Being *Fully* Human

The Art and Science of Noology

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Foreward

There is an uncanny symmetry between the functional design of a species and the ecological niche it occupies. This symmetry is usually displayed as an elegant balance between the physiology of a species and its role in life. The cheetah in pursuit of its prey is a marvel of speed and agility while the two-toed sloth hanging from its tree is the very personification of inertia. Countless other creatures demonstrate a similar coordination between design and function.

Oversized capacity is rarely found in nature. The human race seems to be the glaring exception to this rule. Poor functional design has created an ergonomic disaster for Homo Sapiens. Our bones and muscles are too small to outrun or outfight predators. Our jaws and teeth are too small to tear or chew our food. Upright posture makes us prone to bursitis, stuffy sinuses and low back pain. Our cranial capacity is so large that our infants must leave the womb long before they have any survival capabilities. Finally, the lengthy dependency of our children taxes our resources for most of our adult lives.

Sociologists and physical anthropologists tell us that the advantages far outweigh these relatively minor inconveniences. A prolonged childhood enables the child to master the intellectual and social skills required survival and socialization. Large cranial capacity houses the large brain required for his complex thought processes. Low back pain, stuffy sinuses and bursitis are the tradeoffs for an upright posture that frees his hands for using tools and other implements. The smaller jaw provides room for his organs of speech. Smaller bones and muscles allow him to develop the finely honed skills of a master tool maker, artist or musician.

Most of these tradeoffs do make sense when they are examined in the light of overall human activity. However, this does not explain the huge excess in untapped brain power. Studies by psychologists and brain researchers indicate that even a genius uses only five to ten percent of his brain's capacity. Even more astonishing are recent reports of the sheer excess of neural axions in the brain of the newborn infant. Within months of birth, it seems that millions of these neural cells mysteriously atrophy and disappear. This excess seems to fly in the face of nature's usual economy of design.
In some ways, this overfit and wastefulness resembles my relationship to computers. Neither Megabytes, Gigabytes or an occasional Window here or there makes any difference to me. I turn on the screen, get into the word processor and enjoy working on a glorified typewriter! Typos and syntax errors no longer bother me. Even my occasional left/right reversals are easily correctable. Just delete the mistakes, hit the right keys and out comes a clean copy.

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My computer literate family members are horrified when they realize that I am quite happy with this limited use of the computer. I, in turn, know that if I should need graphics, spread sheets or other esoteric applications, I can read an instruction manual and figure it out for myself. If I cannot fathom the computer's secrets, I can learn from an experienced initiate. With a user's manual and the right measure of curiosity, even the deepest mysteries of the computer can be probed by a novice like me.

Unlike a computer, no user's manual accompanies the young infant at birth. The infant must model human behavior from others. For most people, a hunt and peck process carries them from infancy through early childhood. After that, "Do as I say," is the usual instruction he receives. Only the rare genius or adventurer dares to defy the threat implied in, "Try it for yourself and you'll see!"

Even without instruction manuals, stable communities met the needs of their children from the time of the cave dweller to the middle of this Century. Today, the explosive changes brought about by the linking of computer and communication technologies have strained our economic, political and social institutions beyond their problem solving capabilities. The old methods have created idiot savants out of our most learned and sophisticated experts.

Noology opens a door into the mysteries of human thought processes. It offers the hope that we can begin to tap the enormous resources of our potential. Processes for extending the range of human thought can open up vast areas of the uncharted and unexplored territory of the idle 90 percent of brain capacity.

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Introduction

Dimensionality
A Full Range of Thinking

From the dawn of human history, observant people everywhere have noticed spatial patterns in the thoughts, feelings and actions of their families and associates. These keen observers detected a regularity and consistency in the patterns of human gestures and movements . Keepers of this knowledge described these patterns in the commonly used phrases of their time. They carefully trained their students to preserve this knowledge. With the passage of time, natural changes and developments in custom and language gradually obscured the original meanings until the knowledge became codified into esoteric teachings. Eventually, only the highest initiates could unlock information that was once available to everyone.

In time, other observant people rediscovered these patterns. Each new rediscovery was welcomed as fresh insight because everyone has an intuitive understanding of these spatial patterns. Although this understanding may be difficult to articulate, it is based upon an innate sense of the essential orderliness in all of nature. We see this orderliness expressed in the cycles and the rhythms of the heavens, the seasons and in all the biological processes of life. From the largest components of the universe to the most microscopic, all of nature displays evidence of an underlying regularity. Even the chemical and neural interactions in our brains play out this systemic organization.

Six Ways of Making Sense

Each person has a particular way of making sense of his world. We each think, "I am a sensible person, therefore, my way of reasoning must be the most sensible." We are mystified by the fact that some people make no sense to us. They do things backwards, upside down or out in left field. We encounter these people among our colleagues, coworkers and friends. Worst of all, these people without any common sense may lurk in our families as our spouses and children.

It is sometimes dismaying to realize that there are six systems for making sense of the world. Other systems or types are as legitimate as our own, even though they may differ from the patterns we use for analyzing, learning and creating. Each has its own way to express order because it verifies and validates results in its own way. Each type has its own set of identifying characteristics and features.

The processing system for each individual is operative at birth and remains constant throughout his lifetime. This constancy provides him with a stable reference for dealing with the changes and challenges of each successive stage of life. The system governs the processes for balancing the demands of society with his need for individual creative expression.

The Noological Processing System of each individual provides a reliable means of addressing the issues in life. Each type enters the world of mind through its own physically related axis of perception. This approach can be from the 'outside in' or the 'inside out.' Outside people are objectively focused and are logical and sequential in their thinking. Inside people are subjectively focused, random and systemic in their thinking. Like oil and water, "outsiders" and "insiders" do not mix very readily, although many individuals have negotiated emulsions with varying degrees of success.

There are six Noological processing systems. Each has its own movements which creates its characteristic physical and mental patterns. These are the patterns that were noticed in individuals by Warren Lamb and in societal groups by Edward T. Hall. Each type uses some faculties more than others. This influences their development of language as a cultural artifact. Each group creates an extensive vocabulary to describe the subtleties and nuances of their most frequently used faculties. The complexity of their syntax reflects the intricacies of their processing. Within each group, some people are highly functional and productive and others are not. Some people are happy, while others are miserable.

Relationships

Relationships between the six processing types fall into regular, predictable patterns of interactions. People who share the same processing system have an intuitive understanding of the each other. Progressive differences in processing sequences cause a growing gap in their mutual understanding of each other. Unless there is a compelling need for cooperation, people with vastly different systems usually avoid each other.

The ability to interact comfortably with people of different types has become increasingly important in the economic life of the United States and Canada. As corporations relocate to previously isolated rural areas, diversity in ethnicity and racial origins is no longer an urban phenomenon. Today, it is not uncommon to find four or five types interacting in the workplace. In some places, all six types are perplexing each other. With this diversity, every social institution is impacted in ways that boggle the imagination.

With training in the principles of Noology, people develop greater tolerance and respect for other processing systems. As they become aware of the advantages to be gained by the interaction of different systems, they learn to support the participation of other types in their activities. They begin to appreciate differences as indicators of new solutions that may take them beyond their present horizons. With this new appreciation, differences are treated as resources to be explored and mined for the mutual benefit of everyone.

Activation and Development of Mental Processes

At birth, the human infant is undoubtedly the most helpless of all creatures. Although he is born with the largest brain capacity in proportion to his size, the only behaviors the infant displays are his coiling and suckling reflexes. All other behaviors for locomotion, speech and socialization are developed months and years after his birth. Biologists have long recognized the coiling and suckling reflexes as his primary human reflexes, but these two reflexes alone cannot account for his ability to develop the other behaviors. He must have some other faculty beyond those two reflexes.

Recent studies have established that babies are thinking, cognizant beings from the moment of birth. Of course, mothers everywhere have known this for centuries. Each mother has countless stories to tell about her own infant's uniqueness, originality and inventiveness. Her stories describe the results of her baby's innate ability to model behavior. This ability to model behavior is one of the distinguishing characteristics of the human organism and it must be an instinct that is as strongly established as the coiling and suckling reflexes.

The models for mastering physical behavior and for mastering the complexities of speech and language are readily discernible to an observer. The ability to model mental skills is not readily discernible, even to a trained observer. Whether the activity is discernible to others or not to others, every child manages to develop his mental skills in conjunction with his physical abilities.

By the time the infant has reached maturity, he has successfully modeled the operational skills he needs for sustaining life and for expressing his artistic and creative abilities. He can explore his options and can develop and follow efficient procedures to meet the challenges of life. He can build the analogies and make the inferences that add meaning to his life. With these abilities develops the managerial skills required for organized activity. Lastly, with his abilities to study both the smallest of details and the largest of pictures, he develops his executive skills for directing and leading others in their mutual endeavors. Mastery of these complex skills is dependent upon his abilities to model the skills of his family, peers and elders.

Basic Mental Skills

Twenty seven basic mental skills have been identified and correlated with the three perceptual axes and with directional language patterns. Activation and development of these skills are specific to certain stages between infancy and adolescence. These skills are used by the individual in his capacities as operator, manager and executive.

When an individual has a full range of motion within his processing system, he is

coordinated and skillful in the use of all his faculties. He can accept new challenges, plan wisely and take responsibility for his actions. He can recognize results that are less than satisfying, make appropriate adjustments and can even reconsider his original ideas. With good skills, he has well developed criteria for measuring the satisfactory completion of any task, great or small.

Activation and development of each basic skill is facilitated by the presence of an appropriate role model at specific stages during childhood. For most people, the presence of an appropriate role model is crucial to the activation and development of the mental skills. Noological processes have been developed to successfully activate dormant functions.

Challenges

As we approach the next millennium, we are aware that the demands made of us far exceed those of any other period in human history. The nature of our workplace has changed. With an ever increasing complexity in tasking, duties that were previously assigned by rank or station are now required of the average person. We are expected to evaluate, plan and execute as part of our normal responsibilities.

Our personal lives are increasingly complicated by the presence of people who think in very different ways. This calls for the forging of new rules and standards for interacting with others. We are also called upon to define and set our own standards and requirements for personal satisfaction. All these factors make it imperative on us to activate and develop the full potential provided by nature.

Chapter I.

Noology

noos - mind
mind - the part that thinks, feels and acts
noology - the science of the laws of the mind

Noology presents a three dimensional geometry for understanding human behavior. With this approach, it is possible to look at human activity as processes taking place within intelligible systems of behavior. It offers a map for negotiating the maze of thoughts and actions by charting the most common areas of activity within for each system. It also recognizes areas that are presently out of the normal range of exploration for each system.

Previous attempts to study the three dimensional qualities of human behavior were foiled by the use of two dimensional representations. The flat surfaces of the maps used by the investigators limited their explorations into the dimensional nature of behavior. Many investigators successfully navigated the three dimensional nature of their own processes but were usually not aware of the presence of other processing models. They usually concluded that their findings were universal models for the entire human race. Those who were of the same processing type could understand and follow the system, but it only created confusion for people of other types.

Noological principles are simple and easily understood. Most people have an intuitive understanding of its basic ideas and can readily find applications for the principles in their own lives. With some training, it is possible to master the observational skills required for discerning the patterns that are displayed in the ordinary behavior of family and friends.

Each child develops his six Noological faculties in conjunction with his language and physical skills. They are activated as part of the perceptual responses to the gravitational field of the earth. They are directly correlated to movements about the three perceptual axes with each faculty operating in one of the directions on each axis. These operations create the perceptual world of thoughts, feelings and actions. This perceptual world is governed by the forces and principles of the physical world, but it is not bound by those forces.

Although entry into the perceptual world may be along any one of the six possible approaches, each individual's entry into his processing system is fixed at birth. This system acts as his basic "make sense" equipment and provides a stable base for all his thoughts, actions and feelings. He activates the use of his system by modeling parental behavior and develops it by interacting with his peers.

The Three Dimensions in Thoughts, Actions and Feelings

Entry to the perceptual world is made through one of the perceptual axes. *Concepts* or cognitive mental thoughts are accessed and stored on the Vertical Axis, *Structure* or functional processes on the Lateral Axis and *Use* or feedback loops on the Saggital Axis.

The following chart illustrates this correspondence.

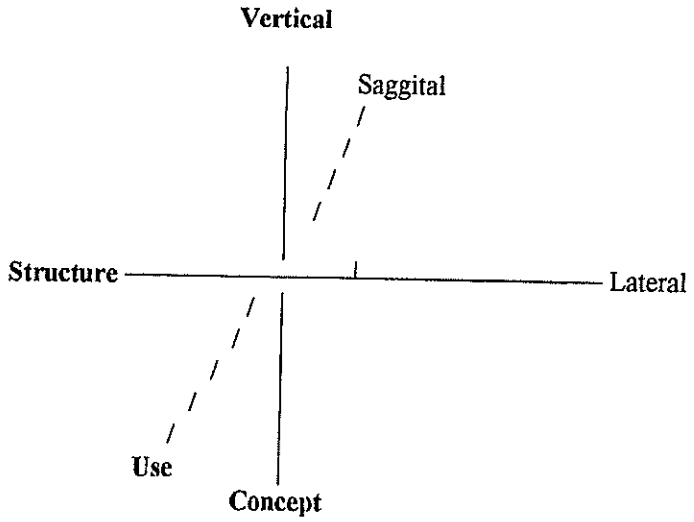


Figure 1.1

The characteristics and functions on the perceptual axes are discussed in this text. The discussions begin with the most basic ideas and grow in complexity to include the patterns of interactions between individuals with differing processing systems.

This book is designed as a introductory primer for basic Noological Theory and Principles. The dimensional properties of Noological processes, the Noological faculties and systems, interactions between systems, and Noological mental skills and their activation are covered in this text. Some applications in the field of education are also presented.

Chapter II introduces the dynamics and properties of the perceptual axes. These include the two stances created by the movement vectors, primary and complementary stances, time orientation, modeling functions and the axial metaprograms. It concludes with a discussions of the effects of misaligned axes.

Chapter III analyzes the 3^3 matrix of interactions between the child and his parents that creates the twenty seven basic mental skills. The importance of appropriate role models at stage specific periods is discussed. These are connected to the axial metaprograms discussed in Chapter II. The development of these skills are tied to the skills of the

individual as operator, manager and executive.

Chapter IV covers the six faculties associated with the perceptual axes. One pair of faculties is organized about each of the perceptual axes. The function of the faculties is described and the differences between developed and undeveloped faculties are noted.

Chapter V discusses the theoretical basis for the presence of the six Noological processing systems and the sequential nature of movement within the Noological processing systems. The primary and complementary stance functions are explained. A detailed analysis of the processes on each axis is provided for the processes for making decisions, learning, mastering, innovating and creating.

In Chapter VI, the six Noological processing systems are discussed including the shared characteristics for each pair of complementary types. The identifying characteristics for each system are described with a listing of mature and immature characteristics. Diagrams for the learning and mastery processes are provided for each type.

An analysis of the natural dynamics that exists in the interactions between the six types of people is explored in Chapter VII. Predictable areas of agreement or conflict are created by theses dynamics. The internal structure of these dynamics are explained in detail.

The connections of the faculties with physiologic and somatic processes are given in Chapter VIII. This includes a discussion of left/right reversals and the connections of "math phobia" with physiology.

The last chapter contains suggestions for future investigations and developments. Other books will explore the dynamics of the six systems in the areas of personal growth and learning, family interactions, applications in education, and in business management and training. These books will cover specific areas with detailed explanations and case histories.

Chapter II.

THE PERCEPTUAL AXES

"Up tight!"
"Bent out of shape!"
"Off kilter!"

These commonly used phrases are indicators of the dimensional and spatial qualities that are inherent in human perception. Each individual has somatic perceptions of his body that are registered mentally. These perceptions are three dimensional and have vertical, lateral and sagittal properties within them. They govern how the individual operates his body and how he uses his faculties. Dimensional indicators are present in every language and are intuitively comprehended, especially when they are accompanied by appropriate postures and gestures.

In the normal course of events, people are constantly shifting and moving their bodies throughout all their waking and sleeping moments. For earth bound creatures, these movements establish and maintain the spatial and gravitational orientations required for all mental and physical processes. These movements have a regularity both in their patterns and in their timing. Prolonged weightlessness is highly disorienting and disconcerting for all but the most highly trained astronauts.

These movements have been noticed and understood by observant people throughout the world. They create an unspoken, but universal language. In England, Warren Lamb described the movements displayed by people during ordinary conversations in his book, *Body Code.* These regular, recurrent movements were correlated with the vertical, lateral and saggital planes and with the mental activities which were identified as attention, intention and commitment. Lamb created an Action Profile for charting both the frequency and directions of these movements. The traits in the Action Profile are consistent with the Concept, Structure and Use characteristics identified in Noology.

With alignment of his physical and perceptual axes, the individual has good balance with a wide range of motion. He is comfortable within himself as he goes about his daily activities. This comfort is expressed with an ease and gracefulness that is noticed and appreciated by others.

Dynamics of Perception

Since the perceptual axes are a mental construct, their properties are not governed by the usual constraints of the physical world. Each individual has his customary entry into processing along one of the axes. This entry is expressed as a preference for movement along one axis which is already operational from the moment of birth. Alert mothers everywhere quickly recognize this preference and honor it in their interactions with their infants.

When the perceptual axes are normally aligned with the physical axes, the vertical axis is on the plumb line of the body with the other two axes intersecting the waist at right angles. The intersection of the three perceptual axes is called the perceptual center. With normal alignment, there is a balance between the two forces operating on each axis. These forces are up and down on the vertical axis, right and left on the lateral axis and front and back on the saggital axis. Balanced dynamics create ideas on the vertical or Concept axis, format operations on the lateral or Structure axis and attach meaning to actions on the saggital or Use axis.

Movements away from the perceptual center govern functions in the objective stance and movements towards the center govern functions in the subjective stance. Objective or subjective stance functions determine the primary stance when the individual considers any information from outside sources. Dynamic forces on the axes create the change from the primary stance to its complement as the individual activates his creative processes for learning, mastery and innovation.

Axial Dynamics

Two opposing forces of movement on each axis creates the dynamics which is sensed as the perceptual axes. These movements are directed either towards the body or away from the body. An individual displays his axial dynamics by the movements in various parts of his body.

Well balanced dynamic actions with a good range of motion allow the Concept, Structure and Use functions to be well developed and fully operational. He may elongate or shorten his body on the Concept axis as he considers new possibilities. He may weigh alternatives on the Structure axis by using his hands and body as a balance scale. On the Use axis, he may lean back and forth to check his needs against the demands of others. Well balanced dynamic actions with a good range of motion allow the Concept, Structure and Use functions to be well developed and fully operational.

The opposing movements on the perceptual axes are shown in the following diagram.

Opposing Movements on The Spatial Axes

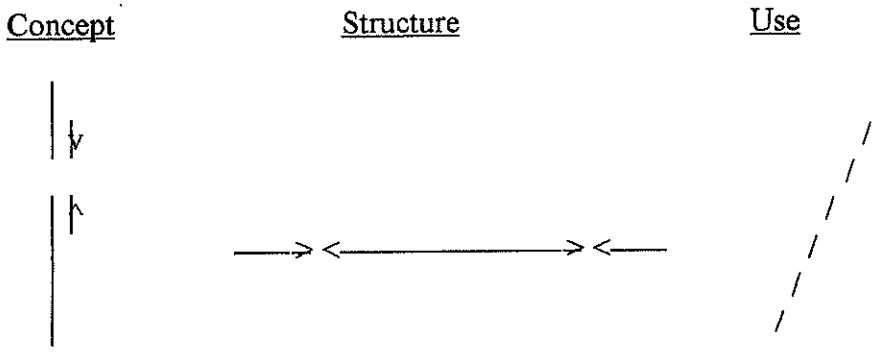


Figure 2.1

The correlations of the perceptual axes with the directions of the movement vectors are shown in the following chart.

Correlations of Perceptual Axes and Vectors

Axis	Dynamics	Vectors
Vertical	Concept	Up and Down
Lateral	Structure	Left and Right
Sagittal	Use	Front and Back

Table 2.1

Restricted dynamics are associated with a limited use of one or both of the vectors operating on that axis. The individual often employs ingenious stratagems to avoid the need for the compromised function. When Noological processes are used to balance and coordinate these functions, the ingenuity used in developing avoidance stratagems usually becomes a strong resource for that individual.

Objective and Subjective Stances

People are divided into two groups which have distinctly different focal points as they process new information. Each group assumes that its own focus or stance is a property of the data itself. This difference in stance causes a fundamental divergence in their primary orientation to the world and to each other.

One group has an objective, rational perspective or stance. The other operates from a stance that is subjective and idealistic. The focal point for objectively stanced people is located away from their perceptual centers and at a distance removed from themselves. Subjectively stanced people have their focal points within their bodies. This is usually at their perceptual centers which are normally located within the body at the intersection of their perceptual axes.

The Objective stance group is concerned with what can be done *to* organize the world in rational, logical and practical ways. They look upon the world as an arena which can be changed, directed or worked upon. In contrast, Subjective stance people are concerned about what can be done *with* the world to reflect their values. Their focus is on a response to the world that is idealistic, systemic and optimal.

Characteristics of Objective and Subjective Stances

Stance	Direction	Criteria	Focus	Organization
Objective	Outward	Standards	To act upon	Sequential
Subjective	Inward	Values	To respond to	Random

Table 2.2

The stance displayed by an individual as he interacts with others is defined as his primary stance. He uses his primary stance to assess and evaluate information that he receives from outside sources.

Primary and Complementary Stances

The primary stance governs an individual's basic attitudes and approaches to life. It defines the values he attaches to any information he receives from outside sources. His decisions about the practicalities of new information are made in the primary stance. It provides a constancy of focus for sorting and condensing the information under consideration.

As the individual considers the possibility of acting creatively upon his information, he changes from his primary stance to its complement. This change in stance provides a natural balance between his response to others and his response to his own creative needs. The complementary stance functions allows him to make clear distinctions between his appraisal of the world and his personal use of information.

With an objective primary stance, the individual looks at the world coolly, rationally and logically. As he begins to act creatively, his stance shifts to its complement, the inner directed subjective stance. During his creative processing, his attention is focused on satisfying his subjective values and expectations.

In contrast, the person with a subjective primary stance wants his world to reflect the intangible qualities of his personal values and ideals. As he activates his creative functions, he shifts to his complementary stance which allows him to realize the measurable, tangible results of the objective stance.

This shift between the primary and complementary stances provides each individual with the means to balance the demands of his outer world with his need to satisfy his own creativity.

PROPERTIES

Three significant properties or traits of the perceptual axes have been identified. These are the properties of time orientation, modeling functions and axial metaprograms. They

govern the basic mental skills which are activated during the development of the child from birth to maturity. Alignment of the perceptual axes allows the properties to be properly reflected in the development of the mental skills.

Time Orientation

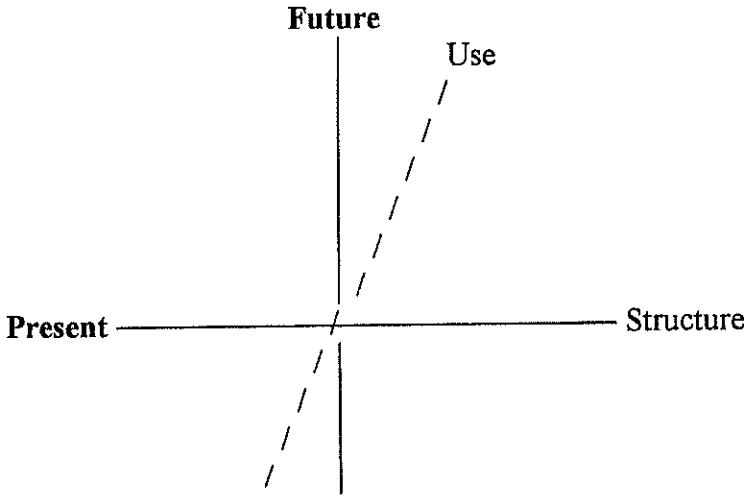
A prolonged sense of time is one of the distinguishing characteristics of the human race. Although other animals have memories of past events as they relate to present or future conditions, this sense is restricted to direct experience. Eagles and lions demonstrate this ability in the hunting skills they teach to their young. Their prey, in turn, teach survival skills to their offspring. Both predator and prey teach the accumulated wisdom of their flock, herd or pride through direct examples of specific behaviors.

Every human cultural group has its accumulated history that is a depository of its values and traditions. Myths and legends provide the basis for their moral, philosophical and religious beliefs. These beliefs are founded upon a concept of a time that started before the presence of man upon earth and a projection into a future that lies beyond the end of time. This sense of time underlies all human considerations and forms a broad reference frame for all our thoughts and actions. Even the devout Muslim, who believes that only God can know the future, has a concept of the future.

The correlation of the perceptual and spatial axes with the concept of time was made by Michael M. Miller of San Diego. He found that past, present and future considerations are made on the saggital, lateral and vertical axes, respectively. When the perceptual axes are normally aligned, the individual has a balanced and orderly consideration of time and timing.

The following diagram illustrates the correlation of time with the perceptual axes.

Time Orientation and the Perceptual Axes



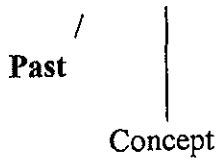


Figure 2.2

Linguistic patterns and physical gestures reveal this directional relationship to time. The location of future events is usually in the upward and forward positions. Common locations for past events are behind the body or off to one side, while the present is represented within one's own body.

When a person speaks of his hopes and aspirations, he might say, "I'm shooting for the moon!" or "Far out!" In ancient biblical times, the psalmist, David, declared that he lifted his eyes to the hills when he needed help. This association of the upward and forward directions with inspiration and hope is found throughout the world.

The past is usually out of the immediate visual field and is put aside or behind one's body. The downward direction can be associated with the past, but it is also associated with contemplation and a search for workable solutions. However, a person who habitually looks down with a mournful expression and slumped posture fits the description of someone who is "down in the dumps." In contrast, a person who puts his past aside or behind him, displays an upright posture and open countenance.

Horizontal gestures directed towards the body, often accompany an individual's declarations about his present state. The statement, "I'm the best!", may be emphasized by the thumbs pointed at one's body. Other indicators of present time considerations are side to side movements of the shoulders and hips.

With good coordination between his perceptual axes and his orientation to time, the individual displays a coherence and congruence between his thoughts and actions.

Modeling Functions

Within the human mind, memories are encoded and stored as a complex assortment of impressions and associations. Many investigators have studied the coding, storage and retrieval processes of the mind. The mathematician, G. Polya, identified the use of generalization, specialization and analogy in problem solving. Noam Chomsky examined the internal structure of language as a means of accessing all the information that is condensed into a simple statement. He found that this internal structure is a multilayered and interconnected web of memories and meanings. Chomsky's findings laid the foundations for modern linguistic studies.

During their development of NeuroLinguistic Programming, Richard Bandler and John Grinder identified the modeling processes used in the storage and recall of memories.

They called these process deletion, distortion and generalization. They looked upon these processes as limiting or restricting barriers which compromise the accurate recall of an event.

In contrast to the limiting definitions of NeuroLinguistic Programming, Noology defines the modeling functions in terms of their functional roles within the processing sequence. The Noological modeling functions are identified as the abilities to select, connect and format data. Each modeling function is used during all natural thought processes. The exact sequencing of the modeling functions is determined by the individual's processing system. This sequence governs how the individual condenses and manages information in useful and creative ways. The processing systems are discussed in Chapters 5 and 6.

The definitions for the modeling functions are given in the following table.

Definitions for
Noological Modeling Functions

select	to single out an object for consideration.
connect	to form comparisons and contrasts for meaning.
format	to create a workable unit from diverse objects.

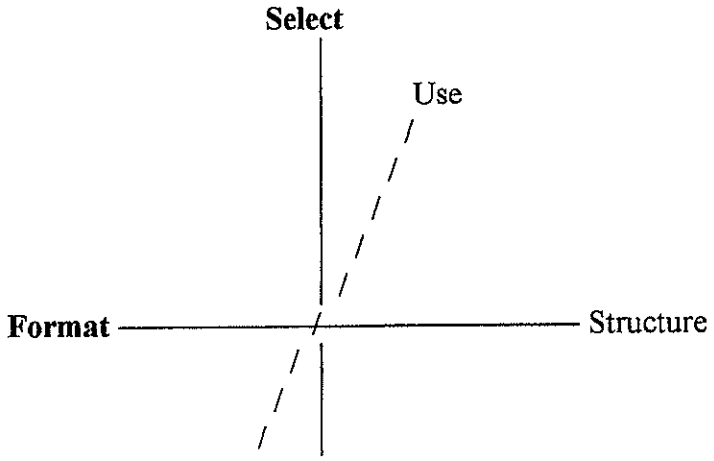
Table 2.4

The modeling functions are correlated with the dynamics on the processing axes in the following manner:

Vertical dynamics create *Concepts* by selecting.
Lateral dynamics form *Structures* by formatting.
Sagittal dynamics monitor *Use* by connecting.

These correlations are shown in the following diagram.

Modeling Processes and the Perceptual Axes



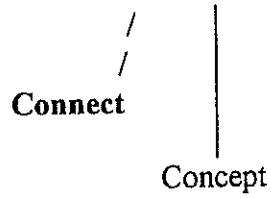


Figure 2.3

The modeling processes are also correlated with the time considerations associated with the perceptual axes. The following chart shows the correlations of the perceptual axes with time orientations and the modeling functions.

Time Orientation, Modeling Functions and The Physical and Perceptual Axes

Physical Axis	Perceptual Axis	Time	Modeling Function
Vertical	Concept	Future	Select
Lateral	Structure	Present	Format
Saggital	Use	Past	Connect

Table 2.5

These correlations are revealed in the postures and gestures that accompany verbal expressions.

AXIAL METAPROGRAMS

The connections between language and behavior are discernible in the language patterns people use to describe their thoughts, feelings and actions. These language patterns are called metaprograms. John C. Lilly defined a metaprogram as the internalized set of rules that governs any programmer as he sets up his programs or behaviors. He noted that metaprograms are set very early in life and are extremely resistant to change. Detailed investigation of metaprograms was pioneered by Leslie Cameron-Bandler. The metaprograms with the broadest application in the workplace were then formatted into a language profile by Rodger Bailey and Ross Stewart. A full discussion of their language profile is presented by Shelle Rose Charvet in her book, *Words That Change Minds.*

Metaprogram patterns are indicators for how a person sorts and organizes information, codes his memories and directs his behavior. Many people favor certain metaprograms over others as they describe their experiences and express their opinions. Some people are able to shift comfortably between the paired patterns.

Three of the metaprogram patterns are stored and accessed as polar opposites on the perceptual axes. They are referred to collectively as the axial metaprograms. A person uses the Options and Procedures metaprograms on the lateral or Structure axis as he describes how he operates. Sameness and Differences patterns on the saggital or Use axis are used to describe his managerial skills. General and Specific metaprograms on the vertical or Concept axis are used to describe how he uses his executive skills.

The correlations of the dynamics on the perceptual axes with axial metaprograms are shown in the following chart.

Correlations of the Axial Metaprograms and the Perceptual Axes

Perceptual Axes		Vectors	Axial Metaprograms
Lateral	Structure	Left - Right	Options - Procedures
Sagittal	Use	Front - Back	Sameness - Difference
Vertical	Concept	Up - Down	General - Specific

Table 2.6

Bailey and Stewart found that the frequency distributions for the metaprogram patterns in the workplace do not form normal distribution patterns. Some distributions formed bimodal curves with either/or distribution patterns or curves that are skewed to left or right. Some formed a bell shaped curve, but even these were flattened on the top with only sixty percent of the population within the normal range of distribution instead of the 96 to 98 percent ordinarily found within two standard deviations of the mean. They found that the ability to use both patterns was usually restricted to highly specialize circumstances.

Charvet shows the following distribution in the workplace for the three pairs of axial metaprogram patterns. These figures are based on the research by Bailey and Stewart.

Distribution of Axial Metaprograms in the Workplace

		Equally	
Options		Options & Procedures	Procedures
40%		20%	40%
Sameness		Sameness	
Only	With Exception	And Difference	Difference
5%	65%	10%	20%
		Equally	

General	General & Specific	Specific
60%	25%	15%

Table 2.7

Although these distributions are generally found in the workplace, people often use very different metaprogram patterns as they talk about their private lives. They may show a strong preference for certain patterns over others. Many people lack the flexibility to move easily between the paired metaprograms as they describe personal situations. Flexibility in the use of the metaprogram patterns is tied directly to the development of the basic mental skills. These skills are formed in the presence of appropriate role models from infancy to adolescence.

In addition to their correlations with the perceptual axes, the metaprograms themselves have dimensional properties within them. They are indicators of the underlying dimensional nature of the basic mental skills. A complete discussion of the mental skills is presented in Chapter 3. Noological processes have been developed for the activation and development of the skills reflected in each axial metaprogram. The somatic nature of processing has been incorporated into the activation process.

Structure Axis
Options and Procedures

The linguistic pattern of the Options metaprogram is usually a simple declaration, such as, "I liked it.", or "I did it because it was a good opportunity." Indicators of Procedural metaprograms usually list the sequence of steps involved in a procedure. The individual may say, "First, I do this, and then I do that.", or he may ask, "What's the right way to do this?" A person uses the Options and Procedures metaprograms to describe how he operates while performing his tasks.

To learn new skills, the operator first follows established procedures. To refine and perfect those skills, he then uses a combination of options and procedures. When he wants to find completely new solutions for a problem, he shifts his attention to his options. He draws on the skills he developed in infancy as he performs as the older child and adult.

Use Axis
Sameness and Difference

Sameness and difference are the linguistic indicators of the similarities and contrasts that are used to build the analogies and inferences which interpret and give meaning to the events in one's life. These are located on the Use or saggital axis. Analogies are formed by combining similar elements until an overriding concept or principle becomes apparent. Inferences are formed by linking different elements into a sequence to form opinions about causal relationships.

"She is a good person.", and "War is hell!" are examples of comparisons equating one thing with another. Examples of inferences are "He's out to get me." and "The Silent Language".

The skills in forming and factoring analogies and inferences are used in the managerial capacity of the workplace. The manager functions as a bridge between the operator and the executive. The manager allocates personnel to form functional networks and creates efficient conduits for exchanging and updating information. He monitors them on an ongoing basis, refining and updating them as needed. He also monitors and utilizes the existing networks and conduits within the organization.

Concept Axis
General and Specific

The General and Specific metaprograms indicate the particular point of view assumed by the speaker. The general metaprogram pattern indicates that the individual is looking at the big picture and its major features and largest elements. The linguistic structure contains only a few general statements and no specific references. In contrast, the specific metaprogram lists many items, as a narrative of specific events or as a random listing of items.

The title of Robert Paul Smith's book about his boyhood experiences perfectly illustrates general language. It is entitled, *"Where Did You Go?" "Out." "What Did You Do?" "Nothing."* Smith's book is a charming account of his childhood, filled with his memories of the wonders of exploration and the thrill of discovery. He uses the detail linguistic pattern to narrate the individual events of his experiences as a young boy.

The skills displayed in the use of both general and specific language are used in executive functions. The executive functions are responsible for overseeing the entire operation of an organization. They indicate shifts between the three hierarchical levels of operator, manager and executive on the vertical or Concept axis.

In athletics, the player plays the game, the manager coaches the player and the athletic director sets policy and oversees both managers and players. Employees, managers and executives fill the three positions in the business world. The corresponding positions in the traditional family model are the child, mother and father.

These three levels form a hierarchical organization with distinct functions in each position. Each position is fully operational when the skills of that position are learned and mastered. In turn, the hierarchy is functional when the duties of each position are clearly defined and there are good communication lines within the hierarchy. The executive functions set the purpose and goals for an organization, define the operational parameters for each of the positions within its hierarchy and utilize the communication lines and functional networks within the hierarchy.

Effects of Misalignments

Optimal positioning for the perceptual axes is coincident with the physical axes. Some people have a mismatch between their perception and their physicality. This lack of coordination is reflected in both their mental and physical mobility. They often experience difficulties with the normal operations of the functions on a misaligned axis. This, in turn, may compromise the operations on the other two axes.

The most commonly encountered types of misalignments are tilting, displacement or folding. Folding is commonly found among naturally left sided people who operate as right handed individuals. Among the less commonly encountered misalignments are bending or breaking. Various combinations of these misalignments are also encountered.

A *tilted* axis compromises the dynamics between the two functions operating on that axis. The two forces that create the dynamics on that axis are not well balanced. As a result, functionality is usually limited to highly specialized circumstances. Full access to the dynamics on the other axes may also be compromised. An axis may become tilted when the individual suffers a fall or a blow to the body or if he habitually maneuvers his body into awkward positions to ward off real or perceived threats.

When an axis is *displaced* or offset from its normal position, the individual has difficulty accessing the functions governed by that axis. An offset may result from physical injury or from a child's attempts to protect himself from the continuous pattern of aggressive behavior from another person. The displaced axis creates a barrier for protecting himself from the emotional assaults of the aggressive person.

A *polar reversal* occurs when an axis is rotated about its center and shifts each function to its opposite polarity. A complete reversal is the extreme form of tilting and can be the result of a severe strain to the system through mental, physical or emotional trauma. The dynamics on that axis are reversed and the normal checks and balances of that axis cannot be performed.

A *folded* axis shifts a function to its opposite polarity, superimposing that function upon its normally positioned counterpart. This often occurs in naturally left sided individuals who model and adopt the responses of a predominantly right handed world. The lateral axis is folded with its left half superimposed upon the right half. Instead of eidetic memory being stored in its appropriate hemisphere, it is shifted to the opposite hemisphere. The creative function then alters all memories as they are accessed and the ability for accurate recall is compromised. The folding also affects the ability to separate all of the other objective and subjective functions.

An axis may also be *bent* or *broken*. A bent axis is continuous, while a broken axis is not. The bent axis may start in its normal orientation, divert away from the normal, and return back to its normal orientation. The broken axis may simply be discontinuous. In rare

cases one or both of the broken sections may also be displaced.

Each of these axial misalignments can be gently and ecologically restored by the application of Noological processes. Determination of the misalignment requires a combined knowledge of the processing sequence of that individual and an awareness of the particular past events that affected the alignment. Ecological considerations require the activation of dormant abilities before an axis can be safely restored to its normal position.

Chapter III.

NOOLOGICAL MENTAL SKILLS

Homo sapiens. Tool maker, story teller? Sooth sayer, lion slayer? Ruthless, kind? Sometimes? Always? Never? These are but a few of the attributes of the human race which form an ever shifting kaleidoscope of abilities, talents and traits. The varieties are endless. The keys to this variety are the abilities to image and to learn.

People use their imaginations to create something that lies beyond their direct experience. The anthropologist, William T. Hall, elicited a wide range of abilities in the use of different kinds of imagery among the people that he studied. Some used various types of visual and spatial imagery. Others used auditory abilities to hear words or sounds. Still other used their somatic senses to create the movements of dance. The specific type of imagery is individual to each person, yet each relies on the development of a wide range of mental skills to produce a finished product out of his imagination.

The ability to learn from watching others is called modeling. There are two aspects to modeling behavior. In one aspect, the instructor models his skills *for* his student. The first aspect is used by both parents and teachers as they instruct a child in the use of tools, in the refinements of language, in the development of social skills, and in the ceremonies and rituals of their society. Instruction is given both by demonstration and explanation. The student must have attained a minimal level of proficiency in both linguistic and manipulative skills to benefit from their instructions.

In the other aspect of modeling, the skill is modeled *by* the student from the behavior of others. It is this ability that enables the infant to master the intricacies of language and the complex motor skills of upright posture. The infant observes and listens to all the activities about him. From these observations, he creates a model in his mind that he then emulates. He refines and hones these skills until he is satisfied with the results. Other people may have difficulty in detecting how or when the child is engaged in this modeling process, but they can easily see the results in his actions and in his use of language.

In addition to modeling language and upright posture, the child models the mental skills used by his parents, family and friends. The child creates his initial models for the mental skills from his interactions with his parents. He then applies and tests them during play and group activities with his friends.

The mental skills are stored and accessed on the three perceptual axes. They are activated and developed in an orderly manner during childhood and adolescence. Operational skills which are activated during infancy and early childhood are stored and accessed on the Structure axis. Managerial skills are activated and developed between the early childhood years and puberty. They are accessed and stored on the Use axis. Executive skills are stored on the Concept axis after they are activated and developed during adolescence.

The dimensional aspect to awareness is incorporated into many diverse and different

religious beliefs. Father, Son and Holy Ghost of the Christians have their counterparts in the High, Middle and Low Self of the ancient Hawaiian Huna beliefs. Even polytheistic beliefs have a three dimensional aspect because the deities can be separated into the masculine and feminine gods acting upon the human soul. The common thread uniting these beliefs with Noology is the correlation of the masculine with evaluating and choosing on the vertical axis, the feminine with accepting and nurturing on the saggital axis, and the child or self with doing and discovering on the lateral axis. The challenge for each individual is to move easily from one role to another. When these shift are made easily, ordinary tasks can assume playful proportions.

One of the unique features of *homo sapiens* is that the adults of the species continues to play as adults. With the possible exception of cetaceans, play is strictly the province of young or immature mammals. Mature adults of other species are concerned with the serious concerns of reproduction and survival. Mature humans will play softball on a warm summer afternoon, reschedule meetings to play a round of golf or to pitch horseshoes at a peg stuck in the ground. None of these activities requires an audience, but friends and relatives will often gather to cheer on the hardy athletes. Play seems to be a fundamental requirement for the sound physical and mental health for young and old alike.

The ability to play, to pretend and to suppose lies at the core of all creative endeavors. Only those with a full range of mental skills can take an idea and give it life. Some create poetry or songs and others invent telescopes or light bulbs. The range of human creativity is boundless. Only the most skilled continue to play and to learn as adults.

Theory

Twenty seven basic Noological mental skills are formed by a 3^3 matrix about the perceptual axes. These skills form the essential components of the six Noological faculties which are described in Chapter 4. It is essential for each skill to be activated and mastered before the faculties are fully operational.

The mental skills are played out in both the masculine quantifying and feminine nurturing roles. Recursive processes about the Concept and Use Axes create thirteen additional skills which form the 42 basic operations of thinking. Their dimensional properties are reflected in language as axial metaprograms and in behavior as postural movements. They are formulated in the spaces surrounding the physical body and are clustered and stored about the three perceptual axes.

The skills are activated and developed during stage specific periods of childhood and adolescence as the child observes and interacts with appropriate role models. Parents act as the primary role models for activating each of the skills. Interactions with siblings and playmates act as the feedback mechanism for refining and expanding the skills initially modeled from parents.

The child successfully models a skill if two conditions are satisfied. First, his parents must demonstrate the skill in their interactions with each other and with him. Second, he must

be able to detect the use of the skill. If only one of these conditions is met, the skill remains dormant and inactive. If both of these conditions are met, the child can activate the skill. If his parents did not demonstrate a particular skill, the child can model it from his peers or from his teachers, but his use of that skill will be confined to the context in which it was learned. He will have difficulty generalizing its use into other situations.

There are four stages for modeling and developing the mental skills. These are the years from birth to age 3, age 3 to the onset of puberty, adolescence and, lastly, adulthood. The child develops options and procedures as an infant and toddler, creates analogies and inferences during childhood and learns to shift perceptual positions from overview to detail as an adolescent.

A match in the processing systems between a child and his model provides the optimal learning situation for the child. A mismatch provides an incomplete model for the child and he will usually experience varying degrees of difficulty in learning the skill. A complete discussion of the dynamics in the interactions between processing systems is found in Chapter 7 of this text.

As an *infant and toddler*, the child explores options and develops procedures as he learns language and motor skills. During this stage he establishes his criteria for how he knows what he likes or does not like. The strongest role model at this stage is the same gender parent.

The *child* explores the boundaries and rules of play from age 3 to puberty. He uses feedback from his playmates to develop the skills he originally modeled from his parents. He learns to adjust his behavior as he takes in and incorporates additional information from others. He develops the abilities to form analogies and to make inferences as he plays with other children. He learns to use information channels and functional networks. He develops his ability to persuade and influence other people. Children of the same gender provide the optimal playground for developing these skills.

The *adolescent* learns the ethical rules and guidelines for formal and informal group activities after the onset of puberty. He uses the skills originally modeled from his parents to develop leadership skills among his peers. These include setting goals, defining and assigning tasks, monitoring performance and charting progress. With these skills he learns to function in organizational hierarchies. Older teenagers in leadership roles act as role models for specific applications in group activities.

The *adult* relies on a mentor to explore the spiritual values which add depth and meaning to his life. A good mentor can teach him to examine and refine his criteria for judging the rightness or wrongness of his experience and to adjust his parameters for measuring accomplishment.

The following chart summarizes the correlations of the four stages for learning with the role models and functional skills.

The Four Stages for Activating Mental Skills

Stage	Role Model	Function	Skill
Infancy (0-3)	Same gender parent	Criteria	Set personal criteria
Childhood	Playmate	Work Rules	Define measurable parameters
Adolescence	Leader	Ethics	Set guidelines
Maturity	Mentor	Values	Assimilate new information

Table 3.1

Each of the mental skills must be activated and developed in both the objective and subjective stances. Objective stance activation governs skill development in the masculine, quantifying role. Subjective stance activation develops the feminine, qualitative role in the application of the skills.

Parental roles are usually played out at one end of the spectrum or the other. The objective stance, quantitative application may be demonstrated as harsh criticisms or as useful critiques. Subjective stance, qualitative application may be demonstrated as accepting and managing within a given set of circumstances or as whining and self pity. The child may use the role model as he experienced it or he may elect to adapt and modify it for his own circumstances. In most cases, he will find himself using the skill as it was demonstrated by his parents.

The family role models for mental skill development are correlated with traditional gender roles and with the functional roles in the business model. Father or masculine role models are associated with the executive function, mother or feminine with the managerial function and child or self with the role of the operator. They are also associated with the perceptual axes and their properties. Father is associated with the properties of the Concept axis, mother with Use axis properties and child with Structure axis properties.

The linguistic indicators for the various mental skills can be found in the axial metaprogram patterns used by an individual as he describes his experience. Options and Procedure metaprogram patterns located on the Structure axis are associated with the role of the operator. Sameness and Difference metaprograms on the Use axis are associated with the managerial capacity. General and Specific patterns on the Concept axis are used in the executive capacity.

The following chart summarizes the relationship of the mental skills with the perceptual axes and their properties.

Basic Mental Skills

Traditional Roles			Physical Axis	Perceptual Axis	Modeling Function	Axial Metaprograms	Time Reference
Male	Father	Executive	Vertical	Concept	Select	General/Specific	Future
Female	Mother	Manager	Sagittal	Use	Connect	Sameness/Difference	Past
Self	Child	Operator	Lateral	Structure	Format	Options/Procedures	Present

People demonstrate a wide range of skills in the use of the various metaprogram patterns. Even in the frequency distributions for the workplace cited by Charvet, the flexibility indicated in the use of paired metaprogram patterns is very often restricted to certain highly skilled situations. The metaprogram patterns used by people to describe their personal aspirations and desires is often very different from the metaprogram patterns they use in the workplace. The ability to use both patterns equally may be compromised or there may be a switch from one polarity to the other. These differences are a reflection of the fact that some of the mental skills may be inactive or only partially activated. Most adults have activated only 60 to 70 percent of their potential skills. Even the most highly effective people have activated and developed a maximum of 75 to 80 percent of their skills by the age of physical maturity.

Noological techniques have been developed for the activation, development and refinement of all the mental skills. They involve both cognitive and somatic learning processes. When the skills are activated and developed, the individual spontaneously uses both metaprogram patterns on an axis with equal facility.

Structure Axis - Criteria

Stage One
Infancy and Early Childhood
Operational Skills

When an infant has the freedom to explore and discover, he develops the abilities to postulate simple cause and effect relationships, to evaluate the effectiveness of his actions and to persevere until he has mastered a task. He initially discovers direct cause and effect relationships because his random movements arouse his curiosity. When he produces an effect that intrigues him, he may concentrate his efforts on duplicating that effect. He may also try to duplicate an effect or movement that he has observed in others. Once he discovers how to duplicate an effect, he then establishes a procedure for consistently reproducing that effect.

Although the nature of his explorations is somatic, the results are mentally registered. These impressions form the basis for his personal criteria for judging the rightness or wrongness of his own performance. He learns to make fine distinctions between the results he likes and those he dislikes.

To learn new skills, the operator usually follows established procedures. To refine and perfect those skills, he uses a combination of options and procedures. When he wants to find completely new solutions for a problem, he shifts his attention to the options available to him. The operator draws on the skills he developed in infancy as he performs as the older child and adult.

Axial metaprogram indicators for the ability to generate Options are simple declarative

sentences. To answer questions about motive, the Options metaprogram will be a simple answer, such as, "I felt that it is the best one for me." Procedural metaprogram answers will be a step by step narrative of a sequence of events. "When I came home my mother told me about the job, so I went down and applied for it."

The infant and young toddler models Stage One mental skills from birth to age 3. The nine skills are activated in simple direct communication, one on one, between himself and his parents. The results of these communications is somatically registered on the lateral or Structure axis. They are expressed linguistically as Options and Procedures metaprograms.

The communication lines for criteria development in infancy and early childhood are shown in the following chart.

Communication Lines
for
Stage One Skills

Father to Mother	Mother to Father	Child to Father
Father to Child	Mother to Child	Child to Mother
Father to himself	Mother to herself	Child to himself

Table 3.4

With a strong internal sense for recognizing the outcomes he likes and for discerning the differences between those he likes and dislikes, the infant and toddler develops self reliance and resourcefulness. He can trust his own judgment in the choices and decisions he makes, and can continue his growth and development beyond his adolescent years. Even as an elderly person, he can continue to learn, to explore new activities and to develop new interests and opportunities.

Noological processes have been developed to teach an individual to explore, evaluate and achieve mastery over the various skills he needs in his life. The somatic nature of discovery and exploration is utilized for teaching the individual to explore new options and to develop practical procedures.

Use Axis - Parameters

Stage Two
Childhood
Managerial Skills

After the child has mastered the syntax and vocabulary of language, he sets about the task of understanding the properties of the physical world and of developing his social skills. He uses his abilities to notice the similarities in elements and combines them into categories. He also uses his abilities to notice differences among the components within a

category and develops his ability to break down large blocks of information into smaller units. He also learns to create games and to play within the rules of a game with his siblings and playmates. He expresses his ideas to his playmates, gets their feedback and modifies his ideas to include new data. He develops his abilities to interpret the intentions of his playmates and to influence or negotiate a compromise with them.

He uses his language skills to elicit the information he needs to discern and create operating networks of competent people and to locate and establish the conduits for exchanging information. He forms opinions about the behavior of other people and about the nature of the world about him. He learns to detect the subtle and indirect cause and effect relationships that influence the actions of others. He learns to use existing communication lines for disseminating information or for influencing others.

Stage Two mental skills are activated during the childhood years from ages 3 to 12. The skills are modeled initially in the interactions of the child with his parents. They are reinforced and expanded during play with his siblings and playmates. The recursive action of the mental skills on the Saggital Axis is reflected in the number of these skills. There are nine direct line skills and 12 skills formed by recursive actions about the saggital axis.

The communication lines for developing the abilities to notice Sameness and Differences are shown in the following chart.

Communication Lines
for
Stage Two Skills

Father of (Mother to Father)	Mother of (Father to Mother)
Father of (Mother to Child)	Mother of (Father to Child)
Father of (Mother to Mother)	Mother of (Father to Father)
Father of (Child to Mother)	Mother of (Child to Father)
Father of (Child to Father)	Mother of (Child to Mother)
Father of (Child to Child)	Mother of (Child to Child)

Child of (Father to Mother)
Child of (Father to Child)
Child of (Father to Father)

Child of (Mother to Father)
Child of (Mother to Child)
Child of (Mother to Mother)

(Father and Mother) to Child
(Father and Mother and Child) to Child
Child to (Father and Mother)

Table 3.5

Stage Two skills are used in the managerial capacity to determine the competence of

others, to notice which ideas are effectively executed, to influence and direct others and to obtain and disseminate information. These processes are the intermediate steps between General and Specific which are used for implementing executive directives and for managing all activities. These skills are the necessary components in the building and factoring of the analogies and inferences which are critical to abstract thinking. This information is stored and accessed on the saggital or Use axis

Processes have been developed to teach an individual to build the analogies and inferences used in abstract thinking and to factor a generality into its component parts.

Concept Axis - Ethical Values

Stage Three
Adolescence
Executive Skills

The young adolescent develops and refines the executive skills he will need to direct his activities as a responsible adult. He applies and tests his leadership skills with his peers and their leaders as he moves through the various hierarchical levels of group activities. He may participate in one or more groups which may include school and church activities, student government, social clubs or athletics. He establishes his ethical values during this stage of development.

Executive functions set the purpose and goals for an individual or organization, monitor progress towards a goal, define and assign functional responsibilities, utilize existing communication channels and activate functional networks. The metaprogram indicator of good executive function is the ability to shift easily from General to Specific.

Older adolescents and group leaders act as the role models for refining the Stage Three skills originally activated in the interactions between the adolescent and his parents. The communication lines for establishing the executive function of State Three Skills are shown in the following chart.

Communication Lines
for
Stage Three Skills

Father through Mother to Child	Mother through Father to Child
Father through Child to Mother	Mother through Child to Father
Father to himself about himself	Mother to herself about herself
Father about himself to himself	Mother about herself to herself

Child through Father to Mother
Child through Mother to Father
Child to himself about himself
Child about himself to himself

Table 3.6

The mark of a good executive is his facility and skill in shifting roles within a hierarchical

structure. Bailey and Stewart found that the chief executive officer of the average corporation must shift his focus every fifteen minutes during the course of a routine day. With each matter before him, he must decide upon the root of the problem within the corporate structure.

NOOLOGICAL MENTAL SKILLS

Reconsideration - Spiritual Growth

Stage Four
Maturity

The mature adult continues to grow with a trusted mentor as his role model. His ethical value system expands into a spiritual value system. With the development of a full range of mental skills, he can reconsider old issues, gain fresh insight into the nature of his world and reset his criteria for evaluating the events in his life. He is able to entertain new ideas and to explore those things which intrigue him.

Effects of Inactive or Undeveloped Skills

When all the mental skills are not activated and developed at the appropriate ages, the individual encounters difficulties in performing specific tasks, managing his affairs or achieving his hopes and aspirations. Most people learn to activate dormant skills for specific applications by modeling teachers or mentors. They may become very proficient in social situations or in the workplace, but often have difficulty in managing their personal affairs.

If a skill has not been activated, the individual usually avoids a situation which call for its use. He may devise ingenious strategies for avoidance or compensation. A commonly employed strategy is to rely on others for guidance or support. After a skill has been activated and developed, the ingenuity used to devise the compensating strategy becomes a resource for applications in other areas.

At all levels of education, students are called upon to use their skills as operator, manager and executive. During the early grades of elementary school, the student uses his operational skills to follow the procedures taught by the teacher and to improvise his own solutions for unfamiliar situations. Without good options and procedural skills, he will not develop a sense of confidence in his ability to take and pass the tests in basic reading, writing and arithmetic. This will be reflected as difficulty with spelling, basic reading, writing and arithmetical skills.

By the time he reaches the secondary school level, the student is called upon to use his managerial abilities to form the analogies and to factor the inferences needed for his

studies in basic mathematics, science, analytical reading and expository writing. Without good stage two skills, he will struggle to complete the preparatory courses required for admission to college.

Students who are restricted to the operational level with minimal managerial skills encounter great difficulty at the college level. Higher education requires the student to operate and to move comfortably between these two levels of skill. The student must be able to track several operations simultaneously. In addition to operational and managerial skills, good executive skills are needed for independent studies. Graduate students at the masters degree level require well developed managerial skills. The doctoral student is required to have well developed executive abilities to conduct his research and to complete his thesis requirements. Without the executive abilities, he will have difficulty in selecting his research topic and in defining the scope and parameters of his thesis presentation.

The ability to initiate and maintain discipline is required for a healthy lifestyle. Many people cannot manage their diet and exercise programs as a normal course of events. For most, it is a hit or miss proposition because executive decisions are not directed and managed in a productive manner.

This situation is often repeated in the workplace. Modern corporations are now called upon to reinvent themselves to meet the demands of the current marketplace. Very few are able to accomplish this task without bringing in an outsider to dictate drastic changes. The executive faculties that define functional roles must be called upon to create a new organization with vastly different systems and strategies. Good managerial skills alone cannot reinvent a corporation because management can function only within an existing organizational structure.

Chapter IV.

NOOLOGICAL FACULTIES

Wisdom, compassion and resourcefulness seem to be the most difficult of human attributes to develop. Most of the stories in the media focus on foolishness, greed and frustration as the root of human problems. The words, *human* and *frailty,* are usually bound together in some inextricable fashion.

The Gods and Goddesses of most polytheistic religions embody a combination of super-natural powers and human weaknesses. Ordinary people can identify with these Deities because they are linked by their mutual strengths and weaknesses. These attributes have influenced our language and imagery because they capture the universal themes of humanity. Legendary heroes added their spirit of daring and initiative to the vast stores of ancient mythic tales. Joseph Campbell cited the need for new heroic figures to inspire modern young people. He recognized the Star Wars Trilogy as a modern setting for the old mythologies. Jean Shinoda Bolen calls for a stronger identification of contemporary women with the Greek Goddesses because she feels that they embody a full range of feminine strengths and challenges.

Polytheistic Gods present the dual challenge of identifying and balancing the polarities presented by their powers. Some powers, such as good and evil, are easily identified but are difficult to put into action. Other polarities are more difficult to identify , but are more easily executed. Alice E. Bailey, who suggested that wisdom is the polar opposite of procrastination, believed that it is only wisdom that keeps a person with insufficient information from acting rashly. The faithful believer is challenged to find that point of balance between each set of polarities and to deal with the paradox that each midpoint acts as a polar opposite to another quality.

In contrast, weakness and folly are accepted as permanent human conditions by most Judeo-Christian religions. In many faiths, man is regarded as powerless to save himself, and redemption is granted through the grace of a benevolent God. Other religions teach that redemption is irrelevant and only the believer's sincere and tenacious efforts to follow the tenets of his religion are important. These beliefs put wisdom and power beyond the reach of the ordinary mortal and into the exclusive province of the Deity. The challenge to the imperfect mortal is to recognize the basic humanity in others and to treat them with the same consideration that he receives from his Creator.

An examination of the internal structure of beliefs reveals their dimensional properties. Many religions have a strong vertical component to them. Gods and angelic beings are believed to reside on mountain tops or other high places. Inspiration often descends from a cloud or high mountain and man transcends his human limitation by being elevated to a higher level of existence. Other beliefs with strong lateral emphasis stress the importance of adhering to a tried and true path or working within a natural system. Still others with a saggital direction believe that avoiding or influencing nature or people is of primary import.

The outer limits for acceptable behavior were defined for the Israelites in the Ten Commandments which Moses brought down from the mountain top. Within these broad extremes, specific details were then spelled out in the Torah. These factors identify the Hebrew faith as a vertical or Concept belief. Although Christianity has Jewish roots, its primary direction is Saggital because its core belief is the extension of God's love to one's fellow man. Islam is a Structural belief because it is a sequentially designed application of Jewish law. The Chinese Tao is also a Structural philosophy of life specifying a path to be followed.

English common law has a vertical orientation and its derivative, the Constitution of the United States, simply lays down broad principles as the basis for government. Other forms of government have their own dimensional properties. When rival factions of an emerging nation have difficulties in founding a new government, the differences in primary orientation are most often at fault. When people learn to appreciate the differences and to find mutual equivalents, they can begin to develop mutually satisfying forms of governing a territory.

Most of these philosophies or religions focus their attention in one of the directions of the Perceptual axes. This direction of attention activates the operation of one of the six Noological faculties. The faculties use the senses for gathering the information they process. Like the senses , the faculty must be developed and refined. Unlike the senses which are operative at birth, the faculties lie dormant until they are individually activated by specific types of experiences.

There is strong evidence to suggest that the senses have continued their development during the period of recorded history. In 1901, Dr. Richard Maurice Burke wrote in his book, *Cosmic Consciousness*, that the perception of colors has expanded from the time of the ancient Greeks. Ancient Greek literature records the perception of only two colors, namely, red and black. Even though they were surrounded by the Aegean Sea, they only described it as black. Apparently they did not perceive the deep blue that impresses modern travelers to Greece. Burke also cites the confusion of blue and green in the Chinese language.

During the years preceding World War II, the Japanese used the single word, *aoi*, to describe both blue and green. In his book, *The Japanese Language*, Haruhiko Kindaichi notes that many words were added to the Japanese language in the post war years to differentiate between the shades of blues and greens.

The frequency of color blindness is reported to decreasing during this century. Many more recruits were rejected for color blindness in the first World War than in subsequent wars. Today, it is not uncommon for the grandsons of color blind men to have better perception of color than their grandfathers. //source//?

Burke also reports that the ability to discern fragrance is also becoming increasingly common. Fragrances have more complexity than scent. Perfumers have responded to this

increasing discernment by creating more diverse kinds of fragrances for men and women alike.

In recent years, there has been an explosion of the culinary arts in the United States and Canada. Trained chefs combine the cuisines of far-flung lands to create a wide variety of new flavor combinations. Grilled ahi tuna is featured in a South West style Tex-Mex restaurant. Crab meat and avocado are seaweed covered vinegared rice roll at every sushi restaurant. Gourmet restaurants staffed by chefs trained at culinary arts institutes are thriving in small towns as well as in the large cities. It is possible that more than the simple accessability of foods and of trained personnel accounts for this availability of gourmet cooking. Perhaps there is an increasing awareness because of increases exposure, but it may also be the result of increased discernment in the palates and tastes of ordinary people.

faculties
ability
natural or acquired
for certain actions
faculty inherent
use must be developed

utilizes senses
vision vs sight
depth perception
directional location of sound
tactile discriminations
learned
well documented by behavioral scientists

Aldous Huxley
learning to see
using Bates method
brain trained to process signals transmitted from eyes
process imaginary images
depth perception learned skill
infant learns to perceive depth as he crawls

hearing
learn to select certain sounds from field
Mozart heard his symphonies in his head and notated them
Beethoven heard his music, unaware that he was going deaf

tactile sense
differentiate touch for sorting grains
surgeon tying knots

smell
enologist
perfumer

senses vs faculties
faculty contemplate something
metaprogram associated with each faculty
part of order in universe
does not yet exist in physical world

considerations
envision goal
speculate about conditions
set directions
coordinate activities
evaluate performance
monitor effectivity

NOOLOGICAL FACULTIES

The Noological Faculties and the Perceptual Axes

There are six Noological faculties for processing information. They operate as complementary pairs on the three processing axes. The Symbolic and Theoric faculties operate on the Concept axis, the Strategic and Systemic on the Structure axis and the Empathic and Sympathic on the Use axis.

The connections of the Noological faculties with the Perceptual Axes are shown in the following illustration.

Noological Faculties and Perceptual Axes

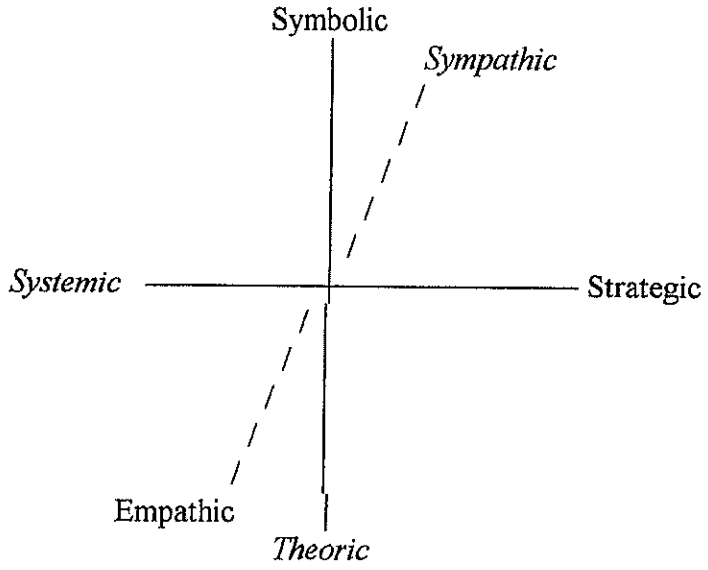


Figure 4.1

The Noological faculties are governed by all the properties of the perceptual axes. These properties include stance, time orientation, the modeling functions and directional axial metaprograms

Stance

The faculties are divided into the two stances by the dynamics on the perceptual axes. The objective stance faculties with an outward focus are the Symbolic, Strategic and Empathic faculties. These are concerned with obtaining rational, logical and tangible aspects of an issue. The inwardly focused subjective faculties are the Theoric, Systemic and Sympathic faculties. These are organized randomly and are concerned with incorporating personal values and ideals into their activities.

The correlations of the faculties with the stances and the axes are shown in the following chart.

The Faculties, Perceptual Axes and the Objective and Subjective Stances

Physical Axis	Perceptual Axis	Objective Stance Faculty	Subjective Stance Faculty
Vertical	Concept	Symbolic	Theoric
Lateral	Structure	Strategic	Systemic
Saggital	Use	Empathic	Sympathic

Table 4.2

Time Orientation and Modeling Functions

Concept faculties perform with a future orientation to time by using the selective modeling function. Structure faculties use the formative modeling function to operate in the present moment. Use functions have a past perspective to time as they use the connective modeling function.

The correlations of the Noological faculties with the properties of the perceptual axes are shown in the following chart.

The Faculties and Their Time Orientations and Modeling Functions

Physical Axis	Perceptual Axis	Time	Modeling Function
Vertical	Concept	Future	Select
Lateral	Structure	Present	Format
Saggital	Use	Past	Connect

Table 4.3

The Faculties, Their Functions and Metaprograms

On the Concept axis, the *Symbolic* faculty is think in abstract, symbolic terms. It selects elements until it can form a clear, visual representation of those elements. The Specific metaprogram is associated with the Symbolic faculty. It seeks specific landmarks to answer the question, "What?" Its complement is the Theoric faculty.

The *Theoric* faculty poses a hypothesis as the reason or cause for each event it encounters and sets the limits for that hypothesis. The General metaprogram and the question, "Why?', usually indicates that the Theoric faculty is in operation. The Concept faculties create ideas for testing and development.

On the Structure axis, the *Strategic* faculty recognizes correct solutions for a problem and collects and sequences the information needed to reach a defined goal. The procedural metaprogram and the question, "Where?,' indicate that the Strategic faculty is in use. Its complement is the Systemic faculty.

The *Systemic* faculty, recognizes operational breakdowns and seeks to correct the condition by gathering and molding all related information into a smoothly coordinated function. The options metaprogram and "How?" are associated with the Systemic faculty. The Structure faculties format data into practical applications.

On the Use axis, the *Empathic* faculty monitors its environs for the effects of the execution of a principle and identifies the conduits for exchanging information. The metaprogram pattern used to indicate the Empathic faculty is the use of Difference patterns. The question "Which?" is associated with this faculty. Its complement is the Sympathic faculty.

The *Sympathic* faculty monitors performance and recognizes functional networks of competent people. The Sameness metaprogram pattern and the question, "Who?", indicate the operation of the Sympathic faculty. The Use faculties connect the outcomes or results of the activities of people.

The following chart shows the functions and metaprograms associated with the Noological faculties and the perceptual axes.

The Faculties, Perceptual Axes and Their Functions

Faculty	Axis	Function	Metaprogram Pattern	Question
Symbolic	Concept	pictures, maps outcome	Specific	What?
Theoric		theorizes, sets limits	General	Why?
Strategic	Structure	sequences, recognizes correctness	Procedure	Where?
Systemic		coordinates, recognizes error	Option	How?
Empathic	Use	monitors environs, communication links	Difference	Which?
Sympathic		evaluates performance, performance networks	Sameness	Who?

Table 4.4

Proficiency in the use of the faculties varies greatly among people. Like all skills, the

proficiency level may vary according to an individual's background and training. A person may be highly skilled in the use of one or two faculties and only moderately skilled in others. It is not uncommon for one or two of the faculties to be very poorly developed. With rare exceptions, most people have very uneven development in the use of their faculties.

Concept Faculties

Concept or vertical axis faculties consider possibilities as symbolic targets or hypothetical theories through the modeling process which selects an element for consideration. Dynamics between the Symbolic and Theoric faculties operate to seek a balance between attainable and altruistic goals. Concept faculties have a future orientation to time as ideas are contemplated and considered for their possibilities.

Concept faculties are used in the executive capacity for setting far reaching, yet attainable goals. The executive function also defines the functional parameters for each unit within the organization and utilizes the communication and networking systems within that organization. The Concept faculties create ideas for testing and development.

Symbolic Faculty

The Symbolic faculty is objectively stanced on the Concept axis and is associated with the Specific metaprogram pattern. It identifies significant features within any territory under consideration. It utilizes its ability to think spatially and symbolically to single out specific landmarks within a territory. The Symbolic faculty selects specific elements of the idea under consideration to form visual representations for them. A higher vantage point expands the range of this faculty.

The Symbolic faculty utilizes the cerebral capacities of the brain which are associated with visual function and perception. This activity take place within the cranium.

When the Symbolic Skills are Well Developed, a Person Can

Create spatial markers for charting progress.
Recognize other people's markers within a territory.
Update maps and boundaries.
Correlate existing standards with new conditions
Compare old perceptions with new information.
Visualize something that does not yet exist.
Create his own goals.

With Poorly Developed Symbolic Skills, He

Cannot respect other people's markers and standards.
Relies on others for ideas.

Has a narrow perspective.
Relies on outdated maps and standards.
Cannot correlate outmoded standards to new conditions.
Has difficulty identifying his personal boundaries.
Cannot create his own vision and goals.

Theoric Faculty

The Theoric faculty is subjectively stanced on the Concept axis and is associated with the General axial metaprogram. It sets personal boundaries and limits of possibility. It forms hypothetical models for each activity it encounters and sets the limits for testing that hypothesis. It seeks to find plausible reasons and answers for everything it encounters. It includes the ability to think in words, yet it is operational in the young infant before the development of language. It provides the drive for the development and expansion of language. Polya recognized the importance of this faculty and called it the ability to formulate a hypothesis by guessing. A deeper vantage point allows it to narrow its field of investigation.

It is associated with the cervical spine, brain stem and neural tube. The brain stem acts as the central processing and distributional mechanism between the brain and the senses with the neural tube acting as the conduit for collecting and disseminating information.

When the Theoric Skills are Well Developed, a Person Can

Define the limits for his hypothetical assumptions.
Identify sound reasoning.
Examine the validity of his assumptions.
Question the intent behind his own actions.
Be comfortable with ambiguities and contradictions.
Check old assumptions against present conditions.
Probe for more questions.
Define his own boundaries.
Is aware of his territorial boundaries.

With Poorly Developed Theoric Skills, He

Assumes that his values are universal.
Does not recognize incursions into his space by others.
Insists on clear cut answers.
Interprets an ambiguity as a wrong answer.
Sorts by Best or Worst categories with no middle ground.
Cannot question or examine his own beliefs, reactions or decisions.
Is defensive when questioned by others.

Structure Faculties

Structure or lateral axis faculties incorporate information into functional operations as strategies or systems through the formative modeling process. The dynamics between the Strategic and Systemic faculties form the checks and balances between efficiency and ecology. Structure faculties operate somatically without the used of words as they format practical applications from raw data.

Well balanced dynamics on the Structure axis create coordinated functional systems and efficient strategies that lead towards a defined goal. Structure faculties have a present orientation to time as they work with currently occurring activities. They are used by the operator as he investigates new ways of doing things and as he establishes the most efficient use of time and materiel.

Strategic Faculty

The Strategic faculty is objectively stanced on the Structure axis and is associated with the Procedural axial metaprogram. It recognizes correctness in the sequencing of information leading to a desired outcome. As it gathers all information that might be applicable to the problem at hand, it examines previous attempts made by others for any information that might be useful as it seeks out it solutions. Broadening the scope of its investigations allows it to include more information.

The sacrum and the endocrine system are associated with the Strategic faculty, with the olfactory sense acting as the principal input channel. This relationship can be observed in the direct influence of pheromones on the courtship behavior of animals. In right handed individuals, the right hand is often engaged as strategies are designed.

When the Strategic Skills are Well Developed, a Person Can

Wait until the goal is defined.
Investigate thoroughly before initiating action.
Sequence appropriate steps to reach a goal.
Set temporal markers for measuring progress.
Schedule time wisely.
Monitor progress as he carries out his plans.
Postpone immediate gratification.
Commit after careful consideration of possible outcomes.

With Poorly Developed Strategic Skills, He

Initiates action before the goal is defined.
Plans without sufficient data.
Gets lost in circular thinking.
Loses track of time.
Has difficulty in making long range plans.
Has difficulty keeping his word.

Changes his mind often.

Systemic Faculty

The Systemic faculty is subjectively stanced on the Structure axis and is associated with the Options metaprogram. It recognizes errors and breakdowns in functional organizations. It coordinates and synchronizes the various phases of an operation. It gathers any information which might be relevant to form an organized, coordinated activity. The concerns of each person who might be involved in the activity are factored into the organization. Narrowing its field of operation allows the Systemic faculty to focus upon the pertinent questions at hand.

The left hand is often in motion as the Systemic faculty operates. Left hand activity is labeled sinister by the French and is often regarded as mysterious or unclean in many cultures. The coccyx and the digestive system are associated with the Systemic faculty. The gustatory sense acts as the leading agent for the selection process in gathering information. The effect of tasting and chewing on the digestive system has its correspondence with the Systemic faculty.

When the Systemic Skills are Well Developed, a Person Can

Coordinate his activities with others.
Exercise care in the selection of components.
Sense missing components.
Consider the needs of everyone in the group.
Form a consensus of the needs of his group.
Recognize individual contributions to the system.
Be aware of the interplay between himself and others.
Adapt his behavior to accommodate the needs of others.

With Poorly Developed Systemic Skills, He

Has difficulty being a good team player.
Has difficulty recognizing the needs of others.
Cannot appreciate the contributions of other players.
Cannot consider the need of others in his activities.
Is competitive in every activity.
Is unaware of conflicts between his commitments.
Does not see sense the interactions among players.

Use Faculties

Use or saggital axis faculties monitor the events in the environment for how well a principle is executed or a skill is performed. These faculties use the connective modeling function to evaluate the outcome or results of the activities of people. Use faculties have a past orientation to time because events are registered only after they have occurred. Axial

dynamics between the Empathic and Sympathic faculties on the Use axis operate to create a balance between effectiveness and personal satisfaction.

Feedback loops within the Empathic and Sympathic faculties establish connective links between well executed ideas and between competent people. These links are used in the managerial capacity which utilizes both the communication channels for the collection and dissemination of information and the functional networks formed among competent people.

Empathic Faculty

The Empathic faculty is objectively stanced on the Use axis and is associated with the Difference axial metaprogram. It notices differences in patterns to factor them into their component factors. From these components, it can postulate a causal relationship for the conditions it encounters in the environment. It recognizes how well an organizing principle is executed and makes inferences about the validity of the organizing principle by the degree of effectiveness in its execution. It can recognize an organizing principle in different cultural settings despite its seemingly contradictory manifestations. It tracks the channels through which information is exchanged. Extending distance allows the Empathic faculty to include more information in making its appraisals.

Empathy is defined as an impression that is viscerally registered and interpreted in the mind. This impression is monitored in the electromagnetic field surrounding one's body. The vagus nerve and lumbar spine are associated with the Empathic faculty. The incoming energy is transmitted through the skin to the vagus nerve which acts as a vibratory resonator and amplifier. The ear drum is part of the Empathic faculty.

When the Empathic Skills are Well Developed, a Person Can

Establish and maintain objectivity in his activities.
Distinguish between his own feelings and those of other people.
Spontaneously monitor his environment.
Utilize conduits for collecting and disseminating information.
Identify the key components in the execution of a project.
Recognize effectiveness in the execution of a plan.

With Poorly Developed Empathic Skills, He

Sets conflicting goals.
Does not monitor his environment.
Lacks awareness of his surroundings.
Is unaware of subtle shifts and changes in conditions.
Blunders into situations.
Takes on the feelings of other people.
Cannot recognize a flawed principle.
Settles for poorly executed results.

Sympathic Faculty

The Sympathic faculty is subjectively stanced on the Use axis and is associated with the Sameness axial metaprogram. It evaluates the functional capabilities of people and ranks them according to their performance. It activates and utilizes operating networks of capable people. Its ability to recognize operational similarities forms the basis for making the analogies required for abstract thinking. Closer proximity to the elements under consideration sharpens its awareness of performance.

The Sympathic faculty is associated with the thoracic spine and the sympathetic nervous system. Responses to the behavior of other people are registered as neuromuscular contractions or relaxations by the sympathetic nervous system. These contractions and relaxations affect pulmonary function and the circulatory system. Contractions are usually interpreted as "bad" feelings and the absence of contractions or relaxation is interpreted as "good" feelings. Contraction or relaxation is registered by the individual as his personal feelings about other people which form the basis for his functional networks.

When the Sympathic Skills are Well Developed, a Person Can

Be aware of his own responses to others.
Be compassionate to others.
Interact with people in many groups.
Assess the relative capabilities of others.
Identify competent people.
Form and maintain functional networks of competent people.
Recognize and utilize existing functional networks.
Identify key players within an organization.
Recognize an unsatisfactory relationship.

With Poorly Developed Sympathic Skills, He

Cannot calibrate to small differences in own responses.
Lacks awareness of his own good feelings.
Is only aware of his bad feelings.
Has difficulty establishing and maintaining relationships with others.
Has difficulty networking with others.
Does not understand the feeling of other people.
Dismisses the feelings of others.
Lacks compassion for others.

Chapter V.

NOOLOGICAL PROCESSES

Art, music, legend and myth are woven into the fabric of every human society. The music and legends of early peoples are lost to us, but archaeologists find many different artifacts in the ruins of ancient civilizations. Most of these artifacts seem to have had a practical function in the daily lives of their users. Even the earliest artifacts reveal that the craftsman displayed an artistry and a flair that exceeded the simple demands of his task. Some artifacts seem to have no practical value and must have been created solely for their artistic and symbolic values.

The tangible results of human creativity can be appreciated and enjoyed for many centuries, but the creative process itself has been a mystery, hidden from view. With his keen insight and highly developed investigative tools, Robert Dilts was able to discern the specific creative strategies of a varied group of people. He described the creative strategies of many musicians, writers and scientists in his series of books, *The Strategies of Genius*.

Deanna Sager of Canada conducted a rigorous examination of the creative process with her advanced students in NeuroLinguistic Programming. She found that all creative strategies follow a consistent pattern in their processing sequence. This pattern lies at the heart of all processing.

This processing pattern is used by both the young infant as he begins his explorations and by the boldest explorer at the cutting edge of art or technology. The skilled craftsman uses this process as he works within the established parameters of his craft or trade and as he works to meet the highest standards of his discipline. Among these skilled practitioners are carpenters, mechanics, teachers and physicians. The genius also uses this process to push past the boundaries and limitations of his field. Instead of accepting old criteria and parameters, he sets new expectations for his explorations. The process used by the genius is identical to that used by the infant and journeyman.

A genius with totally new concepts is often frustrated by the syntax and vocabulary of his language. If he wants to share his ideas with others, he is compelled to develop new words to express his thoughts. As William Shakespeare wrote his plays and sonnets, he added 1500 new words to the English language. Centuries before Shakespeare, Buddha and Jesus of Nazareth created new metaphors and analogies to enrich the spiritual lives of their students and disciples. These geniuses opened new territories for the mental and spiritual growth of people for centuries to come. Even as we approach the 21st century, their ideas continue to influence and inspire many people.

In the visual arts, impressionists and cubists used perceptions of space that initially confounded and perplexed the viewer. Once those perceptions became familiar and accepted, the world of art was enriched. In the world of music, bold experimenters have used different rhythmic and tonal patterns to create music from the Baroque period to

New Age music. In the scientific arena, Galileo and Pasteur opened new fields for exploration. Albert Einstein had to invent a new physics to explain his ride to the edges of the universe on a slender beam of light.

Today, the marriage of computer and communication technology opens a new era of information exchange. Old ways of thinking no longer serve us. Criteria and parameters are constantly being challenged and must be revised and reinvented to accommodate the explosion of ideas that erupt from this new technology. Only those who can adapt rapidly to change can hope to thrive and prosper in this new environment.

The insights and processes of Noology offers a tool for thriving in this era of constantly changing conditions. Its processes allows the individual to activate his entire processing system and to utilize all of his faculties. With a fully operational processing system, he can make good decisions, master new procedures and learn from his mistakes. He can use his innovative skills to improve and expand his skills. He can embark on new endeavors with a reasonable expectation of success. Once he realizes his goals, he can set new goals for himself and create an ever expanding sphere of capabilities.

Theory
of
Noological Processing
in
Deciding, Learning, Mastering, Innovating and Creating

In all thought processes, there is an orderly progression of movement from one perceptual axis to the next. This orderliness provides a constancy in focus and attention for sorting, processing and storing information. It also provides the individual with a reliable means of accessing and utilizing the knowledge gained from his previous experiences.

A functional processing system provides a constancy in perspective and a sense of stability as the individual forms his considerations and makes his decisions. It allows him to fully activate each of the six faculties and to utilize them appropriately. Dynamics between the faculties operating on the axes act as the agents for making the comparisons he needs to estimate possibilities, select criteria and determine the parameters for his considerations. At each step during processing, he is free to exercise his options to continue or to abandon processing. He is comfortable as he makes his decisions, learns new tasks, master skills, innovates or improves upon existing techniques and as he creates something entirely out of his imagination.

All thought processes for deciding, learning, mastering, innovating and creating follow the same sequence in axial progression. The differences lie in the exit points and in the processing loops for the various considerations. Although processing follows the same sequence of axial movement, there is a difference in the basis for accepting data and in setting criteria and parameters. During the learning process, the student accepts the teacher's criteria and parameters as valid. For all other functions he may use his own criteria and parameters or he may rely on others to provide the guidelines.

Primary stance functions evaluate an idea for its applications and uses. Possibilities presented by that idea are then developed by the complementary stance functions. Movements in the primary stance proceed from the first processing axis to the second and ends with the third processing axis. Complementary stance movements have a different axial sequence. Although movement starts with the complementary faculty of the first axis, the sequence of the last two axes is switched. In the complementary stance movement starts with the first axis and proceeds to the third processing axis before it ends with the second processing axis. This progression allows the parameter requirements to be met before criteria values are considered.

In the primary stance, the operational, executive and managerial functions determine the possibilities, probabilities and parameters for any given situation. On the *first processing axis*, the operational function of the primary stance faculty examines a situation for any possibility of success. Once such a possibility is found, the complementary faculty on the first axis sets the range of possibility for that situation. Dynamics between the primary stance faculty and its complement set the arena for development.

On the *second processing axis*, the primary stance faculty makes an executive evaluation of the probable outcome for the situation. If the probability for success is judged to be high enough to warrant consideration, personal criteria for excellence are accessed the complementary faculty on the second axis. Axial dynamics compare the estimated probability of success with personal criteria. If this probability satisfies personal criteria, it becomes the criteria to be maintained during the remainder of processing.

On the *third processing axis*, managerial functions set the parameters to measure compliance with the criteria set by the executive decisions of the second axis. The primary stance faculty of the third axis determines the specific requirements of the matter under consideration. Its complement compares these requirements with the resources available to the individual. If these resources are deemed to be adequate for the project, third axis dynamics set the specifications to be met during processing.

If primary stance processes indicate that the potential for development satisfies personal criteria and parameters, processing changes to the complementary stance. Complementary stance functions are used to explore the possibilities within the conditions set by the primary stance functions. Operational functions of the *first axis* complement develop the most promising possibilities for checking and testing. Managerial functions of the *third axis* complement then check each development for compliance within the parameter requirements set in the primary stance. After the specifications checks are completed by the managerial functions, the executive function of the *second axis* complement tests the results for criteria satisfaction.

When development meets the parameters and passes the criteria tests, the individual has a sense of satisfaction that all considerations were made in an appropriate and timely fashion and that his efforts produced a quality result. These results personalize the use of established procedures and balances societal expectations with personal satisfaction and creative needs.

Noological processing theory is based upon the combined effects of the following factors:

1. The presence of six Noological processing sequences derived from the mathematical permutations formed by the three perceptual axes.
2. All operational, managerial and executive functions defined, activated and developed.
3. Primary and complementary stance processes developed to provide a mechanism to balance societal requirements with individual expression.
4. Objective and subjective stance faculties operating in tandem.
5. Each of the six faculties activated, developed and operating on its appropriate axis.
6. The three perceptual axes located in and oriented to their appropriate positions.

Definition of Permutation

Permutation is defined as the number of combinations that may be formed by a finite number of members when linear order is considered. For any three elements, the number of permutations that may be formed is six. For the axes, A, B and C, the six permutations are spelled out as ABC, ACB, BCA, BAC, CAB, and CBA. These permutations are grouped by their primary axis in the following chart.

Permutations formed by A, B, and C

ABC	BCA	CAB
ACB	BAC	CBA

Table 5.01

The following convention is adopted for notational purposes. It combines the effect of the two stances and the progressions formed by the permutation of the three axes. Objective stance progressions are designated by the series, ABC, BCA and CAB, and subjective stance progressions are designated by ACB, BAC and CBA. In addition, objective stance progressions are notated by capital letters and subjective stance by italicized lower case letters followed by the prime notation, (′). These two factors are combined in following chart.

Primary Stance Notations and the Permutations of A, B and C

Axis	Objective Stance	Subjective Stance
A	ABC	*a′c′b′*
B	BCA	*b′a′c′*
C	CAB	*c′b′a′*

Table 5.02

The shift from primary to complementary stance during processing is shown as a circular movement in the clockwise direction. When the primary stance is Objective, entry is indicated at bottom left or seven o'clock. Subjective stance entry is shown at top right or one o'clock.

Processing Sequences

Objective Stance	Subjective Stance
ABC	*a'c'b'*
C *a'* B *c'* **Enter** --- A *b'* --- *Exit*	Exit --- C *a'* --- ***Enter*** B *c'* A *b'*
BCA	*b'a'c'*
A *b'* C *a'* **Enter** --- B *c'* --- *Exit*	Exit --- A *b'* --- ***Enter*** C a' B *c'*
CAB	*c'b'a'*
B *c'* A *b'* **Enter** --- C *a'* --- *Exit*	Exit --- B *c'* --- ***Enter*** A b' C *a'*

Figure 5.1

These conventions and notational systems are used to illustrate Noological processing sequences throughout this text. The processing sequences are identified by the axial progression in the primary stance or by the primary stance faculty of the first processing axis. The primary stance faculty of the first processing axis is often referred to as the primary faculty because its properties define the distinguishing characteristics for that type and act as its principal mechanism for sorting information

.

The characteristics for each of the six processing systems are described and cataloged in the Chapter VI on Noological Processing Systems.

Primary Stance Functions
ABC

Primary stance functions are used to assess the facts and requirements for participation in an activity. Issues about possibilities, criteria and specifications are considered about the information under consideration. These considerations are correlated with the operational,

managerial and executive functions and their metaprogram patterns. They set up the conditions for participation in an activity.

First Axis
***Operational* Functions Assess Possibility**
Set Limits of Possibility
A = A <——> *a'*

The questions asked by the operational functions as they consider something that is proposed as a fact include:

Is this possible?
If it is a possibility, what are its limits?
What is its maximum potential?

The primary stance faculty associated with the first axis examines information for its possibilities. If a possibility can be established, the complementary faculty sets the theoretical limits of expectation for that fact or set of facts. Dynamic interaction between the two faculties on the first axis then defines the area opened for exploration. This area for exploration provides a stable frame of reference for all subsequent considerations.

Each individual displays consistent linguistic and postural patterns as his primary faculty absorbs information. Linguistic patterns may include, "Hmm," "Really?" and "What else?" or no comment at all. Postural indicators may include a blank stare, head tilting, weight shifting or finger wiggling.

Second Axis
***Executive* Functions Test Probability**
Select Criteria
B = A ——> (B <——> c')

Once a potential for possibility is established by the first axis faculties, processing shifts to second axis. The issues that are considered by the second axis executive faculties are:

What are its probable chances for completion?
Is that probability high enough to satisfy my criteria for success?
If so, what are its criteria for completion?

The executive faculty on the second axis examines the possibility for its probable chances for successful completion. The complementary faculty of the second axis compares this probability with personal criteria for success. If this probability is high enough to meet the individual's personal criteria of worthiness, axial dynamics set the criteria to be maintained during all subsequent processing. This criteria may be articulated verbally or demonstrated in analogical behavior.

Language patterns for criteria comparisons include:

"It stands to reason that it's worth it"

"I just know that it's fine."
"It seems right."

Third Axis
***Managerial* Functions Specify Parameters**
Determine Usefulness
$C = AB \longrightarrow (C \longleftrightarrow c')$

After criteria are set, processing moves onto the third axis for making managerial decisions about the specific requirements of the activity. The questions that indicate the managerial functions are:

What are the specific requirements for this procedure?
What are my resources?
What parameters are specified by my participation?

The primary stance faculty on the third axis examines the specifications required by the activity. Once those specifications are identified, the complementary faculty accesses the resources available for participation in the activity. If these resources are deemed sufficient, axial dynamics on the third axis sets the parameters for measuring compliance. These parameters are usually defined in standard units of measure.

Linguistic patterns for parameter considerations include:

"It has to measure 5 X 7 inches."
"It won't fit into my suitcase."
"I can/cannot afford it."

Change Stance

After the primary stance functions have determined the conditions to be met, processing changes to the complementary stance for development of the options identified in the primary stance. The stance change acts as a pivotal point between the two stances as the creative function moves through its processing loop.

Creative Processing Loop
$Ca'c'$

If: $Ca_x'c' = C \longrightarrow a_x' \longrightarrow c'$
Then: $Ca'c' = Ca_0'c' \longrightarrow Ca_1'c' \longrightarrow Ca_2'c' \ldots Ca_n'c'$

The creative processing loop, $Ca'c'$ straddles the primary and complementary stances as the variables are developed. Dynamics on the third axis, $C \longleftrightarrow c'$, acts as the stabilizing force during the processing loop. It is not unusual for three or four cycles to be completed for each development. With each cycle through the loop, different versions of the variables are tried until the parameters are filled. For very large projects, many more

cycles may be performed through the creative processing loop.

Complementary Stance Functions
$a'c'b'$

Complementary stance functions are used to explore and develop the possibilities presented by a body of information. Skills are learned and perfected to meet the parameters and criteria set in the primary stance.

Linguistic indicators of complementary stance activation are:
"Here's what I have, now what can I do with it?"
"This opens up a lot of options!"
"Where does this take me?"

First Axis Complement
Operational Function Develops Options
$a' = a_0' \longrightarrow a_1' \longrightarrow a_2' \ldots a_n'$

The complementary faculty of the first axis develops the most promising variables, a_x', within the area of exploration defined by first axis dynamics. Parameter specifications set by the dynamics on the third processing axis in the primary stance act as reference points during this development.

Third Axis Complement
Managerial Functions Check Parameters
$c' = c' \longrightarrow ao' \longrightarrow \mathrm{C}$

The complementary faculty of the third axis, c', checks each variable, a_n', against the specifications set by C for accuracy. If the parameters

Second Axis Complement
Executive Functions Test Criteria
$b' = \mathrm{B} \longrightarrow \mathrm{a'}_n \longrightarrow b'$

After the developments are checked for parameter specifications, the complementary faculty of the second axis, b', tests them for criteria satisfaction. Processing is completed when all criteria set by the dynamics on the second processing axis are satisfied.

GENERAL PROCESSING OUTLINE
For
Objectively Stanced Persons
ABC

Enter --- C a' --- Exit
B c'
A b'

A.	First Axis	A = A ——> a	Examine Possibilities. (First axis dynamics set theoretical limits of possibility.)
B.	Second Axis.	B = A ——> (B <——> *b'*)	Select Criteria. (Second axis dynamics select criteria to be satisfied.)
C.	Third Axis	C = B ——> (C <——> *c'*)	Specify Parameters. (Third axis dynamics establish measurable standards.)

ABC = A ——> B ——> C

1. **A** or **B** or **C** — Ignore.
2. ABC = OK — Use.
3. ~ *a'c'b'* — Develop options.

Change Stance

a'	*Develop options within parameters.*	*a'* = $a'_o \ldots a'_1 \ldots a'_n$	*First Axis Complement*
b'	*Check options for fit within parameters.*	*c'* = *c'* ——> a'_n <——> C	*Third Axis Complement*
c'	*Test options for criteria satisfaction.*	*b'* = *b'* ——> a'_n <——> B	*Second Axis Complement*

ABC ~ *a'c'b'* Processing complete. EXIT

Table 5.03

This processing outline is used to illustrate processing for deciding, learning, mastery and innovating. It is also used in Chapter VI to illustrate the learning and creative processing by each of the six Noological types.

GENERAL PROCESSING OUTLINE
For
Subjectively Stanced Persons
a'c'b'

Exit ---- C a' ---- **Enter**
B c'
A b'

Examine Possibilities. (First axis dynamics set theoretical limits of possibility.)	*A <----- a' = a'*	*First axis.*	*a'*
Select Criteria. (Second axis dynamics select Criteria to be satisfied.)	*(B <--- b') <--- a' = b'*	*Second axis.*	*c'*
Specify Parameters. (Third axis dynamics establish measurable standards.)	*(C <--- c') <--- b' = c'*	*Third axis.*	*b'*

Ignore	*ć* or *b́* or *á'*	1.	
Use	*a'c'b'* = OK	2.	*c' <--- b' <--- a'* = a'c'b'
Develop Options	~ ABC	3.	

Change Stance

First Axis Complement	Develop options within parameters	A = $A_n \ldots A_1 \ldots A_0$
Third Axis Complement	Check options for fit within parameters	C = C <----> A_n <----> *c'*
Second Axis Complement	Test options for criteria satisfaction	B = B ----> A_n <----> *b'*

a'c'b' ~ ABC Processing complete. EXIT

NOOLOGICAL PROCESSES
for
Decision Making

Decisions to engage in any activity are made in the primary stance. These activities may involve learning new material, purchasing a product or service, or participating in some social activity. With well developed primary stance functions, a commitment of time, effort and resources is made only after the primary stance faculties conduct a thorough investigation into the chances for a successful outcome. Upon committing to action, attention to the task at hand is easily maintained during the period of participation if the decision making skills are well developed. If, upon a reasonable commitment of time and effort, the activity does not live up to expectations, this information can be used to reach another decision concerning the wisdom of continued participation.

During the decision making process, the possibilities offered by the proposed activity are examined by the operational faculties of the first axis for credibility. If the dynamics between the primary faculty and its complement determine that a proposal has promise, processing moves to the second processing axis. The executive functions of the second axis compare personal criteria for excellence with the value offered by the proposed activity. If the proposed activity is deemed to be worthy of consideration, the managerial functions of the third axis examine the practical aspects of engaging in the proposed activity. These aspects include considerations about its costs in terms of financial and time requirements and the resources it requires for participating in the activity.

The following chart shows the sequence of primary stance functions during the decision making process.

Decision Making Process

Axis	Function	Consideration	Question
First	Operative	Possibility	Is it credible?
Second	Executive	Criteria	Is it valuable?
Third	Managerial	Parameter	Is it practical? - *and* - Can I afford it?

Table 5.05

Language patterns which indicate good decision making skills include:

"It's just right."
"It will/will not get the job done."
"I can't afford it."

Language patterns which indicate poorly developed decision making include:

"You never know for sure."
"Everybody's doing it, so it must be OK."
"They must know what's best."

With poorly developed primary stance functions, decisions are based upon faulty investigations and often yield unsatisfactory results. Even if the results are not satisfying, it may be very difficult to reach a decision to withdraw from the unproductive activity. An automatic default decision, "Do not decide", often results from the inability to make a decision. Out of necessity, the opinions of authority figures are accepted as binding when making important decisions about education, career or marriage. This keeps the individual in the double bind of getting what he does not want and of being unable to develop the skills required for making good decisions. He is stuck with the consequences of other people choosing for him.

Decision Making Process
for
Objectively Stanced Persons

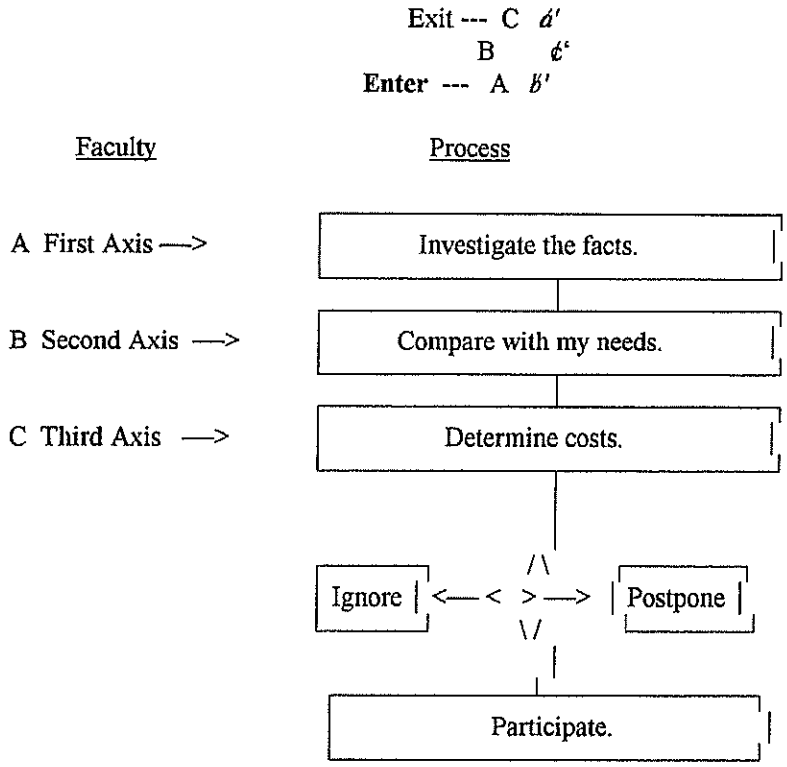


Table 5.06

Chapter V. C.

NOOLOGICAL PROCESSES
for
Learning

During the learning process, the student uses his primary stance faculties to learn the facts, criteria and test requirements for a discipline. He applies the information and develops his skills in his complementary stance. He develops his skills until he is able to pass the required examinations.

Operational functions on the primary faculty accept all information as an accurate and true representation by the teacher or textbook. Executive functions on the second axis accept the teacher or the text book as the expert who embodies the highest ethical behavior for the discipline. The sole criteria retained by the student is his personal criteria for excellence which governs how well he will learn. Managerial functions on the third axis accept the requirements as defined by the teacher. Test results and examination scores are used as the standards for measuring accomplishment.

After the standard procedures are learned, operational functions on the first processing axis activate the creative processing loop to develop proficiency and skill in applying those procedures. Managerial functions on the third axis interprets a correct answer as sufficient evidence of an adequate parameter check. In learning situations, executive functions on the second axis accept parameter checks as evidence of criteria tests. With good learning skills, the student can develop the proficiency and expertise required to become a skilled practitioner in his craft, trade or profession.

The following chart shows the correlations of the axial faculties with their function and associated questions.

Learning Process

Axis	Function	Consideration	Issues
		Primary Stance Functions	
First	Operative	Possibility	What are the facts?
Second	Executive	Criteria	The teacher knows best.
Third	Managerial	Parameter	What is required?
		Complementary Stance Functions	
First	Operative	Develop options.	Apply facts.
Third	Managerial	Parameter check.	Does it work?
		Yes - Exit.	
		No - Repeat or Abandon.	

Table 5.07

If the student made a well founded decision to learn the material, he will persevere until he meets his own criteria for excellence. If his decision making processes are not well developed, he may experience difficulty in maintaining attention and interest during the difficult periods in learning. If he is in school solely because his presence is mandated by law, he will be bored and inattentive at his best moments and disruptive at his worst.

Learning Process
for
Objectively Stanced Person

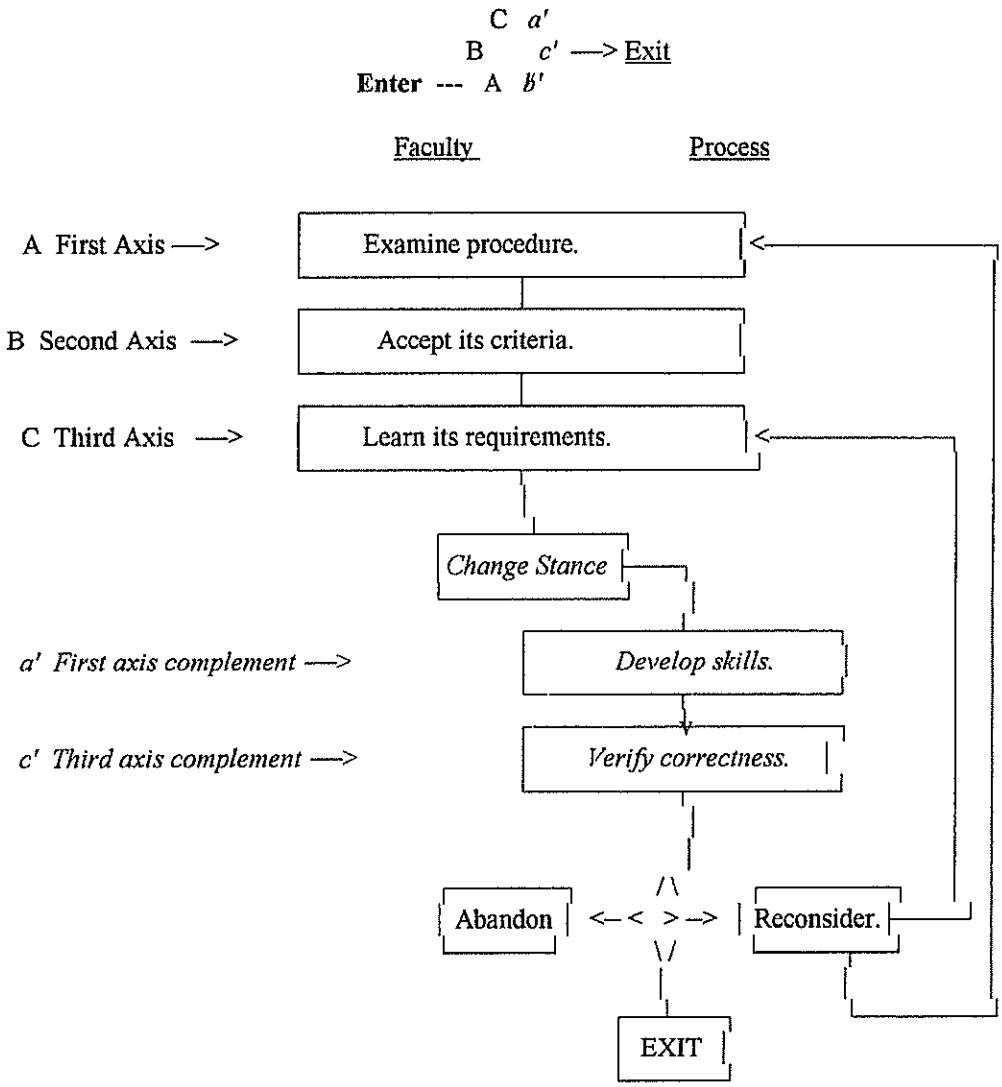


Table 5.08

Chapter V. D.

NOOLOGICAL PROCESSES for Mastery

With well defined criteria for satisfaction, the trained practitioner may be motivated to raise his skill levels to that of a master. He institutes the modifications and improvements that raise professional standards and contributes to the full development of an art form or discipline. The drive to satisfy his criteria allows the master to put his stamp of originality into his work and to balance societal requirements with personal expression. Accountants, athletes, carpenters, musicians and surgeons may be equally motivated to become masters of their craft.

Primary stance functions are used to determine how to expand or improve the procedures within the discipline of an art or a profession. Information from personal investigations or observations is examined for the possibility of integrating it into the standard body of knowledge. Introduction of personal criteria for excellence raises the levels of expertise and competence. Standard parameters for compliance are more precisely drawn to meet the higher levels of expectation.

Complementary stance functions are used to develop the improvements and refinements. Parameter checks are more exactingly measured against upgraded standards. Criteria tests must satisfy the higher levels of expectation which motivates a master.

Mastery Process

Axis	Function	Consideration	Issues
		Primary Stance Functions	
First	Operative	Possibility	What are the facts?
Second	Executive	Criteria	What do I want?.
Third	Managerial	Parameter	What does it require?
		Complementary Stance Functions	
First	Operative	Develop options.	Find Options
Third	Managerial	Parameter check.	Does it fit?
Second	Executive	Criteria	Do I like it?.
		Yes - Exit.	
		No - Repeat or Abandon.	

Table 5.09

The experienced master sometimes seems to jump directly from his initial contemplations of a possibility into the creative loop and exit with a completed criteria test. This ability to reach a quick conclusion may mystify his students and followers, but his teachers and mentors know his secret. The master's years of training developed his primary stance functions to such a degree of perfection that they are intuitively accessed when addressing problems in his field of expertise. When the master is called upon to address questions in areas outside his field, he must work his way through the primary stance functions just as methodically as other ordinary mortals do.

Mastery Process
for
Objectively Stanced Persons

C *a'*
B *c'*
Enter —— A *b'* —— **Exit**

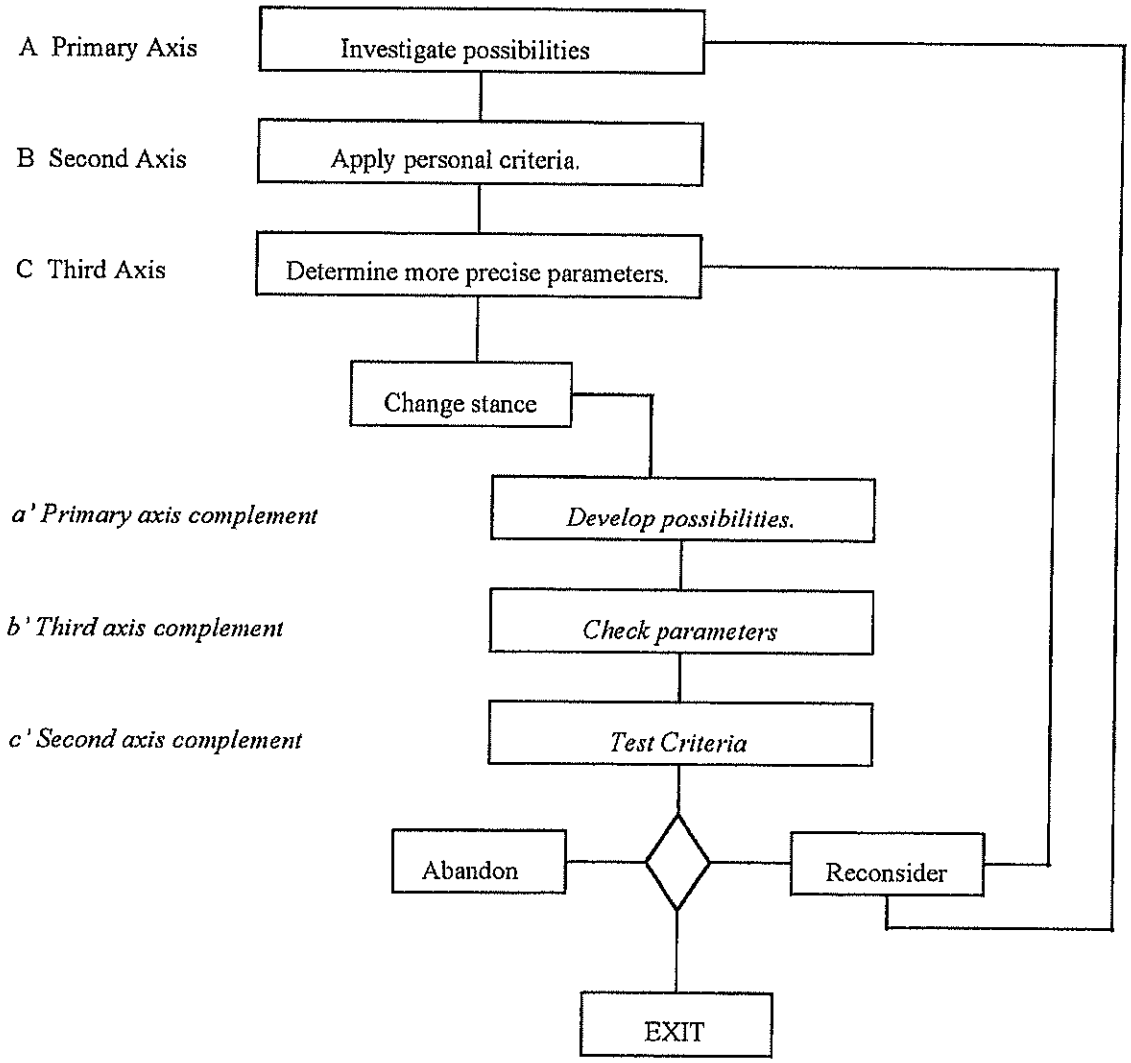


Table 5.10

Chapter V. E.

NOOLOGICAL PROCESSES for Innovation

The innovator who has mastered his craft seeks out ways to push out the boundaries of an art or technology. He might investigate other disciplines for new technologies that might be applicable to his craft. In this way, infra-red imaging is used both by agronomists for analyzing vegetation patterns and by plumbers to determine the integrity of buried sewage pipes. The innovator may invent a new tool or devise a new technique for dealing with a thorny problem. Most of the modern amenities that we enjoy today are the work of some innovator who found a way to resolve an inconvenience or limitation.

The innovator uses his primary stance functions to determine how to expand the discipline of his art or profession. His operational functions on the first axis examine information from his personal investigations or observations for the possibility of redefining boundaries to integrate new information into the standard body of knowledge. Executive functions on the second axis introduce personal standards for excellence into the criteria to be satisfied in the discipline. Managerial functions then raise the parameters for measuring compliance to meet the higher levels of expectation.

In the complementary stance, operation functions are used to develop the improvements and refinements. Parameter checks are more exactingly measured against upgraded standards. Criteria tests must satisfy the higher levels of expectation which motivates a master.

Mastery Process

Axis	Function	Consideration	Issues
		Primary Stance Functions	
First	Operative	Possibility	What are the facts?
Second	Executive	Criteria	What does ?.
Third	Managerial	Parameter	What does it require?
		Complementary Stance Functions	
First	Operative	Develop options.	Find Options
Third	Managerial	Parameter check.	Does it fit?
Second	Executive	Criteria	Do I like it?.
		Yes - Exit.	
		No - Repeat or Abandon.	

Table 5.10

Innovation Process
for
Objectively Stanced Persons

C *a'*
B *c'*
Enter --- A *b'* --- Exit

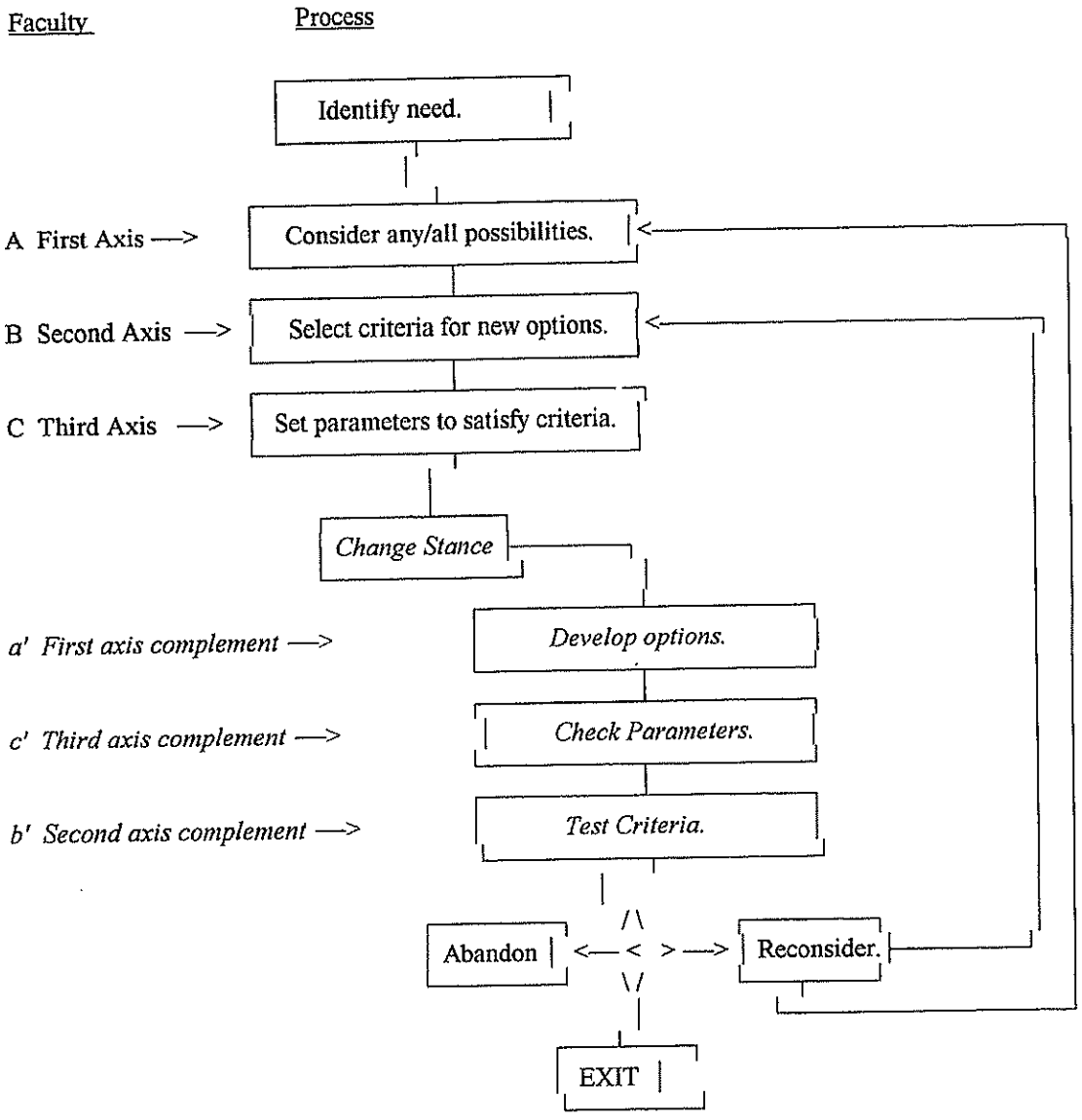


Table 5.11

Chapter V. F.

NOOLOGICAL PROCESSES for Creativity

It is not unusual for people to exhaust the possibilities for growth and development in their field of expertise. They become increasingly frustrated by the limited horizons of their profession. Most resign themselves to working within a confined arena and often find other outlets in charitable or recreational activities. Some find a second or even a third career. It is the rare person who becomes so intrigued by the nature of the problem itself that he devotes himself to solving those problems. When he is successful, he opens new areas for exploration and development.

This cycle of exploration, discovery, development, stagnation and decline is a recurring pattern throughout human history. Each cycle begins as a system is devised to meet the challenges and problems of a particular time and place. As conditions change and new situations come into play, the best minds in the community are called upon to resolve the increasingly complex conflicts and contradictions within the system. Inevitably, exceptions to the rule become so numerous that the system becomes unwieldy and the stage is set for new explorations.

Creativity is almost always the work of a single individual who finds it difficult to operate within the restrictions of his craft or profession. His ideas and questions cannot be addressed because they lie outside the existing frame of reference. When he finds a symbolic metaphor which encompasses both his questions and the contradictions in the old system, he has the inspiration for a new paradigm. With well developed analytical and technical skills, he can build a bridge back to the old system from his new point of understanding. Without this bridge, others can neither understand nor accept his new paradigm.

The creative genius uses both the decision making and learning processes. During the decision making process, the operational functions of the first axis combine his observations and questions with the old system to create a new data base. Its complement sets the outer limit of possibility for the new data base. The dynamics between the two faculties defines a new area for exploration. The executive functions of the Second axis then select criteria for the new exploration and its complement compares it with personal criteria for excellence. Axial dynamics set the criteria to be maintained during the investigation. Lastly, the managerial functions of the third axis faculty determine the parameters to measure compliance and its complement compares those requirements with his personal resources. Dynamics between the two faculties specify the parameters for measuring

progress.

If the genius decides to develop his idea, he uses his learning processes to find about the nature of the idea. He may find that his inquiries open many other areas that need to be explored and developed before he can answer his initial questions. This may necessitate a reactivation of the decision making process for an updated evaluation of scope, criteria and parameters. The genius may restrict his investigations to the original field of inquiry or he may open it to include the new evidence. If his investigations result in a new archetype or paradigm, it may provide the basis for a different art form, political system, religion or scientific discipline. The new system may displace the old one, but in many instances, both the old and new will coexist for a very long time.

Creative Process for Objectively Stanced Persons

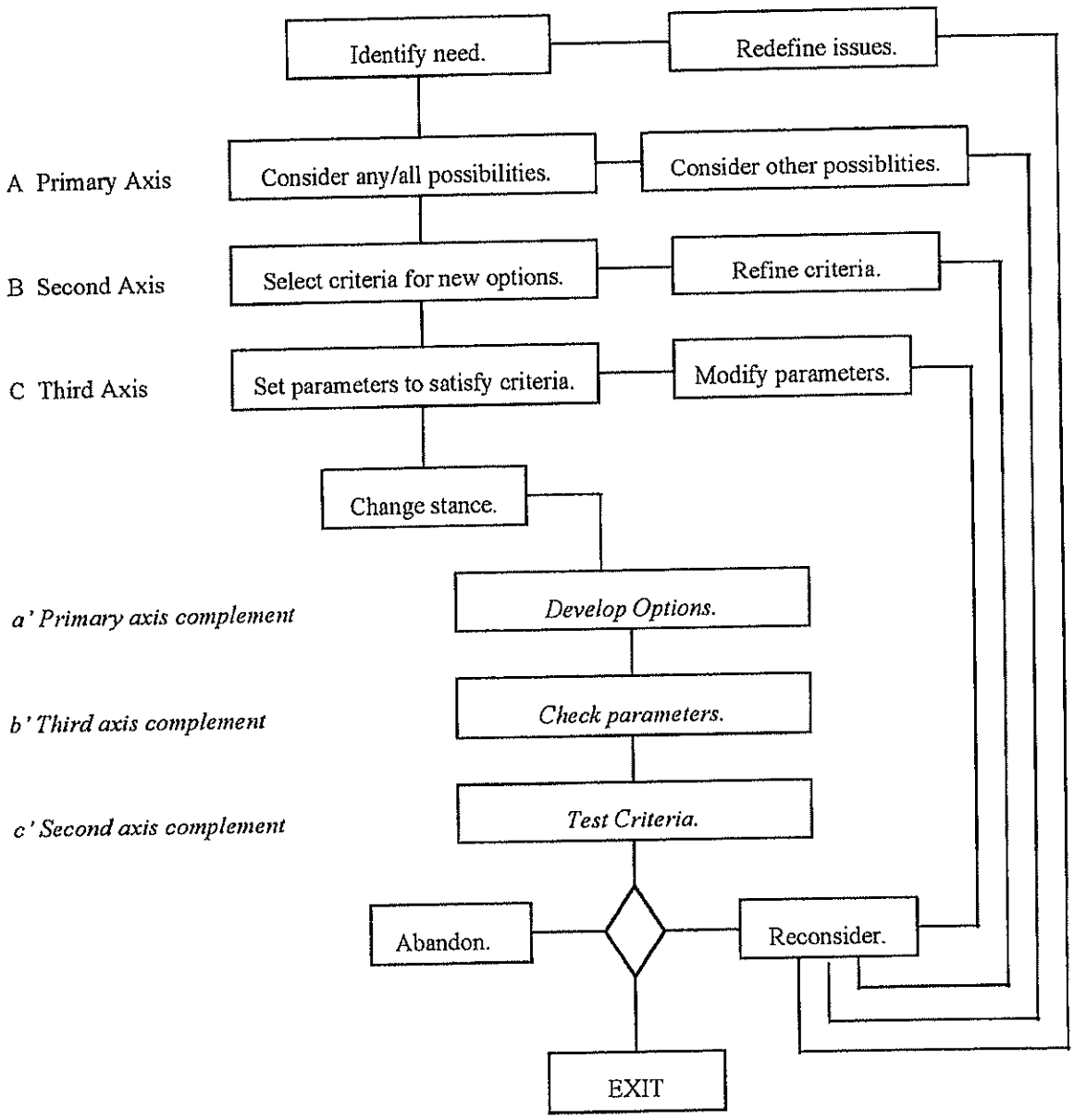


Table 5.11

Chapter VI.

NOOLOGICAL PROCESSING SYSTEMS

When diverse groups of people attempt to create new solutions for a common problem, they begin by expressing their concerns and issues in very different ways. The first group wants to develop a clear picture of a possible solution. The second group wonders about the issues that may have caused the problem. Another wants to collect information that would provide a practical plan. The fourth group states its need to create an optimal operation to satisfy the needs of every person who might be involved. The fifth group wants to know how they would recognize the right solution. The last group asks about the requirements for expertise in using the proposed solution.

Each of these six groups is addressing the problem by stating its own immediate concerns. As they ask their own questions, they are acutely aware of the nature of the investigations launched by their questions. They are familiar with the challenges they have raised and know how to recognize good answers when they get them. They each acknowledge that they will address the concerns of the other groups in due time.

Coordinating the efforts of these disparate groups can present a formidable challenge to most leaders. Some leaders would put the matter to a vote and let the majority rule. While this might be very democratic, it leaves a large disgruntled minority with their legitimate concerns untouched. Another solution might be to allocate resources in direct proportion to the size of each group. Various other types of solutions could be employed.

The most frequently employed solution is, "I will choose the most sensible approach." Translated, this means, "I choose those who *agree with me.*" This arrangement is found in most families, small businesses and large corporations, educational institutions and religious groups and in virtually every other institution known to man.

For the leader trained in Noology, these disparate groups are welcomed and embraced as allies. The trained leader is aware that each group represents one of the six Noological systems and that, collectively, they have defined every problem area. Each group also has procedures for solving the problems in their areas. Most importantly, they have well established criteria for recognizing good solutions.

The Noologically trained leader can recognize the order that exists within the chaos and can readily track the progress of the entire group. Aware of both the capabilities and the limitations of each group, he realizes that a workable solution can be found by resolving the primary concerns of each group.

With Noological training, the members of these groups can also understand and appreciate the immediate concerns of others. They can recognize the importance of having all the concerns clearly articulated. They are patient with each other and are respectful of the differences in each style of expression. They rely on each other to anticipate and resolve

problems that might undermine the entire project. When both the group and its leaders have a good basic understanding of Noology, they can make their differences work for the good of the entire group.

NOOLOGICAL PROCESSING SYSTEMS

The Six Noological Types

Six Noological processing systems are formed by the dynamics on the perceptual axes. They are grouped in complementary pairs about their primary processing axes. Each system is named for its primary faculty and is also identified by its decision making sequence. Grouped on the Concept axis are the Symbolists, CSU, and the Theorists, *c'u's'*. The Strategist, SUC, and the Systemist, *s'c'u'*, are paired on the Structure axis. Paired on the Use axis are the Empathists, UCS, and the Sympathists, *u's'c'*. The properties of their common primary axis create a similarity in attitudes and attributes for each pair of complements.

The following table groups the six Noological system about their primary axes and by their processing stances.

The Six Noological Systems

Axis	Objective Stance		Subjective Stance	
Concept	Symbolists	CSU	Theorists	*c'u's'*
Structure	Strategists	SUC	Systemists	*s'c'u'*
Use	Empathists	UCS	Sympathists	*u's'c'*

Table 6.1

The processing sequences for each system follow the notational system established in the general discussion of processing sequences in Chapter V. Objective stance faculties are notated by capital letters, C, S, or U and faculties in the subjective stance are shown in italicized lower case letters followed by the prime notation, *c'*, *s'* or *u'*.

Each system is named for its primary faculty because it defines the significant properties and characteristics of that system. The initial sorting mechanism for each system is governed by the stance, time orientation and axial metaprogram pattern of its primary faculty. For societal groups consisting largely of one Noological system, the axial metaprogram associated with that system influences the development of language as a cultural artifact. The subtleties and nuances of the most frequently used faculties create the extensive vocabulary and complexity of syntax required for good communication.

The correlations of the processing systems with the properties of their primary axis are shown in the following table.

The Noological Processing Systems and Dimensional Properties

Physical Axis	Perceptual Axis	Stance		Time	Modeling Function	Axial Metaprograms
		Objective	Subjective			
Vertical	Concept	Symbolists	Theorists	Future	Select	Overview/Details
Lateral	Structure	Strategists	Systemists	Present	Format	Options/Procedures
Saggital	Use	Empathists	Sympathists	Past	Connect	Sameness/Differences

Table 6.2

Notational System for Processing Sequences

The sequence of axial movements is notated as a clockwise, circular movement which illustrates axial progressions during processing. Objective stance systems enter processing from the bottom left or the seven o'clock position. Subjective stance systems start their processing from the top right or the one o'clock position.

The Six Noological Processing Systems

Objective Stance Systems

Symbolists
CSU

U *c'*
S *u'*
Enter --- C *s'* --- Exit

Strategists
SUC

C *s'*
U *c'*
Enter --- S *u'* --- Exit

Empathists
UCS

S *u'*
C *s'*
Enter --- U *c'* --- Exit

Subjective Stance Systems

Theorists
c'u's'

Enter --- U *c'* --- Exit
S *u'*
C *s'*

Systemists
s'c'u'

Enter --- C *s'* --- Exit
U *c'*
S *u'*

Sympathists
u's'c'

Enter --- S *u'* --- Exit
C *s'*
U *c'*

Figure 6.01

It is possible to identify the primary stance processes of people by a wide range of characteristics. These include linguistic patterns, physiognomy, postures or a combination of these factors. These patterns are demonstrated on a continuous basis as people interact with others. Pamela Ramsden used photographic sequences in her book, *Top Team Planning,* to show the different postural patterns indicated by Lamb's Action Profile. With some training, it is possible for most people to recognize the primary stance processing of the colleagues and families.

The behavioral and linguistic indicators of complementary stance processing are more subtle and are not as easily detectable. These patterns are used by a person in his private, reflective moments. They are consistent among people of the same processing system and provide an accurate means of identifying the processing systems. Identification of systems using complementary stance functions require training in the detection of metaprogram patterns and accompanying behavioral patterns.

Each of the Noological systems is described both by its identifying characteristics and by its strengths and challenges. The sequences for both learning and creative processes are illustrated for each system. The identifying traits of physiognomy are in the process of being catalogued and will be published at a later date.

GENERAL NOOLOGICAL PROCESSING SEQUENCE

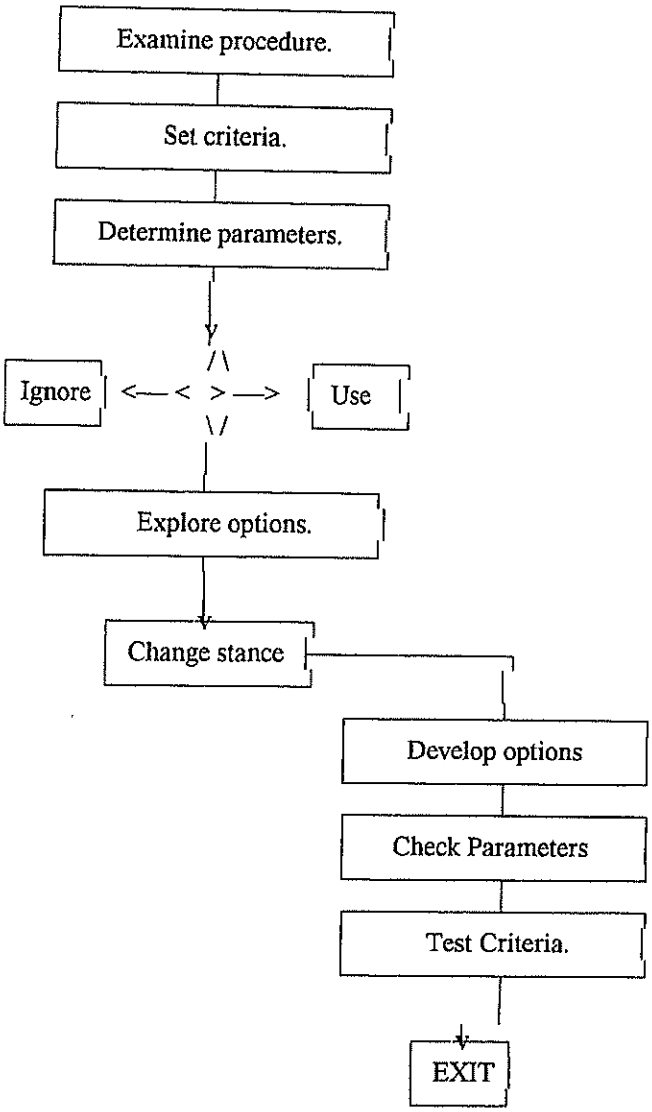


Figure 6.02

Chapter VI. B.

NOOLOGICAL PROCESSING SYSTEMS

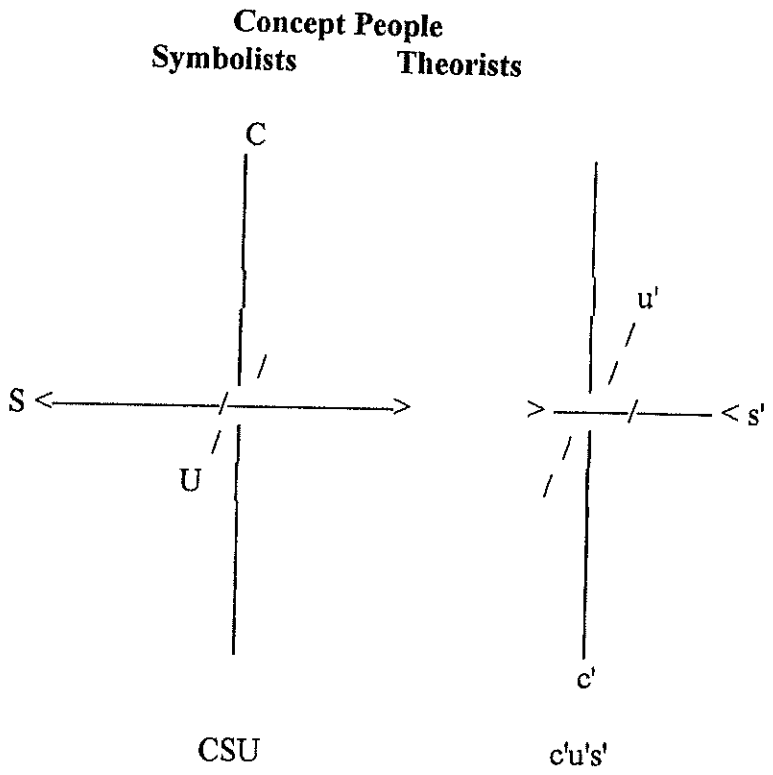


Figure 6.03

Concept people create cognitive ideas for each thing in their experience as images or theories. They set standards to measure achievement and create rules for personal conduct. They project their ideas into the future as possibilities and aspirations.

The modeling process of selection is used to identify a single phenomenon for consideration. They use many nouns and modifiers in their language to express their ideas precisely. A strong vertical sense is reflected in the structure and movement of their bodies.

Chapter VI. B. 1.

NOOLOGICAL PROCESSING SYSTEMS

Concept People - Objective Stance

Symbolists - CSU

U $\dot{c}'$
S u'
Enter --- C s' --- Exit

Figure 6.04

Symbolists start their processing on the vertical axis in the Objective Stance. Their primary faculty is the symbolic faculty which they use to create and shape visual images for understanding all incoming information. As they work with an idea, they select the elements required for a clear visual representation as a picture, map or diagram.

Once they get a clear image, they project it into the future as a possible goal. From this future position, they look back to the present until they can sense a basic strategy for reaching that goal from existing conditions. If a strategy can be found, then the Symbolist understands the potential application for the information.

Symbolists learn easily when there is a clear representation of an idea in the form of a diagram, map or picture. They use their creative function, $Uc'u'$, to find the logical reasons for optimal applications of an idea. They experience a deep sense of satisfaction when they create a smoothly functioning system.

Symbolists have excellent eidetic memory of the images they use in their considerations. Their language reflects this ability with words that precisely identify ideas and many adjectives for creating clarity and preciseness of detail.

Aggregate Behavioral Characteristics

Symbolists are characterized by the formality and restraint they exhibit in their behavior. The aggregate behavior of Symbolists creates a hierarchically organized community with distinct classes of society. There are formalized rules of behavior within each class and strict rules for interaction between the classes. Upward mobility is limited to those with the greatest intelligence, wit, and proper demeanor.

The Mature Symbolist

Maintains a wide perspective when considering new ideas.
Creates new perspectives on problems.
Investigates the basis for his ideas.

Respects established norms and customs of society.
Modifies existing standards to meet new conditions.
Has high standards of behavior

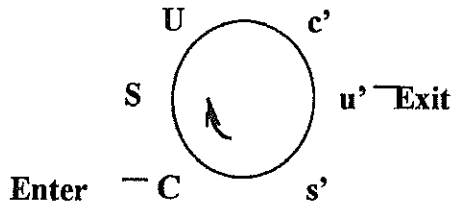
Defines his words precisely.
Infuses his ideals into his behavior.
Considers the feelings of those affected by his plans.
Looks at own system and its impact on others.
Is secure in his position within his group.

The Immature Symbolist

Has a limited or fixed perspective.
Is judgmental and territorial.
Relies on old maps, boundaries and standards.
Relies on others for his ideas.
Seeks to exclude or neutralize potential rivals.
Imposes his own standards on others.
Is unsure of his position.
Overlooks his own shortcomings.

Cannot create harmoniously working systems.

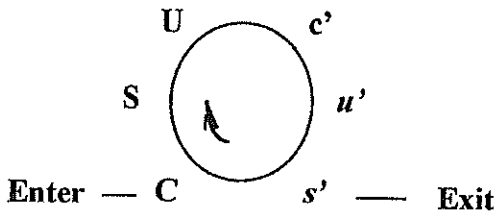
SYMBOLISTS
Learning Process



Faculty	Process
C Symbolic	Look at the idea
S Strategic	until I understand the basis
U Empathic	for this application
	Caange Stance
c' Theoric	*Identify the limits*
u' Sympathic	*that are reasonable*
	Exit

Figure 6.04a

SYMBOLISTS
Creative Process



Faculty | **Process**

C Symbolic

S Strategic

U Empathic

c' Theoric

u' Sympathic

s' Systemic

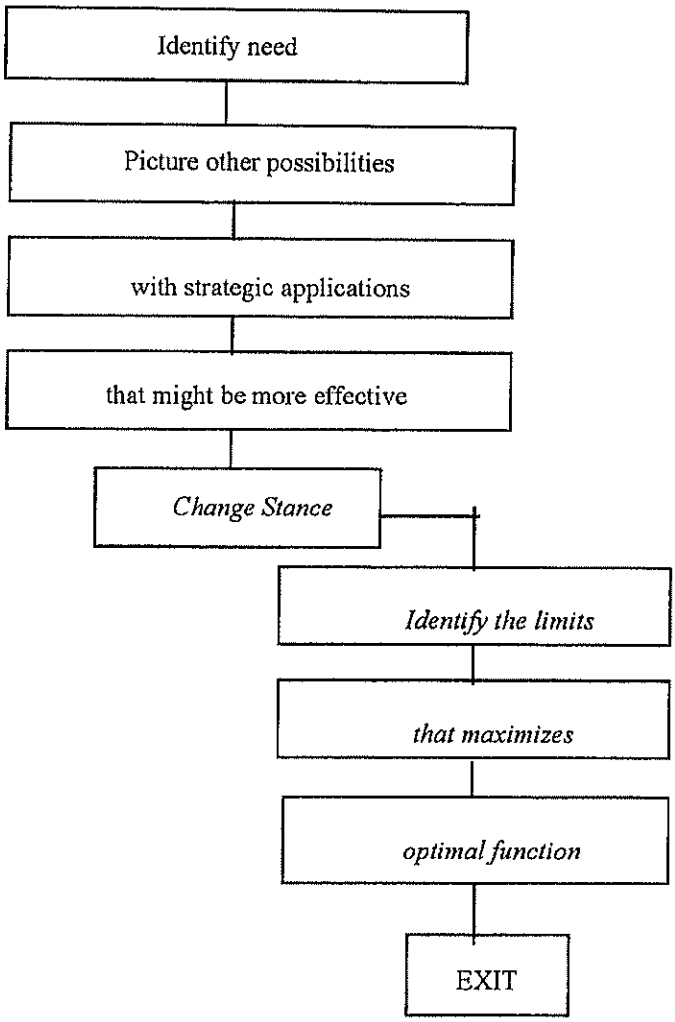


Figure 6.04b

Creative Loop
CSU U~ c'u'

6/21/97

Chapter VI. B. 2.

NOOLOGICAL PROCESSING SYSTEMS

Concept People - Subjective Stance

Theorists - *c'u's'*

Exit --- U *c'* --- **Enter**
S *u'*
C *s'*

Figure 6.05

Theorists start their processing on the vertical axis in the Subjective Stance with the Theoric faculty as their leading faculty. They are concerned about finding the limits of possibility for the every occurrence in their experience.

Learning for the Theorist is facilitated by well defined reasons for a clearly stated idea. They understand a proposition when it has the potential for a reasonably coordinated outcome. They look back from the future to a present condition which is rooted in the past.

To achieve mastery, they use their creative strategy, *s'*CS, to identify each of the items that are essential for an employable strategy. The experience satisfaction when their strategies are effectively executed.

Theorists are precise and judicious in their choice of words expressing their opinions about abstractions, ideals and qualities. They use many superlative forms of adjectives when describing the activities of people with frequent references to the best or worst of conditions. They have accurate recall of their conversations, especially of the logical development of an argument.

They are strongly affected by their perception of a lack of consideration in the behavior of other people. They are concerned with issues involving justice and fairness. Even a young Theorist can cut quickly to the heart of any question and succinctly summarize the intent behind the actions of others. They are quick to identify what they do not like.

Aggregate Behavioral Characteristics

A community of Theorists organizes itself into small groups forming functional modules radiating from each individual. Interaction between modules is initiated by the person at the center of that organization. Individuals shift easily from one module to another as the need of the group dictate. There is strong sense of consideration and respect among the members of the groups with reasonable rules of behavior.

The Mature Theorist

Differentiates between what he likes and dislikes.
Probes deeply in his search for alternatives.
Notices details.
Compares old assumptions with present conditions.
Has high moral values.

Is objective while searching for solutions.
Incorporates practicality into his ideals.
Is fair and equitable towards others.
Appreciates the efforts of others.
Accepts human frailty.
Looks at the consequences of his actions.

The Immature Theorists

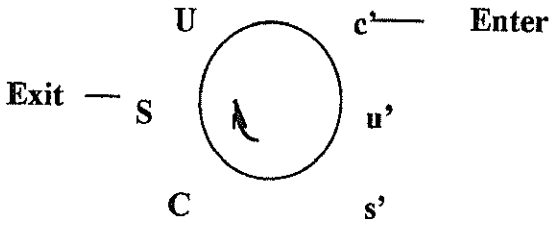
Has difficulty defining what he likes.
Interprets motivation based on his subjective experience.
Forms opinions based on outmoded assumptions.
Cannot examine the basis for his assumptions.
Assumes that his reactions and values are universal.
Is unaware of the consequences of his own actions.

Demands idealistic behavior from himself and others.
Assumes that negative outcomes are the result of bad intentions.
Acts impulsively or ponders options endlessly.
Belittles himself for inadequate results.
Is shy and reclusive, unsure of himself.
Settles for the least expectation of success.

Seldom has the satisfaction of being effective.

Theorists

Learning process



Faculty

Process

c' Theoric

u' Sympathic

s' Systemic

C Symbolic

S Strategic

Identify the ideas

that I can use

for this activity

Change stance

Look for specific details

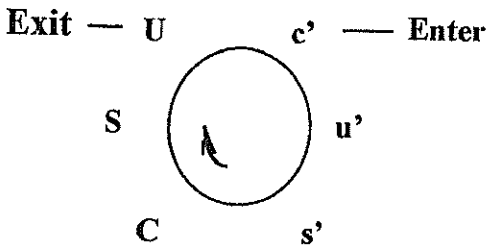
to carry out the intent

EXIT

Figure 6.05a

Theorists

Creative Process



Faculty

Process

c' Theoric

u' Sympathic

s' Systemic

C Symbolic

S Strategic

U Empathic

Identify need

Determine the range

for optimal

function

Change stance

Identify the specific details

that will carry out my intent

most effectively

EXIT

Figure 6.05b
Creative Loop
c'u's' s'~CS

Chapter VI. C.

NOOLOGICAL PROCESSING SYSTEMS

Structure People

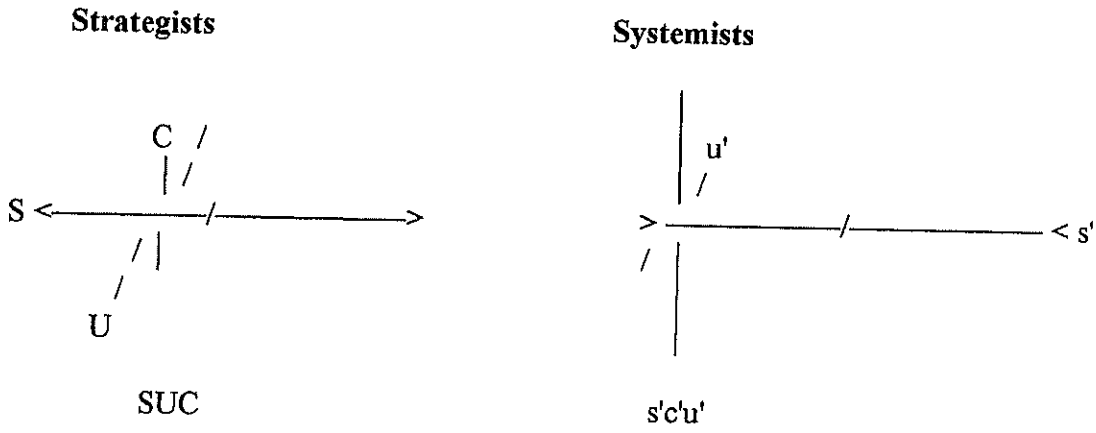


Figure 6.06

Structure people establish operations for efficient strategies or ecological systems through somatic processing. They understand how things operate when they create a meaningful whole from a particular body of information. The modeling process of formation is used to work a problem. Time considerations are made in the immediate present as an ongoing activity.

In their language, Structure people use verbs that make fine distinctions among many different types of activities. They are silent when considering new possibilities and attach words to an operation after they have mastered its tasks. Primary processing on the lateral axis expresses itself as a strong sense of groundedness in their bodies.

Chapter VI. C. 1.

NOOLOGICAL PROCESSING SYSTEMS

Structure People - Objective Stance

Strategists - SUC

C *s'*
U *c'*
S *u'*
/ \
Enter Exit

Figure 6.07

Strategist start their processing on the lateral axis in the Objective Stance. Their primary faculty is the Strategic faculty which is used to conduct searches for any information that might be connected to a stated objective and to use that information to format an optimally designed path to that objective. They are thorough in their investigations and can readily identify flaws in existing strategic plans.

They can coordinate multiple strategic enterprises with points of exchange for goods, services and information. Leadership rests in the hands of those who are best able to plan and track strategic paths.

They look at present circumstances as the outgrowth of past conditions which is then projected into the future. They can understand a new situation when they are presented with a good procedure that leads to a clearly stated objective. To attain mastery, they use their creative strategy, *Cs'c'*, to take each component of the optimal strategy and to refine it until each step flows smoothly into the next. They experience satisfaction when their efforts yield a deep, private sense of well being.

They can accurately recall the considerations that were made in creating their strategies and can describe the intricacies of their plans metaphorically. Their conversational tempo is deliberate and measured. Strategists are concerned with efficiency in the use of materiel, time and energy.

Aggregate Behavioral Characteristics

Strategists form groups based on kinship ties. These groups may be as large as a clan. Extended family groups often prefer to live in large compounds sharing communal duties. The society is stratified, but an individual may move up through the layers based upon his intellectual and physical abilities. Rules of behavior are codified and detailed according to rank and function. They usually conduct paired conversations with many pairs conversing simultaneously within a larger group.

The Mature Strategist

Is efficient and orderly.
Is patient as long range plans are formed.
Monitors progress as he carries out his plans.
Respects the skills and tools of his trade or profession.
Seeks to improve his skills and tools.
Is a good mentor to those with lesser experience or skills.
Insures that each step in plan functions smoothly and leads easily to the next one.

Considers the needs of other people.
Shares his feelings with others.
Is sensitive to the effect of his actions on others.
Can alter his strategies in response to others.
Works with others to improve and upgrade existing operations.

The Immature Strategist

Sets goals without investigating possible drawbacks.
Has difficulty in making long range plans.
Starts action before the goal is defined.
Repeats familiar strategies even when they don't work.
Maintains outmoded strategies as rituals.
Resists new ventures.
Refuses to work within a group that does not meet his expectations.

Impatient with delays and inefficiencies caused by others.
Belittles those with ideas that seem unclear to him.
Does not consider others when forming his strategies.
Regards other people's feelings as irrelevant.
Has difficulty being a good team player.
Has difficulty sharing his feelings with others.
Cannot make fine distinctions in his own feelings.
Cannot articulate own needs.

Seldom gets what he want.

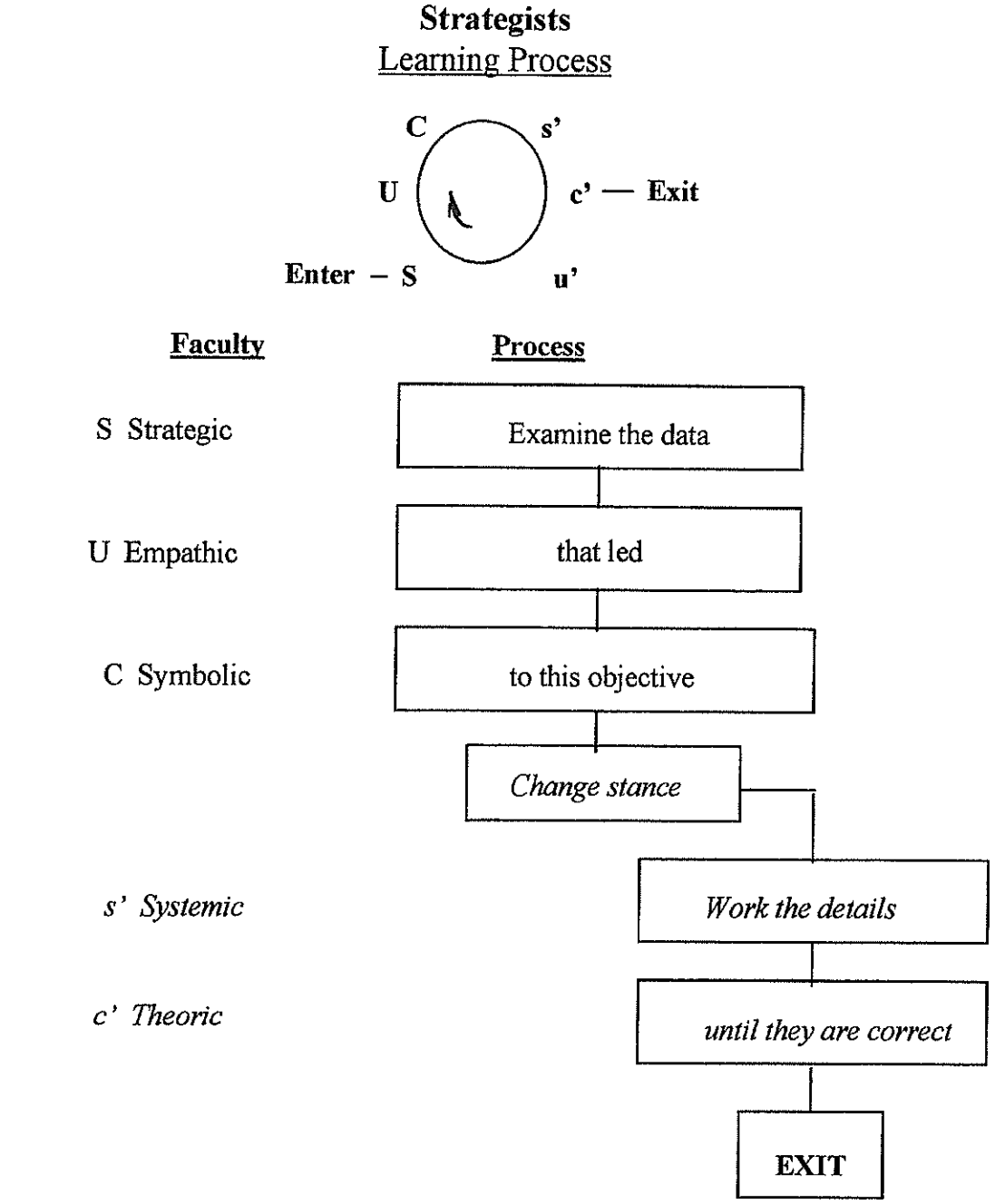
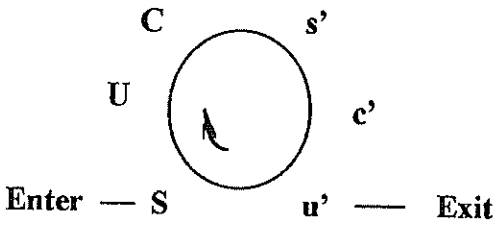


Figure 6.07a

Strategists

Creative Process



Faculty

S Strategic

U Empathic

C Symbolic

s' Systemic

c' Theoric

u' Sympathic

Process

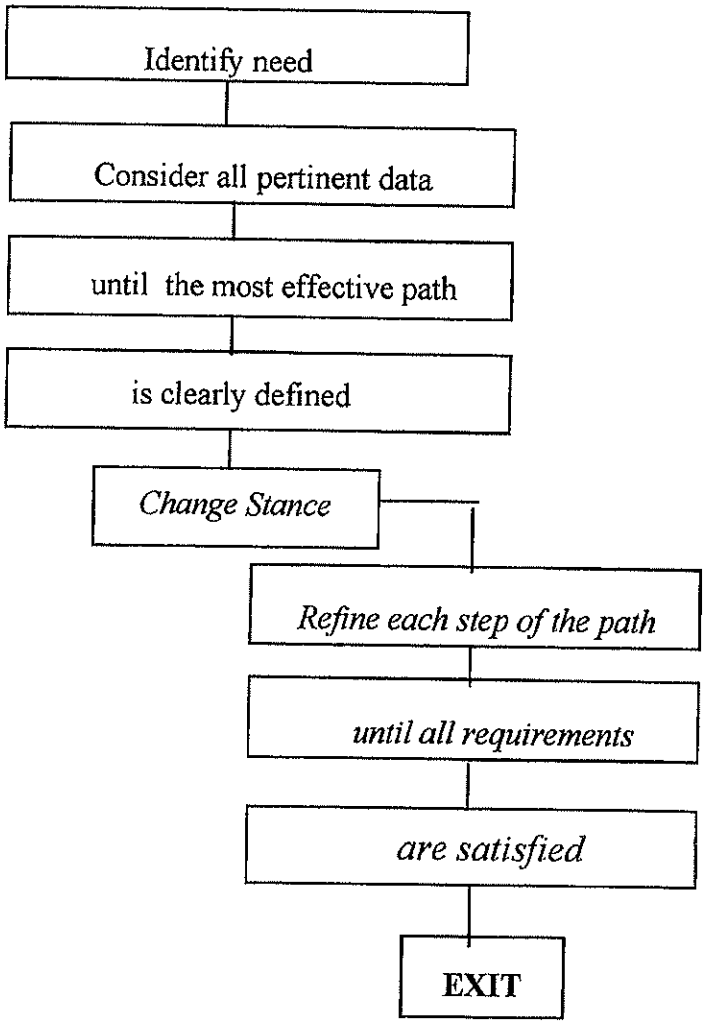


Figure 6.07b
Creative Loop
SUC C~s'c'

Chapter VI. C. 2.

NOOLOGICAL PROCESSING SYSTEMS

Structure People - Subjective Stance

Systemists - *s'c'u*

Exit --- C *s'* --- **Enter**
U *c'*
S *u'*

Figure 6.08

Systemist start their processing on the lateral axis in the Subjective Stance. Their primary faculty is the systemic faculty which is used collect all information that might be of organic importance. They are keenly aware of any gaps or spaces in their understanding and usually resist applying information until they have a good working knowledge of the principles involved.

They understand how something operates when they can find an structural or isomorphic relationship to a model they already understand. They usually describe such relationships allegorically. They are concerned with creating an ecological system that meets the needs of each person within the system. They look at the present as a basis for future conditions that will create its own history.

To achieve mastery in a field, Systemists use their creative function, *u'*SU, to select appropriate elements from the system to develop applications for practical uses. If they wish to create a new model or prototype, they form a consensus which satisfies the needs of everyone who might be involved in the activity. They experience deep satisfaction when the finished product resembles the original model. They remember the importance of each component as it was considered for the final model. Their conversational tempo is usually very deliberate, often punctuated by long pauses.

Aggregate Behavioral Characteristics

A community of Systemists organizes itself into modules based upon the functional requirements of the activity. Within the functional module, responsibilities are usually shared equally by each member. The leader is the person best able to form a consensus of the group's needs. There is a measure of stratification among the functional modules. Systemists usually form lifelong associations with their peers, especially with those from their early childhood modules. Systemists observe societal rules which they understand tacitly from modeling the behavior of their elders. Systemists speak alternately, even when there are several people in the group.

The Mature Systemist

Factors in the needs of everyone as he forms a consensus.
Creates practical prototypes from his operational model.
Coordinates the activities of his group.
Appreciates the contributions of each member.
Senses the needs of group and shifts roles according to the task at hand.
Delays immediate gratification for the good of the group.

Provides a role model for less experienced members.
Is articulate when describing the intricacies of his system.
Pictures his own goals in concrete terms.
Expresses his own individuality uniquely from the group.

The Immature Systemist

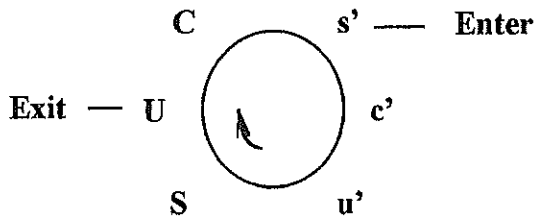
Relies on others to form a consensus for the group.
Confines experience to familiar settings and tasks.
Is timid about new ventures and experiences.
Follows dictates of his group or operates as a loner.
Observes group mores long after original need disappears.

Finds himself at cross purposes.
Activities or pursuits impinge upon each other.
Leads by example only, and cannot offer verbal directions.
Avoids responsibility for others.
Cannot visualize his own goals.

Seldom experiences the satisfaction of seeing tangible results.

Systemists

Learning process



Faculty **Process**

s' Systemic

c' Theoric

u' Sympathic

S Strategic

U Empathic

Learn all the facts

of this model

that are in operation

Change Stance

Identify the essential elements

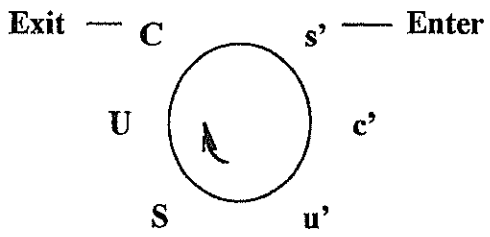
for this applicastion

EXIT

Figure 6.08a

Systemists

Creative Process



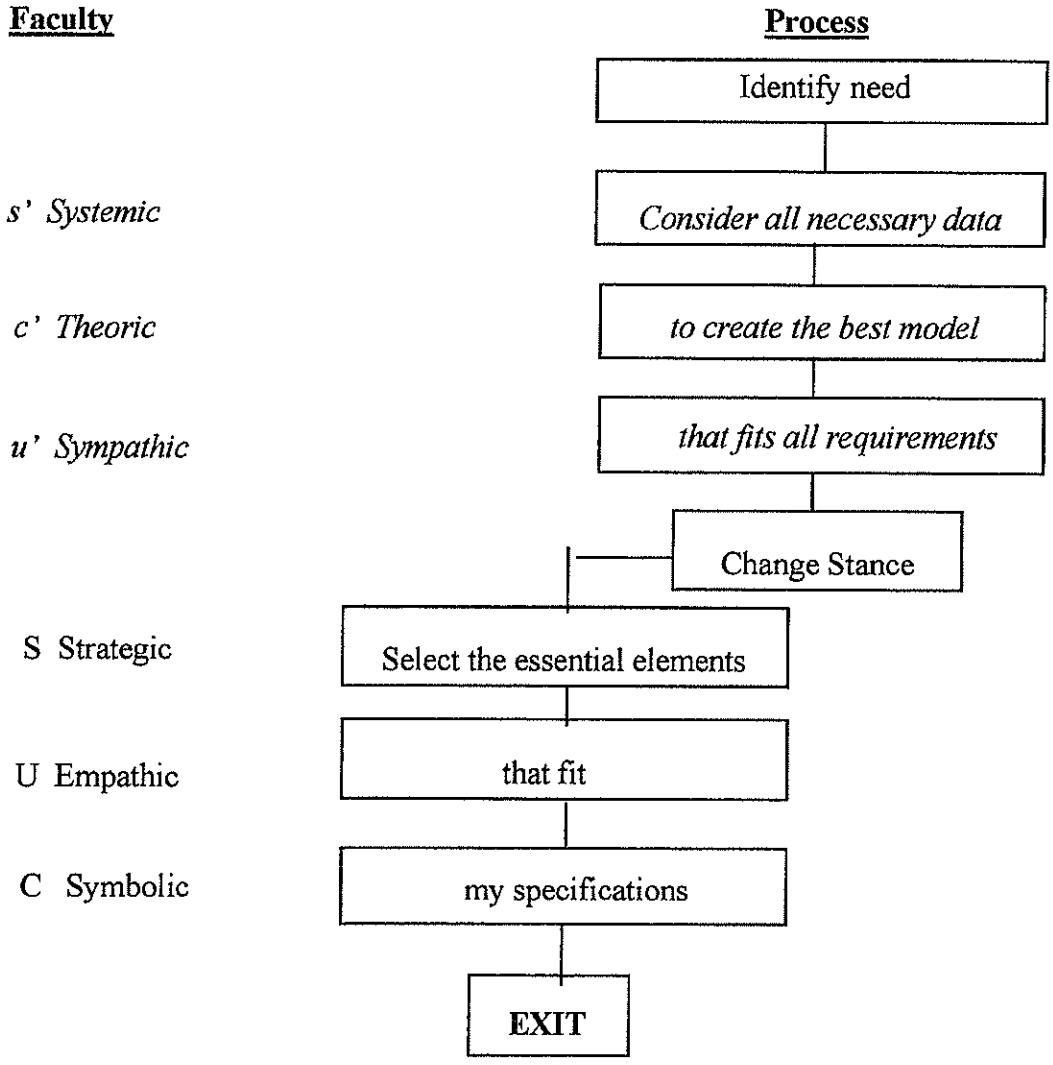


Figure 6.08b
Creative Loop
s'c'u' u'~ SU

Chapter VI. D.

NOOLOGICAL PROCESSING SYSTEMS

Use People

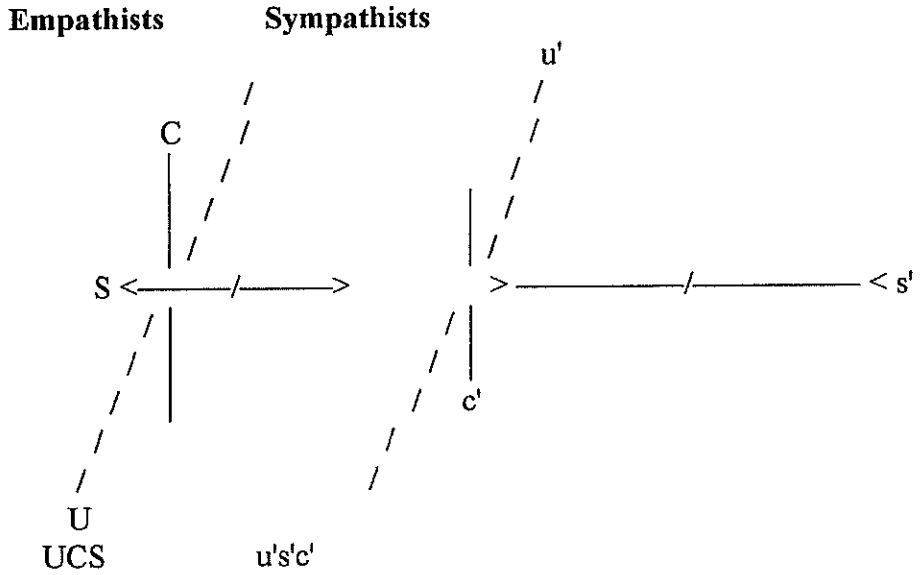


Figure 6.09

Use people establish associations through the creation of conduits for the exchange of important information or by the establishment of functional networks among competent people. These associations are based upon their personal response to that idea or person. When an association is made, that idea or person is included in their experience. If no association can be found, that idea or person is usually excluded from consideration. There is a constant, ongoing referral to the external world as they continuously monitor these associations.

The connective modeling process is used to monitor the environment for changes in conditions on an ongoing basis. They have a past orientation to time because they are aware of an event as soon as it has occurred. They use many forms of verbs modified by different prefixes and nominalizations of these verbs to make fine distinctions between the effective execution of ideas and astute discriminations about the character traits and abilities of people. The dynamics on the sagittal processing axis creates flexibility in their torsos.

Chapter VI. D. 1.

NOOLOGICAL PROCESSING SYSTEMS

Use People - Objective Stance

Empathists - UCS

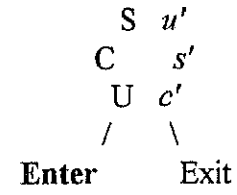


Figure 6.10

Empathists start their processing on the sagittal axis in the Objective Stance by using the Empathic faculty to assess the validity of an idea by the degree of effectiveness in its execution. They are strongly affected by the electro-magnetic energy fields within their environment and monitor their surroundings on an ongoing basis. They create and monitor many channels for the exchange of information.

They understand something when there is a well executed demonstration of its organizing principle with a clear statement of similarity between a new concept and its predecessors. They can identify unifying principles among seemingly unrelated projects.

They have good recall of the ideas and thoughts they considered in their assessments. From a past vantage point, they look at established ideas as the precursors of future conditions. They use many forms of verbs modified by different prefixes and nominalizations of these verbs to form distinctions between the effects created by different causes.

To attain mastery in a field they use their creative function, *Su's'*, to identify the most effective strategy and refine its components until a smoothly functioning system is created. They experience satisfaction when something works to its highest potential.

Aggregate Behavioral Characteristics

Large groups of Empathists organize themselves according to the requirements of the tasks to be performed. Within their society, there is a measure of stratification by tasking. They refine their organizational structures to perform smoothly and efficiently for the benefit of its members. Their tools and other material artifacts are similarly refined for efficient operation. Leadership rests in the hands of the most capable. Their competitive spirit usually expresses itself as individual accomplishments of prowess and skill.
A society of Empathists expects its members to understand and accept its organizing principles and to be effective in carrying out its intentions.

The Mature Empathist

Recognizes and respects good execution of an idea.
Identifies the organizing principles in a functional organization.
Identifies common principles in seemingly unrelated projects.
Modifies a system until it operates at its full potential.
Functions within existing systems.

Participates in team efforts.
Exercises care and thoughtfulness in making commitments to other people.
Recognizes an enterprise that is not satisfying.
Disengages from commitments not conducive to his own well being.

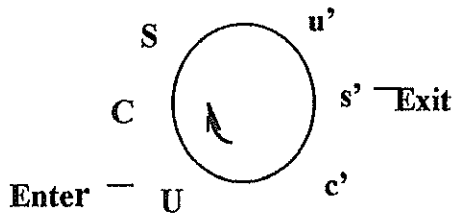
The Immature Empathist

Accepts a flawed principle or idea.
Connects unrelated ideas.
Settles for poorly executed results.
Creates plans without a sound basis.
Ignores his own internal alarm signals.
Commits prematurely to a person or cause - or -
Requires absolute certainty before committing.
Disconnects abruptly and with little forewarning.
Denounces beliefs that conflict with his.

Seldom experiences a measure of perfection in his efforts.

Empathists

Learning process



Faculty **Process**

U Empathic — Accept effectivity

C Symbolic — of the idea

S Strategic — in this application

Change Stance

u' Sympathic — *To satisfy the stated need*

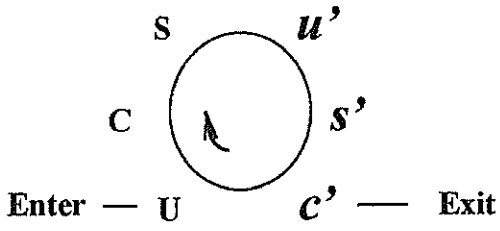
s' Systmic — *identify itss operative components*

EXIT

Figure 6.10a

Empathists

Creative Process



Faculty

U Empathic

C Symbolic

S Strategic

u' Sympathic

s' Systemic

c' Theoric

Process

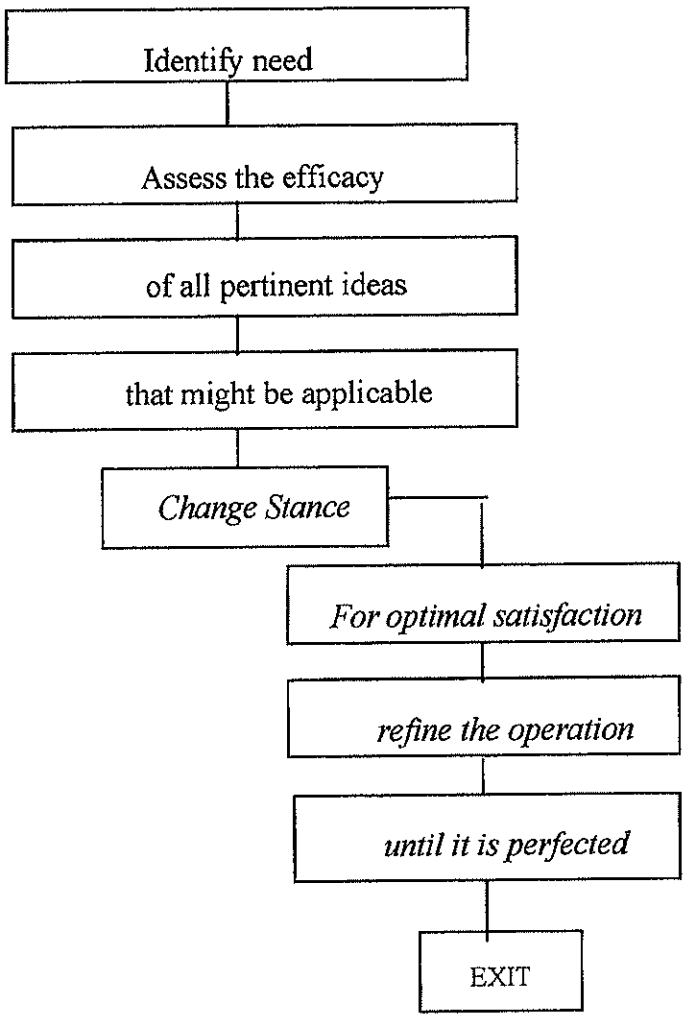


Figure 6.11
Creative Loop
UCS S~u's'

6/21/97

Chapter VI. D. 2.

NOOLOGICAL PROCESSING SYSTEMS

Use People - Subjective Stance

Sympathists - *u's'c'*

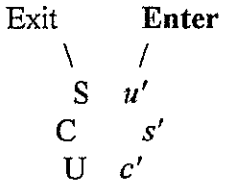


Figure 6.11

Sympathists start their processing on the sagittal axis in the Subjective Stance. Their primary Sympathic faculty is used to judge the relative competency of others based upon personal standards. They value competency and create functional networks among those who are most capable. These networks are activated as needed to carry out a project.

They learn most easily when an expert demonstrates the applications of a principle. To achieve mastery, they use their creative function, *c'*UC, to take the best possibility and flesh it out until it presents a fully developed picture. They experience satisfaction when their efforts result in an effective strategy or plan of action.

They regard past events as the roots of presents conditions which determines future outcomes. They have good recall of the faces and names of the people who are in their networks. Their use of language includes many modifiers for making fine distinctions in the character traits and abilities of people. Many Sympathists are able to carry on more than one conversation at a time. Skilled communicators can track multiple conversations simultaneously.

Aggregate Behavioral Characteristics

Large groups of Sympathists form fluid, amorphous groupings with everyone interacting with everyone else. Although kinship associations are very strong, alliances of powerful people tend to dominate the political, economic and social life of the group. The society is organized into a dominant group with the remainder forming subordinate groups. Tasking is often assigned by the dominant group. Leadership rests with those who can form the most powerful alliances. Because they sense constant shifts and changes in conditions, Sympathists regard rules and standards as base lines which are subject to reinterpretation as circumstances and needs change. Each new circumstance requires a new evaluation of rules and standards.

The Mature Sympathist

Quickly identifies the relative competence of others.
Has good criteria for judging competence.
Selects associates carefully.
Forms effective networks among his associates.
Associates comfortably with many people.
Reciprocates with others in activities.
Forms independent opinions.

Is considerate of the comfort and well being of others.
Considers the impact of his plans upon others.
Pictures his own goals and aspirations.

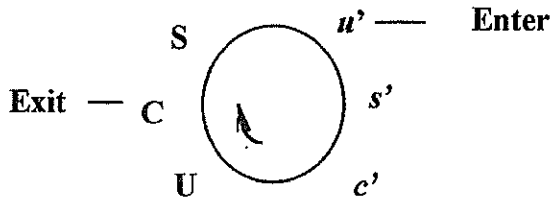
The Immature Sympathist

Relates quickly to others without exercising caution.
Creates networks based upon superficial ties.
Maintains relationships with others because their needs make him feel powerful.
Expects others to anticipate his needs.
Continuously tests the limits of others.
Becomes embittered by their continued inability to fulfill his expectations.
May shun those who disappoint him.
Mistrusts associations with other people.
Cannot form his own goals.

Seldom has the satisfaction of creating effective plans of action.

Sympathists

Learning process



Faculty **Process**

u' Sympathic

Observe the teacher

for how he sets

s' Systemic

the limits for this idea

c' Theoric

Change Stance

U Empathic

Enrich each aspect

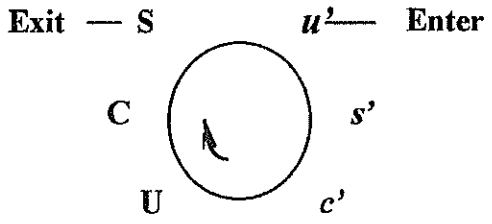
C Symbolic

until the idea is clarified

EXIT

Figure 6.11a

Sympathists
Creative Process



Faculty

u' Sympathic

s' Systemic

c' Theoric

U Empathic

C Symbolic

S Strategic

Process

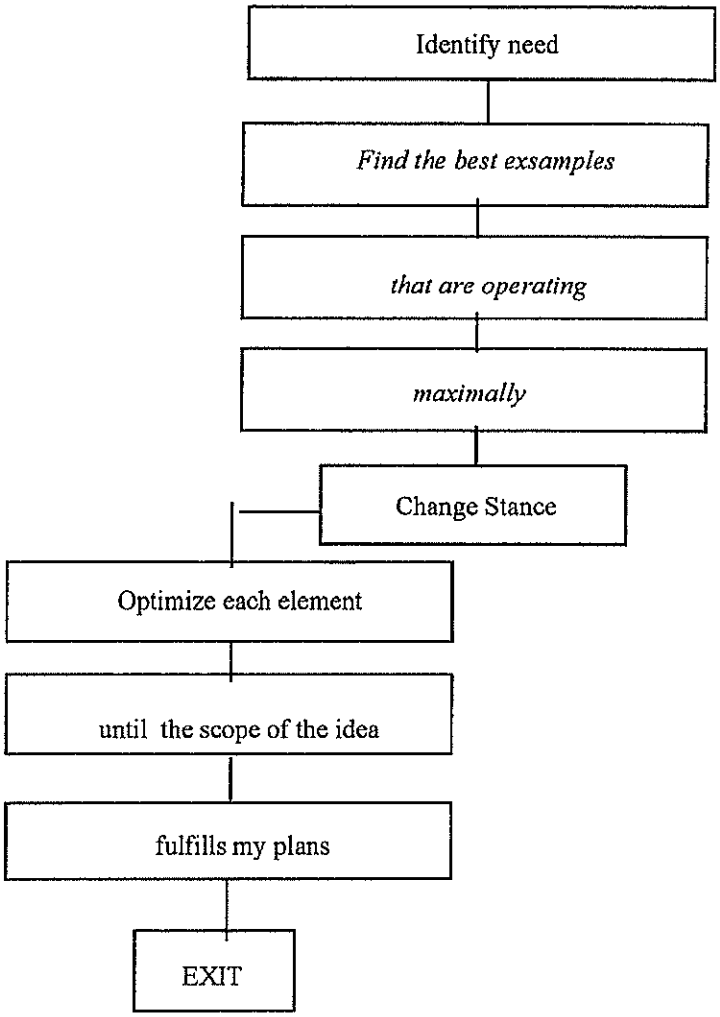


Figure 6.11b
Creative Loop
u's'c' c'~ UC

Chapter VII.

INTERACTIONS BETWEEN TYPES

As people interact with each other, they find that some people are very easy to understand. These people seem to have sensible values and good common sense. They comprehend basic issues without elaborate explanations. It is easy to reach a mutual understanding with them. Even if an agreement cannot be made, the position of the other person is readily understandable. There is an easy rapport and mutual understanding among these reasonable people.

In contrast, there are others who surely come from another planet! They make arbitrary decisions and have questionable motives. They seem to be lacking in common courtesy and have no regard for others. They start things without thoroughly examining the issues involved. Their responses to ordinary events are difficult to understand. They do not have any common sense and are reasonable in everything they do.

Ethnic and cultural influences are often cited as the basis for these differences, but Hall revealed that an unspoken, silent language underlies most cultural differences. This silent language expresses itself in virtually all areas of life. Differences in considerations of time, definitions of personal space and organization of social systems are identified as part of this silent language. When these differences are regarded as idiosyncratic to a single individual or to a particular culture, they require extensive analysis to reveal the underlying patterns of behavior. When these unspoken languages are examined as expressions of systemic patterns, they readily give up their secrets.

It is interesting to note that these people who seem to have originated on different planets share the same opinions about each other. What is perfectly reasonable and obvious to one side is arbitrary and obscure to the other side. There is a lack of candor and mutual trust between them. The result is, at best, an uneasy truce. This truce can be very tenuous and fragile and is easily broken. When these people live on the other side of the mountain or better yet, on another continent, their presence is tolerable. Problems arise when they live in close proximity to each other as neighbors and family members.

In the past, geographical isolation protected people from the effects of dissimilar populations. With modern communication and transportation, everyone is confronted with the challenges of interacting with others who think and act in very different ways. Even small tribal communities in the remotest parts of the world are increasingly exposed to the instant global communications of the information age. Educators, businessmen, politicians and statesmen alike are charged with the responsibility of communicating clearly and precisely. When they are trained in the knowledge and skills of Noology, they can begin the complex task of bridging ancient political and religious divisions and schisms. Common economic goals can be used as the incentive for people of different types to work together.

Patterns of Relationships

The interactions of people are directly influenced by their Noological processing systems. Similarities and differences in their processing sequences create predictable types of interactions between people. Initial contact is strongly influenced by their respective decision making processes. More prolonged contact will accentuate the interactions between the patterns in their creative processing loops. When people understand the dynamics of their interactions, they develop greater appreciation and respect for each other.

People with the same processing system share similar personality traits and have an intuitive understanding of each other's thought processes. As the differences in processing systems become greater, people encounter more difficulties in their interactions. For those with the greatest dissimilarities, only the most compelling common goals and values allow them to cooperate and work with each other.

Five types of systemic relationships govern the interactions between people. People of the same stance share a common outlook on life and can find many ways to interact with each other. Shared stance people are able to form an easy rapport with each other. There are two classes of shared stance interactions. These are Synchronous people who share the same processing system and Inverses who share a common stance but start their processing on different axes.

People of opposite stances have more difficulty relating to each other. Complements start their processing on the same axis and have the most in common with their opposite stance counterparts. Converses share a common third processing axis and Reverses completely reverse the sequencing of the processing axes.

The following chart shows the five patterns of interactions between the Noological types.

	<u>Shared Stance</u>	
Synchronous	ABC : ABC	Identical Sequence
Inverse	ABC : BCA : CAB	Maintains Sequence (as in music)
	<u>Opposite Stance</u>	
Complement	ABC : *a'c'b'*	Shared Primary Axis
Reverse	ABC : *c'b'a'*	Axial Sequence Reversed
Converse	ABC : *b'a'c'*	Common Third Axis

Table 7.1

Although every processing type uses all six of the Noological faculties, each uses some faculties more than others. This directly influences their ability to communicate with each

other. Even with a common mother tongue, neighboring groups of different types will create changes in vocabulary and in syntax. Learning requirements are one of the principal areas affected by systemic differences. Decision processes create different dynamics in negotiations and in the needs for formal agreements and contracts. Other cultural artifacts that are affected are perceptions of time and ownership.

SHARED STANCE RELATIONSHIPS

People who are of the same stance share basic attitudes and a common outlook on life as they form their opinions and decisions. Their shared stance creates a mutual sense of understanding between them. They maintain this understanding with little discussion or explanation. Even when they do not agree, they can concede that the other may have valid reasons for his opinions. People who share the same stance are either synchronous to each other or inverses of each other.

Synchronous Relationships

ABC : ABC

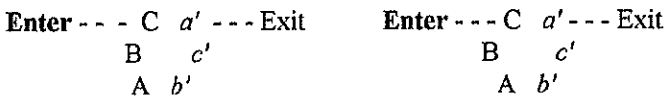


Figure 7.01

Two individuals who are synchronous to each other have identical processing sequences. They have an intuitive understanding of the thoughts, feelings and actions of the other person and in the order each creates about him. They have a keen awareness and appreciation for their mutually shared creative processing loop. There is an easy affinity and rapport among synchronous people.

Development of the mental skills during childhood and adolescence is facilitated by interactions with synchronous partners. The younger person can easily comprehend the components of the operational, executive and managerial functions demonstrated by his synchronous elder. As differences in processing systems widen, the younger person has increasing difficulty in modeling the skills of the mentor. These difficulties can range from mild confusion to serious doubts about his own competency. Noological processes have been developed to activate the all of the mental skills by utilizing both mental and somatic learning processes.

Same Gender Parent - When the infant and the same gender parent are of the same type, the synchronous nature of their interactions provides the child with a model that he intuitively understands. It allows the child to establish his own internal signals for judging the rightness or wrongness of things. With well established signals, he has a strong sense of self reliance and independence as he learns his other skills.

Playmate - When the child has a playmate of the same type, he can fully explore the

boundaries and rules of play. Their synchronous action provides understandable feedback to adjust both his behavior and range of activity. The teamwork and sharing that he learns from his playmates form the essential components of his managerial skills.

Leader - A leader of the same type provides the adolescent with guidelines for group behavior and leadership which are used in the executive capacity. He learns the ethical rules of the society he is about to enter.

Mentor - A mentor of the same type models for the adult the insight needed for developing spiritual values. The mentor may be a person of another type, if he has the flexibility to allow the younger person to conduct his own investigations and to reach his own conclusions.

The aggregate behavior of synchronous people creates a society with shared values, language patterns, customs and mores. Culturally stable societies are usually composed of people who are synchronous to each other. This is especially true of small indigenous tribes with little interaction with other people. As other processing types interact with a synchronous group, the complexity of the group grows and increases the differences until it is no longer a synchronous group.

Inverse Relationships

Objective Stance - ABC : BCA : CAB

Subjective Stance - *a'c'b' : c'b'a' : b'a'c'*

Inverses share the same stance during their decision making process. Each set of inverses uses the same three faculties in their decision making process. This creates a mutual acceptance of the fundamental reasonableness of each other's thoughts and actions. It also allows for an easy tolerance of the differences in their processing patterns. Inverses in Noology have the same relationship to each other as the inverses of a musical triad. Each primary axis acts as the root of one of the inverses. There are three pairs of inverses in each stance. The objectively stanced inverses are the Symbolists, Strategists and Empathists. Theorists, Systemists and Sympathists are the subjectively stanced inverses.

Each set of inverses use the same faculties during the decision making process, but they are not used for the same function. The operational function of the first inverse uses faculty A for determining possibilities. The second inverses uses faculty A for making managerial decisions and the third inverse uses it for making executive decisions. The other two faculties are also used for different considerations.

The following chart illustrates the faculties used by the various functions of the inverses in both the objective and subjective stance.

Primary Stance Faculties Used by Objective Inverses
During
Decision Making Process

	First	Second	Third

Function	Inverse ABC	Inverse BCA	Inverse CAB
Operational	A	B	C
Executive	B	C	A
Managerial	C	A	B

Each pair shares a common processing sequence in their decision making process. The following chart illustrates the overlap between the inverses in the objective and subjective stance systems, their common axial sequence and the faculties used during their decision making process.

Objective Stance Inverses	Common Sequence Pattern		Function
Symbolist and Strategist	CSU and SUC	**SU**	Strategic application
Strategist and Empathist	SUC and UCS	**UC**	Direction of objective
Empathist and Symbolist	UCS and CSU	**CS**	Scope of planning
Subjective Stance Inverses			
Theorist and Sympathist	*c'u's'* and *u's'c'*	***u's'***	Evaluation of performance
Sympathist and Systemist	*u's'c'* and *s'c'u'*	***s'c'***	Activity with common values
Systemist and Theorist	*s'c'u'* and *c'u's'*	***c'u'***	Model for making judgements

Table 7.2

Although these common sequences create a bond between inverses, it does not create an equally share bond of understanding. In most cases, an individual's insight into the thought processes of his second inverse will be better than his understanding of his third inverses's processes. It is generally easier for the first inverse to make an executive evaluation of his second inverses operational use of the common faculty A. When that same faculty is used by his third inverse to make managerial decisions, it can cause confusion for the first inverse.

OPPOSITE STANCE RELATIONSHIPS

Opposite stance interactions create more difficulties for people because their appraisals and decisions are formed from different point of views. There is a fundamental difference in the perspective they maintain as they respond to the pressures of family, professional and societal obligations. This difference in stance is reflected in the way they gather and assess information, set priorities and define their requirements for participating in an activity.

Complement Relationships

ABC : *a'c'b'*

Common Lead Axis for Processing

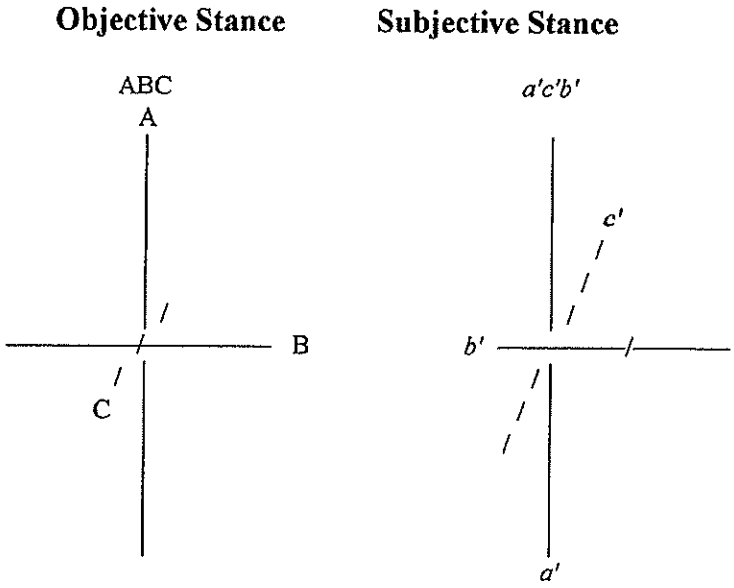


Figure 7.02

Complements start their processing on the same primary axis, but from opposite stances. When they have similar backgrounds and interests, operational dynamics on the primary axis often opens possibilities that may intrigue both of them. This similarity of interest often forms the basis for friendships and other long term relationships.

This dynamic feeds upon itself and often escalates a passing interest into an enthusiastic commitment for action. Each finds himself in an enterprise that neither would have embarked upon on his own. Each assumes that the other one considered all the problems that might be encountered along the way. They are surprised to find that many important considerations were not made during the investigative stage. A common solution is to create a division of duties so that each partner works independently of the other. When the relationship requires them to work closely together, differences in their processing sequence causes some natural areas of conflict.

The following diagram shows the entire processing sequence for a pair of complements with their points of entry and exit.

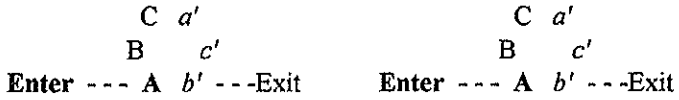


Figure 7.03

The three pairs of complements are shown in the following illustration with their complementary faculties on the primary axis underlined.

Pairs of Complements

Concept

Symbolists *Theorists*

Structure

Use

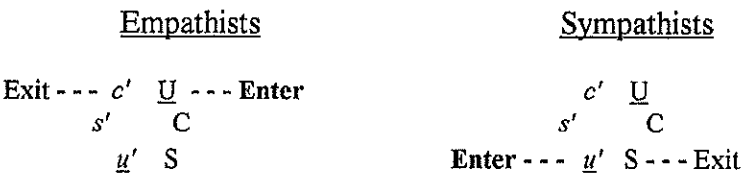


Figure 7.04

Although complements share a common primary axis, there is a sharp divergence of opinion about the proper way to approach a problem. The subjectively stanced partner often yields to the analysis and logic of his objectively stanced complement. The difficulty arises when the subjectively stanced partner stands his ground and refuses to yield to the logic of his objectively stanced partner. His subjectively based, randomly organized statements about an idealized solution will drive his partner to distraction.

This same dynamic between the creative and value planes of complements makes it difficult to work out disagreements. As soon as one partner begins his analysis and tries to set criteria with his second axis faculties, the complement will be offended because his system requires that those faculties be used for establishing parameters. An examination of the processing sequences for complements reveals that the executive and managerial function operate on different axes. As each makes his executive decisions about criteria on his second axis, the other feels that his partner has jumped to managerial considerations. With this mutual violation of criteria, an abrupt termination of discussion usually occurs with deeply wounded feelings on both sides. Each is disappointed and surprised that such a promising enterprise could end so badly.

A shared optimism about the possibilities in a relationship often provides the spark for romance and marriage. However, as the relationship progresses, difficulties in long range planning usually begin to surface. With married couples, a common complaint centers about financial goals and plans. "We can't ever discuss X!" "Just give me a budget (or allowance) and I'll manage on it." Similarly, a business partnership may have difficulties in articulating the specific details of their business plan. Each partner defines his duties according to his interpretation of the business plan and works independently of the other. Not only does this lead to inevitable conflicts, but it often results in a serious under--utilization or over-commitment of their assets.

Objective Stance **Subjective Stance**

Symbolists and Sympathists
Shared Creative Axes: U*c'u'* and *c'*UC

Symbolist

U *c'*

S *u'*
Enter - - - C *s'* - - - Exit

Sympathist

Exit - - - S *u'* - - - **Enter**

C *s'*
U *c'*

Strategists and Theorists
Shared Creative Axes: C*s'c'* and *s'*CS

Strategist

C *s'*
U *c'*
Enter - - - S *u'* - - - Exit

Theorist

Exit - - - U *c'* - - - **Enter**
S *u'*
C *s'*

Empathists and Sympathists
Shared Creative Axes: S*u's'* and *u'*SU

Empathist

S *u'*
C *s'*
Enter - - - U *c'* - - - Exit

Systemist

Exit - - - C *s'* - - - **Enter**
U *c'*
S *u'*

Figure 7.07 Reverses

When a pair of reverses are equally committed to an enterprise, they can pursue the development of its potential in their shared creative faculties. Each enters his creative function with his own parameters, but their entry from opposite stances defines a broader area for development. Each is compelled to adjust and expand his parameters to accommodate their mutually expanded creative area. With a commitment that can withstand the constant challenge to determine new parameters, the combined efforts of reverses can produce a product that exceeds their original aspirations.

Converse Relationships
ABC : b'a'**c'**
First two axes switched, common third.

Objective Stance **Subjective Stance**
ABC b'a'c'

A

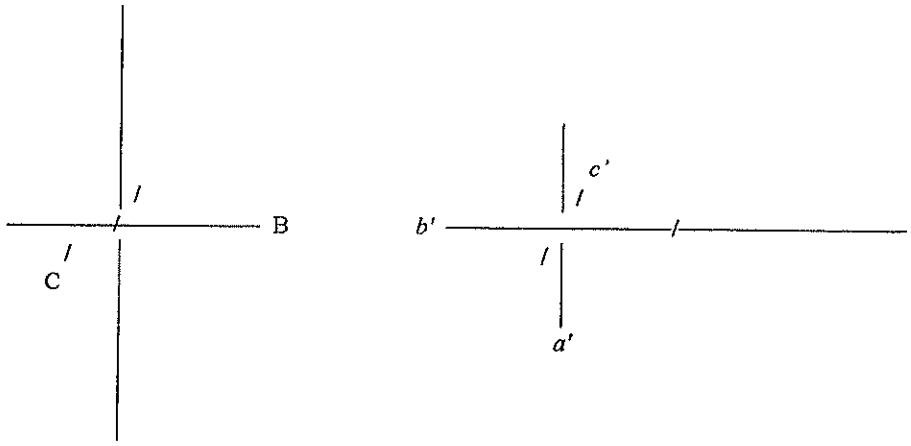


Figure 7.08

An examination of the processing sequences for converses reveals that they share a common pair of axes in making value judgements. Each begins his processing with the faculty that is used as the exit point for other. During processing, criteria are set by the executive function in the primary stance by the second axis faculty and tested by the complementary faculty in the sixth processing step. Because this test has deep personal meanings for each person, it creates difficulties when he sees his converse using that faculty to gather ordinary factual information for his operational functions.

The following diagram shows the complete sequences of a pair of converses with their shared value axes in bold type and underlined.

Enter - - - C *a'* - - - Exit
B *c'*
A ***b'***

A ***b'***
C ***a'***
Exit - - - B *c'* - - - **Enter**

Figure 7.09

The converse relationship is the most challenging of all relationships. For most people, there is no middle ground. It either works or it does not. The converse relationship offers either the broadest range of possibilities for mutual exploration or no possibility for interaction. When an interaction is possible, an intense and enriching dialogue exists during the period of mutual growth and exploration. After this period of sharing, the dialogue usually wanes in its intensity and their interests often diverge. This may cause some initial confusion, but they retain a deep respect for each other.

The converse relationship works when two people have the same criteria for defining satisfaction. Their shared criteria are often expressed as similar moral convictions and spiritual beliefs. As each person shares his deepest convictions, his converse is challenged to reopen his processing sequence. With new factual information, the playing field is expanded, new criteria must be set and more rigorous parameters must be determined.

The three pairs of converses are shown with their entire processing sequences. Value planes are shown in bold type and underlined.

The Shared Value Axes Converses

Objective Stance **Subjective Stance**

Symbolists and Systemists

CSU/*c'u'c'*
s'c'u'/SUC

Shared Value Axes: *s'*CS - C*s'c'*

Symbolist	**Systemist**
U *c'*	Exit - - - **C** ***s'*** - - - **Enter**
S *u'*	U ***c'***
Enter - - - **C** ***s'*** - - - Exit	S *u'*

Symbolist appreciates Systemist's outlook on life.
Systemist agrees with Symbolists's actions.

Strategists and Sympathists
Shared Value Axes: *u'*SU - S*u's'*

SUC/*s'c'u'*
u's'c'/UCS

Strategist	**Sympathist**
C *s'*	**S** ***u'***
U *c'*	C ***s'***
S ***u'***	U *c'*

Strategist approves of Sympathist's strategic planning.
Sympathist understands Strategist's feelings

Empathists and Theorists
Shared Value Axes: *c'*UC - U*c'u'*

UCS/*u's'c'*
c'u's'/CSU

Empathist	**Theorist**
S *u'*	**U** ***c'***
C *s'*	S ***u'***
U ***c'***	C *s'*

Empathist admires Theorist's ideals.
Theorist respects Empathist's effectiveness.

Figure 7.10

When two converses do not have the same criteria for beliefs and values, there is a sense that each trivializes or profanes the values held by the other. Each has little insight into the motivation of the other. They may be suspicious of each other and feel that there is a lack of common decency in the other person. This is especially true if one or both parties do not have well developed criteria for satisfaction.

Chapter VIII.

SOMATIC PROCESSES

somatic processes
shifting perceptual positions
functions within positions

For every infant on this planet, a primary challenge of his learning is to move and operate his body in response to the earth's gravitational field.
The average person spontaneously and gracefully calibrates his own constantly shifting center of gravity with that of the planet.
This is part of the natural heritage that we share with other living forms.

Just as we have calibrated to movement in our physical world, our minds have developed the capacity to operate in a perceptual world that reflects the three dimensional characteristics of the physical world.

Full movement of mind in three dimensions seems to be a potential that is unique to the human race.
Other living forms share this ability with us in restricted and limited ways because most of their behaviors are programmed by instinct.
We are the pioneers of this exploration of space and we are offered challenges and opportunities far beyond our present expectations.

Field of somatic education
Feldenkrais
Trager
Rolfing
CranioSacral

SOMATIC PROCESSES
Functional Correspondence to Physiology

explain -more
The Concept line is on the plumb line of the body with the other two axes intersecting at right angles at the waist. This orientation allows the full range of dynamic activity to take place on each axis.

Each of the six faculties is related to a specific portion of the spinal column.
mental perception, not in octants of space

Concept Symbolic Skull, Cranium (Insert
Theoric Cervical Spine Diagrams)

Use Sympathic Thoracic Spine
Empathic Lumbar Spine

Structure Strategic Sacrum
Systemic Coccyx

pelvic girdle and shoulder// girdle Structure
right arm and leg - Strategic
left arm and leg - Systemic

///The Noological faculties are also correlated with various parts of the body and their functions.
The Symbolic faculty is associated with the cranium.
The Theoric faculty is associated with the cervical spine,
The Sympathic faculty operates with the thoracic spine,
The Empathic faculty is associated with the lumbar spine,
The Strategic faculty is associated the sacrum
Lastly, the Systemic faculty is associated with, the coccyx. These correlations of the body and the faculties were made by Miller.

The following chart shows the simple correlation of the faculties with the skull and spinal column.

Correlations of
the Noological Faculties with the Spinal Column

Faculty	Spine
Symbolic	cranium
Theoric	cervical spine
Sympathic	thoracic spine
Empathic	lumbar spine
Strategic	sacrum
Systemic	coccyx

Table 4.5

and its abilities to visualize and focus
the sympathetic nervous system and the circulatory system and is associated with exhaling

//breathing monitors performance
brain stem and spinal tube and the ability to verbalize and hypothesize.
the sympathetic nervous system and the circulatory system and is associated with exhaling
//breathing monitors performance
the vagus nerve with its ability to monitor the electromagnetic field ///inhale// monitor execution of ideas
and reproductive systems which influence strategic behaviors . with the endocrine system,
the digestive organs and systemic functions

All of these correlations are utilized in the design of Noological processes for training and developing the various faculties. These correlations of the faculties with the physical body are the subject of continuing study. The findings in these studies will be published as they are completed.

Integrative Plane

Concept	Soft palate
Structure	Pelvic floor
Use	Diaphragm

//There is an additional correlation of the Noological faculties with the physical body. All of these correlations are utilized in the design of Noological processes for activating and training specific faculties. This is covered in more detail in the discussions of the individual faculties and in the chapter on Physiology. The following chart shows the simple correlation of the faculties with the skull and spinal column.//

Posture of the Stances

	Objective Stance	**Subjective Stance**		
head	up	down		
shoulders	back	forward		
breath	inhale	exhale arms	open	folded
spine	erect	curved		
knees	aligned	in		
toes	out	in		

Insert Stick Figure diagrams

Precise identification of the function to be activated is possible by careful calibration through observation and elicitation. The physiologic correspondence of function and stance are utilized in the design of Noological interventions. rc

Keep???

Dynamics	Lead Axis	Objective	Subjective
Concept	Vertical	CSU Symbolist	c'u's' Theorist
Structure	Lateral	SUC Strategic	s'c'u' Systemist
Use		Projectile UCS Empathist	u's'c' Sympathist

rc chart

Gesture	Faculty
Eyes forward	Symbolic
Eyes down or up	Theoric
Right hand, palm down foot, splayed	Strategic
Left hand, palm up foot, pronate	Systemic
Breath, inhale posture, open	Empathic
Breath, exhale posture, slumped	Sympathic

Systemic activation - lying on back, looking at sky
Strategic activation - lying prone, looking below

insert movement book up, down, side to side
include eye movements,
hand gestures ala Mike Miller

movements and positions use when activating faculties

SOMATIC PROCESSES

electromagnetic fields surrounding the body
three fields
  physical - extends 2 - 3 inches from body
  subjective - 3 - 10 from body
  objective - more than 10 inches from body

Miller investigated this field
findings resolves
conflict between eye movement patterns described in NLP
Eastern correlations of body and mental patterns

Eastern - right side of body masculine
        left side of body feminine

NLP eyes focused to right creative
              left remembered

phenomenon
inflection as move out from body

fields arranged in vertical layers
about sections of the spinal column

Stance

SOMATIC PROCESSES

Mixed Dominance Patterns in Physiological Left Handers

Mixed Dominance patterns are a common characteristic of people with learning difficulties. They have various combinations of hand, foot, eye or ear preferences. This pattern is usually an indicator that the cultural preference for right hand dominance has been superimposed on a left handed physiology.

To comply with the cultural norm, some of the functions which would have operated naturally on the left side are transferred to the right side. This compromises many conscious mental functions including accurate visual recall skills that are required for good spelling and reading comprehension. Objective reasoning skills may also be compromised. These problems are usually accompanied by a strong reliance on auditory recall skills.

Physical indicators are a death grip on the pencil while writing, stronger sustained grip in the left hand and better balancing skills on the left foot. People with left/right reversals often have a poor directional sense.

When the natural lateral preference is restored, accurate visual recall is established. With accurate recall, spelling strategies and reading comprehension skills are easily mastered. A vast improvement in the directional senses is also experienced.

SOMATIC PROCESSES

Fractions
Apple Pies or Brownies?

"Math phobia" usually has its roots in the primary education of the student. Because the basic skills are not mastered, conceptual problems requiring shifts in perceptual positions become monumental obstacles to proficiency. Development of the theoric faculty is often seriously compromised as a result. An inability to handle fractions and percentages is commonly encountered with poor skills in mathematics.

There is a somatic connection between a student's sense of comfort in handling fractions in mathematics and the visual model originally used in introducing the concept of fractions. This difficulty almost always carries over into difficulties with percentages and with the use of the metric system. A simple change from pies to brownies usually overcomes the aversion to fractions.

If the visual image retained by a student is that of a round pie shape, that student has difficulty with fractions and percentages. There is an innate, physiological aversion to handling a piece of pie smaller than one eighth, especially if it is apiece of juicy fruit pie. Some students will agree to consider 1/16 if they like New York Cheese Cake. All of them will balk at 1/32 of a pie. A piece that small is too small to be of any consequence.

There are several obstacles to dividing a circle. First, it is difficult to bisect angles. Second, it is difficult for most people to make visual distinctions between angles of less than 45 degrees. Third, the small motor skills at the third and fourth grades are not sufficiently developed to allow for accurate drawings.

Simply changing the visual aid to brownies or sheet cakes overcomes these difficulties. The student intuitively accepts 1/32 or even 1/100 - if it is a BIG sheet cake. As the pieces get successively smaller, he accepts the idea of using tweezers or other implements to extract and handle small pieces. Most importantly, even the smallest piece retains it geometric congruence to the original. All the angles are right angles and opposite sides are parallel and equal in length.

This simple change from pies to brownies prevents many problems from developing.

CHAPTER IX.

Future Projects and Applications