium blurred, he experienced a return to the conversation about the false antique with the second expert in which the doubt of genuineness was immanent and he was saying to the expert "to think I spent as much as forty cents for it. I hear some people are forging these things." In parallel with the last words he was conscious of the sensation experienced when fingers are deeply set into a vagina coupled with a visual sensation of that act perceived as through a transparent body and organs. There was a superimposed sensation of grittiness perceived both through the fingers and synaesthetically his mouth.

Unless one makes a special attempt to remember and is on the lookout for these events, these experiences quickly recede from consciousness. The symbolic content of the drowsiness experience was in keeping with the patient's neurotic complexes. He was character logically preoccupied with sexual infidelity and had more than once been cheated in love as he had been through the purchase of false antiquities.

HAPTIC SYMBOLISM IN HYPNOGOGIC STATES

From the standpoint of symbolizing function, the use of haptic sensation as a manifest symbolic form should draw our attention. "Haptic sensation" refers to sensation that is experienced within the body of the symbolizer, such as touch, odor, and proprioception. One usually observes manifest symbols that are derived from telereceptor senses such as vision and hearing, which represent sensations emanating from sources beyond the boundary of the self. The haptic coloring of hypnogogic symbols is a product of the blurring of self-object boundaries during persistence of self-reflective awareness.

REPRESSION OF HYPNOGOGIC EXPERIENCE

In awakening from the experience of a hypnogogic symbol, one becomes aware of repression as an actual experience. In this circumstance repression takes the form of a sort of "sucking into the abyss" of the symbol cluster that appeared during drowsiness. One does not sense that the symbol cluster is being pushed from consciousness. One does not sense the establishment of a countercathexis, which consists of introducing substitutes that draw the attention of the system consciousness. Rather one senses an experience of symbol clusters and contexts being drawn back out of and beyond one's grasp—like some

latter day Euridyce. One must fight to hold it in consciousness. Spontaneous recall of the experience fades quickly. Hypnopompic phenomena characterize states during the shift from sleep to full arousal during which self-reflective awareness is present. The representations (symbols) that occur contain verbalizations with poor grammar. (i.e. "It's Him.")

HYPNOGOGIC PHENOMENON AND THE SOMATIC CROSSROAD

During hypnogogic phenomena, symbols are mobilized to protect against further regression into a state of sleep. The presence of both mental memory elements and haptic sensory memory elements in hypnogogic phenomena illustrates the contribution of both visually and verbally encoded experience, and somatic evocations (haptic sensations) to manifest content during the generation of symbols. This gives an inside view into the step in symbol formation at which the modalities to be used for creating a representation are reviewed for use as manifest symbols. All symbol formation may contain such an intermediate step in which there is a flair of possible symbols from which the symbol to be used will be chosen. The more narcissistic the symbolizer, the more regressed will be the preferred stage of development from which the symbol source within the flair will be derived. (See Unit Two, Section B, Chapter 5.) As a result narcissistic patients will be more likely to have a choice of symbols that will emphasize somatic (haptic and vital) internal components. The establishment of cadres of haptic sensations to be used as manifest symbols are enhanced when content linked discharge from the central nucleus of the amygdala (See Unit One, Section C, Chapter 10.) into the autonomic nervous system generates remembered sensations identifiable as associated with an organ response. These sensations become encoded in the haptic-vital memory system and become a template to be used in active evocation, which remembers through the activation of organ function. The somatiform symbols produced contribute to the content of Psychosomatic responses such as hypertension, hyperventilation, respiratory rage, and their equivalents. A second source of somatiform symbols is sensation recalled from interactions at the boundaries of the body with the world. The latter mechanism underlies incorporation. These pathways for recall make possible somatic symptoms as potential symbolic forms. This concept can be used in place of the idea of a "magical leap" as a logical explanation for psychosomatic diseases.

THE SYMBOLS OF STAGE ONE LIGHT SLEEP AND NONREM REGULAR DREAMING

When 4 to 6 per second Theta waves dominate in the EEG, the sleeper is in stage 1 sleep. If the definition of dreaming is extended to include fragmentary reports of mental phenomena, (See Berger (1969) then the dominant dreaming, reported as much as three quarters of the time during light sleep nonREM awakenings, (page 23), is fragmentary. Such dreaming resembles waking thought in that it tends to emphasize verbal modes and to lack sensory imagery. Fisher (1970) described such verbal content in non-dreaming REM states. He described «. . . mental activity, generally less dreamlike and more (like) secondary process apparent dreams.» (P 150). Such verbal emphasis in dreaming reflects a cognitive system similar to that found during waking states. Such emphasis on verbal processes may be found coloring hypnogogic periods during light sleep, and in the nonREM dreaming that occurs during descent into stage two and stage three sleep. Monroe,L.J. (1965) noted that during stage one entry sleep, hypnogogic phenomena can persist. Dream activity indistinguishable from REM dreaming can also occur. (page 25). The latter two types of mental content take up a minor portion of NREM light sleep dreaming.

STAGE TWO SLEEP—

When 4 to 6 per second Theta waves are interrupted by wave bursts called sleep spindles and K complexes, stage 2 has been reached.

STAGE THREE SLEEP—

When the brain waves slow more, high voltage three per second delta waves (see below) begin to appear and K complexes and sleep spindles disappear. This is stage 3, which is an intermediate stage. In one night, there are constant shifts in the level of sleep between stage 2 and stage 4. Shifts into stage 2 sleep occur about five times per night. Shifts down into stage 4 sleep occur one or two times.

THE SYMBOLS OF STAGE TWO AND STAGE THREE NON-REM SLEEP

Non-REM dreaming during the transition from light to deep sleep is characterized by increasing anxiety and fragmentary reports of verbal mental activity. There is a shift in content toward the experience of affect and other haptic sensations with deepening sleep.

THE NATURE OF THE REM DOMAIN

Most sleep cognitions de-emphasize but do not wholly exclude recognition of social situations and the communicative needs of others during symbol formation. (See Unit Three, Section B, Chapter Five.) REM states are distinguished by an alteration of emphasis in the selection of symbols used for representation during dreaming. The selection of affect neutral symbols fends off arousal. Internal influences and idiosyncratic visual imagery dominate the neutral sources of symbols during sustained Rapid Eye Movement sleep. By way of contrast there is emphasis on the sound of words in hypnopompic, hypnogogic, light sleep, and NREM dreaming, while there is an inward turning emphasis on affect in dreaming during arousal from fourth stage sleep.

VARIATIONS IN SLEEP STAGES TWO AND FOUR ASSOCIATED WITH AROUSAL

REM (Rapid eye movements) appear on the EEG during arousal from stage two sleep. Arousal from stage four sleep is similarly associated with a variant EEG pattern, which is called hypnogogic hypersynchrony (see Sven Brandt (1955). This pattern is characterized by synchronized high-voltage slow wave activity. Anxiety dreams and nightmares (anxiety dreams with awakening) which are a sign of failure of symbols to neutralize affect are frequently associated with and indeed activate these psychophysiological states of arousal.

SYMBOLS DURING AROUSAL FROM STAGE TWO SLEEP WHEN ACCOMPANIED BY REM

The EEG of Second-stage sleep during arousal is interrupted by the intermittent appearance of high voltage irregular waves of low frequency. These are caused by electrical currents induced by rapid movement of the eyes (REM). Periods between REM sleep bursts are characterized by stage 1 patterns. Therefore the sleeper is said to ascend from stage 2 sleep into REM sleep. REM wave periods are frequently accompanied by dreaming and a complex set of physiological changes. There are concurrent flagrant variations in respiration, heart rate, blood pressure, erections, loss of muscle tone, and cessation of the production of noradrenaline in the locus coeruleus (see Siegel (2000) p 78). ". . . serotonin neurons are silenced, but some acetylcholine neurons are very active . . .". (Damasio 1999 p249 ; Maquet 2000 p834). In a related observation, Robbins (2000) describes "a decrease in brain activity in the

dorsolateral prefrontal cortex . . . and an increase in brain activity in the regions of the visual cortex" as a result of an infusion of physostigmine in the brain. The REM state associated shift from catecholeamine frontal lobe dominance to acetylcholine occipital lobe dominance could explain the predominance of visual imagery based symbols and the altered nature of symbolization in REM sleep. The lowering of the affective tonus in the forebrain that occurs with the loss of catecholeamine decreases the kindling and triggering of displacement that supports affect neutralizing symbol formation. This results in the reduction of activation of bodily sensations of affect that prompts the creation of dream symbols. Thus REM state dreams contain visual symbols that are less distorted and close to referents in form. This opens the way to a more direct working through of less symbolized traumatic memories and day residues as well as the potential for sleep disturbing nightmares.

Ordinarily REM dreaming generates symbols to control and diminish affect. This aims at preservation of sleep during arousal from stage two sleep. Strong affect would mean an early end to sleep in one of the five or more periods during the night when there occurs lightening of sleep depth. To avoid awakening when affect threatens sleep, the referent memory must be turned away from and the placement of derivatives of the referent in consciousness achieved through more neutral symbol substitutes. This process preserves sleep from the erosive force of affect while it carries an encrypted referent message to awareness.

Failure to produce adequately protective symbols during REM sleep results in affect porous symbols and nightmares, which rouse one from sleep. The longer the REM state the greater the tendency to develop affects that could wake one. Monroe has (1965) reported that with the passage of time more emotionality, dramatic quality and distortion was found in dreams, and that dreams recalled towards the end of the sleeping period tend to be more elaborate than those dreamed earlier. (P 27) The passage of time and the intensity of drives fatigues and diminishes the effectiveness of dream symbols in preserving sleep

SYMBOLS DURING REM NIGHTMARES

Fisher (1970) defined Nightmares as dreams whose symbols attract sufficient affect (i.e. dream of being attacked by "man sized cats" (page 759) to rouse one from second stage sleep. (p 757) Though

"The REM *anxiety* dream, of all degrees of intensity, is frequently characterized by subjects as a nightmare." by definition an anxiety dream does not awaken the dreamer. Fisher (1970) illustrated a REM anxiety dream with a man's "Dream of (a) girl performing fellatio associated with fear she would bite off his penis" There was insufficient anxiety to awaken him. (P758) Fisher (1970) described a Stage 2 nightmare as ". . . somewhat more severe than the average REM anxiety dream but much less intense than the stage 4 nightmare." (see below) (p760) There is ". . . never . . . a very severe nightmare . . . arising out of stage (two)." He refers to affect rather than content. Fisher (1970) presented a stage two REM dream, which awakened the dreamer and could therefore truly be called a nightmare. The dream was ". . . about receiving a severed human leg as a Christmas gift." It was unaccompanied by increased variability in the heart rate and "no trend toward increased rate as awakening approached." (p 761) Upon awakening tachycardia set in ". . . within 45 seconds." (P 760) This was interpreted as an indicator of an affect extinguishing mechanism within the brain, which results in a diminution of discharge into the autonomic system, while at first not producing a mental representation of discomfort sufficient to waken the dreamer. (p 760) The level of anxiety parallels the horror level of the symbols. However there appears to be an anxiety control mechanism in addition to that involving displacement to less affect-laden symbols, that can lessen the consciousness of affect anxiety. As Fisher (1970) explained "It appears that the REM dream has a mechanism for tempering and modulating anxiety, for desomatizing the physiological response to it . . . abolishing or diminishing the physiological components." (p 770) This sleep protecting anti-affect could be the result of a diffusion of affect resulting from the volatility of the autonomic system during the REM state, or could be the product of the shutdown of the norepinephrine producing Locus Coerulius and increase in the production of acetylcholine in the PAG (Periaquaductal Grey Matter).

The symbolic dream derivatives of referents in memory are shaped by the sensory modalities available to dreaming consciousness. This phenomenon determines the general characteristics of the affect porous symbols created during the disturbed and disturbing dreams that occur during REM dreaming. This means that in REM dreaming the form of manifest symbolic representations de-emphasizes origins in communicatively realistic images in favor of origins in evocative visual symbols and the haptic sensations that make up anxiety. The affect associated with evocative symbols represents the energy of drives that stand ever at the ready to propel internal conflict into consciousness. When the

strength of awareness of reality sensation and the strength of communicative symbolic forms is diminished, drives become more forceful in their freedom to propel conflict into awareness at the expense of the symbolic forms which are the communicative tools of waking consciousness.

Waking consciousness aims to employ communicative modes. The orientation of waking consciousness in the sane adult is toward sensory communication with other beings and natural reality. The REM situation is different in this regard. The mind is isolated from objects in reality. Its use of symbols resembles that of the latency age child who plays with ludic symbols in the absence of the availability of physiologically based personality structures that would enable him to articulate drives with real objects in real situations.

The marked attenuation of the influence of supplies of reality sensation during REM is a result of a physiological blocking of the influence of external visual input. This blocking is a concomitant of rapid movement of the retina during REM. During eye movement no retinal input to the brain is recognized. This phenomenon is associated with all eye movement. It can be demonstrated while awake simply by looking at a mirror while shifting one's gaze from the right pupil to the left pupil. One cannot see the movement. This scientific physiological finding was described by Pompeianu in 1970. He reported that there is no neural transmission from the retina to the visual cortex in REM sleep (page 10). Pompeianu's findings could explain de-emphasis of reality-based visual influence on symbol formation during REM dreaming. As a result of this external visual de-emphasize, REM dream symbols are released to the influence of internal visual evocations. Other modalities such as hearing and smell, remaining under the muting influence of reality are preempted. As a result an unleashed intensely visual evocative mode dominates REM dream content. For this reason, REM dream symbols are primarily visual with sources, which are internal and evocative in origin and with manifest form distortions. An example of form distortion is the metamorphic symbol, which changes content during active dreaming. An example of such a symbol would be the dream character whose leg turned into the leg of a wolf during the course of a dream. This is certainly a product of a different organization of consciousness than that found during wakefulness.

There is greater emphasis on visual imagery derived from symbolic expressions of prior experience when there is no possibility of external perception. Where eyes move, eyes do not fix and there is no

perception. Absence of external visual input encourages a shift to internal visual memory input as a source of data during REM dreaming. Under these circumstances masking visual symbols are less bound to reality and reflect the fantasy pole. Internal visual imagery is unshackled through the use of symbols. Distortion through great emphasis on visual symbol formation is the means of expression of the cognitive domain that accompanies the sleep state of which Rapid Eye Movements are sometimes a part. Visual symbols are not present in pathological states when rapid eye movements are absent during arousal from stage 2 sleep that has all the physiologically labile characteristics of the "REM state". Berger (1969) noted that «. . . REMS are absent during otherwise normal REM periods in congenitally blind men and in those who have been blind more than thirty years." (p 74) Those in the latter group, who claim to continue to have visual imagery in dreams, continue to have REMS. Congenitally blind children do not report visual content in their dreams. Emphasis goes to other sensory modalities. For instance, Birmingham (1962) reported the dream of a blind child in which the child directed her steps in the dream to the living room at the right of the stairs, where she knew her mother was waiting for her. She was aware of her mother's presence and location—in spite of the absence of a visual component to the dream—as a result of the presence in her dream of her mother's perfume wafting toward her from below and to the right.

In cats, there are brain wave spikes called PGO. These are named after the ponto-geniculate-occipital visual pathway. Their appearance temporally precedes the onset of REMs. Jouvet (1969) related them to an association between REM sleep and the ". . . visual imagery of dreaming (and thus with some previous input effected during waking),the PGO spikes may represent the electrical phenomenon of a memory mechanism playing upon the central visual system." p 90.

SYMBOLS DURING AROUSAL FROM STAGE FOUR SLEEP WHEN ACCOMPANIED BY HYPNOGOGIC HYPERSYNCHRONY

The deeper the level of sleep, the slower and higher become the electro-encephalographic waveforms until stage four sleep is reached with its characteristic delta waves. These are high amplitude waves produced at a frequency of 2 to 4 waves per second. This accompanies very deep sleep, which occurs twice a night early on. It is accompanied by an increase in growth hormone production with its alteration of calcium metabolism, increase in blood sugar and sexual stimulation. Fisher (1970) noted that the degree of anxiety experienced with stage four arousal exceeds that of stage two arousal. "The

stage II arousal is related to *stage IV*, but the degree of anxiety involved is much less." (P753)

The neurophysiological characteristics of arousal from fourth stage sleep were described by Brandt (1955) and Kales (1969). As arousal occurs during fourth stage sleep, steady, high-voltage slow waves, which appear at once all over the head occur normally in children younger than five.

Brandt (1955) described the EEG patterns of healthy children from zero to five years of age. He described synchronized highvoltage slow wave phenomena as normal (sic) in this age group and designated it "hypnogogic hypersynchrony." He had first found it occurring in drowsy states and therefore called it hypnogogic. Anthony (1959) found a similar waveform in the EEGs of 20 percent of children with sleep disturbances. These waves occur in pathological states in adults. Kales (1969) in a study of the brain waves of sleepwalkers, found that somnambulism occurs with arousal from the fourth stage of sleep. These episodes characteristically begin with the sudden onset of bursts of synchronized high-voltage slow waves. Hypnogogic hypersynchrony, through which one does not pass into full awakening, is a constant concomitant of pavor nocturnus in children and severe night terrors in adults.

SYMBOLS DURING STAGE FOUR NON-REM NIGHTMARES

The non-rem nightmare was described by Fisher (1970) as a sudden, instantaneous, cataclysmic event associated with a single scene and a massive autonomic response rather than the complex unfolding story of the REM nightmare. (p744) He described the NREM nightmare as displaying ". . . naked manifestations of drive, especially aggression . . ." "These . . . are more marked in the nrem nightmare than in the REM anxiety dream." (p 774). The traumatic events that produce nightmares appear in disguised form in both the REM and NREM nightmares. Typically the referents (latent contents) of the symbols used were rape represented by storms or volcanic eruptions and choking represented by a threatening man standing at the foot of the bed with a knife.

Most NREM nightmares occur during fourth stage (deep) sleep arousal. They consist of dream variants utilizing affect porous symbols during dream stages two and four. REM nightmares during stage two sleep also utilize this symbolic form. Both REM and NREM nightmares occur during arousal. Instead of securing sleep, they hurry wakening.

Fisher (1970) noted that the longer that sleep is sustained the more severe is the horror of the stage four nightmare. (P 755) (In this regard, see the similar observation of Monroe in relation to REM stage symbols above.) ". . . the Stage IV nightmare does not serve to master anxiety, but rather represents a massive failure of the ego to control it. (P 781) The stage IV ". . . nightmare experience rapidly becomes dissociated . . ." (P 762) The "Ongoing content . . ." that stage ". . . IV dream symbols generate is not elaborate but generally refers to a single vivid scene (falling, being crushed) in contrast the prolonged highly elaborated REM dream." (p762) Stage IV dream content is ". . . coherent, psychodynamically organized, related to the subject's preexisting traumata and conflicts, and to REM dreams of the same night." (p 762) In a typical stage IV dream the dreamer was ". . . swallowing something, a necktie, or nails, when in a research setting he dreamed he was choking on an electrode. Later that night he had a dream in which he bought groceries from a girl, his cafeteria tray had electrodes attached. In the production of the manifest symbol the eating with electrodes situation was displaced from choking to preparing for lunch and the swallowing of electrodes was displaced to buying lunch with electrode attached." (Page 762) The symbols of dreams associated with arousal from fourth stage sleep are characterized by great valence for attracting affect in dreams, which contain isolated episodes. The content contains body representations and is raw with little displacement to diminish terror. The symbols are evocative in mode. Awakening from sleep is blocked by a locking in place of the activity of hypersynchronous waves rather than by defensive displacements to arousal with the production of blander symbols. Nightmare generated immediate awakening that bypasses symbol softened transitions through less deep sleep stages and accompanied by terrifying shrieks is common. In adults, the appearance of such symbols suggests severe ego pathology.

SUMMARY

There are neurocognitive states whose contents do not ordinarily cross their own boundaries of awareness. There are specific symbolic forms that characteristically dominate each state and cannot be easily retrieved in other cognitive states. This explains infantile amnesia and loss of memory for dreams. Should recalls of symbols move into conscious awareness from sleep stages and psychotic states, intense affects are generated that necessitate the mobilization of a defense such as repression.

CHAPTER 10
CONSCIOUSNESS AND AFFECT MANAGEMENT THROUGH PSYCHOANALYTIC SYMBOL FORMATION (AN HYPOTHESIS REGARDING THE LOCALIZATION OF PSYCHOANALYTIC SYMBOL FORMATION IN THE BRAIN)

GENERAL PRINCIPLES OF SYMBOL FORMATION

Cryptic complex symbols (i.e. Psychoanalytic Symbols) are highly personal cryptic symbols. They are seen in health, in art, in dreams, in the fantasies of psychotic patients and in adjustment oriented behavior. They help in regulation of emotion associated with both memories and new experiences that are linked to excess affect. They mask and mute the impact of conscious disorganizing affect associated with threatened intrusions into consciousness of distressing psychic contents. Such intrusions include uncomfortable memories for concepts and insights, as well as interpretations of new perceptions.

Transformation of painful memories and threatening current perceptions of the world into affect neutral cryptic symbols is a means of managing affect. This is achieved through replacement of offending elements with less affect-loaded alternatives. Immature and pathological forms of symbols (i.e. affect porous symbols) produce mental disorders associated with impaired adaptation to affect.

The symbolizing function that produces psychoanalytic symbols is prominent among the brain mechanisms that are activated when fear inducing affects threaten to overwhelm psychological defenses. Failure or impairment in production of psychoanalytic symbols can result in failure of adaptation for the organism. Conscious content in part consists of affect porous symbols, which represent regressions and failures of cryptic symbolization to contain affect. These take the form of pathological distortions of reality.

Psychoanalytic symbol formation occurs when there is repression of awareness of the relationship between the affect of a referent and the masking symbol that represents it. Repression in this situation results when attention (cathexis) is displaced from affect charged referents to similar though less affect charged representations. Their relative affect neutrality permits their use as symbols in consciousness.

Either under the impetus of drive pressure or out of a need for mastery, affect charged and affect neutral contents rise toward *consciousness* in clusters. These consist both of highly affect valenced core concepts and less affect endowed concept groupings that are closely related in meaning to their confreres. In the formation of cryptic symbols, awareness cathexes illuminate for consciousness the less affect endowed concepts, leaving the rest of the contents of the concept cluster as the latent content referents of the conscious symbol.

CONSCIOUSNESS

THE CONTRIBUTION OF SYMBOLIZATION TO CONSCIOUSNESS

"Consciousness" as used in this chapter refers to that which is left of the totality of innate immediate animal awareness, after it has been enhanced in content by interpretations of reality-based on memory and the constructs of ambition, or diminished in content as the result of the repression of affect-linked words and concepts that is associated with psychoanalytic symbol formation. A knowledge of psychoanalytic symbols is therefore important for the understanding of "Consciousness", which depends on symbolization for much of its content. The defenses that alter and diminish subjective experiences in awareness in the service of affect control are suppression, denial, and displacement. Concepts, perceptions and memories that are cut from conscious awareness in the process of affect control are relegated to the proscribed content of the dynamic unconscious (system UCS). They retain potential for retrieval into awareness with altered impact as a result of cryptic symbolization. Human consciousness is a process, not a thing. It is a product of a direction of awareness to elements generated by the symbol forming mechanisms that alter its content. An understanding of dynamic consciousness, whose altered and truncated content in awareness is the product of mental mechanisms, offers a door to insight into mental pathology. Understanding of the workings and failures of mechanisms that produce the contents of dynamic consciousness by limiting its content, offers knowledge that exceeds the insight offered by a definition of consciousness, which is solely oriented toward content. An example of a concept of consciousness that is based on cognitive content alone, is "consciousness" as described by Damasio (1999). He distinguished between two distinct content categories of conscious awareness (p 91). The first category is core consciousness (simple focused awareness). The second category is extended consciousness (p 195) (an awareness of the present, the past, the abstract future, and evolving ideas).

Levin (2002) has identified this distinction with Edelman"s (1992) primary consciousness ("mental images in the present") and higher order consciousness ("a model of the past and the future as well as the present." p 112) These concepts (core/primary and extended/higher-order consciousness) have limits. They fail to recognize the dynamic processes that create, alter and truncate the content of consciousness and produce as end products a subjective experience in awareness, which consists of a tincture of symbols and reality. They ignore the influences that produce for man a consciousness with flexible borders. They neglect the force of eldritch memories, which though failing to obtain direct conscious expression, can express remnants of their power through interpretations of perceptions and alterations of latent concepts in memory that populate conscious content with cryptic symbols. Could one say, following Damasio's definition that a six year old child, whose concept of himself is devoid of a self reflective awareness encompassing himself in past, present and abstract future, is not conscious.

Calvin (1999) in commenting on the limitations of Damasio's concept of consciousness, notes that "Most of what Damasio treats would apply equally well . . . to the less structured consciousness of chimpanzees and bonobos." (p 8) Panksepp (1998) humanized the content of higher order consciousness by including in it the ". . . ineffable feeling of oneself as an active agent in the perceived events of the world." (p 310). This idea does not encompass all of consciousness. Describing the contents of consciousness and understanding what one actively feels during subjective experiencing in awareness are only facets of the understanding of consciousness. Other facets to understand relate to dynamic processes that in limiting conscious content become syncretic with the creation of consciousness. The dynamic processes to which I refer are involved in cryptic symbol formation. Cryptic symbols counter the awareness expansion that takes place during the development of abstraction loaded higher order consciousness. To comprehend consciousness in man, it is necessary to study the role of cryptic symbols in altering consciousness through diminishing man's scope of awareness.

Through repression (denial and displacement), masking symbols (cryptic, secondary, psychoanalytic) truncate the content of memory, as it gains access to conscious awareness. Symbolic representations find their way to conscious expression. The referent ideas and concepts that inspire them remain in an encasing limbo that affords little access to direct expression. Cryptic symbols are conscious traces of elements of knowledge so foresworn.

Symbolization (cryptic, secondary, psychoanalytic) contributes to interpretation of sensations derived from the world. Reality perceptions are interpreted under the guidance of a manifest symbolic worldview. An altered reality, created by interpretation of sensations based on symbol panels, results. The new reality becomes encoded and is retained in memory. Subsequently it is used both for interpreting and processing concepts that are being driven from memory toward awareness, and for new rounds of distorting interpretation applied to external perceptions. A potential to produce symbol sourced pathological distortions of reality, which dilutes and alters perception of the world is thus introduced.

Simple and poetic symbolizations structure potential future conscious awareness by verbally encoding subjective interpretations of perception into the contents of memory for later use. Cryptic symbol formation alters access to conscious awareness of memory concepts and perceptions. They alter content as a means of controlling affect. Their function of controlling affect is a key to an understanding of consciousness. Their comprehension opens the way to a comprehension of failures to control affect, and offers insight into the origins of the pathologic distortions involved in phobia formation, poor reality testing, and deformation of reality by fantasy.

THE INFLUENCE OF CHILDHOOD COGNITION ON ADULT CONSCIOUSNESS SOURCES FOR THE EXCLUSION OF CONCEPTS FROM CONSCIOUSNESS-

Full awareness of one's past, present, and future is not possible. Cryptic links between conscious content and associated memory systems create galaxies of potential awarenesses in memory, which become noncommunicating when the retrieving cognitive system changes. Memory for dreams, for instance, enters consciousness for what is at best a fragile residence. The content of Pavor Nocturnus dreams in children are remembered during partial awakening. It is not remembered the next morning. Commands made during hypnotic states are not recalled, yet are acted upon. Experiences during childhood, which enter memory through an immature cognitive memory organization, are not recalled spontaneously into the cognitively shaped consciousness of adults. There is an infantile amnesia in adults for emotion-laden experiences before six years of age. This is explained (Schachtel 1949) on the basis of the maturational cognitive drift from affectomotor memory with its intuitive symbolic way of encoding experience to a mental-verbal appreciation of the real world. There is difficulty for memory

retrieval of concepts derived from distorting symbolization and intuition by a cognition that is oriented to logical verbal and abstract concepts. During the years encompassing six to twelve, conflict oriented experiences, which have been attenuated in their immediate impact through fantasy and symbol formation, remain latent in memory and do not enter free association verbalizations during psychoanalyses unless prompted. This phenomenon is the basis for giving this childhood age period the name Latency.

CONSCIOUSNESS AND AGE

Symbolic linkages based on abstract similarities between referents and representations are introduced during the eighth year of life. Concrete interpretations may persist. Abstract elements aid in the shaping of symbolic interpretations of valid perceptions of immediate personal reality. They codify realistic perceptions and insights in memory. In adulthood, abstract cognition encourages an interpretation of perceptions that is based on the intrinsic similarities that identify accurate categorizations. The nature and content of dynamic consciousness is increasingly limited by a defensive infrastructure that grows with age. It consists of gradually maturing symbolizing structures and mechanisms of defense, which utilize abstract memory contents in forming the symbolic linkages from which symbols create internal representations of the world. The "mature system consciousness" (see Sarnoff 1976 P 339) with its related "abstract conceptual memory organization" (p 117), informs adult consciousness. It does not fully mature until midadolescence.

Understanding that there is a developmental aspect to dynamic consciousness, which gives it an evolving form adds levels of complexity to the function localizing tasks of neuroscience. A neuroscientific understanding of the shaping of the forms and contents of consciousness requires an appreciation of the relationship of maturing brain components to shifting interactions and influences that develop and change with age and the symbolizations that reflect these changes. Child development challenges any attempt to create a simple topographically oriented neural hypothesis of consciousness that assigns fixed function to an unchanging place in the brain, since that hypothesis would exclude the influence of age specific stages of the ontogenesis of repressions, abstract thinking, and symbolization.

CHILDHOOD MAGICAL COGNITION PERSISTS TO INFLUENCE ADULT CONSCIOUSNESS OF PERCEPTIONS

In the years of childhood before the age of eight, perceptions are remembered, interpreted, and understood primarily on the basis of intuition and symbol formation; both are based on concrete similarities in shared external characteristics. Remnants of this immature cognition persist into adulthood in the memory panels used for recognition of perceptions. As a result of these immature interpretative cognitions, magic, symbolic linkage through the predicate, and concrete interpretations of perception are tolerated in an adult's conscious image of the world. As a result they influence the content of the adult system consciousness when magical forces become acceptable as content in consciousness. In the process adult awareness widens to conform to culturally defined orientations and conceptions, some of which may be alien to objective reality. For the mind that has not matured in the use of abstractions based on shared intrinsic characteristics it is difficult to comprehend realistic interrelationships and categorizations of perceptual elements. Magical fantasies and beliefs, which otherwise might have been rejected, gain access to consciousness.

SYMBOLS AND REALITY TESTING

Symbolic interpretation places a distorting lens between the world and the mind. Experience and sensation are transformed by the symbolizing function into altered memory images during the transition that transmutes a perception into a concept in memory. Early on concrete and superficial similarities between perceptions and remembered images from a former world are mobilized to provide links through which perceptions can be stored in symbolic form. The network of transformed referents (symbols) so formed in memory is available to be called upon in creating affect dampening distorting interpretations of new stimuli and inputs. A memory system is developed which consists of panels of symbolized perceptions overlying preexisting layers of submerged and altered reality. Interpretation based on these panels provide preconceptions for use in settling discordances between immediate perceived realities and memory-based distortions. Interpretation of perceptions shaped by these panels produces new symbolized concepts for encoding in memory, which may introduce qualia (interpretations) at odds with physis (natural reality).

When compared to a panel of symbolically processed memories, a newly developed symbolized

concept of the world can be recognized as congruent with remembered experience and recognized as "real", reinforcing its recent alteration through symbolic interpretation. The sense quality of reality, that is achieved in this way is bestowed on later interpreted perceptions as they qualify to become contents in memory. This process replaces reality testing with a sense of reality, which accepts distortions as real. In the transition from concept in memory to concept in awareness, a similar infrastructure of masking defenses prevails. It is guided by preconceptions based on previously symbolized memory elements, which in modifying the content of memory, shape the potential contents of the dynamic system consciousness. The mutilayered content of dynamic consciousness (system CS) is produced by the superimposition of complex images, derived from remnants of perceived reality, on remembered distorting symbols. The content of consciousness so produced is best likened to a palimpsest.

Suppression of reality content in consciousness is produced when concept formation truncates awareness, creating a reality-distorting residue, which pushes aside affect charged content. Insufficient displacement in the production of the countercathectic residue during symbol formation leaves disquieting affect in awareness. Phobia, fear in neutral situations, anxiety dreams, transcendent art, and doubt filled expectations are examples.

SYMBOL TYPES AND THE BRAIN
SIMPLE SYMBOLS AND MASKING SYMBOLS

Both simple symbols and masking symbols are products of brain function. *Simple symbols* are solely communicative in function. They consist of verbal representations, which by convention convey memories, concepts and insights. The brain localization for the production of simple symbols is a circuit that begins with sources in the memory areas[1] of the cerebral cortices, and traverses the angular gyrus, Wernicke's Area, the Arcuate Fasciculus and Broca's area on the way to speech. This track for the formation of symbols lacks circuits involved in generation and control of affect.

Masking symbols control the affect levels of perceptions and memory contents, should they threaten to disorganize adjustment during moves toward consciousness. Control of affect is achieved through displacement of attention to a related more affect neutral content. This is part of the protective substitution of symbols for affect-laden content that occurs during interpretation of new perceptions and

preconscious memory content.

Cushioning verbal symbolic content has less affect than the perceptions and core memory concepts that it represents. Symbolization readies the mind for less affect charged interpretations of reality in new perceptions. It diverts conscious cathexis from affect-laden core memory content, which though replaced in conscious representation, does not disappear from memory. It persists as part of its original cluster of concepts.

MASKING SYMBOLS AND THE BRAIN

Masking symbols are products of a neuronal system through which perceptual traces, and memory elements from the cerebral cortices are altered in support of muted affect during their move toward awareness. The brain structures that serve this system serve symbolization. They function as the detectors, filters, and diverters that compare potential conscious representations with information about affect potentials that are stored in memory panels in the cortices of the frontal lobe. Affect is detected on a nonconscious level when potential conscious representations are recognized to be commensurate with danger to self or to ego functions.

Generation of signal affect is achieved through neuronal loops that are interposed in the circuits between perception and memory and in the circuits from memory to consciousness. The efferent pathways of the loops are activated by the appearance of fresh perceptual or memory content that in activating discharge from the amygdala into the autonomic nervous system, generates haptic visceral sensations. Detection of associated visceral sensations requires an afferent pathway (i.e. the vagus nerve and humeral messengers) to transmit them to the brain, where they can be identified as affect as a result of further comparison with the contents of frontal lobe memory panels.

Affect loops enable serial scanning of emerging and evolving cognitive content for affect with potential to signal impending disorganization of ego functioning (signal anxiety). Each time that such affect is detected, a duplicate circuit, which cushions further generation of affect, is activated. Serially each pass through the circuit activates a substitute representation that minimizes destabilizing affect through activating a shift of attention to milder cognitive content within the concept cluster, to which the

offending content belongs. The newly introduced cognitive content becomes a milder affect bearing representation. New content, which consists of perceptual or memory elements undergoes the same scanning process as the initial data. It is passed repeatedly through the metamorphosing affect loop until with each ever softening pass, finally a representation (symbol) is produced that has an affect level that can enter consciousness without an endangerment. As a result of this response to affect by psychoanalytic symbol formation homeostasis is modulated.

Psychoanalytic symbol formation entails displacement of attention from original affect-laden content to less threatening though related content. Related contents are sufficiently removed from original contents to be able to serve as manifest symbols, whose affect load bears diminished danger. The affect generating potential of manifest psychoanalytic symbols is more moderate than that of the original perception or referent content.

SUBSUMMARY

Cryptic symbol formation defends against affect. Were affect-linked concepts and drives to be faced or recalled in the absence of this aspect of the symbolizing function, strong and disorganizing forces associated with conscious feelings would threaten adjustment. The hypothesis presented in this chapter is that manifest Psychoanalytic (masking) cryptic symbols are generated in an attempt to adjust to the threat posed by preconscious affect-linked symbolized concepts as they reach the brink of awareness. The affect producing potential of emerging symbols is detected through a process that compares them with panels of remembered concept content, for capacity to generate the haptic sensations identifiable as affect that result from activating discharge from the central nucleus of the amygdala into the autonomic nervous system. In response to strong affect, a series of symbols with increasingly attenuated affect mobilizing strength is created until one is reached that has a level of affect, which will permit comfortable acceptance of the new representation into consciousness.

The structure of the brain involved in Psychoanalytic Symbol formation consists of an afferent leg from perception to memory storage upon which is superimposed an affect feedback loop to identify danger in the world, a central processing area, storage areas for memory panels, and a similar affect feedback loop superimposed on the efferent arc from memory to expression in consciousness. Both affect

feedback loops attach affect to concepts through the generation of sensations in the viscera that are recognized in the brain as the haptic sensations called affect.

PATHWAYS FROM PERCEPTION TO CONSCIOUSNESS THAT BYPASS SYMBOLIZATION

Conscious experience of the world first evolved in sensate beings without the interposition of symbolization. Remnants of this primitive system persist in reflex responses to stimuli and physiognomic thinking. Here we trace the course of those new percepts that find their way to immediate nonsymbolized conscious awareness. In this circuit telereceptor percepts transmit their affect potential through the centromedial area to the amygdala, from which autonomic discharge is generated without direct cortical registration. This independent circuit at first parallels the delivery pathway that carries percepts to receptive consciousness through the cortex. It parts company with cortex bound sensations at the level of the colliculi.

Parallel sensory pathways are part of the brain system required for making immediate and reflex responses to stimuli. Visual and auditory telereceptor systems initiate these parallel pathways. Within the brain the colliculi, which are contiguous with the tectum are enlisted to activate non-conscious reflex muscular responses such as knee jerks, physiognomic responses, reactions of awe, and autonomic changes including contraction of the iris in response to light.

PATHWAYS FROM PERCEPTION TO CONSCIOUSNESS THAT INVOLVE INTERPRETATION, SYMBOLIZATION, AND MEMORY CONTENT

Next we trace the interpretation of a teleperception—under the influence of previously stored and symbolically altered images of reality—into a symbolically altered sustained memory concept called by some a "qualia". Auditory and visual sensations that are involved in this process are directed to the brain cortices through the geniculate bodies. These nuclei are extensions of the thalamus. Auditory radiations from the medial geniculate bodies terminate in Heschl's gyrus in the Temporal lobe. Visual radiations from the lateral geniculate bodies place stimuli in the Calcarine fissure in the Occipital lobe. Neighboring gyri ready the stimuli to enter memory as categories.

Perceived true reality is not processed in isolation from the past experience of the observer. When

perceptions generate disquieting affect, memory based distortion using symbol enriched memories are invoked to create a calming interpretation of reality.

Should defense against disorganizing affect be required in dealing with perceptions, sustained symbolically altered images of reality are generated for retention as memory concepts under the guidance of frontal lobe memory panels, which activate affect loops. The transition from memory concept to consciousness is similarly governed by memory panels in response to affect loops. Affect loops consist of frontal lobe panels and amygdala activated autonomic tracts, which guide the displacement of threatening concepts to less affect-laden conscious representations (cryptic symbols).

CONCEPT CLUSTERS

PERCEPTIONS BECOME CONCEPT CLUSTER MEMORIES THROUGH SYMBOLIZATION

Concept clusters consist of groupings of symbols with common internal meanings and characteristics. Transformation of a perception into a member of a concept cluster is frequently guided by previously stored and remembered symbolically altered images of reality. Interpretation of perception based on effective psychoanalytic symbols as prototypes diminishes affect. As a result of altering the form of a representation so that it will conform to memory recalls, fit into a concept cluster, or reshape perceptions of external reality, the psychoanalytically symbolized world becomes a neutralized representation of affect-laden percepts. There is woven, from a web of symbols, an internal simulacrum, a topographically determined concept cluster, that when synthesized into a symbolic internal map is interpreted by the awareness of the subject to be a realistic image of the world. Synaesthesias, memory attrition, and cultural and personal infusions limit accurate representation of reality in this simulacrum. They create distorted interpretation of perception, enhancing the unique and personal nature of internal maps of the natural world. The remembered natural world combines external reality with recalls of established memory producing personal inner landscapes. Aragno (1997) notedthat "A certain synaesthesia prevails over the way in which experiences are internalized and memories are recalled." (P 250)

A symbolic interpretation that distorts reality perceptions is required in order to maintain

emotional equilibrium at times when affective responses to reality could flood the ego's defenses and disengage those functions of the mind devoted to adaptation to reality. Effective defense in confronting world based affect is the product of the creation of symbolic forms, whose minimized level of affect permits entry into consciousness of a reality that is minimally distorted and introduces a conflict free response to reality. The accuracy of interpretation is influenced by the degree of displacement involved in the creation of the conscious symbol that represents new perceptions. Overwhelming sensory inputs are softened to produce a compromise that permits attenuated reality to enter the central processing system in preparation for screening for entrance into consciousness. Interpretation gives perception a form, which has been so acceptably blunted that it appears to be old, known and familiar, and therefore under control and not threatening. Within limits this process makes possible a loosening of reality testing that serves adaptive object ground differentiation when it is required for survival. An example of the latter would be accepting the discipline required to belong to a social group, which shares occult beliefs.

There is a downside to this process. Displacement during interpretation of perceptions can produce changes that are so marked in degree that the reality that is represented is distorted and the original percept excluded from consciousness. Such distorting symbol informed interpretations of reality perceptions synthesize memory panels with a falsely remembered world. Memory panels such as these contribute to a future sense of reality that has potential to be faulty. This situation can produce a denial and truncation of perceived reality and an attendant bypass of detection of danger during cortical scanning of perceptions.

False memory content may mislead the interpretation of perception. The identifying characteristics of a fearsome attacker may be linked to imagery that permit its symbolic conversion to a friend as could happen were a thief to approach offering kindness. Alternatively the structure of the symbolic form to be used may have been poorly chosen by the symbolizing function, resulting in the assignment of an overabundance of affect to a perception. In pathological situations, in which the choice of manifest symbols is guided by poor reality testing and concrete symbolic linkages, or in which displacement stops short of affect neutral representations (see affect porous symbols in Unit 2, Section B, Chapter 4.), exaggerated fears interfere with adjustment.

THE AFFECT FEEDBACK LOOPS

Perceptions, concept clusters and other memory sources within the cortex have a potential to rise to consciousness via the hippocampus and the amygdala, where its affective charge is made manifest through activation of the efferent leg of the affect feedback loop, which discharges into and activates the autonomic nervous system. Activation generates visceral activity, which is accompanied by the generation of haptic signals from the skin and viscera, which enter the afferent leg of the feedback loop. Response to haptic visceral sensations takes on the form of a signal, which one learns to identify as anxiety, loneliness, anger, sexual feelings, awe, rage, hunger, depression, delight, joy, or orgasm. Panksepp (1998) has identified the receptive portal for the haptic autonomic sensations of the afferent portion of the affect feedback loop in the tectum, ". . . centromedial areas of the midbrain . . ." (p 311). The tectum is located in areas immediately caudal to the colliculi. The centromedial areas of the midbrain serve as way stations for a feedback loop involving the autonomic nervous system. It sends signals to the amygdala and its associated memory panels that there are, associated with a concept or percept, excess bodily sensations consisting of primary visceral-proprioceptive perceptions, which are experienced subjectively as affect.

In primitive creatures the centromedial area (including the colliculi and tectum) is a limited way station that activates reflex responses and physiognomic reactions to telereceptor stimuli. Centromedial areas in primitive creatures, which contain relatively few neurons, have little room for the many synapses required to make alternative action responses and delay possible.

As the number of neurons increases during evolution, the number of possible reflex responses increases. Enhancement of the number of centromedial synapses and associated response carrying neuronal groups in the cerebral cortex increases. This provides the neuronal infrastructure for selection between alternative reactions to sensations and stimuli. An evolved response, that promises to carry the least affect and which will best counter an affect-activating situation can be selected.

In higher-level creatures such as elephants and primates with many neurons, disjuncture (defined as freedom from automatic reflex responses to environmental stimuli) is possible. The large volume of neurons enhances potential for delay and the availability of choice of responses. In man the choice of responses includes the evolutionarily recent development of internal affect attenuating substitutes such

as fantasies and symbols and the alterations in the level of affect and the content of awareness that symbolization produces.

CENTRAL PROCESSING OF PERCEPTUAL ELEMENTS THAT HAVE BEEN INTRODUCED INTO CONCEPT CLUSTERS IN MEMORY

Here we trace the course of concepts as they acquire their places in memory. The activity of memory areas of the cortices is called central processing. It begins when symbolic interpretations of sensory inputs produce the form of a referent that augments the content of the symbolizer's preexisting remembered internalized world image. Central processing organizes memory content (referents and concepts) with varying degrees of ability to generate affect when entering consciousness. Affinity groups consisting of webs of symbols with common internal meanings and characteristics are called concept clusters. They consist of bridges of meaning across which displacements can be made.

Proverbs utilize concept clusters in the creation of their cautionary tales. In the proverb, "A rolling stone gathers no moss." the wandering of a forlorn person belongs in the same concept cluster as the rolling of a stone. The concept cluster to which both belong is organized around the abstraction "motility". When a proverb interpreter equates a motile rolling stone with a motile wanderer the interpretation of the proverb is correct. An example of a pathologically interpretation was presented when a patient interpreted the same proverb with the thought 'If they had brought their own bread with them, they wouldn't have had to make matzo'. In this case, the aspect of a rolling stone was extended to include a millstone, which rolls but does not move from its place, and by extension to the people of Israel wandering in the desert of Sinai.—a concrete concept linkage that is not inferred by the proverb.

THE SOURCES OF THE MEMORY CONTENT THAT INFLUENCE THE SHAPE OF CONCEPTS AND THE ESTABLISHMENT OF CONCEPT CLUSTERS DURING ENCODING IN MEMORY

Interpretation is informed by memory. In the sources of the contents of memory therefore lie much which shapes later human experience of the world and the contents of consciousness. Theories of the origins of memory contents fall into four groupings.

The first group holds that memory is derived from remnants of earlier afferent perceptions and

interpretations of reality as well as centrally located thought processing, synaesthetic distortions, and innate content such as physiognomic thinking. (see above Unit 1, Section B "The Ontogenesis of the Symbolizing Function"). Reality perceptions come to reside in memory after first traversing a circuit that involves the symbolizing function. In this circuit, warning stimuli are scanned for potential to generate affect with destructive potentials. They then may be neutralized by distorting symbolization which involves the use of repression, displacement and countercathexis formation, before being encoded in memory, creating a trap for the unwary in the interpretation of future events. Reactions to anxiety and fear underlie the reshaping of new perceptions of reality that will become the content of memory that is available to consciousness, Selective recall of these contents produce fantasy to buffer fear.

The second group emphasizes the role of emotion in the creation of the content of memory that passes through the portals of consciousness. LeDoux (1994) in his ". . . inquiry into the relation between memory and emotion." P 50 stated that "Emotion is not just unconscious memory: it exerts a powerful influence on declarative memory and other thought processes." (p 57) He does not include repression as a factor.

The third group recognizes a theoretical source of memory in induced content. (See Unit 1 Section A, Chapter 4) This includes transcendent symbols for whose origins cognitive derivatives of divine origin are invoked. This knowledge is taught as information with origins in transmission from the world of the spirit to the mind of the mystic.

The fourth group finds sources of contents in memory in hereditary elements that preexist the birth of the individual. Recently there has been given favorable attention to such hereditary sources of memory content. (Lane (1970) These are the neolamarkian concepts embodied in structuralism. The concept of structuralism holds that 'there is in man an innate, genetically transmitted and determined mechanism that acts as a structuring force'. (which) 'determines the limits within which the structure of all types of social phenomena can be formed' (p. 18). Social structures are 'genetically rather than socially or culturally determined' (p. 31). Structuralism is the study of the effects of a postulated innate structuring mechanism, which guides, shapes, and limits the creative efforts and characteristics of man in society. Interpretation of memory and perception is linked in structuralist theory to memory of a primordial encounter with the universe of myths sustained by primitive man, which has stamped its influence on all

subsequent cosmologies, and religions. Brothers (1997), recognizes a related process in which ". . . faces, voices, and social actions (are) significant in themselves, eliciting amygdala activation through evolutionarily inscribed pathways." (p 61). Such a concept of preexisting knowledge is far from new. Both Freud (universal unconscious) and Jung (inherited unconscious) used similar ideas. In ancient days, Plato (Ant) described knowledge based on prebirth experience in heaven thusly, ". . . every human soul by its very nature has beheld true being otherwise it would not have entered into the creature we call man . . ." ". . . Some had but a brief glimpse of the truth in their former existence . . . the sacred vision they once saw . . . of the world above . . ." (Page 56) The concept of an essential verity, buried in a collective unconscious, was described in Humbert de Superville's mid nineteenth century "Essay on Absolute Signs in Art" as described by Stafford (1979 page 22).

His theory integrates expressive theory with all other historically relevant human disciplines, through the presence of a remembered universal truth.

Scientific observation of loci for storage for such innate perceived natural realities has as yet found no anatomical locale for the storage of these "essential verities" in man. Innately structured social orders can be observed in the behavior of antelopes in herds. (Estes 1993)

CHARACTERISTICS OF CONCEPT CLUSTERS

Any member of a concept cluster can be used to represent the whole cluster or any part. The brain enhances a concept cluster each time it records and stores a new percept. In this way new percepts come to be related to previously acquired content. Simple symbols are produced when neutral words are consciously and knowingly associated with a concept cluster. Poetic symbols are established when words which are associated with new concepts and insights are associated with preexisting memory clusters. Transcendent symbols are components of concept clusters with origins identified as arising in the precincts of deistic reality These precincts exist beyond the boundaries of the self. Their origins are thought to be in venues removed from the symbolizing function of the brain.

The internal connections between subunits of a concept cluster become concrete and abstract symbolic linkages. Displacement across these linkages during symbol formation follows abstract logical

connections and learned affinities in health. They follow seemingly logical leaps along superficial characteristics in pathology. Affect neutral cryptic symbols are created when the contents of recalled memory are altered by displacements and substitutions during symbol (affect attenuated representations) formation.

NOTES

1 See Damasio (1999) ". . . long-term memory of . . . facts relies on multicomponent brain systems, whose key parts are located in the vast brain expanses known as the cerebral cortices." (p 116)

During the move from a concept toward symbolic expression, alterations of content are achieved by the direction of awareness to related affect neutral elements across linkages within concept clusters. Referent memories (concept cluster elements) which have the strongest affect, are experienced as repressed, when displacement shifts conscious awareness to related concept cluster elements in memory, which are linked to less affect and which can serve as countercathectic content. This mechanism offers a weak point in the system. Weak displacement can produce a symbol that is porous to affect and can support the generation of phobias and nightmares. With enhancement of cortical neuronal mass as in man, the number of possible derivatives is enhanced by the use of abstraction. Similar elements with varying associated levels of affect contribute to the formation of concept clusters.

THE PASSAGE FROM MEMORY TO CONSCIOUSNESS FROM CONCEPT CLUSTER TO VERBAL EXPRESSION IN CONSCIOUSNESS

One of the venues for the formation of Psychoanalytic symbols is the pathway that leads from concepts in memory to their conscious expression through a related less affect-laden member of their concept cluster. Concept clusters consist of symbol groupings with common internal meanings or characteristics. Displacement produces substitution of an affect charged concept by a fellow member of its concept cluster with less valence for attracting affect. Newly arrived perceptions of the world are filtered for recognition through the same scanning neural networks created from remembered distortions and symbols, which scan memory concepts arising toward consciousness.

Established concept clusters rise toward consciousness when propelled by drives or called up by need to recall as occurs in active concept retrieval. Affect-laden referent concepts are moved from the cortex through the hippocampus (V.I.) to brain areas, approached by way of the Amygdala, which serve as sieves that screen for affect. As a given concept moves from memory toward consciousness derivatives are chosen from a serial cascade of related words or impressions. Each of the elements within the cascade of derivatives is treated as though it were a trial action. Each is scanned for elements stored in memory informed areas (i.e. dorsolateral prefrontal cortex) for its potential to generate discordant affects at motivating strengths. When manifest verbal symbolic forms are selected for the verbal expression of drives with a level of affect that is acceptable for use on a communicative level, a sophisticated choice of

conscious verbal substitutes as symbols becomes possible.

Concept clusters rise continuously toward dynamic conscious awareness. They are impelled toward consciousness by what Panksepp (1998) has called an ". . . endogenous urge of the brain." (p 290), a phenomenon independently described by Freud less than a century before. Freud called the urges that impel concepts to actions, words, dreams and somatic discharge, "trieb" (drive). He noted that drive manifestations are defined by four characteristics. These are source (organ urge), impetus (force), object (another person, an animal, food), and aim (discharge). Of all the drives, which impel man to contact with the world, three have potential for delayed discharge. These are the drives connected with aggression, hunger, sex and reproduction. As a result of disjuncture, these drives can undergo aim inhibition. Their discharge can be displaced across bridges of symbolic linkage between the elements of a concept cluster. Capacity for displacement contributes to the role of these drives in symbol formation. Of the three flexible drives, sexual and aggressive drives that generate affects are most commonly involved in psychoanalytic symbol formation and less often, as in the dreams of food of starving men, hunger drives are manifested in symbols.

When representations (manifest symbols) occur in dreams or other evocations with the unconscious connection to their referents effaced, representations are identifiable as psychoanalytic symbols. Kubie (1953) pointed out that the manifest symbolic dream elements that represent conceptual abstractions are predominantly derived from central cortical receptive visual and auditory areas, which store in memory the perceptions of distance receptors (p 83).

EXPRESSIVE SYMBOLIZATION AND THE CONTENT OF CONSCIOUSNESS

Trial action and proposed verbalizations enter a circuit that detects links to affect-laden memory and sensation. Proposed potential conscious manifestations of percepts and concepts are evaluated through a selection procedure based on potential for danger, judged in terms of predictions of affect (i.e. anxiety or depression) and peril. In man alone defense against affect associated with action or verbalization produces defensive substitutes (i.e. psychoanalytic symbols).

Psychoanalytic symbol formation is a response to affect that is generated by interpretations of new

perceptual realities as well as a rising toward consciousness of the affect that is associated with concepts in the process of recall. Detection of these associations is the result of scanning of cognitive content, as it moves toward consciousness. The process of detection of elements that generate threatening levels of affect falls to the amygdala and the prefrontal cortex (ventromedial and dorsolateral) in light of their capacity to intercept such potential in new perceptions and in the cognitive content of consciousness bound concept clusters that actively radiate through the brain from their loci in memory centers. These units scan cognitive content for affect generating potential. The progress toward consciousness of affect-laden cognitive content is blocked (gated) on its way toward consciousness. Gating involves interfering with the progress of content by substituting more neutral substitutes derived from related concept cluster content stored in the cortex. The substitutions so produced are psychoanalytic symbols. Such symbols attenuate affect charged thought contents and divert their powered flow towards consciousness leaving them latent.

CORTICAL ZONES THAT GUIDE EXPRESSIVE INTERPRETIVE SYMBOLIZATION

Vastag (2002) referring to the work of Drevets, has noted that "After the amygdala generates a strong emotion and the accompanying autonomic reactions, . . . the nearby orbital cortex keeps these mental and physical manifestations from spinning out of control." (p1788) These cortical guide zones in the frontal cortex provide the template of contexts against which the processing of sensations makes comparisons. Freshly introduced actions, concepts and words are evaluated in terms of prior experience. Detection by a filter, geared to provide an early distant warning that there is high affect risk, identifies verbal content that needs to be altered by symbolization in order to enter the dynamic system consciousness.

The impending appearance of strong affect in consciousness motivates symbolization. It sets in motion the following cascade of events. There is denial of the noxious percept or concept and its replacement by redirection (displacement) of attention cathexes from the denied referent to a countercathectic substitute (the symbol) drawn from within a concept cluster consisting of elements, which are shared by both the representation and that which is represented. Affect screening filters stand at the response decision interface at which affect-laden stimuli and memories are responded to with the activities or symbols that will substitute for them in consciousness. Triggering affect responses linked to

the future danger implied in current risk behavior and chance taking are generated under the influence of the Prefrontal Cortices (See Carter (1998 Pp 194-5) The evaluation of risk for generating affect in verbal content that is moving toward consciousness, is guided by the ventromedial prefrontal cortex (Becharia (1997). Choice between alternative responses to stimuli is the province of the anterior cingulate gyrus (Barch (1999).

When screening under the scanning influence of the prefrontal cortex reveals predictably high levels of potential affect (e.g. signal anxiety) a need for modification of mental content emerging into consciousness is indicated. This modification is triggered when elements pressing for representation in awareness are discerned to be laden with affect that will threaten ego function. This is especially so when affect with a disorganizing potential threatens disruptively to break through the boundaries of consciousness. Disruptive affects and sensations are quelled as the result of the formation of the cryptic manifest symbols of the dynamic system consciousness.

For example, a four year old girl began to stutter. A new born baby brother had recently changed the family configuration. She put on a puppet show for her grandfather, in which there was a panda bear, which stood apart from a large rabbit on whose lap a little bear sat. The ordinarily nonaggressive child began to hit the panda with a quick and persistent series of little fist socks. The grandfather asked, "Why hit the panda". She answered, "the panda is angry that they are together". That day the stutter dwindled and within a day, it was gone. The child had projected her need for punishment for becoming angry onto the panda. As a result of venting one side of her conflict over the arrival of her brother, which had been manifested in her stammer, her stammer lessened. Stammer can occur when there are conflicts that vie for expression in words. The panda served as a symbol for her own self rejected unacceptable anger at the arrival of her new baby brother.

Symbols are generated to counter potentially disorganizing affects associated with mental contents that advance toward awareness under the pressure of that which Panksepp calls urges and Freud calls drives (see above). *Memory based concepts* that are linked to uncomfortable affects are converted into manifest symbols that will mask and represent them with muted affect as they enter awareness. The latter are drawn from a bank of preformed and preconceptualized representations, to create a personalized interpretation of reality.

Symbols guard the gates of consciousness from the intrusion of disruptive remembered or assigned affect. Too great an affect conveying a sense of danger can produce disorganized thinking marked by thought disorders. Poor ability to produce neutralizing symbols results in affect porous symbols and nightmares. The amygdala and the ventromedial Frontal Cortex (VMFC) (see below) form an early warning system that signals the alarm that is responded to by activating the displacements that constitute the activity of the symbolizing function. The boundaries of consciousness shrink as many of its contents are replaced by substitutes whose meanings have a cryptic dimension.

Established concept clusters rise toward consciousness when propelled by drives or called up by need to recall as occurs in active concept retrieval. Affect-laden referent concepts are moved from the cortex through the amygdala by way of the hippocampus. Thence a combination of the affect loop and frontal cortical areas create sieves that screen for affect and in the case of threatening signal affect trigger cryptic symbol formation.

SUBSUMMARY

Anxiety loaded concepts generate affect through the activation of the autonomic nervous system by the amygdala. The sensations generated are detected within the brain, which under the tutelage of the dorso-lateral frontal cortex (future risk) and ventromedial lateral frontal cortex (chance risk) subject its content to reflection and judgment. If the affective valence that is revealed is too high, conscious expression of content is delayed, diverted (strained out), and altered in form through replacement by the selection of more neutral cryptic psychoanalytic symbols. Affect neutralization through symbolization makes possible a move of mental content from the cortex to consciousness, expression, and action.

The cryptic symbol is sufficiently removed from recognized association with the lead element (concept plus word representation plus affect) of its original concept cluster in memory that it produces less affect with an ensuing lessened need for fight or flight. This makes way for measured thought and action. This is achieved through affect regulating centers[1], which activate repression, projection, displacement, and somatization in the pursuit of creating symbolic representation. The link of affect to a memory is manifested through the amygdala. Symbolization occurs in situations in which associated affects in consciousness would be so distracting that reality oriented function would be derailed.

The original referent is held out of consciousness, where it retains the potential to generate activity. It can still enter consciousness and find expression in repetition compulsion tinged affect-laden manifestations. It can be approached therapeutically by free association, or activated in life situations by those external perceptions, which stimulate and reinforce the drives that push memory and affect into consciousness. External influence on the content of consciousness is strong while awake. In sleep, the external influence is slight. This encourages the formation of psychoanalytic symbols, which represent primarily internal psychic contributions. Concept cluster elements become linked to painful affects as a result of the uncomfortable nature of reality experience, or because of preexisting innate internal influences such as a physiognomic response to the features of a face.

Established concept clusters rise toward consciousness when propelled by drives or called up by need to recall as occurs in active concept retrieval. Affect-laden referent concepts are moved from the cortex through the hippocampus to brain areas, approached by way of the amygdala. These serve as sieves that screen for affect.

BRAIN STRUCTURES REQUIRED FOR SYMBOL FORMATION

THE NEURAL INFRASTRUCTURE OF THE SYMBOLIZING FUNCTION

Mental image contents, recalled in consciousness, stand apart from the brain structures that produce them, much as a hologram stands apart from its source. There follows an extended description of those brain structures that are required for the production of symbolic representations.

THE ORGANS OF PERCEPTION

The brain receives afferent inputs from *external* perceptual apparatuses (i.e Telereceptors such as eyes, ears, nose). Natural reality may be perceived accurately within the limits provided by the perceptual potential of these organs. However perception of telereceptor based natural reality is altered by the application of symbolic filters during interpretation of perception. As a result memory contents may differ from the actual perception that they represent. This results in inaccurate recalls and intensification of the symbolized interpretation of new sensory inputs. Inaccurate recalls also occur as the

result of what Carter (1998) has called ". . . de-focusing on the outside world." (see p 200) The latter can result from at least three conditions.

The first condition is brain damage (p 128) involving the ". . . tegmentum, an area just above the reticular formation." (p 128) [probably what is referred to are the tegmental nuclei, which are cephalad to the reticular formation.]

The second condition is dream cognition, which reorganizes dream content during recall. This process was called by Freud (1900) "secondary elaboration". As a result of this process, symbol-based dream images are organized and ". . . enhanced (so that) . . ."coherence of object images can occur." Demassio (1999), assigns this activity to the tectum (the superior colliculi), the Cingulated cortex, the thalamus and some prefrontal cortices. (p 180)

The third condition is chemically mediated alteration in the cognition that organizes the sources of recalls (See Siegel (2000) p 78); Damasio 1999 p249 and Maquet 2000 p834.) For instance, during REM sleep there is cessation of the production of noradrenaline in the locus coeruleus (see Siegel (2000) p 78) and ". . . serotonin neurons are silenced, but some acetylcholine neurons are very active . . ." When there is such dominance of acetylcholine in the brain, (as occurs with REM sleep and infusion of physostigmine into the brain (Robbins (2000), there is a shift in the content of awareness from inputs derived from the prefrontal cortex and external organs of perception to inputs derived from visually encoded memories. The infusion of physostigmine is associated with ". . . increase in brain activity in the regions of the visual cortex" and decrease in the activity of the prefrontal cortex." (p. 2275)

THE THALAMUS

The thalamus is a brain nucleus that sits deep within and central to the cerebral cortex. The word thalamus is appropriate. It is derived from a Greek word (tholos), which means a deeply hidden chamber. The thalamus functions as a receiving switchboard containing the connections that distribute incoming sensations to individual differentiated areas of the brain in which they can be either interpreted or stored or responded to reflexly. Potential visual perceptions are transmitted through the lateral geniculate bodies to the perceptual areas of the occipital cortex, where they are interpreted in

preparation for conscious representation. Other visual inputs pass through the superior colliculus, which serves as a way station for their transmission to areas where reflex nonconscious responses are activated. Auditory stimuli are transmitted through the superior olivary nucleus and the medial lemniscus to the inferior colliculus from which transmission to areas where non-conscious responses are effected and in parallel transmitted through the medial geniculate body to the auditory cortex of the temporal lobe. (see Warner (2001) Page 500.) in preparations for conscious representation. Haptic sensations including vagal stimuli pass through the tegmentum in a position caudad to the colliculi but anterior to the reticular formation and thence to the cerebellum and the cerebral cortex. Perceptions which project to cortical areas are subject to interpretation during the transition through the passage to conceptual awareness.

THE STRUCTURAL PASSAGE TO AWARENESS
(BRAIN STRUCTURES THAT CARRY, AND STORE PERCEPTIONS AND THOSE, WHICH MODIFY THEM ON THE WAY TO CONSCIOUSNESS.)

The incoming route to those structures of the brain, which are assigned to the integration of affect, sensation, and perception, consists of three levels.

Level I consists of simple input circuits direct from sense organs through the thalamic colliculi to the amygdala, producing affect and autonomic responses independent of learning and without conscious awareness. Baraniga (1992) noted that Ledoux in studying the incoming route for perception found that ". . . the information takes ". . . a direct route from ear to amygdala, [cochlea to amygdala] traveling through the brain's lower auditory segments . . . skipping higher level processing." and bypassing reflective thought. This is the zone of simple sensations and simple reflexes that produce the quickest possible responses to danger. Simple and conditioned reflexes bypass the cortex producing direct activation of the amygdala. In support of this concept, LeDoux (1994) quotes Jacobs and Lynn to the effect that perceptions passing through the subcortical auditory thalamus pass simply and quickly to amygdala providing ". . . crude perception of the external world . . ." (p55) Similarly visual stimuli are *first* processed by the ". . . thalamus, which passes rough, almost archetypal, information . . ." (p 56) directly to the amygdala. Level one responses produce safety preserving activities, avoiding potential errors produced by abstraction and delay. Responses of awe, or physiognomic thinking are mediated in

Panksepp's (1998) ". . . centromedial areas of the midbrain . . ." (p 311)

LEVEL II consists of sensory activity that passes through afferent circuits where they activate automatic prelearned responses independent of conscious awareness. These responses are stored in interpolatedway stations, through which incoming sensations pass during transmission to the amygdala. A key interpolated way station on the way from perception to processing for consciousness involving the amygdala, the autonomic nervous system and the memory panels of the frontal cortex, exists in the hippocampus. For instance Russell Phillips (see Baraniga 1992) found that cues linked to fear associated with cages and spatial orientation are *processed in the hippocampus before reaching the amygdala (p 888).* In addition Zola-Morgan (1990) identified a primary role for the hippocampus in an early stage of memory acquisition and learning. Apparently ". . . the Hippocampal formation is required for memory storage for only a limited period of time after learning new inputs. As time passes, its role in memory diminishes, and a more permanent memory gradually develops independently of the hippocampal formation, probably in the neocortex." (p 288) This conclusion was based on ablation studies of the hippocampus. In addition expression of *responses to the surroundings* is blocked by making hippocampal lesions. (LeDoux (1994) p 53). *Hippocampal* involvement takes us beyond simple conditioned reflexes to a zone of function where other factors are involved in the formation of emotional memory. Apparently as in the case of the sensations entering the tectum, there are two pathways. There is an hippocampal pathway to an area, the amygdala, which activates a reflex response in the autonomic nervous system producing affect and a second pathway to cortex based memory. The former offers a circuit along which a content or memory may return from the cortex to activate discharge through the central nucleus of the amygdala producing internal changes including autonomic discharge, which expresses the affect associated with the cognitive content and activates screening responses based on memory panel contents that activate cognitive changes such as symbol formation. (see below.)

What is it that is stored in memory that makes a new experience fearful on this more complex reflex level (level II)? In the case of induced conditioned reflex, it is affect or shock associated with a past experience. LeDoux 1994 noted that the processing of unconscious non-declarative memory. "occurs in the hippocampus for ". . . hippocampal lesionsmade after fear conditioning had taken place . . . prevented the expression of responses to the surroundings."(p53)

Some emotional information can be stored in declarative memory in the hippocampus as a cold declarative fact. (LeDoux 1994) A representation derived from this memory segment can enter consciousness without being detected by the amygdala. It therefore arrives in consciousness without affect. This is not denial. Rather it is a characteristic of one pathway for information to the central processing area of the brain. As such it is only a partial expression of the referent. What is indicated here is the concept of a channel to memory, which permits acquisition of realistically encoded information for future use in interpretation of perceptions. The potential level of accuracy offered by this process when it contributes to the interpretation of danger has obvious survival value. As a result of bypassing the amygdala on the way to consciousness such a diversion of affect permits an accurate devitalized recall of referents in the form of a "protosymbolic" form in consciousness that makes possible accurate appraisals of reality.

Such symbolic forms have the subsequent potential to activate discharge from the amygdala of affects that signal danger. This process can result in a conflict between motivations arising from the original protosymbolic perception and the more neutral subsequently produced symbol. The conflict is resolved when through displacement and psychoanalytic symbolization a less affect charged representation results in repression of one leg of the conflict situation and maladaptive behavior or fantasy. This dynamic process can be undone through therapeutic interpretation or free association. The information acquired permits a return to potential for realistic choices.

LeDoux 1994 described the experience of reaffectivization of the protoymbol as "The individual may also become tense, anxious and depressed, as the emotional memory is reactivated through the amygdalic system." (p 57) The ability of the amygdala to serve as a venue for secondary coordination of declarative memory with affect is a process that has two functions. The first function activates the potential associated affects that generate cryptic symbols in consciousness that are used in modifying interpretation of memories and new perceptions.

The second function permits efficient and accurate perception in the absence of cryptic symbolization. It sets aside symbolic blurring of reality in preparation for accurate evaluation of danger in new situations. The latter is a skill that matures during late latency. The transition involved is part of ludic demise.

The first function is the basis for the distortions produced by symbolic and intuitive thinking. The second function is the basis for the interpretation of events and memories in terms of the accurate establishment of reality categories based on similar intrinsic characteristics. As the second process supercedes the first process, there occurs a loss of the use of symbols as a means for establishing a world context that can be used for the discharge of tension. (This is part of Level III input. See below.) As a result, with maturation reality becomes the arena for adjustment. In child analysis one can see the signs of this change. The play symbols of the child grow in size till only reality-sized items such as the therapist's desk or a large box—to be used as a tank—satisfy. The child moves from play to talk. The child moves from playroom to consultation room. Fantasy play is replaced by verbal reporting of reality problems and tasks.

LEVEL III consists of the alteration of initial primary perceptions by cryptic symbolic formation. After perceptual inputs are transmitted to visual, auditory and haptic receptors in the cerebrum, they can be passively modified by interpretation influenced by the symbolizing apparatus of the brain. Interpretations become new impressions, which are encoded alongside unaltered perceptions in cortical memory areas. The former take the form of distorted representations of natural reality. Memories so encoded in turn expand the basis for symbolic interpretation, which produce ever-newer alterations of perceptions of natural reality.

Internal perceptual apparatuses inform recognition and interpretation and assign the new organized knowledge units to membership in relevant preestablished concept clusters. Affinity assignment to concept clusters is guided by similarities in both concrete (external) and abstract (internal) characteristics. Through these similarities symbolic linkages are established, which afford a bridge, later to be used to guide displacement. Impelled by drives, sympathetic arousal responses to perceptual sensations are activated. Concept clusters radiate toward consciousness in search of words, actions, or images to express them. Conscious attention is drawn to the strongest affect-laden expression as the attention of beasts is drawn to a smell, a sound or a visual threat. Disorganizing affect when detected forces a shift of attention away from strong content toward related more neutral words or images. These become the manifest cryptic symbols, which buffer the manifestations of affect.

The third level takes perceived elements through channels, which lead to interpretation, storage,

and grouping by abstraction. For instance, the lateral geniculate body, which is located in the posterior portion of the thalamus, carries visual input from the retina to the calcarine fissure (the visual area of the occipital lobe of the brain), where proximity to the visual interpretive cortex means that a thoughtful characterized response to visual sensations is to be expected. [The superior colliculus (see above), which in the thalamus lies near the lateral geniculate body, transmits the same visual stimuli out of the range of possible reflective awareness to areas in which quick and automatic responses such as visual reflexes (i.e. flinching) free of the delay and influence of symbolization is activated.]

Third level input organization influences the storage of stimuli, which have been modified through symbolically educated interpretation of perception. This process links new experiences to old remembered trauma. This is a potentially psychopath genetic process which is the opposite of active symbolization. New percepts and experiences are equated with prior acquired memory on the basis of concrete characteristics. This identification process, often unconscious, underlies syllogistic thinking and the thought disorder called predicate identification. This is the basis for paranoid misinterpretations of perceptions, as is found in Schizophrenic thinking. Interposition of reality testing rejects such associations. Reality testing aids in making the interpretation of perception a source of awareness of that which is actually perceived.

Internal memory elements in radiating towards awareness have the potential to generate affect and to modify the interpretation of new perceptions. Since they are recognized to be similar to new stimuli through identification involving predicate similarities, it is well to remember that affect can function as a predicate adjective or nominative as a result of such syllogistic equations. New percept and old memory are experienced as equivalents. There is generated the same uncomfortable affects for the new stimulus as for the old memory to which it is newly linked through interpretation. New external percepts are passively experienced through symbols, which evoke affect-loaded memories. If the memory is noxious, the new percept is avoided or responded to negatively.

There are exceptions to the principle that new experiences are all interpreted in terms of prior experience. Kant (1781) and Starobinski (1982) have noted that war, injury, and some sights need not have been the subject of prior experience in order to have the capacity to generate the affect of awe. To this list Chalfant (1969) has added "Stimulus Qualities of [certain] Object[s]" (P81). Such response can

be seen in the awe production directly inherent in the perception of flood, storm, shadow, fire, and earthquake. These events can, as LeDoux (1994) tells us, evoke strong affect during a first level encounter, when "the amygdala, the thalamus and parts of the cortex interact—. to create memories[2] about fearful-I experiences . . ." (p51)

Memory can influence perception through influencing interpretations. In advance of the generation of painful awareness, reflective interpretation can exclude from within the boundaries of consciousness percepts and memories associated with unacceptable affects. The excluded elements are retained outside of consciousness as the result of diversion of attention to masking symbols.

Most new perceptions are assigned to memory units that are easily accessible to dynamic consciousness; but not all. Those, which at first generate interpretations associated with strong affects, when later taking part in efferent discharge through the amygdala, are removed from inclusion in those areas of concept clusters, which have access to expression in awareness. Memory based percepts in the active process of recall are scanned for potential affect, as the radiation of content comes into the zone at which discharge from the amygdala into the autonomic nervous system occurs. If threatening affects are generated, the percept contents are returned to that area of their concept cluster that includes words that cannot rise toward consciousness but which can be acted out or manifested in action or psychosomatically.

THE CENTRAL PROCESSING SYSTEM

The central processing system consists of cortical functions that serve memory, reflection, and judgment. The psychodynamic clinician works to correct a patient's distorting interpretative associations. Fear can be generated in response to new stimuli as a result of interpretative recognition informed by memory residua of prior overwhelming inputs. These associations are derived from concrete and abstract memory elements. They are organized in panels in frontal lobe cortical areas of the brain. Pathological reactions arise when interpretations stray from reality. Dynamic psychotherapies are focused on defusing this experience.

THE CEREBRAL CORTEX AWAKE

We now shift our focus from reception of stimuli to the workings of central memory storage areas. These occur primarily in the cerebral cortex. When awake the cortex counters affect generated through the amygdala by initiating action, withdrawal of attention and through triggering displacements that take attention from latent referents, which have been activated by external stimuli. Attention goes to less affect charged manifest declarative content, which becomes the source of manifest waking symbols. This response to amygdalic discharge is guided by memory panels in the frontal cortex.

THE CEREBRAL CORTEX ASLEEP

Symbols alter data for two observers. These are the audience and the self-observing ego. The dreaming process places emphasis on the latter. In sleep there results a shift to cortically stored memory as the primary source for manifest symbols. This results in a reduction in the number of neutral reality-based simple symbols to be used to counter affect.

Latent contents (referents) in memory reveal their affect charges when they approach awareness. Affect is detected at the gates of consciousness through a review of content. This is a part of the affect scanning function of the amygdala (see below). This amygdalic function, initiates frank signal anxiety by activating the autonomic nervous system. The formation of manifest symbols derived from related more neutral elements within the concept cluster counters the formation of such potentially disquieting manifest affects in dreams and as a result protects sleep.

THE CEREBRAL CORTEX IN SLEEP AND DREAMING

The cortex during sleep experiences a marked reduction in the influence of external stimuli. External perception is lessened during sleep. As a result sleep symbols represent internal memory referents. This phenomenon is at its height during arousal from second and from fourth stage sleep.

The EEG during arousal from second-stage sleep contains low frequency high voltage irregular waves. This EEG pattern reflects rapid movement of the eyes (REM). REM Periods are part of a consistent set of physiological changes that occur about five times per night during second stage sleep. These

changes include flagrant variations in respiration, heart rate, and blood pressure, as well as erections, and loss of muscle tone. In addition because with any eye movement there is cessation of external visual stimuli to the brain, during REM periods there is a shift to sources for ideation in the memory areas of the cerebral cortex.

Humeral changes during REM sleep focus this shift onto the visual cortex. Cessation of the production of noradrenaline in the locus coeruleus occurs (see Siegel (2000) p 78), and ". . . serotonin neurons are silenced, while some acetylcholine neurons are very active . . .". (see Damasio 1999 p249 and Maquet 2000 p834). The reduction in catecholamines and the increase in acetylcholine that occurs produces a situation that parallels Robbins (2000) observation that "a decrease in brain activity in the dorsolateral prefrontal cortex . . . and an increase in brain activity in the regions of the visual cortex" occurs as a result of an infusion of physostigmine (an acetylcholine like substance) in the brain (p 2275). The focus of dream content on visual imagery during REM dreaming is explained by this effect, which confirms Freud's observation that there is a topographic regression in the focus of awareness manifested in the visual content of dreams.

The decrease in prefrontal cortical affective tonus in the forebrain described by Robbins lessens affect. This helps to preserve second stage sleep. It diminishes the activation of displacement that underlies the creation of dream symbols. This contributes in part to the primitive content of cryptic dream symbols. In addition diminution of the influence of telereceptor percepts that occurs with sleep frees the cognitive content from external influences. As a result the potentials of the symbol forming function of the ego is freed from the reality testing that contact with the world brings into focus. Decrease in brain activity in the prefrontal cortex decreases the influence of memory panels and frees the symbolizing function from the restraints posed by memory panel contents such as culture, superego, and the influence of current behavior on future prospects. The resulting loss of temporal object ground differentiation dominates the loss of cause and effect that characterizes dreams.

The symbols that defend against second stage sleep arousal are less frightening than the symbols generated during fourth stage sleep, which force arousal. Though less displaced than waking cryptic symbols, they are more displaced than the raw symbols of fourth stage sleep which in the absence of hypnogogic hypersynchrony initiates arousal. Because second stage REM dream symbols persist, they

permit a more direct working through of traumatic memory residues than fourth stage sleep symbols.

INTERPRETATION OF THE INTRICACIES OF REALITY

Reflex responses are not adequate for dealing with intricate situations and inputs. As LeDoux (1994) noted "The cortex is not needed to establish simple fear conditioning; instead it serves to interpret stimuli when they become more intricate." (p 54) Interpretations of intricate reality are retained in cortical memory and processed through cortico-limbic circuits. Apparently interpretive memory elements, which are stored in the cerebral cortex represent, but as a result of prior interpretations are not identical with, perceived reality. In turn, prior perceptions modified in memory influence interpretation, which adapts symbols to express experiences of past events and opinions. Preconceptions make reductive interpretation of newly perceived intricacy possible. And what is remembered is different from what is perceived. Derived memory elements are precipitates of abstract level linkages. The personal world of opinion, sensed reality, and affect are interpretations influenced by these constructions. In regard to the role of the amygdala in such interpretations, it is interesting to note LeDoux's (1994) quote of Schneiderman to the effect that ". . . in primates . . . projections to the amygdala from sensory regions of the cortex are important in processing the emotional significance of complex stimuli." (p 54) One of the results of such processing using ". . . perceptual sophistication . . ." is the ability of the cortex to deactivate fear reactions mediated by the amygdala. (see LeDoux (1994) quoting Jacobs and Lynn.)

BRAIN PATHWAYS FROM MEMORY CENTERS TO EXPRESSION

The simple symbol serves to communicate concepts through the conventional use of signs and words. The memory portion of the cortex retains concepts. Concepts find their way to simple word representations by passing through the angular gyrus, Wernicke's area, and Broca's area, on the way to conscious expression. This topographic march across the posterior temporal region of the left brain carries concepts to expression in speech.

Benign manifest representations of strongly affect-laden concepts may be sensed to be awkward upon entering consciousness. Such cryptic symbols are displaced representations, whose removal from

original meaning alters their fit in the contexts into which they belong. For instance the elements of a dream or a legend often seem unrelated to one another. The interposition of such substitute forms is rationalized by its being secondarily elaborated into the contexts of neutral dreams and the matrixes of psychic reality into which they intrude. The story is altered to make them fit. In this way symbolic representations acquire seemingly logical relevance to conscious contexts of thought. Denial of any direct connection between a referent and the manifest concept cluster element, which as a result of displacement has become its representation, reinforces the cryptic character of a symbol. Representations become a focus of attention (countercathexis), which in supporting denial produces repression. Symbolization occurs when concept clusters contain elements with moderate traces of affect, and these less affect-toned contents draw selective attention from more highly charged concept cluster elements. As a result of this process, poetic and psychoanalytic symbols offer no direct access to their referents. They appear to be rootless and cryptic. Referents, evoked memories, and primitive drive responses accompanied by threateningly strong affect, which is beyond the ability of the individual's symbolizing function to handle, follow a different course. They lose access to attention through displacement to a representation that pierces the boundaries of awareness in the form of discharge from the amygdala producing exaggerated somatic organ function (psychosomatic symptoms). This is a narcissistic, evocative pole symbolic form, which protects close objects from the force of drives by a shift of attention to a zone within the boundaries of the self.

NON-CONSCIOUS JUDGMENT AND THE DECISION AREAS THAT INFLUENCE DISPLACEMENT IN SYMBOL FORMATION

INTRODUCTION

Control of affect motivates the formation of cryptic symbols that represent cognitive contents as they move toward consciousness. In cryptic symbol formation, the communicative function of the symbol is diminished in the service of affect modification and dampening of impact. Cryptic symbol formation is initiated when contents of memory storage areas, in seeking consciousness generate a subliminal autonomic discharge. The amygdala generates these warning affects through stimulating the autonomic nervous system. These affects are responded to by guidance responses, which are influenced by the ventromedial prefrontal cortex and the dorso-lateral prefrontal cortex. Neutralization of the potential for

conscious disruptive affect results from displacement of attention to more affect neutral representational substitutes (the symbol).

The cryptic symbol communicates memory referents in a representational form that is altered beyond easy recognition. This masking function quiets discomforting affects specific to content, which approach consciousness in the form of haptic vital sensations involving the autonomic nervous system.

Abstract concepts, which represent the pressure of drives, seductions, and sympathetic stimulation when encoded in memory, can themselves become referents. They can move from memory storage areas in the cerebral cortex toward temporal lobe areas where consciousness is manifest. The transit is accompanied by activation of inherent affect, when vagrant content is scanned by the frontal cortex-amygdalic circuit. The presence of potential affect activates discharge into the autonomic nervous system. An experience of affect, consisting of haptic sensations and humeral discharge products returns to the brain from the effector organs. Should the level of affect (signal anxiety) reached be sufficiently uncomfortable, there results a defensive shift of sibliminal attention to a less affect charged substitute content (the cryptic symbol).

Representations of contents whose referents have origins in cortical memory are created by this process involving passage of the concept through the hippocampus and amygdalic discharge into the autonomic nervous system, which produces haptic sensations and humeral discharge that is detected by the AVFC[3] as it guides the selection of acceptable symbolic forms on their way to speech areas of the temporal lobe.

BRAIN LOCALIZATION OF SUPEREGO AFFECTS

The ego deforming affects whose detection initiates the formation of symbols include affects associated with superego function. Superego motivating affects are the driving forces in symbolic moralism (see below) and conscience. Brain localization, related to these affects, is in the frontal lobes. Superego affects diminish when the frontal lobes are damaged. This occurs clinically in General Paresis. A pathognomonic presenting symptom of this condition is loss of social judgment. Pincus and Tucker (1974) note that "destruction of the frontal lobe leads to poor self-control, inability to understand the

consequences of actions, and an inability to orient actions to the social and ethical standards of society" (p. 103). Conversely, the increase of the mass of the frontal lobes that occurs during the phylogenesis of man is accompanied by an augmentation of ethical concept recognition, increasing capacity to form value judgments and to consider the future implications of current plans when making ethical decisions. The Dorso-Lateral Prefrontal cortex has been described (see Carter 1998 p 195) as the memory locale for the content sources that inform these influences on the symbolizing function. Awareness of the influence of present behavior on future consequences, which is an important part of superego function, has been placed by Sawaguchi (1991) in the prefrontal cortex. Using a biochemical localization technique, he found that "D1 Dopamine receptors play a selective role in the mnemonic, predictive functions of the primate prefrontal cortex". (p 947.)

PATHOLOGIES ASSOCIATED WITH IMPAIRED SYMBOL FORMATION

SYMBOLS AND DISORDERS OF AFFECT CONTROL

Davis (quoted by Baraniga 1992) noted that "The real problem for people with anxiety disorders seems to be that they cannot turn off or inhibit their anxiety." (p 888) From the standpoint of symbol theory the source of this defect may be found in a lack of a technique, such as suppression which could diminish affect, or symbol formation which would substitute an alternate perception or concept to head off anxiety. The latter process is the function of the amygdala and the ventromedial and dorsolateral gyri of the prefrontal lobes.

Symbol impaired people regress to a primitive recall mechanism, such as evoking the original synaesthesia of concept and affect by activating a topographic regression to original sensations. Hallucinations and psychosomatic disorders are generated in this way. Another form of impaired symbolization which is associated with poor affect controlis the production of affect porous symbols. This form of impaired symbol formation is characterized by the inability to detoxify affect-laden percepts through adequate degrees of distraction or distancing.

THE AMYGDALA

DISORDERS OF AFFECT CONTROL ASSOCIATED WITH THE AMYGDALA

The amygdala consists of almond[4] shaped groups of small bilateral structures located in the temporal lobes and pendant to the tail of the hippocampus. One of the functions of its nuclei (cell groupings) is to activate affect through transmission of sensations associated with the declarative contents of perception, interpretation and memory into the autonomic nervous system. (Baraniga (1992) noted a related phenomenon. She reminded us that if one would "stimulate the amygdala of an epilepsy patient during brain surgery, . . . he will report a surge of anxiety not-produced by stimulating other parts of his brain." (p 887)

Perceptions, without the preexisting innate affect responses found in physiognomic responses, acquire affect as the result of a learning process. Affective reactions to new stimuli are acquired and then encoded in memory, ever after altering the autonomic response of the organism to a given stimulus. This is the basis of fear conditioning. The amygdala is associated with the assignment of affects to percepts.

HOW THE BRAIN HANDLES EXCESS AFFECT

The level of subliminal (nonconscious) affect tonus in the brain is regulated and influenced by both chemical influences and symbol formation. The brain is capable of suppressing perception of referents that promise to introduce severe affects into consciousness, in favor of bland manifest contents, which pass the gates that block content associated with proscribed affect. The amygdala is a location in the brain in which the mechanisms of perceptual rivalry and suppression are activated in symbol formation.

EFFECT OF ABLATION OF THE AMYGDALA THE KLUVER-BUCY SYNDROME

Patients with Kluver-Bucy syndrome exhibit "an aberration of motivational assignment" according to Duffy and Kant (1997 p. 4041) and typically display inappropriate responses (i.e. sexual, aggressive, and eating), toward any object within the immediate environment. The Kluver-Bucy Syndrome is associated with bilateral amygdalic damage. This clinical entity identifies the amygdala as the anatomical locus wherein linkage with affect is effectuated.

The amygdala, which is located in the temporal lobe, serves modification, delay and regulation of emotional and maturational aspects of behavior in response to anxiety responses. Removal of the temporal lobes produces a syndrome (Kluver-Bucy) in which these functions are absent. Delay of discharge and the symbolization of aggressive, hunger, and sexual drives are impaired. Of the drives that motivate man, aggression, hunger, and sex, are the ones that are capable of the delay of discharge that provides time for the production and utilization of alternative pathways for discharge such as symbols. Symbols produced in dreams of hunger often represent food. Fantasy and dreams contain symbols which represent unacceptable aggressive feelings and feelings of sexual stimulation. In the Kluver-Bucy patient, delay is lost. Raw drives are expressed. Undifferentiated and undelayed hypersexuality, omnivorous eating and uncontrollable exploratory assertiveness appear instead of symbols. Such immediate and undifferentiated discharge saps cognitively informed conation, such as fantasy. An apparent apathy toward structured pursuits is produced. Diversion of affect into the autonomic system and evaluation of the affect potential of representation with adjustment to affect through substitutes and sublimations is lost.

Kluver and Bucy (1937) described this syndrome following bilateral temporal lobectomy in monkeys. They described a constellation of emotional symptoms. This included "psychic blindness" (p 353) in which one can see objects but one lacks ability to produce appropriate affective responses. Psychic blindness is associated with emotional placidity and an inability to ascribe appropriate emotional valency to percepts. The capacity to articulate affects with perceptions is lost. The subjects were". . . unable to recognize objects by the sense of sight" and did not exhibit the reaction generally associated with anger and fear (p 353). A function of an intact amygdala is apparently the linking of appropriate affect to content and stimuli. This is achieved through a cascade of circuits. Percepts, which activate awe, are associated in memory with external danger. Anxiety linked evocations representing internal sources in memory activate the amygdala. The amygdala sends signals, which follow pathways that traverse the lateral hypothalamus and the rostral ventrolateral medulla. This signal activates the autonomic nervous system. This activation is manifested in activity in the viscera, skin and the vasomotor system (e.g. discharge of adrenaline, piloerection, elevated blood pressure, increased heart and respiratory rate.) These changes are identified in conscious awareness by the term "anxiety".

Anxiety sensations express amygdala mediated detection of latent valence for affect that is

generated when potential manifest symbolic expressions of ideas of things and concepts rise toward manifest consciousness. If the affect produced is perceived as too strong, the representation of the referent or perception can be deferred and a substitute in the form of a related less charged percept, derived from its associated concept cluster (symbol net) can take the attention of awareness. If sufficient muting or neutralization is achieved through the introduction of the substitute cryptic symbol, the level of affect becomes acceptable. As a result, the substitute enters consciousness. It becomes a symbol for the referent.

Kluver-Bucy syndrome symptoms involving emotional and motivational aspects of behavior and vegetative functions, also can appear in humans after an attack of herpes simplex encephalitis, anoxia, or carbon monoxide poisoning (Harrison, 13th edition). Baraniga (1992)notes that when Bruce Kapp removed the amygdala in rabbits, learned-fear response was lost. Duffy and Kant (1997) in describing the syndrome following bilateral destruction of the amygdala, noted loss of valence for attracting affect for both animate and inanimate objects. Cummings and Duchen (1981) described Kluver-Bucy like behavior in humans who were suffering from Pick's disease. Pick's disease is a dementia associated with atrophy of brain tissue, which can involve the amygdala (p 1420).

A suppressed referent unit (concept and affect) remains active out of consciousness, either as a subliminal or fully repressed unit. Exclusion from awareness by cortical suppression, displacement, and countercathexis does not deactivate the repressed unit's contribution to motivation, which remains sufficiently available to be approached by free association, and to influence non-conscious decision making.

ANXIETY AND THE AMYGDALA.

Baraniga (1992) described the amygdala "[as] a reflex serving brain structure that mediates autonomic affective reactions in response to both external and internal stimuli. This circuit links a variety of emotions—including fear—to certain memories and situations." (P 887) As perceptions of reality and referents from memory pass through the amygdala, learned or innate associated affects become evident as a result of related discharge into the autonomic nervous system. As such, the amygdala functions as an association area that unveils the affect inherent in new stimuli as well as in memories while they are

taking part in the process of evocation.

NEW STIMULI AND THE AMYGDALA

A stimulus from the cochlea (organ of hearing) can go directly through the auditory thalamus (inferior colliculus) to the *amygdala* as well as to the auditory cortex (Heschel's gyrus). Of all the areas to which the auditory thalamus sends fibers, only damage to the amygdala was followed by a loss of ability to develop fear conditioning. By the use of this pathway, the auditory cortex can be bypassed without interfering with conditioned fear formation.

On a primitive animal level, perceptions at the physiognomic syncretic level are transmitted directly though the colliculi to the amygdala, where innate response (withdrawal[5]) to experienced dangerous perceptions are activated as strong sympathetic and parasympathetic readying reactions. Autonomic discharges are experienced as feelings of rage and anxiety, which impel autonomic (fight or flight) reactions.

Physiognomic responses of the amygdala to new perceptions have a survival function. This can be observed in the behavior of the inexperienced kitten who hides at the appearance of each new person who comes into her view until the safe nature of the new entrant into his world scene is determined. Once a benign character for a new entrant is determined, new associations to the entrant as a stimulus are acquired. The entrant is assigned to a concept cluster associated with a bland affect. New intrusions by the now familiar person no longer have negative effects on a now older and wiser cat.

IMPAIRED WORD RETRIEVAL

Word retrieval is a function that is closely related to symbol formation during the expression of memory content. The structures involved are the same. The main difference between the two functions is that in symbol formation the force that propels the concept to consciousness is an internally generated drive with emphasis on evocation, while in word retrieval the self reflective portion of the conscious ego draws content in the service of communication from memory towards awareness. I speak specifically about the form of word retrieval impairment in which no effort can unlock the hidden word for there is another word in place that holds the attention. Often the patient knows he knows the word and says,

"Wait it will come to me." No matter how one tries, the barrier word will not give way. Usually the barrier word has sounds in common with the target word or belongs to its concept cluster. For instance, a scholarly man stopped near a park entrance too look at some Russian black lacquer boxes. The proprietor of the kiosk identified the three painted figures on the box with a mumbled word. Then he admitted he was not sure of the work. The scholar knew for sure that the picture depicted medieval knights errant called "?". No matter how often he tried to remember, he could only come up with the word Bogomil. Only when the proprietor came up with the name Ilya Morematz, a Russian knight errant and a rough pronunciation of the word, did the target word come into focus. It was "Bogatyr". Bogomil served as the countercathectic focus for awareness in the way a symbol blocks a referent.

MEMORY AND ANXIETY

When a disquieting affect is associated with a memory, delay of expression in consciousness produced by the amygdalic processing that contributes to symbol formation is adaptive. It preserves the calm required for neutral activities, such as learning and modulates the nature and strength of the affects associated with stored elements. LeDoux (1994) has described the existence of two such types of memory contents. He differentiates memories into "Emotional and declarative memories." These are stored and retrieved in parallel. (These ". . . activities are joined seamlessly in our conscious experience (and) . . . combine with current declarative memory to form a new declarative memory" p 57). The same content can be associated with damaging emotion or can be declarative in form and supportive of the neutrality needed for neutral activities. Content that stirs emotion strong enough to activate an avoidance mechanism, (i.e. a symbol) ". . . modulat(es) the storage and strength of memories." (p 57 LeDoux, quoting Jacobs and Lynn).

THE AMYGDALIC NUCLEI

The amygdala itself is subdivided into a series of nuclei with varying functions.

(1) The Subiculum and the Lateral nucleus-. LeDoux (1994) describes the subiculum as ". . . a region of the hippocampus that projects to other areas of the brain . . ." It communicates with the lateral nucleus of the amygdala. Another of the sources of inputs to the lateral nucleus is the "auditory thalamus" (P52") Ledoux (1994) suggests that ". . . contextual

information may acquire emotional significance . . . via transmission to the lateral nucleus" (p54). The lateral nucleus is assumed to be a location in the amygdala for the activation of latent affect associated with concepts.

(2) The Basomedial Nucleus-LeDoux (1994) describes the basomedial (aka accessory basomedial) nucleus as a way station for inputs to go from the lateral nucleus to the central nucleus through direct neuron to neuron communication. (p53)

(3) The Basolateral nucleus is an extension of the lateral nucleus. It projects to the central nucleus (p53). Cummings and Duchen (1981) noted that the basolateral group of amygdalic nuclei is larger in humans, than in any other species. It has extended neocortical connections, and is involved in alerting and affective responses. (P 1420)

(4) The Central Nucleus -LeDoux (1994) describes the central nucleus of the amygdala as the unit that connects with areas in the brain stem involved in the control of heart rate, respiration and vasodilation (these are aspects of manifest experienced anxiety). The central nucleus is a ' . . . crucial part of the system through which autonomic conditioned responses are expressed." (p 52) The ". . . central nucleus appears to be the interface with the systems that control responses." (p53)

THE AMYGDALA IN AFFECT PROCESSING

LEARNED FEAR

The amygdala brings out the potential for affect in concepts and perceptions as they move toward awareness. Affect is generated when, as an expression of this potential, the central nucleus of the amygdala activates the autonomic nervous system (see LeDoux (1994) P 103), generating the nonconscious bodily changes, which would be recognizable as affect (anxiety) if they were sufficiently strong to attract the cathexes of consciousness. He quotes Michael Davis as saying "Evolution has hardwired in all the connections between the central nucleus of the amygdala and all these target areas that are involved in the specific signs and symptoms of fear." (p 103) In response to learned cues internal ". . . signs we have learned to associate with danger . . ." (Baraniga 1992 p887) are activated through discharge from the amygdala into the autonomic system. Persistence of these signs supports acquired fear. Acquisition of fear is a form of learning which when sustained is called long term potentiation (LTP). Injection of an LTP blocking drug into the amygdala blocks such fear learning.

THE AFFECT LOOP

Physiognomic level responses to afferent environmental stimuli activate the periaqueductal grey matter (PAG) and the amygdala, which are at that point in maturation equivalent inducers of affect-loaded emotional sensations in the body (Ledoux (1996) (p 60). Damasio (1999) also describes both the amygdala and the PAG as "inducers of emotion" (p 60).

The initial experiences of affect are induced by this *efferent* discharge of signals from the amygdalic central nucleus by way of the hypothalamus and from the PAG (Periaqueductal Grey Matter) into the autonomic nervous system. The loop consists of efferent discharge into the autonomic nervous system, and afferent signals for recognition of emotional sensation by the scanning functions of the Amydala-Ventrolateral-Ventromedial-Prefrontal complex. The amygdala becomes the main driver for the efferent portion of the affect loop.

The efferent arm of the affect loop begins with this discharge. The target organs influenced by this discharge, which produces autonomic nervous system arousal, are the adrenal medulla, and the activating nerve endings of the visceral tissues. The medulla releases adrenaline, which has widespread actions in the body. The visceral tissues release adrenergic catecholamines, which activate the functions of the viscera and the skin.

The afferent arm of the affect loop consists of pathways for the detection and transmutation of these phenomena into sensations interpreted by the brain as the affects of anxiety, depression, grief and awe. The afferent arm of the affect loop consists of nerves, which carry impulses to the brain and humeral agents (hormones), whose influence on the body includes activating receptors in the brain. The adrenergic catecholamines play this role. Adrenaline may not. Adrenaline cannot normally enter the brain from the blood (adrenaline molecules are too big to cross the blood-brain barrier). Adrenergic catecholamines can pass the blood brain barrier and affect the brain.

The sensations that bodily events produce are detected in the brain, to which they have been transmitted through many portals, both indirect and direct. The indirect pathway to the brain from visceral events activated by humeral influences passes through the afferent fibers of the vagus nerve. These terminate in the nucleus of the solitary tract in the medulla. LeDoux (1996) observed that the

nucleus of the solitary tract sends signals to the locus coeruleus to release noradrenaline, which travels through diffusion and through axonal microtubules to "widespread areas of the forebrain, including the amygdala . . ." (p 208). This chemical would elevate the affect tonus and lower the kindling point for activating synaptic receptors in the prefrontal cortex. Differentiated responses would be pendent to the differentiated sensitivities of the activated receptors. Panksepp (1998) has described a direct neuronal portal for haptic sensation in ". . . the centromedial areas of the midbrain, including the deep layers of the colliculi (tectum) and the periaqueductal grey . . ." (p 311) Damasio (1999) and Ramachandran (1998) have suggested that another portal exists in the ". . . insular cortex, which is driven partially by sensory input . . . from the viscera . . ." (p 248). Damasio (1999) suggests that the nerves that populate these portals for emotion and affect sensations pass from the body into the brain through ". . . spinal cord pathways, and the trigeminal nerve, . . ." and addresses the possibility that adrenaline can enter the brain directly through the "area postrema." (p 151, 156) The latter is located in the fourth ventricle. (Fix 1995 page 310) It is chosen on the basis of its lack of a blood brain barrier, which makes possible the passage into the brain of humeral agents such as emetics and possibly adrenaline. (p 151)

AFFECT AND THE AMYGDALA

Noradrenaline influences amygdalic and ventromedial frontal cortical functions by increasing the level of basic affect to the point that the affective valence of potential manifest symbols on the way to the system CS is enhanced. This enhancement of affect triggers a further substitution in the form of displacement to a manifest masking psychoanalytic symbol. This occurs when under the influence of the functional contents of the dorsolateral prefrontal cortex (future impact of the symbol) and the ventromedial prefrontal cortex (prediction of risk outcomes in the use of the symbol) strong enough subliminal affect signals activate cortical suppression and substitute formation. This results in the production of manifest substitute forms such as symbols. Barch (1999) notes that the anterior cingulate cortex (located posterior to the genu and superior to the corpus callosum) may serve to monitor conflicts between potential responses to stimuli. She infers that the cingulate gyrus "provides a signal that serves to recruit the dorsolateral prefrontal cortex to play a more central role in complex task performance." (p 1849) The influence of future risk evaluation would be brought to bear on the choice of concept cluster element to use as the symbol in consciousness.

The role of the *norepinephrine* producing cells of the locus ceruleus, in the feedback pathway involved in the role of affect in psychoanalytic symbol formation, calls for more than passing attention. Siegel (2000) tells us that these cells are ". . . inactive when . . . animals are in REM sleep.) (P 78) Implied is a reduction in the tonus of affect during REM sleep. Less tonus means less need for displacement in symbol formation. Therefore the symbols of REM sleep will be closer to the non-displaced elements of the concept cluster that arises from memory uninfluenced by reality inputs. With affect tonus blunted, eldritch symbolic forms become manifest in REM dreams. It is likely that there are further influences on affect tonus in sleep. The dreams of arousal from fourth stage sleep during hypnogogic hypersynchrony are manifested in even less displaced symbols. (see Sven Brandt (1955)

A feedback loop is thus identified[6] through which nonconscious somatic anxiety sensations, with origins in amygdalic discharge, are transmitted back to the brain, where they influence gating mechanisms. A gating mechanism enables automatic response to affect. In this case the choice of responses are either passing undistorted representations of offending content to consciousness, maintaining affect in a reverberating circuit within the feedback loop so as to motivate adaptive response, or require that repression of offending content be achieved as a result of the creation of a distorting psychoanalytic symbol substitute for that content. The latter choice is activated through an alteration of manifest content as a result of displacement of attention to a countercathectic content, with less valence for attracting affect.

THE MIDTEMPORAL AREA AND THE EXPERIENCE OF PERCEPTION

The experience of perception as conscious awareness, according to Penfield (1959), is located in the midtemporal area. It is here that associational symbol net components could influence conscious decision making. Such associational memory nets[7], according to Cartwright (1990) are stored in the cortex. Manifest conscious derivatives of these nets are symbolic forms that have been selectively cathected at the expense of related referents within the same memory net or concept cluster. The experience of perception is colored by symbolic interpretation.

Symbol formation is generated when interpretations, which connect new perceptions to abstractly related affect charged memories, are activated under the tutelage of the ventromedial prefrontal cortex

(see Bechara, below). In this circumstance, affect is generated through discharge from the amygdaloid body through the hypothalamus into the autonomic nervous system. Should nonconscious apprehension of this disquieting affect threaten, the road to consciousness for the dangerous affect can be blocked by the introduction of a substitute, as occurs with cryptic symbol formation.

Chemical influences maintain the subliminal affect tonus that is associated with symbol formation. Kent (2000) noted that "a serotonergic pathway originating in the dorsal raphe nucleus (in rats) innervates the amygdala and the frontal cortex via the medial forebrain bundle." (p. 737). It follows logically that catecholamines produced by the raphe nuclei (located in the periaqueductal gray matter) produce an affecttonus in the neural substrate of the reverberating circuit that is the infrastructure for symbol formation. Affect tonus establishes the basic level of affective response to emerging nonconscious content and perception. The basic level of response to an affect generating input is determined by the affect tonus. An high affect tonus predisposes a person to levels of anxiety response that distract and require defenses or medication in pursuit of an equilibrium. A flexible attenuation and alteration of affect tonus that motivates attitude, fear, and behavior can be achieved by defense mechanisms such as psychoanalytic symbol formation. Symbols bring variable input affects under control. A consistent fixed derivative level of acceptable affect can be produced by manipulation with medication.

There is a sustained baseline level of subliminal affect that is produced by a synergistic interaction between chemically mediated affects and cryptic symbols. The latter binds affect-linked content and transmutes it into the tolerable affect that is associated with acceptable thought, and action. The higher the baseline of affect and the greater the response sensitivity in reaction to perceptual and memory based inputs, the greater will be the need for mechanisms of defense such as symbol formation aimed at attenuating affect.

Absolute level of affect and affect-linked to content are not the only factors involved in the activation of symbolic substitutes. Value judgments influence as well. Morality affects (guilt and shame) and apprehension associated with chance, contribute to the censorship of content entering consciousness that requires that the content be displaced to more affect neutral symbols. The addition of these factors to influences, which activate the symbolizing function, requires that we identify anatomical locales (VMFC), which participate in the formation of cryptic symbols. Moral value based affects associated with potential

actions or referents, which are on the way to consciousness, can be sufficiently threatening to activate an avoidant shift of awareness to a more acceptable action strategy or substitute representation derived from companion referents contained in its concept cluster. Such "non conscious» biasing of manifest content or action is localized to the ventromedial prefrontal cortex [VMFC] (See Damasio below).

Solms (1998) has described the clinical effect of bilateral ablation of the ventromedial frontal cortex. In his cases, this pathology was the result of an occlusion of the anterior cerebral arteries and the anterior communicating artery of the Circle of Willis. The patients showed an impairment of censorship. There were produced states in which fantasy overwhelmed reality. Delusional dream like states occurred. Thinking became destructuralized. In brief these patients' thinking took on the special characteristics of the primary process dominated system UCS.

"NON-CONSCIOUS BIAS" AND SIGNAL ANXIETY IN THE SELECTION OF SYMBOLIC REPRESENTATIONS

Cryptic symbols arise as a response to nonconscious affect that threatens to enter consciousness with a destructive force that will disorganize the ego (i.e. the executive apparatus of the personality).

THE CONCEPT OF THE NONCONSCIOUS IN BRAIN SCIENCE

The affect that triggers cryptic symbol formation is characteristically nonconscious. The "non-conscious" is a term used by Bechara (1997) in referring to an arena in which psychic stimuli and responses take place, which are beyond the conscious awareness of the subject. The nonconscious covers a broader set of phenomena than the dynamic unconscious, whose content by definition is a product of awareness altered by repression.

Bechara (1997) demonstrated mentation that is nonconscious when he performed the following experiment. Normal participants and patients with prefrontal damage associated with decision-making defects were given a gambling task during the performance of which behavioral, psychophysiological, and self-account measures were obtained in parallel. Normal subjects chose advantageously before they realized consciously which strategy worked best. ". . . prefrontal patients continued to choose disadvantageously even after they knew the correct strategy." (1293) "Moreover, normal subjects began to generate anticipatory skin conductance responses whenever they pondered a choice that turned out to

be risky . . . whereas patients [with damage to the ventromedial prefrontal cortex] never developed anticipatory [planning] . . ." (P 1293). Bechara (1997) saw this as ". . . evidence for a complex process of nonconscious signaling, which reflects access to records of previous individual experience specifically of records shaped by reward, punishment, and the emotional state that attends them." (p 1294) Bechara (1997) noted, in relation to apprehension associated with chance in a gambling like situation, ". . . that overt reasoning is preceded by a *nonconscious* biasing step that uses neural systems other than those that support declarative knowledge." (P 23)

Gretchen Vogel (1997) in commenting on Bechara's paper notes that ". . . the authors say the overall findings suggest that in normal people, nonconscious emotional signals may well factor into decision-making before conscious processes do. Antonio Damasio believes the ventromedial prefrontal cortex is part of a system that stores information . . . and triggers the non-conscious emotional responses that normal people may register as intuition . . . .". (p 1269) Gardner is quoted as having described this as an "early-warning system" that guides reasoning. (p 1269)

A role for the ". . . deep ventrome(d)ial frontal region . . ." in dreaming was introduced by Solms (1998, 2000) when he observed that patients with bilateral damage to the white matter of these areas have (p 45) cessation of the conscious experience of dreaming.

Among the mental experiences contained within Bechara's "non-conscious" zone are "the unconscious" (system UCS) and "the preconscious" (system PCS) as they are described in Freud's topographic theory. Freud's unconscious and Bechara's nonconscious are not sequestered and idiosyncratic abstractions. They are detectable zones in the vast ever expanding terrain of potential awareness that is one of the insights of brain science.

Awareness of the Nonconscious zone is not limited to Bechara. LeDoux (1994) introduced a concept similar to the non-conscious in his description of ". . . emotional learning that comes about through fear conditioning . . . which in *all* likelihood operates *independently of our conscious awareness*." (p 57). Berns(1997) has added to the growing body of knowledge that relates to unconscious declarative mentation. His finding ". . . suggests that the ventral striatum is responsive to novel information, and the right prefrontal area is associated with the maintenance of contextual information, and both processes

can occur *without awareness*." (P. 1272)

Freud's concept of the non-conscious differs from that of the others. Where the affects and concepts in the generalized nonconscious arise freely toward consciousness, the affects and concepts of Freud's dynamic unconscious consist, to a large extent, of affect charged elements that have been interdicted and denied entry to awareness by an internal censorship. The censorship is informed and guided by memory contents of the ventromedial and dorsolateral frontal cortexes, which activate recognition of the affects associated with potential danger. Cognitive contents, moving toward awareness, or verbalization, or action, are returned to being a memory as the result of the pressure of this signal anxiety. They become inaccessible to awareness, having been replaced in the approach to consciousness by more acceptable representations such as manifest symbolic forms.

One of the functions of Psychoanalytic Psychotherapy is to bring nonconscious content, both that which is repressed and that which contributes to biasing, into conscious awareness, permitting decisions free of nonconscious bias. Free association and reflection on manifest thoughts and actions integrate unconscious content into consciousness. Insight, which is based on such full awareness can enhance intuitive logic, bringing it to the level of secondary process thinking.

NONCONSCIOUS RESPONSES TO SIGNAL ANXIETY CREATE THE DYNAMIC UCS.

An early warning system exists as a component of "nonconscious" mentation. It is in this system that intuition guiding non-conscious anticipatory affect is detected. It is in this system that subliminal nonconscious anxiety motivates the formation of cryptic symbols. In 1915 this early warning system was called "Signal Anxiety" by Freud. He referred to small amounts of anxiety that warn of the danger of great affect, that would accompany a given concept representation were it to be admitted unaltered into consciousness. It is signal anxiety that activates defenses such as repression. It also initiates the nonconscious biasing steps that precede overt reasoning (Bechara 1997 p 1293).

Bechara (1997) has identified an anatomical location for the memory content that guides biasing. Content scanning for threatening content is detected as the result of the mentoring influence of the memory content of the ventromedial prefrontal cortex. It is here that there takes place unconscious value

influenced decision making. The decisions are based on interpretations influenced by prior experience. Drive impelled memory content, which in approaching conscious awareness generates morally sensitive affect (anxiety or guilt) is here responded to by withdrawal of attention from offending manifestations of the internal percept. Further pursuit of activities recognized as associated with risk in the past is avoided as a result of this non conscious biasing. It is the «nonconscious signal» (P 1294) that applies «prior individual experience to the creation of interpretation and response to internal perceptions generated by memory or new sensations.» (p 1294)

Freud in 1916 described an "expectant preparedness" (p 395). This idea is pertinent here. He noted that "The more the generation of anxiety is limited to a mere abortive beginning—to a signal—the more will the preparedness for anxiety transform itself without disturbance into action and the more expedient will be the shape taken by the whole course of events." (P 395)

TISSUE FUNCTIONS INVOLVED IN SYMBOL FORMATION

SCANNING AND GATING

The boundary of the Freudian system consciousness has a gate through which awareness of psychic reality as well as endopsychic perceptions, and precipitates in memory of natural and imagined worlds, may pass into awareness. The amygdala serves as guardian of this gate to consciousness for it is a part of the distant early warning system that *scans*sensory input. When there are sensory inputs that in the ventromedial prefrontal cortical memory of the subject are signals of danger, the amygdala generates affect. Affect so mobilized responds by closing the *gates*of consciousness to the offending concept. This is achieved through the distracting cathexis of a less threatening accompanying member of the concept cluster to which the offending input is assigned. The offending input is gated out and ignored.

*Scanning and gating*are here introduced as mechanisms that initiate symbol formation. "Scanning" refers to the detection of contents of memory, which are associated with affects that are too strong to be tolerated as they rise toward consciousness. (see above, non-conscious bias) This triggers a gating out of such units through suppression of the content. This is supported by a shift of the countercathectic focus of attention to less affect tainted symbolic forms.

Elements associated with more moderate amounts of affect pass through the gates of consciousness unchanged. Gating closes the way to consciousness for elements of memory, which are linked to strong affect. Gating is achieved through the activation of mechanisms that shift perceptual attention to cryptic symbols in support of suppression of noxious content elements and their affect.

Cryptic symbols attract awareness. Cryptic symbolization draws attention to symbols and in the process supports suppression and denial. When symbols hold attention effectively, countercathexis, the complex (multipart)[8] mechanism of psychical defense at work is called repression.

In exceptional circumstances the amount of affect is so great that the original concept affect unit overrides the gate, and gives affect coloration to the manifest symbol. This process occurs with certain types of symbols (affect porous) and in certain cognitive states (arousal from fourth stage Delta Wave sleep) (see Sarnoff 1976). Those examples are associated with undoing or loss of repression.

GATING AND THE ATTENUATION OF AFFECT THROUGH SUPPRESSION, DISPLACEMENT, AND COUNTERCATHEXIS.

SUPPRESSION AND DISPLACEMENT

Up to this point, there have been discussed the steps involved in the formation of cryptic symbols, the brain areas in which these steps take place, the mental functions involved, scanning which identifies the need to activate these steps, and gating which through suppression, denial, and displacement create cryptic psychoanalytic symbols. Now we explore the characteristic functions of brain tissues that are the enabling components of the symbolizing process. The mechanisms intrinsic to gating are suppression, displacement, and countercathexis.

SUPPRESSION AS A CEREBRAL CORTEX TISSUE FUNCTION

Suppression is a tissue function of the cells of the cerebral cortex. When a choice must be made between overlapping percepts or affect memory elements within the same concept cluster, there is competition for awareness. The competition is resolved by removal from awareness of one of the elements.

An example of suppression may be observed during the resolution of visual rivalry. If one eye is exposed to a series of horizontal white dots, while the other eye is exposed to three white dots with a vertical arrow pointing at the central dot, the brain will superimpose the arrow and its dots on the initial dot series. At either end of the three dot series, there develops conflict between the dots as seen in each eye. (see Binocular Rivalry in Jennings (2000) p 743) This situation is relieved by the exclusion from awareness of the dot at each end of the three dot series. This is called visual suppression. This is an innate tissue function of the cerebral cortex.

THE PHYSIOLOGY OF VISUAL SUPPRESSION

In dealing with visual suppression, which he calls "Visual Rivalry", Ramachandran (1991) offers what is a neurophysiological explanation for the form of "repression", which is based on denial supported by countercathexes, a process which produces increased awareness (cathexis) of one object at the expense of awareness of another. Ramachandran (1991) found that "If one is aware of an object, the firing of all neurons that are simultaneously activated by that object alone becomes synchronized. This synchronization does not include other neurons that are activated by objects that one is not attending to." (p. 950). Bariniga (1991) p. 1025) in commenting on Ramachandran's work noted that ". . . electrical activity of direction-selective neurons in the middle temporal and the superior temporal sulcus was monitored. One might suppose that neural responses corresponding to the suppressed image would be silenced while neurons corresponding to the other image would be active. Although 10% of the cells showed the expected suppression, in most neurons no simple suppression was observed—certainly nothing similar to the complete occlusion that occurs perceptually". Tononi and Edelman (1998) describe a similar exclusion of perceived stimuli from consciousness during visual suppression. (p 1849) Repressed content is not obliterated. Attention is drawn away from it. This is the essence of countercathectic repression.

The middle temporal area referred to by Baraniga is the area Penfield (1949) identified with the function of conscious awareness. He demonstrated this through electro stimulation of the living human brain. (p 118) He identified the seat of conscious awareness in the temporal lobe. He concluded that "Psychical responses come only from the temporal cortex and occasionally from the insular cortex" (p. 44). Awareness of comparative interpretations of new experiences and old memories are made here (pp.

47-48).

Lumer (1998) also studied the phenomena of visual suppression in the human brain. He found that the phenomenon was "specifically associated with perceptual alternation only during rivalry." Hence his name for the phenomenon, "binocular rivalry" (p 1930) Binocular rivalry entails ". . . the suppression of visual information from conscious perception." (p 1933) "Monocular stimuli become periodically invisible during rivalry . . ." (p 1933) Concomitant with this ". . . sensory events associated with unattended stimuli have a diminished impact on awareness . . ." (p 1933) He suggested that "front parietal areas play a central role in conscious perception . . ." He identified the organic locus for the existence of ". . . biasing the content of visual awareness toward abstract internal representations of visual scenes, rather than simply toward space." (p. 1930) This is one of the rare references in the brain science literature to the direction of attention (cathexes) to internal representations, which are abstract, in the place of the concrete experience of external reality. Abstract internal representations, which are cathected in the place of conflictual perception fulfill the requirements of a displacement generated symbol.

Further studies of visual supression were reported by Kanwisher (1998) and Kastner (1998). Kanwisher described visual suppression and displacement of attention. He noted that "Only a limited amount of what we see reaches consciousness and becomes stored in memory . . .".

". . . there is limited processing capacity within the visual system . . . multiple object representations are in competition for access to this limited capacity system. One way to resolve the competition is through spatially directed attention. If one attends, for example, to a specific location in a cluttered scene, information processing is greatly facilitated at that location, while interfering information from objects at nearby locations is efficiently filtered out."

"Evidence for competition is provided by the finding that the response to an otherwise optimal stimulus presented within a neuron's receptive field is often reduced when a second stimulus is presented simultaneously at a different location within the same receptive field. Hence, multiple stimuli are not processed independently from each other but rather interact competitively in a mutually suppressive fashion." [pp 57-58]

A Form of repression is described by Kastner (1998) who noted that "Modulation of suppression at several extrastriate stages may therefore be a mechanism by which attention filters out unwanted information." P 110

Visual suppression is a physiological correlate of the denial mechanism, which asserts, "If it bothers me, I won't see it." Suppression of affect-laden content is the effective process that accompanies each cycle of selection during symbol formation. As noted above suppression and displacement are activated when the intact amygdala, through discharge into the autonomic nervous system, creates an affect signal that would be unacceptable in consciousness when scanned by the frontal cortex. The percept or memory associated with the affect is denied direct entry into consciousness. This diversion is accomplished through affect driven cortical suppression of the offending referent and displacement of attention to a substitute (the symbol). During symbol formation, there are many such cycles of selection. Cycles of selection repeat until displacement of attention to a related word within the concept cluster draws so much of the conscious attention that there is dimming of conscious connection to the original content.

In response to affect that could overwhelm the integrity of the self (ego) or that might override moral strictures, suppression of awareness of an offending referent percept occurs. Suppression of a referent reduces tension and attenuates discomforting affect. Suppression can be sustained if one can shift the focus of awareness onto a less affect-linked companion element within the concept cluster group that is rising toward consciousness. Conscious attention to the substitute element occurs at the expense of the suppressed element. The process of shift is called displacement. Attention to the substitute is called countercathexis. Repeated cycles of displacement and countercathexis are core mechanisms in symbol formation.

DISPLACEMENT AND COUNTERCATHEXIS

DISPLACEMENT

Displacement of attention from one percept or activity to another is a very primitive and evolutionarily early function developed by brain tissue. Werner (1948) described the occurrence of this mechanism in dreams, children, and primitive men (p 162) manifested in symbolic transpositions,

which mask communicative meanings. Estes (1993) describes displacement activities in antelopes responding to territorial pressures and tense situations with everyday maintenance activities. (P30, P 57) These displacements include scratching one's back with horn tips and self scratching with incisors. Condensation refers to the combining of two referents into one representation or symbol. It is a mechanism as primitive as displacement and as much a part of primary process thinking as displacement.

COUNTERCATHEXIS

> Countercathexis refers to the establishment of an intense focus for attention-consciousness that results in a loss of the focus of attention to another object. The new focus for attention becomes the cryptic symbol. Freud (1915) described this process thus, ". . . the cathexis directed to (the threatening content or impulse) has drawn back from the impulse and the unconscious libidinal cathexis of the rejected idea has been discharged in the form of anxiety." ". . . (in) a first step . . . taken in the direction of mastering the unwelcome development of anxiety . . . (t)he cathexis that has taken flight attaches itself to a substitutive idea which on the one hand, is connected by association with the rejected idea, and, on the other, has escaped repression by reason of its remoteness from that idea . . . securing it against an emergence in the (system consciousness) of the repressed idea." (p. 182).

Following Freud's lead, Sarnoff (1976) noted that "Repression proper exists when it is possible to exclude from consciousness the link between what represents and what is represented. This results when substitute formations, which (seem) either unrelated to the original idea of the thing or so well masked that they are unrecognizable, are cathected in place of direct representation of objects . . . we call this countercathexis[9]." (p339)

Damasio in (1999) described the phenomenon thus "Sometimes we use our minds to hide a part of our beings from another part of our beings." (p 29)and ". . . mental imagery based on nonbody objects and events masks the reality of the body." (p29)

Burnett (1911) offered a metaphor for countercathexis. "Much more surprising things can happen to anyone who, when a disagreeable or discouraged thought comes into his mind, just has the sense to remember in time and push it out by putting in an agreeable determinedly courageous one. Two things cannot be in one place."

> "Where you tend a rose, my lad,
> A thistle cannot grow." (p 294)

SUMMARY

Man has a capacity to delay conscious reaction to increased levels of those negatively experienced subliminal affects, which are generated when an affect-linked percept or concept cluster is detected by the amygdala as it moves toward consciousness. Reactions to this affect can be deferred through the production of creative countercathectic substitutes in support an exclusion from consciousness of an idea, a reaction, or perception.

There are two types of content inputs to the amygdala. One input represents internal drives, concept memory and affects, associated with concept clusters, which rise toward consciousness from memory. This is revealed when passage of the idea of the thing through the amygdala activates the autonomic nervous system. A second source of input is external perception. This input which contributes content to storage in memory, is subject to symbol-based interpretation when affect generated by symbolic recognition based on prior experience represents a danger. Perceptual elements provide the manifest symbol content that is used when external reality is used as a countercathexis to memory content.

SYMBOLIZATION OF INTERNAL MEMORY ELEMENTS

Clinically repression of internal memory elements is not isolated to exclusion of single recalls. Rather it is expressed in an amnesic resistance to bringing to consciousness a penumbra of concept cluster elements, which move in cohorts toward awareness. Consciousness views a single symbol with an hungry eye, neglecting representations of other concept cluster elements, which are as a result, repressed.

Selection—aimed at deciding that which should become the conscious symbol and that which should keep its assignment in memory—begins when potentially disorganizing affects belonging to the most threatening concept element of the concept cluster group activate the amygdala, which in turn generates affect that signals danger. Should this signal affect threaten to break through into consciousness, defensive displacement and suppression comes into play. Alternate less affect-laden content elements within the concept cluster receive the displaced attention cathexes of consciousness. Shift of attention cathexis from threatening content mitigates the threat offered by disquieting affects.

SYMBOLIZATION OF EXTERNAL PERCEPTIONS

When attention and conscious awareness are drawn away from perceptual reality, the content of consciousness is truncated. What is left in consciousness is a protected confine of thought and awareness. Increasingly reality and its stress are converted into evocative symbol-based fantasy. This is adaptive when production of symbols becomes a means of limiting disorganization from reactions containing impetuous and possibly antisocial responses to reality. Examples of such reality stresses are threats of parental punishment or erotic wishes toward a forbidden love object. Such denial of reality may aide immediate reality adaptation. However in the long run, delay in response to reality stresses tends to be maladaptive. Psychoanalytic symbols support hiding from stresses rather than finding means by which the personality can deal with reality. Some examples follow: a man, who finds comfort in pictures which reflect his private fantasies whenever he is confronted with any reality rejection, will not strive to correct the cause of the rejection. People, who turn to music listening or TV drama at the end of the day to certain themselves in their discomforts, delay response to painful personal dramas. Latency age children respond to humiliation by investing their energies in fantasy play. There can be only a momentary cushion of adjustment provided by such reactive symbol formation.

This response is an evolutionary remnant of the reaction time that offers to high memory animal attention a moment of delay in which to decide to fight or flee. As a result of man's capacity for disjuncture a longer moment of delay is introduced that make possible choices based on abstract memory. A scanning process in which frontal lobe based recognition of danger elements are detected, as they become content inputs to the amygdala, influences this activity. The moment of delay permits abstract memories, organized as concept clusters, to influence the interpretation of percepts and memories. In pathological situations such mental activity opens a potential to disorganize reality testing, threaten future survival, or sunder equanimity. Banks of data contained in the ventromedial, dorsolateral frontal cortexes helps scanning to recognize content (both perceptual and memory) with linked potential for affect danger. Affects that threaten to disorganize the executive apparatus of the personality (ego) are responded to by a displacement of attention to substitute content such as symbols that are less threatening. When sufficient displacement takes place so that the relationship between the new representation and the original concept or percept is lost, cryptic psychoanalytic symbols are formed. Such symbols contribute content to dreams, poems, delusions, fantasies, phobias as well as poor reality

testing.

SUMMARY

External perceptions and internal sensations that represent concepts, are scanned through the amygdala. The presence of potentially ego disorganizing affect content triggers nerve impluses, which are sent from the amygdala into an efferent circuit that generates Peripheral Autonomic Nervous System activity, which produces visceral discharge that is detected by the brain through an afferent arc consisting of hormones, humeral agents, and the Vagus nerve, which activates additional catecholamine production in the raphe nuclei, the locus coeruleus, and the periaquaductal grey matter. Catecholamine hormone like substances are transported through microtubules and the vascular system of the brain to the amygdala in the anterior brain. As a result of the function of this circuit, generated affect is perpetuated. The catecholamines produced by the raphe nuclei and nuclei contained in the periaquaductal gray matter (LC), produce an enhanced affect stimulus, which invites further scanning aimed at comparing content, which is moving toward consciousness, against memory panels tuned to detect potential affect. When content approaches the consciousness areas of the temporal lobe, suppression[10] gates the content from consciousness. Drive energies continue to push related concept cluster contents and symbolically altered percepts that have latterly become linked to preexisting concept clusters, that have less valence for attracting affect, into the zone of scanning. Affect driven multiple cycles of scanning on a nonconscious level follow. Eventually contents with sufficiently attenuated affect pass into consciousness. Elements with strong affect are gated out of consciousness. Conscious awareness of relationship between the original referent and the non-gated one is lost. Abstract links between a manifest symbol and suppressed threatening referents within the concept cluster and perceptions are lost to consciousness. The concept cluster element that was chosen to become conscious becomes the psychoanalytic symbol.

NOTES

1 amygdalic -ventromedial frontal cortex complex -the AVFC

2 Cortically stored as part of a third level response.

3 Amygdalic ventromedial frontal cortex complex -see below.

4 Amygdala means almond in Greek.

5 On this primitive level of response, there is scientific support for structuralism.

6 Adapted from Le Doux (1996) Page 208.

7 i.e. processed derivatives of concept clusters

8 There are simple defenses such as denial which works alone. There are complex defenses which consists of combinations of simple defenses such as repression which consist of denial, displacement and countercathectic symbol formation.

9 Since the term antecathexis as used by Freud has more than one meaning (see Freud (1900) "Interpretation of Dreams" p 605) I use the translation "countercathexis" to indicate the specific function herein described.

10 An innate function of these brain tissues (see Below).

CHAPTER 11
NEUROPHYSIOLOGICAL UNDERSTANDING OF THE SENSE OF REALITY

"The heart has reasons that reason cannot know."

Pascal

"Love looks not with the eyes, but with the mind;
And therefore is winged cupid painted blind;"

Shakespeare

INTRODUCTION

Reality as it is sensed by the mind is the product of interpretation applied to perception of sensation both internal and external. Mutual agreement, on a codified single shared way of interpreting perceptions to create a sensed reality, is the basis for cultural identity. Indeed most cultures are organized around a single system for establishing a sense of reality, which is supported by its mythology. Individual members of these cultures may also have a personalized realistic sense of danger, independent of group cultural dictum, in their interactions with natural reality in the world matrix (physis).

Western Civilization is characterized by the presence of a dual group system for arriving at a sense of reality. In the first system, there is an infused reality, passed down through mythological conventions, which becomes the basis for a culturally shared means of evaluating the reality of new information and for creating compatible explanations for eldritch natural phenomena, such as Niobe's despair as the source of weeping stones. In the second system, explorations of the world matrix have been codified to create in memory a shared scientific worldview, against which the reality value of new interpretations of inputs can be evaluated. This state of affairs has provided the philosophical basis for the current stage of Western civilization, in which religious beliefs have been preserved in the face of the introduction of contradicting information generated during the development of science.

CLINICAL EXAMPLE: DUAL REALITY

During a discussion about lateness with an eight year old patient, there was introduced the topic of the great glacier, which had left the long hill upon which my office stands and which had delayed his arrival that day. I explained that the glacier had been at its height ten thousand years ago and had left this hill as a terminal moraine as it receded. He mused half to himself. "5750 years" was what I think I heard. He repeatedly mumbled the number. He clearly was bewildered. Finally he spoke up, explaining to me that I must be wrong for God created the earth some 5700 years ago and "There was no earth ten thousand years ago". His referent for reality and mine differed. His sense of reality used transcendent concepts as the basis for the evaluation of the reality of interpretations of new inputs. My referent was derived from the conventions of "scientific objective natural reality" as the source for the interpretation of new inputs. Dual reality is so pervasive in Western culture that the concurrent acceptance of contradictory truths is often to be observed in professors of science as well as pastors.

Let us explore the origins of the dual reality of the West. First we will look at historical origins. Then we will search out the early childhood origins of the cognitive skills, which persist, both in their functions and through their paradigms, in support of the cognitive capacity to tolerate contradictions in consciousness. Then we will review the role of symbols in the creation of the memory panels that become the sources for comparisons in establishing whether an input represents reality. Finally we will review neural mechanisms and structures, and the brain organization that makes possible the brain's tolerance and acceptance of contradictory perceptions of reality.

THE ORIGINS OF THE DUAL REALITY OF THE WEST

A BRIEF HISTORY OF SYMBOLS AS THEY APPEAR IN DREAMS

Western civilization with its dual reality evolved out of an earlier culture whose group sense of reality was defined in terms of symbols understood to be messages from gods.[1]

EARLY TRANSCENDENT DREAMS

The earliest reported dreams have transcendent contents. For example Jacobsen (1946) tells of a

dream of Gudea, King and Ensi (Ensign of God) of Lagash (circa 2144-2124 BC). Gudea had noticed that the ebb and flow of the Tigris River was amiss. His intensely pietistic world set the stage for him to seek a solution to the problem through a temple dream. "In the dream he saw a gigantic man with a divine crown, with wings like a great bird, and with a body which ended below in a flood wave. To the right and left of this man, lions were lying. The man commanded Gudea to build his temple" (p.189). Day breaks in the dream. People appear and show details of the building. After Gudea awoke, he went to a dream interpreter because some of the details were unclear. The interpreter sent him back to the temple to dream some more. It took several nights, but eventually the god (Ningirsu) appeared to tell in detail "what units the new temple should contain" (p.191). This story is not presented to illustrate a myth, but to give an example of that which was acceptable as a reality interchangeable with ordinary events of the day in the ancient kingdom of Lagash.

In early Christian tradition, there were many intensely transcendent dreams, which informed the sense of truth and changed the shape of culture. An element of a widely held deistic symbol net that even today shapes a very influential sensed reality is St. Joseph's dream—[(Mathew 1:18-25)] "Mary was betrothed to Joseph; but before they came to live together, she was found to be with child. Joseph, being a just man decided to divorce her informally. Soon after, an angel appeared to him in a dream", saying "Joseph, son of David, do not be afraid to take Mary home as your wife, because she has conceived what is in her by the Holy Spirit. She will give birth to a son and you must name him Jesus, because he is the one who is to save his people from their sins." In another influential dream, St. Paul introduced Christianity across the Bosphorus after he dreamed that a Macedonian man had bid him "Come over to Macedonia and help us", and the emperor Constantine converted both himself and the Roman Empire to Christianity in response to a message in a dream from an angel who told him that he would achieve victory in battle under "The Sign of the Cross". So strong were dreams believed to be true messages from god that they became inspired turning points in world history.

ARISTOTLE INTRODUCES REALITY TESTING AS A BRAIN FUNCTION

The classical world saw reality in the revelations of myth, and in communications from gods through transcendent symbols found in apparitions and dreams. Into the midst of this world, Aristotle (Ant—On The Soul) introduced a way of organizing and interpreting sensation by which he intended to

displace the strategies of transcendence in determining reality. The potential for this interpretation of sensation was placed by Aristotle in an internal mental construct similar to the Psychoanalytic concept of the ego. He called it the soul. It could identify reality through ". . . the judging capacity which is a function of the intellect and of sensation combined . . ." (p 181) This judging capacity is called in current theories "interpretation of perception". Aristotle described an hierarchy of validity for the perceptions and interpretations available to the reality testing "soul". Most valid was ". . . perception of proper objects . . ." beyond the boundary of the self. Such external perceptions were ". . . only capable of error to the least possible degree". (p 163) Less validity for the capacity to see reality occurs when internally derived memory elements become their source. When ". . . for the thinking soul, images take the place of direct perceptions and when it asserts or denies that they are good or bad, [and] it avoids or pursues them." (p 177) or when, ". . . because imaginations persist in us and resemble sensations, living creatures frequently act in accordance with them . . . because the mind is temporarily clouded over by emotion or disease, or sleep." (p163). Aristotle differentiated such fantasy elements from reality elements on the basis of the latter's "capacity for exciting movement in space." (p 181) (See also Kant's causality (V.I.) In these contributions of Aristotle lie philosophical sanction for the development of natural science in which the empirical study of objects in the physical world replaces intuitive memory based on fantasies, remembrances, prescribed thinking, preconceptions, infused data, ordained beliefs, illness, and dreaming. These inputs may feel real, but are more subject to alteration and clouding than consensually validated telereceptor (vision and hearing) based perceptions.

ARTEMIDORIS INTRODUCES A SCIENTIFIC APPROACH TO DREAM SYMBOL STUDIES

Non-religious mantic transcendent dream symbols were recognized to exist during the age of Aristotle and the GrecoRoman period (350BC to 200 AD). Their perceived value in comparison to deistic messages had caused them to be dismissed as worthless in spite of popular beliefs in the predictive value of dreams, which had persisted from prehistoric traditions. The hegemony of religious "truths" in dreaming was challenged indirectly by dream interpreters, when they tried to find clues to the future of the dreamer in his dream symbols.

One dream interpreter, Artimedorus of Daldis (First Century A.D.) applied traditional survival oriented reality testing and the Aristotelian approach, which had become a part of the intellectual

climate of his time, to the study of these non-deistic dream symbols. He attempted a scientific study of the mantic power of dream symbols to predict the future. He collected thousands of dreams from all over the known world in search of dream symbols, whose predictive import might be learned through careful studies of their appearance in successfully interpreted premonitory dreams. He described his discoveries in a book titled "The Interpretation of Dreams." (See White (1975). This book was the source of the title of Freud's Dream Book). In addition to dream symbols with mantic power, he described a category of dream, the Enhypnion, which had no power to predict the future and was not god inspired. This type of dream was motivated by "an irrational desire" or "an extraordinary fear" (p. 184) on the part of the dreamer. Such dreams were considered to be of little value by Greek dream interpreters. The concept of god's influence as the only source of dream content was challenged by these findings.

ST. AUGUSTINE[2] REINFORCES TRANSCENDENT REALITY

Aristotle's influence on logic had been strong. However it had come too early. Science, in the absence of germ theory, could not explain plagues. Nor could it predict the currents in the narrow strait at Aulus (Modern Chalkis), or divine the whims of the winds. The wills of willful fickle gods explained all and in the process supported the priests of sacrifice. As a result Aristotle's influence dwindled to the point that by the 5 th century AD, Western thought came to be dominated by the truths of transcendence. This was reflected in the philosophy of St. Augustine, who taught that in seeking truth one must depend on the sensations of sense experiences including memory, which are internal. These included awe, and revelation experienced as memory. His memory borne proofs of the existence of God were derived from conceptions drawn from biblical sources as well as mystical experience in which Augustine (400 A.D.) ". . . attained the eternal wisdom which abides beyond all things." (p 171) Thus stood open the gates of faith within which dwelled a talisman to blunt the wiles of the fearsome predators of night with prayers, and empower weak individuals with the strong weapons of group belief. Here is the narrow valley in the circuits of the mind, where individual men enter and armies leave. Beyond this defile is a world of fantasy beliefs. Here is Avilion, and the land of the Tuoni. At this world's edge men die in defense of balustrades, crenelations and keeps that are only glimpsed in dreams.

AVERÖES CASTS THE APPLE OF DISCORD

Augustine's sense of reality held sway in Europe until the 12th century, when the Islamic philosopher Averöes (born Cordova Spain 1120) awakened the two realities concept while studying the writings of Aristotle. The effect of the intrusion of the Aristotelian concept of natural science into the organic fundamental religious world of the medieval temperament has been described by Glatzer (1994). He noted that the sense of reality—developed as a result of the Aristotelian incursion during the waning of the middle ages—was based on truth derived from Aristotelian logic, as well as truth guided by religious belief.

Averöes[3] stood at the cusp of the intersection of these conflicting planes of thought. He was in his time thought to be the most authoritative commentator on a rediscovered Aristotle. He used both truth born of faith and empirical truth in his writings without overtly defining and differentiating empirical from infused transcendent truth. As he used them, these truths were not necessarily mutually exclusive.

The rediscovery of Aristotle, and Averöes' use of two truths opened the way to introduction of the scientific attitude. This threatened to alter forever the reach of the medieval mind. The problem peaked when a 13th century Latin translation of the major works of Aristotle accompanied by the commentaries of Averoës became available to Western scholars. A philosophical school, the Averoists, arose which used this new source of information in support of the contention that there was knowledge that was independent of revelation. Such a belief was deemed to undermine the power of truth in religious doctrine. Restoration of Western confidence in empirical knowledge threatened to undermine transcendent reality. Orthodox thinkers both Catholic and Jewish saw this challenge from the Averoists' interpretation of Aristotle as something that required resolution.

Maimonides[4] (b. 1135), representing rabbinic Judaism confronted Aristotelian rationalism in its Arabic form with writings which supported God and creation. His work profoundly influenced St. Thomas Aquinas.

ST. THOMAS SAVES THE DAY

St. Thomas Aquinas[5] (born Italy 1225) succeeded in allaying the concerns of the clergy in the face

of the Averoist challenge that there was knowledge, based on the senses that was independent of transcendence. Aquinas (1256-59) held that though all knowledge both phenomenal and spiritual begins in sense data, it becomes intelligible only through interpretation by the intellect. "Knowledge . . . begins in sense . . . , it is completed in the *intellect."* (p 12) In effect, he moved the primary venue for the perception of truth from the organs of *sensation,* both internal and external, to a defining locus in a place within the mind, that interprets.

Viewed from a Psychoanalytic perspective, Aquinas' approach speaks of an interpretation of sensation, which imparts a psychological sense of reality (see below) at a place within the mind removed from the primary modalities of sensation. As a result of this placement the infused truths of faith and the deduced truths of Aristotelian sense experience become syllogistically equivalent in validity, fully compatible, and capable of coexistence. As a result of this, truth, based upon interpretations by the intellect, makes possible the understanding of things immaterial such as the human soul, angels, and God in the same sense that natural phenomena can be understood. The former requires revelation. The latter requires physical sensation. Truth becomes that which one interprets sensation to be. As Aquinas (1258-59)[6] described it, ". . . as the beginning of natural knowledge consists in a knowing about creatures as a result of sense perception, so the beginning of the knowledge that is given from above consists in the knowing of the first truth by means of *infused faith."* p 292]

Each truth serves the practices of its beholders. From the point of view of transcendence, knowledge becomes available to man through guided interpretation, which makes each man's choices, revelation based manifestations of free will. From the point of view of science, interpretations of reality sensations can be blurred by prior knowledge leaving some things unknown and some things unknowable or unconscious and expressed by substitute symbols. The latter is a condition amenable to psychotherapies that remove blurring influences.

The introduction of Aristotle's science into Western culture in the 12th century, and the resolution of its contradiction of faith by St. Thomas was paralleled by cultural acceptance of two truths. This is reflected in Meisner's (1992) note that "In 1554, advising [a] religious superior about one of his tormented subjects, Ignatius Loyola wrote, 'Don't be troubled, and don't get up because of these noises, or lose any sleep. The devil can do nothing without God's permission. If, however, some of these terrors are

caused by a natural disposition inclined to melancholy, a doctor should be consulted." (p 200) With this the door was opened for Freud's (1923) interpretation of a "Case of Demoniacal Possession" as an example of mental illness 350 years later.

PSYCHIC REALITY AND SENSE OF REALITY

The inner interpretation of reality as introduced by Aquinas is called psychic reality by psychoanalysts. It takes precedence over reality itself because there is a capacity of the mind to cloak interpretation with an affect called *sense of reality,* which experienced internally, can make interpreted awareness seem to be more 'real' than real.

PSYCHIC REALITY

Psychic reality as used in this paper may be defined as the inner experience of outer reality. As a result of the phenomenon of psychic reality, thinking beings can harbour error and have no sense that that which one feels to be true is only a far cousin to those truths, which can be touched. At its best, psychic reality is less than reliable. It can be influenced by training, philosophy, and inhibition. It keeps open the possibility of a sensed reality-based on memory alone.

Zimmer (1975[7]) described the experience of psychic reality thusly—

> "Like vapour they and their creation come to pass, flow, and pass away. That is the true nature of . . . (the personal apprehension) . . . of the process of life . . . as it is experienced by us with our individualized, limited and perishable consciousness, awake or asleep, remembering or forgetting, acting or suffering, laying our hands on things, yet ourselves slipping out of our own grasp." (p 150)

Aquinas equated spiritual universals with scientific observations. This nod to Aristotle replaced the extreme belief that religious realism was independent of human mentation. It provided a logical basis for acceptance of a dual reality and supported the retention of religious belief in spite of incursions from extreme Aristotelian reality. Aquinas thus had set the stage for our cultural tolerance for conflicting sensed realities that exist side by side.

LATTER DAY CONTRIBUTORS

Kant (Born, Germany, 1774)[8] also tried to resolve the problem of two standpoints for truth. In his "Critique of Pure Reason", Kant (1781) divided reality into a "phenomenal world of appearances" (8XCVII) and a "noumenal world of things in themselves" (8XCVII). Events in the phenomenal world are integrated into a chain of causality (Aristotle's concept of initiating movement) and are fully predictable. In the noumenal world "events may take place in the absence of any antecedent causal determinants." (8XCVII) The latter leaves room in logical thinking for myth and deity based contributions to the interpretation of phenomena. "Scientific experience and knowledge pertain to the phenomenal world; moral experience and spiritual knowledge pertain to the noumenal." (8XCVII)

The Scottish Moralists[9] further addressed the origin of truth. They placed emphasis on the role of symbols in carrying ethical truths and moral principles to future generations and the need for symbols in recognizing manifestations of morality in behavior. For them, memory of moral truths is carried across generations through symbols, which are used in interpretation of physical sensations in support of transcendent reality. This is an adaptation of Aquinas' concept that interpretation of sensation based on 'infused faith' can be used to harness the power of memory to synthesize psychic reality. The guided truths of infused faith shape behavior as a result of the equation of the myth bearing symbols of memory with the harder truths and causalities of the phenomenal world.

Modern theories about dream symbols are derived from two worlds of truth. On the one hand there is Freud's (1905) description of the natural origins of fantasias. On the other hand there is Savary's (1984) transcendent view that dreams are an ". . . invitation . . . to a relationship with the divine . . . ." (p 4)

TOLERANCE FOR DUAL REALITY: EARLY CHILDHOOD ORIGINS

The factors in the ontogenesis of human cognition that makes it possible to tolerate dual reality remain to be explained. Insight into childhood origins for tolerance for a dual reality in our culture begins with Freud's introduction of a method for the reconstruction of mental function in early life from manifestations found in adulthood. The concept of primary and secondary process thinking and their

parallel maturation in early childhood results from this approach. (Freud 1911A)

One of the characteristics of primary process thinking is of special interest to us. This is the ability to tolerate simultaneous conflicting concepts in consciousness. Persistence of a regression to this early cognition can make attribution of a sense of reality to both of two conflicting realities acceptable to an adult. Of interest also is the transition from primary process dominance to secondary process dominance. During maturation, this shift enhances the ability to appreciate natural reality and offers a potential challenge to the idea that there are two realities.

PRIMARY PROCESS THINKING

Freud (1900a) used the term Primary Process (p 603) to refer to the context of mechanisms that define unconscious mental life. Primary process is characterized by free energy expressed in thoughts and actions whose motivations are uninhibited by logical causal considerations. This form of logic underlies tolerance for thinking which would support influences (numinous), which are not physically demonstrable to be causal. The characteristics of primary process thinking (Freud (1915E) are: mobile energized attention (cathexes) which through displacement and condensation are shifted from one idea or object to another without regard to the influence of external natural reality. The causality that propels this is based on affect not fact and is under the sway of the pleasure principle. The causality of objective reality provides minimal influence. There is timelessness, no negation, and no variation in degree of certainty. In this type of thinking multiple ideas can be funneled into and expressed as one idea; and awareness focused by drive energies can be shifted and redirected to new ideas or objects in a way that results (P 186) in loss of attention to (countercathectic repression of) the original ideas or objects to which attention cathexes had formerly been directed. This is the displacement required for cryptic symbol formation.

From the standpoint of "dual reality" it is important to note that disparate wish impulses appear in primary process thinking, which "exist independently side by side, and are exempt from mutual contradiction." (P. 186-7) As a result contradictory ideas can be held simultaneously in the mind. This is a possible paradigm for tolerance of dual reality. Primary process thinking is derived from haptic cognition and shares its vicissitudes. Its sense of reality does not require memory panels derived from

perception of external sensations.

SECONDARY PROCESS

The context of mechanisms that police the passage of unconscious contents into consciousness was called by Freud (1900a) Secondary Process Thinking. (P 603). It is derived from telereceptor cognition and shares its vicissitudes. Secondary process reality takes into account sensations from and memories of the natural world. It is characterized by a search for internal consistency in conscious thought. At times this conformance is achieved through psychoanalytic symbol formation, which permits masked expression of wish fantasies, which have been suppressed as part of the mature mind's pursuit of pragmatic imperatives. The psychoanalytic symbols of mature secondary process are essentially passions of the mind clothed in the uniforms of culture. The characteristics of secondary process mechanisms are:

Inhibition of drive discharge.

Exclusion of displacement and condensation.

Enablement of communication between ideas, which permits ideas to modify and influence one another. In secondary process thinking this communication favors a non-contradictory sense of reality, which is influenced by remembered reality perceptions in the place of infused truths.

A growing child does not switch from primary to secondary process thinking. Primary process thinking does not decline while secondary process thinking replaces it. Both strengthen and mature side by side so that both primary and secondary process thinking persist in the mind of the adult. The products of primary process mechanisms that underlie symbol formation are modified in the direction of reality influences. The existence in parallel of two complete cognitive processes underlies the capacity to support two senses of reality.

HAPTIC AND TELERECEPTOR SENSORY INPUTS

The impact of internal factors (i.e., evocative symbolism, inner drives and haptic sensation) on the evaluation of reality while awake, diminishes with maturation.

Memory and present consciousness change to conform closely to natural reality (physis) with the maturation of telereceptor sensory inputs. Secondary process mechanisms are strengthened as a result. Telereceptor sensory inputs are inherently fixed, verifiable, repeatable, and transmissible. They can be consensually validated. Their immutable nature overcomes intuitive interpretations of perceptions. As a result, cognitive content becomes more fixed. The main trend during maturation is enhancement of the influence on memory of telereceptor (visual and auditory) mediated reality perceptions from the natural world. With maturation, natural processes and realities beyond self-boundaries become more and more influential as they replace intuition and infused knowledge in the formation of the memory panels that are used in making comparisons in evaluating psychic reality.

Memory, which shapes interpretation, serves both haptic and telereceptive masters as well as being involved in the creation of consciousness. Current telereceptor reality perceptions challenge the validity of infused memory recalls. The inner experience of outer reality changes with growth as a result of a developmental reshaping of awareness that replaces intuition with natural reality. Recognized meanings for perceptions, based on interpretations influenced by natural contents in memory, enhances the transition of awareness into consciousness.

Awareness of the sensations of the real world is shaped into those memory panels of conscious psychic reality, which are used for judging reality, by interpretation. The contents of the memory panels are forged from an amalgam of four factors. These are current sensation (external and internal), past memory encoded as symbols that represent infused truths derived both from religious revelation and ensconced scientism, abstract hopes that symbolize the future, and a sense that thought (including religious teachings) symbolizes reality.

In sum, aristotelian scientific truth aims at a sense of reality-based on recalls remembered from telereceptor sensations. It may be invaded by scientific tradition. Platonic transcendence aims at a truth derived from infused tradition driven psychic reality. It gives way slowly to scientific challenge. Aquinas postulated a seat for both truths in the intellect, which interprets the contents of memory through a perceptual system that produces the affect called 'psychic reality'. This enables a tolerance for culturally recognized two truths in near equation, one better for interpreting numinous transcendent reality, the other better for interpreting external perceptions.

HAPTIC AND TELERECEPTOR COGNITION

The symbolic interpretation of percepts is influenced by memory elements. Natural symbols are memory elements derived from past telereceptor sensations, which shape interpretations of new sensations to represent external reality. Transcendent symbols and the symbols of infused science use new sensations to reinforce preconceptions. The interpretation of content based on transcendent symbols is strengthened by the presence of haptic inner sensations such as awe, hallucination and other accoutrements of mysticism.

An awakening of a sense of reality, appropriate to haptic experience at the narcissistic level of development, influences intuitive interpretation of what is seen or sensed. In this circumstance, philosophically undifferentiated numinous memory and memory for externally perceived phenomena are experienced as haptic sensations because as memories they arise from within the body. A feeling of reality, influenced by recall of the experience of images and concepts shaped by earliest childhood's primary process thinking tolerance for the fantastic, can be applied equally to both.

Immature psychic reality in adulthood is a remnant of tolerance for, persistence of, or regressive reassertion of organizations of reality perception encountered during early development. Such tolerance can encourage acceptance of persistent contradiction between infused consensual and perceptual realities and can produce fantasy influenced symbolic interpretations of sensation. Note the emphasis on symbolic interpretation in the following examples of psychic reality in a young child.

Aviva was four and suffering from an infantile zoophobia for which she was in treatment. Her sense of reality was so poor that her actions were primarily motivated by fantasy. At one point during a therapy session she ran from the playroom to her mother screaming that "Dr. Sarnoff is a bear."

A father and his four-year-old son took the subway to the circus. Eyeing the subway entrance, the child declared "That's a cave. I read about caves in a book with mommy." As they approached the first level down, a train came noisily into the station below. "There's a dragon in this cave declared the tot." He seemed reassured when it was explained that the sound came from a train. They proceeded down, only to be met by a running crowd of adults heading for the exit. He tore his hand from his father's and began to run with the crowd. When overtaken, he proclaimed "If this isn't a cave and that's not a dragon, why

are these people running?"

HAPTIC AND TELERECEPTOR COGNITION INFLUENCE ADULT SENSE OF REALITY

The paradigm for sense of reality first occurs during the borderless narcissistic period of early childhood, when inner (haptic) sensations dominated the perceptual processes, and the all about and the all within were fused and experienced with all *the "fierce vexations of a dream,"*[10] This dreamlike *sense of reality* persists even though the maturation of cognitive skills makes possible a *boundary* between external perceptual reality and the inner world consisting of haptic experiences, memory and fantasy informed by hope. The inner world persists in memory panels located in prefrontal cortical areas whose contents are experienced as real. Experienced adult psychic reality is the product of persistence of or *regressive reassertion* of the feeling of psychic reality encountered during the originating experiences of psychic reality in the child. Its persistence makes possible the conversion of a mixture of perceptions, hopes, and memories into an intrapsychic phenomenon experienced as reality. Such residual cognitive paradigms support a sense of reality, which gives the feeling that an experience is real.

EARLY COGNITIVE PARADIGMS AND TOLERANCE OF DUAL REALITY

Recent scientific studies (Werner (1940,1963), Yahalem (1967), and Kubie (1953) have identified stages during early child development that underpin the ability to accept multiple realities, such as the dual realities of our civilization. One such stage encompasses the shift of dominance between haptic and telereceptive cognition. In the earliest experiences of the child, haptic (close in, internal) sensations such as proprioception, protopathic sensation, vibration, heat and cold, and affects, dominate in the recalls of early affectomotor memory. They are not subject to external corrections. Haptic memory elements that participate in this form of perception are at first not sensed to be representations. Rather the retrieved memory is early on experienced and later on recalled as syncretic with the original experience or perception. Reality interpreted in the light of memory, which has been encoded according to the principles that guide haptically acquired percepts in early childhood are highly personalized and limited to sensations from within the body. The haptically based initial world of the infant is as a result unshared, and self centered. It lacks a remembered concept of the self immersed in a consensual world of reality, to be used as a reference for interpretation and communication. Sleeping or awake haptic

percepts cannot naturally be confronted by perceptions of the external world. There is no way of consensually validating haptic percepts as there is for vision and hearing. This leaves a paradigm for interpretation of meaning derived from fixed "infused faith" (scientific or religious) for content, intensified by awe to create an affect of reality.

This contrasts sharply with reality interpreted in light of memory encoded according to the principles that guide telereceptor based percepts. (Visual and auditory perceptions at a distance that can be compared and shared.) The latter, including fragile shared myths (scientific or religious fixed ideas) participate in the creation of a differentiated reality tested external world. (See Kubie (1953)

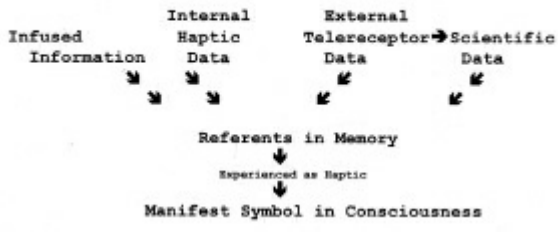
During the first months of life, there is little in the memory to give interpreted shape to the diffuse sensory experiences that are the phenomena of telereception, (incipient vision and hearing). As a result early in the first year haptic cognition dominates. Telereceptor based cognition, which operates with consensually validatible sensations, and which has the potential to focus on conscious contradictions are at first thinly cathected. They are relegated to unimportance and overwhelmed by the diffusing effects of synaesthesia and physiognomic thinking. The gradual enhancement of stored items in memory, which can be used for the interpretation of visual and auditory sensation, enabled the creation of panels of telereceptor based perceptual forms. With the accumulation of panels of sustained visual memory elements based on telereceptor sensations and the development of verbal concept memory, confrontation about shared experiences becomes possible. When these become stabilized, recognizable and interpretable they enhance interpretation with preconception and opinion. At that point concepts become subject to verbal confrontation, challenge and correction. This early process provides a paradigm for the intellectual verbal confrontations of secondary process thinking, and the construction of a stable inner world of memory that represents phenomenal reality and can be codified into memory panels to be used as the basis for defining new inputs as real.

SYMBOLIC FORMS

The memory contents to which new inputs are compared during the activation of the sense of reality consist of symbolic forms in memory. These are images that are derived from sensory and infused inputs, which become the basis for comparison in judging whether or not a new image or concept is valid.

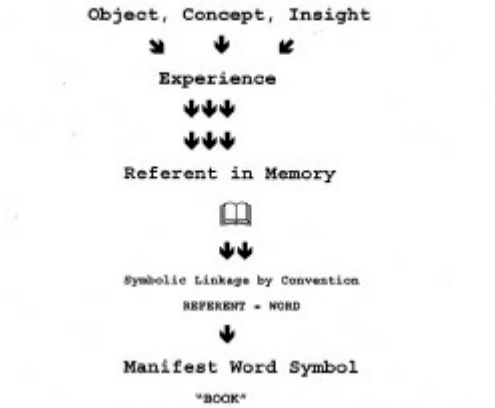
The judgment that accepts the truth of an interpretation is guided by the accepted theoretical constructs of a culture and the intrapersonal needs of persons.

Chart A. General Symbol Formation



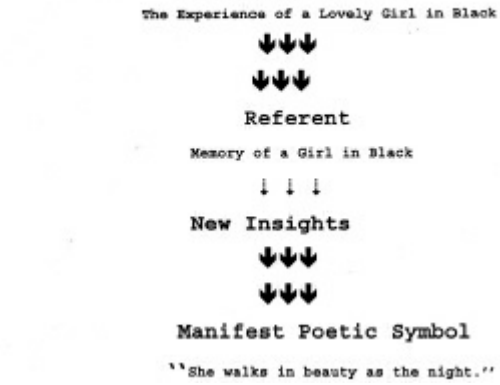
THE SIMPLE SYMBOL'S manifest representation has a culturally determined linkage to the content of its referent. These linkages are determined by *conscious* convention. An example of a social convention based symbolic linkage would be the communicative spoken word. The sources of the referents to which words refer are the objects, concepts and insights that are shared by and define the society of the symbolizer. (see chart B)

Chart B. Simple Symbol Formation

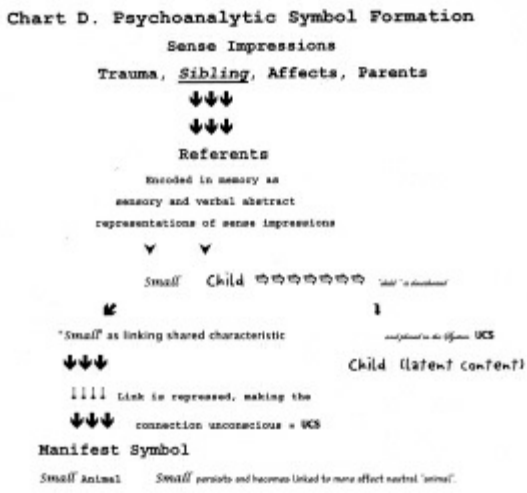


THE POETIC SYMBOL'S manifest representation is consciously selected by poets from facets of the meanings of known words chosen to convey innovative meanings. The sources of its referents are extraordinary new insights and concepts, which expand the worldview of a group or culture. Poets are artists who are gifted with a talent for discovering new ways of using words to represent new insights. Through these somewhat cryptic forms society is introduced to new referents. The freshness of these representational insights introduces new symbolic uses for old words. An example of poetic symbolism would be the phrase "She walks in beauty as the night" [11] used as a description of a young woman dressed in black. Poetic symbols invigorate language, for in Emerson's (1844) phrase "Every word was once a poem." (p. 455) (See Chart C)

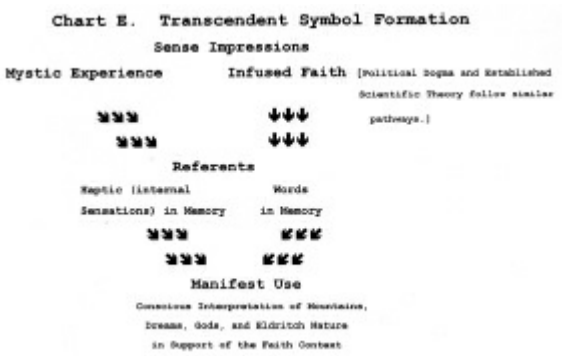
Chart C. Poetic Symbol Formation



THE PSYCHOANALYTIC SYMBOL represents inputs, which are associated with sensory experiences of intolerable affect. The manifest content of the psychoanalytic symbol is the product of a protective choice in which elements, which convey less affect than the painful memory trace which they represent. The referent contains sense experiences of recent traumas, current wishes and past experiences, affects, parents, sibs, and other important figures from the childhood of the symbolizer. The link between referent and representation is unconscious. An example would be a small animal representing a sibling in a dream. (see chart D)



THE TRANSCENDENT SYMBOL derives its manifest representations from reverence for landscapes, from the avatars of gods, the songs of birds, and the labors of humble men and sacred dreams. The impelling source of the referent is understood by initiates simply to be a "God" or his works. These images are linked to referents according to principles fixed by the traditions and conventions of "infused faith"[12], consciously known to initiates, though at times thought of by common men as a mystery. Their manifest symbols are employed in support of the beliefs of initiates in a transcendent being beyond the boundaries of the self. (See Chart E)



SYMBOLIC FORMS IN THE CREATION OF DUAL REALITY

There is a clash of explanations for the sources of their referents that sets transcendent symbols apart from poetic simple and psychoanalytic symbols.

Transcendent symbols are understood to be derived from referents whose origins lie within a sphere of a "reality" that transcends man. They are held by theorists immersed in the ways of transcendence to be messages from God without a point of origin in the brain. An example would be the use of mountains in the paintings of Frederick Church, who consciously painted landscapes to illustrate the grandeur of God's creations. In regard to the latter, Savary (1984) describes dreams as coming ". . . from an origin other than one's own conscious ego . . ."(p 3) which is ". . . an invitation given by the Source of our life and destiny calling us on a spiritual journey toward greater consciousness, and to a relationship with the divine . . ." (p 4); In essence (Psalm 1) "The heavens declare the glory of God; and the firmament showeth his handiwork."

Simple symbols are sensed to be real by comparing them to referents determined by convention. Poetic symbols are linked to their referents by creative insight. The referents (latent contents) of psychoanalytic symbols are understood by the scientific world to be memory banks, which contain elements too affect-laden to be represented directly. These memory panels can contain fantastic, incomplete or false images of reality. They have the potential to inspire symbols, which offer idiosyncratic

truths, which undermine reality. These can be uncovered and corrected through psychoanalysis using free association. For instance the meaning of a mountain in a dream or landscape can be traced to prior experience of the dreamer, through analysis of free association to the dream symbol, and seaweed seen as hostile can be resolved into the anger of a child for a mother who left for a little while.

Western culture supports systems for defining truth, which simultaneously can see truth in scientific natural and in experienced religious realities, as well as all forms of infused truth, such as an individual mother's concept of a healthy diet. There are champions for each system and supporters of both simultaneously are not at all rare. To contain such diverse types of symbols in one logical system, it is necessary to accept the existence of two simultaneously contradictory truths through a philosophical orientation that supports the coexistence of the scientific method, and an infused religion, which is reinforced by the presence of experienced externally presented symbols and icons. This requires cognitive systems, which match recalls and inputs with remembered worldviews to activate the affect of sense of reality, as in "It feels true". In this circumstance manifest symbols with veridical telereceptor based referents and manifest symbols supported by transcendence based referents as well as infused knowledge can be felt to be equally true.

NEUROSCIENTIFIC MECHANISMS AND STRUCTURE THAT CONTRIBUTE TO THE SENSE OF REALITY

INTRODUCTION

Sense of reality refers to the affect associated with the recognition of mental representations as real. These include derivatives of haptic perception in memory as well as immediate telereceptor perception. An interpretation does not have to be congruent with natural reality (physis) to be sensed to be real.

Sense of reality is prone to error. It is a residuum of infantile omnipotence. The capacity to sense reality was considered by Ferenczi (1913b) to be an ". . . hallucinatory omnipotence . . . that survive(s) into adult life." (p223) ("Hallucinatory omnipotence" refers to a small child's capacity to create images that feel as alive as the fall of day, such as the fearful monsters of the twilight moments that precede a child's sleep.) ". . . (P)ersistence of (this) period of unconditional omnipotence." (p 219) into later life may be seen in the ability of the older child or adult to tolerate a mature mind's creation of false

"realities" through distorting interpretations. ". . . attention is arrested above all by those objects of the outer world that on the ground of resemblance remind (one) of (one's) dearest experiences." (p 228)

Inputs detected by the source organs of perception, may be recognized as real, when they bear a resemblance to the content of a previously acquired memory panel. A memory panel consists of an organization of memory traces that by experience or convention are consensually validated to be true as a result of convention or shared experience.

SOURCE ORGANS OF SENSATION

The source organs of sensation, include external telereceptor receptors (visual and auditory) and the internal servants of haptic memory. Both internal and external stimuli can be interpreted to be equally true. What is required is that either set of stimuli pass comparison with validating mnemic traces contained in memory panels.

Freedberg (1998) described the scanning function involved. "When we see an image, we strive to constitute it according to some graspable form with which we are already visually acquainted . . ."(p 281) We try to convert it into a symbol for that which we already know.

Memory panels offer comparison criteria for validating inputs as true. They are derived from two sources. There are those that are based on "knowing about creatures as a result of sense perception" of natural reality (Aquinas v.s.), and there are those knowledges, the first truths of which have beginnings in "infused faith" derived from deistic authority. (Aquinas v.s.) Both sources may be encoded in memory verbally. As such when retrieved they are experienced as haptic traces.

Recognition of similarity through comparison to memory panels generates "sense of reality". Attribution of reality may identify conflicting realities as both true. Contradiction between memory panels' content is acceptable because the mind is comfortable with back and forth shifts of cathexes between telereceptor and haptic based memories, and between non-linear and linear organizations of data.

Shifts of cathexis between frontal and parietal areas is a fact of maturation for the attentional areas

of the brain. In early childhood there are paradigmatic maturational shifts between wholly narcissistic haptic memory traces and telereceptor traces with their potential for shared validation. In adulthood, mature cognition draws its strength from the identification of reality through comparison with verifiable telereceptor traces. In the creation of externally verifiable secondary elaborations, sensations are organized into communicative structures with fixed patterns, which fit prior established memory patterns stored in the frontal memory areas. The impact of the latter is diminished when attention cathexis (awareness) is shifted from temporal memory storage areas to transitional polymodal (auditory and visual and haptic) memory areas in the parietal lobe. These memory areas move into a position of dominance in defining truth, when they draw cathexis away from telereceptor influenced memory panels.

Panels of validating information can be called up for comparison in support of identification of the familiar as truth. Traces that are organized into memory panels may have origins in haptic traces and infused knowledge as well as in consensually validatable telereceptor sources. The finding of identities between inputs and memory panels in the frontal lobes is congruent with experiencing the quality of reality. The capacity to achieve direction of cathectic energies to frontal panels depends on physiological states. Should there be interference with frontally directed cathexes, as occurs in REM sleep, meditation, etc. (v.i.), *reflective functions* send cathexes toward the left parietal area where memory panels consisting of traces that are tuned to conform with simultaneous primary process cognition, permit greater latitude in the acceptance of infused inputs as imbued with a sense of reality.

THE LOCATION OF THE REFLECTIVE FUNCTIONS WHOSE CATHEXES GENERATE A SENSE OF REALITY

Ferenczi's "Capacity to Sense Reality", Aquinas' "Intellect" and Plato's "soul", are associated with the frontal limbic region. Solms (2000) has noted that the reflective systems associated with conscious sense of reality are lost in people with frontal limbic damage. "Patients, with damage in this region . . . lose the ability to distinguish between dreams and real experiences." (page 50) They suffer from ". . . a disturbance of reality-testing . . ." (page 50) which Luria (1973) attributed to "equalization of the excitability of traces." During which the panels that they contribute to become equal in their ability to attract attentional cathexes that imbue them with the sense of reality.

ON MEMORY PANELS

The existence of units of memory (panels) that can be used as referents for recognizing new sensory inputs is one of the oldest insights into human psychology. A reference may be found in Plato's (ant) "Phaedrus". Plato described knowledge based on prior experience as the basis for recognizing reality thusly, ". . . every human soul . . . has beheld true being . . . but it is not every soul that finds it easy to use its *present experience as a means of recollecting the world of reality."* (Page 56). Note that here that Plato's "world of reality" refers to memories based on experiences of goodness before birth not early infused content based on transcendent symbolism.

In 1907, Bekhterev linked the function of correlation of new inputs, with panels made up of traces of past experience, to the frontal lobe when he noted that animals without frontal lobes ". . . cannot correlate new external impressions with past experience . . ." This leads to ". . . loss of successive traces . . . failure to evaluate impressions . . ." and loss of ability to make deliberate choices. (pp 1464-1468, See also Luria 1977 II,5, p 222). Werner (1963) refers to this organization of traces through which the world is "known rather than merely reacted to . . ." (p 13) as a "symbolic vehicle" (p 15). Sperber (1975) referred to a search within memory for a "stock of acquired knowledge" (P117) from which can be constructed concepts by which new inputs can be recognized. He describes such a structure in memory as a "field". (p 121) He postulates the existence of a "conceptual mechanism" (p 141), which reconstructs fields, from "traces left by previous acts of construction" (p 141), which are used in the recognition of new inputs and remembered concepts. This concept has strong resemblance to "panels" evoked for use in evoking recognition for new perceptions and concepts. Gazzaniga, M. (1998) postulated an "interpreter" situated in the left hemisphere which ". . . assimilate(s) perceived information into a comprehensible whole." (p 26) The comprehensible whole that is produced, though less than accurate, becomes the basis for comparison of new external impressions with past experience. In this situation the "qualia" that is produced becomes a symbol imbedded in a panel to be used for comparison in evaluating reality. Comparison of new perceptions and interpretations with such prior infused or perceptually assimilated memory trace panels may produce a correlation. If this occurs, the basis for the experience of the illusion called a sense of reality is established.

Ninio (2001) in his scientific explication of illusions describes the sense of reality (". . . the one that

makes us believe that we have a direct hold on reality." p 181) as possibly the strongest illusion of all. His explanation of this illusion introduces the concept of "Criteria of judgment" (P 189), against which comparisons (p 184) are made in search for clues to correct actions and a stock (p 186) of words which are ready to surface to provide correlation of prior experience in the interpretation of new perceptions. His concept of a panel of memory traces is loaded in the direction of affects and social expectations. These shape behavioral responses. His panels of memory traces are not conceived of as fixed units persisting in memory. Rather they are awakened as associations to perceived cues. (". . . every stimulation from the outside awakens everything in memory related to it." (P 186) Traces are used for comparison in identifying the validity of a plan or perception. They are organized into panels as the result of dynamic interactive processing influenced by current situational and behavioral contexts. In Ninio's view, panels are actively organized from traces of prior experience at the time that new perceptions or concepts occur. It is possible within his theory for organized preexisting panels to be used for recognition of new inputs. Sense of reality contains an affect. Plato (ant) was the first to report the presence of a strong affect accompanying the recognition of a present experience as a simulacrum of the remembered world of "reality". He noted that people ". . . when they see some likeness of the world above, (preexperienced in the period of prelude to life) are beside themselves . . ." (p 56) The presence of such affects provides the sensation part of "sense" of reality. What is implied is the involvement of the hypothalamus the amygdala, and autonomic nervous system discharge in the production of the sense of reality experience that motivate responses such as hiding from a fearful hallucination.

LOCATION OF MEMORY PANELS

Bechara (1997) has reported the existence of memory panels in the ventromedial prefrontal cortex that are filled with traces of prior experience, which he describes as "records of previous individual experience". (Page 1294) These records form a basis for comparison in judging the validity of an input. These records must be retrievable to be useful as traces of past experience. Sense of reality requires an intact long-term memory, plus the short-term memory ability to move between short-term memory trace panels and long-term memory trace panels. Sense of reality cannot exist without an intact memory.

Bechara (1997) detected linear sequential serially related secondary process nonconscious mentation in the ventromedial prefrontal cortex experimentally. Normal participants and patients with

prefrontal damage associated with decision-making defects were given a gambling task during the performance of which behavioral, psychophysiological, and self-account measures were obtained in parallel. Normal subjects chose advantageously before they realized consciously which strategy worked best. ". . . prefrontal patients continued to choose disadvantageously even after they knew the correct strategy." (1293) "Moreover, normals began to generate anticipatory skin conductance responses whenever they pondered a choice that turned out to be risky . . . whereas patients [with damage to the ventromedial prefrontal cortex] never developed anticipatory [planning] . . ." (P 1293). Bechara (1997) saw this as ". . . evidence for a complex process of nonconscious signaling, which reflects access to records of previous individual experience specifically of records shaped by reward, punishment, and the emotional state that attends them." (p 1294)

OTHER MEMORY PANELS

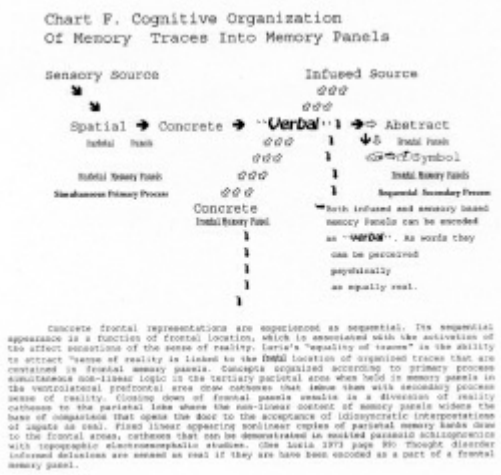
Luria (1973) described fixed linear appearing nonlinear memory panels with the primary process characteristics of "tertiary" parietal cognitive organization in the frontal areas of paranoid schizophrenics who were concentrating on their delusions as demonstrated by topographic EEG studies. (page 99) He also found memory panels in the left parietal lobe. People with left lateral parietal damage have no sense of reality. They have lost the sequential haptic memory panels whose use verifies reality. Sense of reality improves with memory return. The rule of thumb is that spontaneous improvement can be expected up to one year after injury. Luria (1973) has placed processing of concrete perception into verbal abstractions and memorization and storage of organized material in the tertiary zones of the posterior cortical regions (p 74). The location is in the left inferior parietal lobe. This storage location was identified by ablation studies and posttraumatic clinical findings. This parietal function contributes to the content of prefrontal memory panels.

Luria (1973) placed memory panels containing non-sequential nonlinear thinking without logical order in the left inferior parietal lobe of the brain. Solms (2000) in a paraphrase of Luria ("see Luria, 1966, 1973") differentiated the simultaneous nature of inferior parietal-lobe mechanisms from the sequential processes associated with frontal lobe memory patterns (p 46). Luria placed the synthesis that transforms traces encoded with primary process mechanisms into panels of traces encoded according to the principles of secondary process mechanisms in the tertiary multimodal zones of synthesis of the

parietal lobe. Luria (1973) noted that "This work of the tertiary zones of the posterior cortical regions is thus essential, not only for the successful integration of information reaching man through his visual system, but also for the *transition from direct, visually represented syntheses to the level of symbolic processes*—or operations with word meanings, with complex grammatical and logical structures, with systems of numbers and abstract relationships. It is because of this that the *tertiary zones of the posterior cortical region play an essential role in the conversion of concrete perception into abstract thinking,* which always proceeds in (sic) the form of *internal*schemes, and for the *memorizing of organized experience*or, in other words, not only for the reception and coding of information, but also for its storage." (Italics are Luria's.)(1973 p 74)

This process is not limited to the parietal lobe. The frontal lobe is involved in the final stages of the process too. Ablation and post trauma studies reveal a loss of relevant associations and serial connections in thinking with loss of frontal lobe function. Luria (1977) noted that "This facile lapse into irrelevant connections apparently lies at the root of the intellectual defects considered by many workers to be the specific feature of frontal lobe lesions." (Italics removed)(p 285)

Bechara (v.s.) has reported memory panels containing observed, organized experience, which are operational as templates for comparison of new inputs with prior experience in the ventromedial prefrontal area. (see Chart F)



MEDIATORS OF SHIFTS OF THE CATHEXES THAT CARRY THE SENSE OF REALITY

Shifts of the cathexes that imbue memory panels with conscious sense of reality are mediated by humeral, physiological, traumatic, and voluntary factors. Such shifts of the cathexes of the internal interpreter of the reflexive system, between frontal and parietal memory panels occurs on an ongoing basis. Solms (2000) has described one such example ". . . attentional cathexis is directed uncritically during dreaming towards the perceptual regions . . . Thus the process ends in a concrete perceptual representation, which is hypercathected by the reflective systems as if it were a real experience." (p 54) Note the similarity between these observations and the descriptions of St. Thomas Aquinas (v.s.) and the description of the "the reflective system" which Plato called the "Soul".

There are physiological reasons for shifts from telereceptor based (sequential verbally processed) prefrontal ventromedial memory panels to the haptic based (simultaneous visually processed) parietal memory panels, which are the sources of the symbols used for recalls during REM sleep. Acetylcholine dominance, which is a characteristic of REM sleep results in a chemically mediated alteration in cognition. There is exclusion of frontal memory panels as sources of representations during REM sleep (See Siegel (2000) p 78); Damasio 1999 p249 and Maquet 2000 p834). (Acetylcholine dominance

produced by the experimental infusion of physostigmine into the brain induces a shift in brain activation from the frontal to the parietal lobe. (Robbins (2000) **This frequent reversible physiological shift between serial and non-linear memory panels enhances the spectrum of tolerance of the intellect for the shift between haptic and telereceptor realities and reinforces tolerance for the two truths of the Western world.**

A shift in the cathexes of patients away from frontal lobe memory panels (associated with external organs of perception and stored in the ventromedial prefrontal cortex) also occurs when one is deprived of frontal lobe function as the result of trauma. Solms (2000) has noted in such cases a shift in the content of awareness away from abstract verbal entities to visually encoded memories that are stored in the parietal lobe. "Concrete, near-hallucinatory experiences" are produced (P. 204).

A reclining position introduces such a shift in preparation for sleep or free association. Meditation and mystic experiences are induced by active focusing of attention away from telereceptor sensations. (See Newberg 2001, Underhill 1955) Loss of retinal vision is often accompanied by shifts of cathexes to visual storage areas or visual traces. Hallucinations as in the Charles Bonnet syndrome frequently occur. (See Ramachandran 1998 p 87.)

The memory panels of the Ventromedial Prefrontal Cortex contain serially related, secondary process contents. The memory panels of the left inferior parietal lobe contain non-linear, spatially organized, primary process contents. The temporal lobes (see Ramachandran (1998 p 179) and Newberg (2001 pp 31-32) have been suggested as the local of memory panels for transcendent "realities".

The direction taken by cathexes during the search for an operative memory panel, is influenced by many factors. These include fatigue, humeral (acetylcholine) dominance as in REM sleep, mental illness, willful withdrawal of external attention cathexes from external reality, and states of sublimative creativity. As a result of the loss of availability of linear frontal lobe memory panel function, reality sense endowing cathexes are channeled toward non-linear contents in parietal panels. As a result sense of reality is attached to poorly organized primary process panels to produce, for instance, REM dreaming and Charles Bonnet Hallucinations.

DISCUSSION

Aristotle established a psychic reality system based on external phenomena perceived by the senses. This differed from the ancient cultural system based on the Platonic dualist concept of myth as reality. Aquinas identified the venue for the sense of psychic reality for both systems in internal mental interpretation. Contemporary studies recognize that experience perceived as psychic reality consists of interpretation of sensation based on comparison of new inputs to organized memory traces (panels).

As a result of a culturally accepted philosophy that makes possible assignment of sense of reality to internally generated sensations, psychic reality sense in our culture tolerates the perception of a wide spectrum of inputs as "reality". Inherent conscious contradictions between external sensation and input from within is tolerated because of persistent availability of the haptic cognition of the first year of life, when personalized early haptic events were the whole world and the shared and challenging sensations of sight and sound were barely developed. The contents of early haptic memory are endowed by boundary free narcissism with a sense of being real. This paradigm for an unchallenged sense of reality supports later influence of memory for distorted and symbolized experience as a criterion for the evaluation of new inputs as real. The shift to shared telereception as the source of validating memory begins with the development of sight and sound telereceptors. These become the source of a second bank for comparison in producing a sense of reality.

Neurophysiological studies offer anatomical locations for the circuits involved in the cognition that support the existence of shifts in the definition of reality. The circuit for the sense of reality consists of systems for reflection with an affect generator in the frontal limbic areas that responds to comparison of inputs to memory panels in the left parietal, prefrontal ventromedial, and temporal regions of the brain. The degree to which a faulty input can be recognized as real in spite of irrational characteristics depends on which location is the site of the memory panel that is cathected at the time, in the process of the scanning that will identify the new percept as familiar. In certain physiological states the memory panels of the frontal lobes are unavailable and reality endowing cathexes are routed to the memory panels of the parietal lobe or in the case of meditation to the temporal lobe.

The direction taken by cathexes during the search for an operative memory panel, is influenced by many factors. These include: humeral (acetylcholine dominance as in REM sleep), mental illness (as in

the acceptance of the reality of delusions in schizophrenia), willful withdrawal of external attention cathexes from external reality (as in states of sublimative creativity, and meditation), destruction of the frontal lobe (as occurs with trauma and brain tumor), and loss of telereceptor input (as in Charles Bonnet Hallucinations following loss of vision). With the described shifts of cathexes to memory panels in the parietal lobes, the sense of reality of frontal lobe syndrome patients attaches to the "a logical intellect" and "randomly found associations" [See Luria's (1973 II,5,p282) comments on Kleist (1934)] of the poorly organized primary process. The latter is presumed to be located in the "tertiary" area memory panels of the left parietal lobe. Tolerance for this condition in frontal lobe syndrome patients is supported by the persistence of the infantile cognitive organization. In normal development with the increasing impact of telereceptor influence on the synapses through which the content of parietal memory panels advance, the location transitions into the left frontal lobe. In this regard, the function of the right frontal lobe is little known. (see Luria 1973 II,5, p 293)

The ease with which the sense of reality can shift away from telereceptor reality underpins the dual reality of the Western world. For this reason, the world itself remains ever beyond human grasp. We are born into a drive dominated haptic fantasia. As adults we strive for shared telereceptor based realities. Because reality testing in adult life is frequently based on infused inputs, distorted interpretation, and symbolized telereceptor sensations, the best that we can hope to achieve is a psychic reality-based on symbolizations that are tuned to the world and vibrate in harmony with it.

SUMMARY

The elements of the brain infrastructure that make up the dynamic mosaic of distant points in the nervous system that are united in the task[13] of producing a "sense of reality" for the dual reality of the Western world are studied in this chapter.

"Sense of reality" drew attention first when the ancient definition of reality through mythological education was challenged by Aristotle who described reality as an external phenomena perceived by the senses. Aquinas later localized the sense of psychic reality to internal comparisons between new inputs and old memory banks. Philosophical tolerance for dual reality was created. Persistence of the cognition of the first year of life with its boundary free narcissism, combined with the maturation of sight and

sound, which added a verifiable second bank of panels for comparison in producing validation for detection of reality, supports this dual reality.

Trace panels for use in internal comparisons of new inputs to memory contents are contained in the left parietal, and prefrontal ventromedial regions of the brain. Cathexes from reality affect generating systems in the frontal limbic areas endow perceptions and inputs with the affect of "sense of reality". When the memory panels of the frontal lobes are unavailable, reality cathexes are routed to the memory panels of the parietal lobe. Secondary process contents are replaced by the primary process contents of the memory panels of the left inferior parietal lobe, making a dual reality possible.

NOTES

1 In primitive culture, individuals survived in personal encounters with the dangers of the hunt by a personalized approach to immediate dangers that could be seen and heard as well as through the manipulation of animistic symbols.

2 Hesburg (1994)

3 This material is derived from Kretzmann (1993) and from Zilboorg (1941) P 69 which is in turn a paraphrase of Nordenskiold, E (1926).

4 See Kretzmann (1993) P 70.

5 See Bourke (1960) ppxvi-xviii.

6 Boethius on the Trinity II, 3, c.

7 Adapted from Zimmer (1972)

8 See Silber (1934)

9 Adam Smith, David Hume, see Shott (1976) p 39.

10 Shakespeare 'Midsummer Night's Dream' iv 1 74.

11 Byron (1815)

12 Aquinas(1258)

13 This sentence is an adaptation of Pavlov as quoted by Luria 1973 part 1, (1993) P 70

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