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These findings have important implications for the design of the training program. The results suggest that the training should be designed to address the specific needs of the participants, such as the need for a structured learning environment, the need for a supportive learning environment, and the need for a learning environment that is designed to address the specific needs of the participants.

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Abstract: This study examined the effects of a 12-week, 1000 kcal energy deficit diet on body composition, energy expenditure, and metabolic rate. The subjects were 10 healthy, lean, young men. The diet was a 1000 kcal energy deficit diet. The subjects were monitored for 12 weeks. The results showed that the diet was effective in reducing body weight and body fat. The diet also resulted in a decrease in energy expenditure and metabolic rate. The diet was well tolerated by the subjects. The results suggest that a 1000 kcal energy deficit diet is an effective method for reducing body weight and body fat. The diet also results in a decrease in energy expenditure and metabolic rate. The diet was well tolerated by the subjects.

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THE 2.75 PERCENTUM: THE CHALLENGE OF THE
FUTURE OF ENVIRONMENTAL AND SOCIAL DESIGN

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and farther. However, the tendency also aims at transforming this "something" in the "how" of one mode of appearance to the same something" in the "how" of other modes of appearance. It aims at the "production" of ever new modes of appearance, which we can also call "images" - a concept of image which naturally has nothing to do with illustration but one which is thoroughly customary in current speech.

In this sense, every object of external perception is given in an "image" and the object is constituted in the synthetic passage from image to image, by means of which the images, as images (appearances) of the same object, come to have synthetic coincidence. Every perception which presents the object to me (Husserl) in this orientation leaves open the practical transition to other appearances of the same object, specifically to certain groups of appearances. ^(3.0 pg 83) The possibilities of transition are practical possibilities, at least when it is a question of an object which is given as enduring without change. There is thus a freedom to run through the appearances in such a way that I (Husserl) move my eyes, my head, alter the posture of my body, go around the object, direct my (Husserl) regard toward it, and so on. We call these movements, which belong to the essence of perception and serve to bring the object of perception to givenness from all sides in so far as possible, *kinaestheses*. They are consequences of perceptive tendencies, "activities" in a certain sense, although not voluntary actions. In doing all this, I (Husserl) do not (in general) carry out voluntary acts. I (Husserl) move my eyes, etc., voluntarily, without ^(3.0 pg 84) "thinking about my eyes." The *kinaestheses* involved have the character of an active, subjective process; hand in hand with them and motivated by them goes a sequence of visual or tactile changing "images," which "belong" to them, while the object is still one hand receptive and on the other hand definitely productive. The coming-into-view of the images is "in my (Husserl) power"; I (Husserl) can also cause the series to break off, e.g., I "given" to me in an inactive duration or alteration. My (Husserl) relation to the object is on the (Husserl) allow the

(3.0) Husserl, E., "*Experience and judgement*"

kinaestheses to run their course, is having another image come into view. With regard to this, I (Husserl) am purely receptive, if I (Husserl) put these or those *kinaestheses* into play vis-a-vis the object, these or those images will come into view.

The role of metaphors in the creative process:

Metaphors are exuded throughout the creative process as reified experience. Their three-dimensions reflect the reality of the architectural idea. For an architect, *metaphors* manifest as the rate of frames of a motion picture. With each frame the architect realizes a new *metaphor*. These *metaphors* provide "feed-back". (1.0 pg 49) "Feedback mechanisms are cardinal to any creative process. Without them the process is a static one and thus, with its progression fails to account for new situations, new findings and discrepancies." The process of creating works of architecture must be an open one, "allowing for the flow of new information and appropriate adjustments." (1.0 pg 44) "In a sense a creative process is a learning process, learning new situations, problems, combinations and those responding to them accordingly. Thus the response or resolution becomes appropriate, new and unique. It is an evolving process, and that is the beauty of it. It is *metaphoric* and kinematic. *Metaphors* are both its' form and content. ¹"*The media is the message*".

"A spatial dimension":

(1.0 pg 17) Three-dimensional thinking is about space which is three-dimensional yet we try to describe it with either or both verbal language or two-dimensional graphics (plans, sections, elevations, orthographic projects, etc.). Three-dimensional perspective drawings closer resemble the multi-and three-dimensional nature of space since they bring-out the feeling of depth or volume. In their definitions of architectural graphics the American Institute of Architects (A.I.A.) describes the perceptual accomplishment which combines two-dimensional graphic tools to describe, recreate the define a three-dimensional reality. This is needed in order to communicate

(1.0) Foroque, O., "*Graphic Communication as a design tool*"

1. M. McLuen

architectural ideas in standard formats.

(4.0 pg 3)“Architects naturally think of the dimensions of space as being of primary importance to what they are doing, though sometimes the practice of designing two-dimensional plans leads them to go repetitively to the *third* spatial dimension, resulting in ceilings uniformly eight feet high. But even when they are thinking in *three-dimensions*, they can still trivialize the dimensional problem. Height, width and depth, which we measure with coordinates *X*, *Y* and *Z* are not the three-dimensions, they are merely *three* dimensions. As far as we have any way of knowing, three-dimensional space does not exist outside of our minds, and the feelings of height and width and depth-like those of light, sound, color, temperature, smell, or any other perceptible variable - are not objective realities: they are the result of complex neurocomputations in the brain, based on signals from the body’s sensory equipment.”

(1.0 pg. 156)¹ *Janusian and Homospacial thinking:*

Janusian thinking is the architect’s ability to view “*empty*” simultaneously with “*full*” space, i.e. that is filled with some object. To the architect, empty space has a content and shape of its’ own. Such concurrent perception of full and empty space makes the experience a unified one and enables the architect to uncover the real nature of form, light, and color. *Homospacial* thinking is the simultaneous or conjunctive consideration of two or more aspects of the same spatial condition. In this process, considerations are made in spatial terms. For example, consideration of positive and negative spaces in a facade also requires the contemporaneous visualization of interior spaces behind the facade, or a multiuse space needs to be thought through the superimposed spatial consequences of various functions. Since *homospacial* thinking is visual, it

(1.0) Foroque, O., “*Graphic Communication as a design tool*”

(4.0) Moore, C., & Allen, G., “*Dimensions/Space, Shape and Scale in Architecture*”

1. *Janusian and Homospacial:* Albert Rothenberg, in his book “*The emerging Goddess*” (1979) discusses about two interesting concepts in characterizing creative behavior. They are: Janusian thinking (named after the Roman God Janus who has two opposite focus) and Homospacial thinking.

requires graphic tools to explore the full potential of this process, while graphic exploration itself improves homospatial thinking.

²Paradoxical thinking:

^(1.0)Paradoxical thinking requires plunging into both the (logical and rational worlds to come up with an innovative and practical solution to a problem.) This is why a highly creative mind makes quick departures from the rational plane to the irrational and intuitive plans and vice versa. Both sides of the brain are used and *metaphors* are formed. For the architect his or her's is a multidimensional *metaphor* from multidimensional experiences.

Privacy, Plasticity and the necessity of multi and three-dimensional thinking:

^(5.0 pg. 66)For an architect, the composer of three-dimensional metaphors space is one of the structures which express our ^(5.1)'being in the world'; we have said that space is existential; we might just as well have said that existence is spatial; "Dwelling is the *essential property of existence*". Creating space is emblematic of the architect's experience and the reification of what he or she is. The *metaphor's* composer's needs can only be known by knowing his or her's manifestations. The architect therefore thinks three-dimensionally to visualize his or her's existence. ^(5.2)"The true *nature of space does* not reside in the more or less extended character of sensations as such, but in the intelligence *which interconnects these sensations*. Space is therefore the product of an "interaction between the organisms and the environment in which it is impossible to dissociate the organization of the universe perceived from that of the activity itself." Every thought that the creator of *architectural metaphoric space* is primarily concerted toward maintaining, sustaining and experiencing its' own parochial reality. The personal manifestation of its' own being in the space it limits and bounds. It is in that space that both the composer and

(1.0) Foroque, O., "*Graphic Communication as a design tool*"

(5.0) Norberg-Schulz, Christian, "*Existence, space and Architecture*"

(5.1) Merieau-Ponty, M., "*The phenomenology of perception*", 1962, pg. 293

(5.2) Plaget, J., "*The childs' construction of reality*". 1955.

2. *Paradoxical:* like a *metaphor*, self-contradictory statement that at first seems true. Something with seemingly contradictory qualities..

ultimate perceptor (the user) ¹*dwell*. they both become known in the space. This is a manifestation of their natural existence as defined by their own nature. Their need to be multidimensional because they are multidimensional and perceive their space in a multidimensional thought.

(5.3)²What does it mean to build? The old German word for "to build" was "buan" and means to ¹*dwell*. That is to stay, to remain. The word "bin" (am) came from the old word to build, so that "I am", "you are" means: I dwell, you dwell. The way that you are and I am, the way men are on earth is "Buan", dwelling.. "Dwelling is the basic principle of existence." This dwelling is from the original "bau" which is the German's name for the rabbit's and fox's home. They do not built but only inhabit and "be" in that place. The German farmer is a "bauer" as one who cultivates while being fed by the land. The context of the "dwelling" is the one in which the architect composes his *metaphor* about his experience creating that home, his existent self and the one in which the users share that "self-becoming experience."

Self:

But who is that dwells, is, becomes and experiences; and how is he formed? And what does the concept of "privacy" and "dwelling" have to do with making *metaphors*? (6.0 pg 37) One of the most powerful factors says Rose, in the formation of the self is the right to *privacy*, intrusiveness may range from direct exploitation of the child's body to subtle invasion of the *privacy* of feelings. In order to come to experience one's own relatively stable sense of self, as well as spatial wholeness and the integrity of others, one must be treated and experienced as a whole by one's early eminent.

(5.3) Heidegger, M., "*Bauen Wohnen Denken*," 1954

1. *dwelling*: exist, to remain for a time, to go astray, hinder as one is away from activity, purpose or goal. A set apart place.

particulars.”

Imagination is the process by which the *forms accumulate connect and apprehend. They classify, join and bridge space, structures and systems such as avenues, corridors, spaces, voids and ambulatories where full size people can again experience the architect's thoughts.* The act (or power) of forming a mental image of something not present to the senses or never before wholly perceives in reality is the architect's creative ability as he or she confronts and deals with the three-dimensional context of architectural design's plastic media of sections, elevations, axonometrics, etc. Not an illustrator, draftsman or model maker he or she however, uses these crafts to become the one who “forms”. He or she “forms” thoughts in a *known medium* with “forms he or she learned into realities heretofore unknown. *Not knowing before the outcome the architect proceeds to think three-dimensionally, forming three-dimensional realities into a work of architecture. “An inherently plastic metaphorical work”.* A work which is totally the result of an aesthetic, existential, *non-empiric* experience. The result of such a work is as powerful as the impetus, bravery, commitment and *passion* of the formative process. It is sophisticated creativity. It is coming from the naiveté of the natural mental state to its' needed realities. It is willful, intentional and developed. It is *wordly-wise and uses educated stimulus, means and methods.* The experiences once alien to the natural self, having been learned and now the welcomed vehicle, catalyst and syntax by which the three-dimensional habit can be exercised. It is an architectural, artistic and plastic art. It reifies by *regarding* (the abstracted program) as a material or concrete thing.

(8.0 pg 221-222)¹ *Authenticating, Authenticity, conscience, and resoluteness*:

For the architect, the maker of *plastic*, scaled and humanly dimensioned space, three-dimensional

(7.0) Moskvitin, J., “*Essay on the origin of thought*”.

(8.0) Mehta, J.L., “*Martin Heidegger, the way and the vision*”.

1. *authentic*: perpetrator, master, to accomplish, authoritative, worthy of acceptance or belief as conforming to fact or reality, trustworthy, not acceptance or belief as conforming to fact or reality, trustworthy, not imaginary, false or imitations; the real thing. Not counterfeit.

are necessary. *The forms thus produced are taken into the architect's mind producing architectural thoughts.*

Imagination:

"Free imagination: ^(7.0 pg 329)we imagine similar particulars - similar to actualities which have been actually experienced to begin with - and there upon as many as we choose, that is, always new, individually different from one another, as similar particulars, and such that, if the experience had continued, they could actually have been given to us. Thus, to every concept belongs *an infinite extension of purely possible particulars*, of purely possible conceptual objects. If I (Moskvitin) imagine things, I (Moskvitin) **apprehend** in them as pure possibilities the concept of a thing. I (Moskvitin) can find this same concept in actual things; stated more precisely, in intended things which I (Moskvitin) posit as actualities on the basis of actual experience. In the transition from imagination to actual experience, these give themselves as particulars realizing the same universal which, in imagination, is not truly realized but only quasi-realized in the possibilities discerned."

^(7.0 pg 329)Consequently, *the possibility of the formation of general objectivities*, of "concepts," extends *as far there are associative synthesis of likeness*. On this rests the *universality of the operation of the formation of concepts*; everything which, in some way or other, is objectively constituted in actually or possibility, as an object of actual experience or of imagination, can occur as a term in relations of comparison and be conceived through the activity of ¹eidetic identification and ²subsumption under a universal."

^(7.0 pg 329)The concept in its' ideality must be understood as something objective which has a *purely ideal being*, a being which does not presuppose the actual existence of corresponding particulars; it is what it is even if the corresponding particulars are only pure possibilities, though, on the other hand, in the realm of experienced actuality, it can also be the realized concept of actual

(7.0) Moskvitin, J., "Essay on the origin of thought".

1. *eidetic*: extraordinary accurate and vivid recall esp. of visual images.
2. *subsumption*: to place or include within something longer or more comprehensive.

reversed when Dasein expressly pulls itself out of its; forfeiture to the 'one' and back to its' own self. Making *metaphors*, composing, designing and thinking three-dimensionally starts with this choice.

(8.0 pg 222) "The possibility that man can find his way back to himself is to be found within his won self as an ability to be something that, in a sense, he already is. Such testimony, *"continues Mehta about Heidegger"* finds contained in the phenomenon popularly called the voice of conscience, which, in spite of, and indeed by reason of, the ambiguities and controversies attaching to its' meaning, is to be regarded as a primordial phenomenon of Dasein's existenz."

(8.0 pg 92) "It is to convey this direct reference to "being", constitutive of the essence of man, that Heidegger uses the term *Dasein*. The way "man" understands himself has its' source in his existenz, in a possibility of his or her's own self to be or not to be his or her's own self". "The problems of existenz as it is factually ¹(ontically) dealt with in concrete personal life is called "existenzziel" by Heidegger. Moreover, since the pursuit of science is itself a way of being of Dasein in the 'world', the ontologies which deal with realms of assents which are in a different way from "man" himself.

The "*modern*" architectural movement greatly benefited from this very essential and non-empiric start for design consciousness. Thereby being satisfied to become itself the form and the so-called style and images that "*it*"self "*wants*" to be because of its' relentless pursuit of truth and aligning its' three-dimensionality with nothing more and nothing less than the extant *real* parameters of its' contextual existence. Accepting this realization placed architectural design authority into the hands of all people and away from elite "clicks" and special interests. It results in an accessible approach to architectural design. It can "*metaphor*" (as components are transformed in a *metaphor*) to all traditions, cultures and heritage's because it is from none of an yet symbiotic to all of them.

(8.0) Mehta, J.L., "*Martin Heidegger, the way and the vision*".

1. *ontically*: of, relating to, or having real being. Reality as opposed to appearance.

Compulsion:

*The architectural conceptualizer is a compulsive existentialist in search of experiences through which to be; grow and concretize. As the "media is the message" so the three-dimensional thinker is the result of three-dimensional syntax of mind, imagination and thought. It is a context by which ¹seeing and perception is experienced and located both on paper and in models. It is the architect's formation of his perceptions which when perceived become an account both of the objective reality of what has been studied but mostly of the experience of the architect's vision. ¹It is a series of dots, lines, shades and shadows of inter-relationships, tops, bottoms, and features which *form* what is "the thought."*

This is the lure of adventure, surprise and discovery; and for the man of God, by emulating Him in the good mimesis; to know God by imitating His creative way and thereby witnessing creation. *The architect's learning is a bold life-giving experience whose lure is going into the unknown and discovering architectural form. The form of the mind of The Creator.* The created is the form of the *forming* experience. To know the one who thinks, forms and conceives. This is the urge behind making the journey. The experience which no one else can make for the architect. It is his alone to take. *Three-dimensional thinking is internal, interactive and connected to all other life functions.*

The Journey into the Mind:

In discussing the nature of the workings of the mind and its' ability to work, form and vitalize J. Moskvitin says' that, ^(7.0 pg 275)that whatsoever comes to being is my vision, is my silence: the vision that belongs to my character who, sprung from vision, am vision-loving and create vision from the vision-loving faculty within me. The mathematician from his or her vision draws his or her figures: but I draw nothing: I gaze and the figures of the material world take being as if they fell from my contemplation.

(7.0) Moskvitin, J., "Essay on the origin of thought".

1. *Ara Ignatius*: Pratt Institute 1960, teacher, renderer and architectural illustrator.

"(7.0 pg 275) "The unfolding of the powers of the Intellectual principle is always attended by some abandonment is regard to the highest: the outgoing is by loss and the loss is various, but according to the deficiency of the life-form produced by their falling they find the means of adding various requisites: the safeguards of life become inadequate, there appear nail, talon, fang, horn. Thus the intellectual Principle by its' very descent is directed towards the perfect sufficiency of the natural constitution, finding there within itself the remedy of the failure."

Three dimensional thinking relies upon the mind's mechanism to utilize internally stored and internal abilities to conjure and operate in the external multi-dimensional world.

(7.0) The very idea of the variability of the categories lies implicitly in the assumption that the transitive experiences may render cognition, and so is also an integral part of the hypothetical model. the synthetization of elements of fragments separated in time - their bringing together by memory in a common pattern - is to the experiencing mind an abolition of the category of time, and any application of a more complete and integral pattern is bound to bring about the transition from one causal level to another and more hidden one, the ultimate phases of this process being marked by the dissolution of the category of ¹causality. The deeper we probe into the universe the deeper we are probing into our own *mind*, and those features that to us appear to belong to a very remote but governing level of the universe are essentially nothing but the transformation mechanisms (metaphors) of our own *minds*. We tend to forget that the moment we move beyond the immediately tangible reality we are only discussing the substitutes provided by our own *minds* for talking of the imaginary realities yonder - and therefore the features characteristic of those yonder regions are characteristic of our *minds* as well." The multi-dimensional world is what we perceive and are able to use in conceiving three-dimensional form.

(7.0) Moskvitin, J., "Essay on the origin of thought".

1. *casualty*: the relation between regularly correlated events or phenomena.

A Hostile act:

(9.0 pg 202) Architectural forms serve to resist environmental forces which threaten works, stability and survival by its' own internal needs to resist hostility to it. In other words it does not only receive its' impulse to exist from external forces as though it were a "kind of plastic amorphous mass" it also has its' own internal structure and organization and integrity; it is not indefinitely deformable or malleable. It is outward from this realm of internal integrity through which the composer "three-dimensionalizes" his experience to establish a metaphor against a hostile environment. An environment which Piet Mondrian and Paul Weiss indicate must be claimed by us in our own time, place and general context. If we do not, our predecessor's claim on our time will perpetuate. In Steadman's view so will our contemporaries. It is the creator who must act tenaciously to assert his or her multi or three-dimensional vision onto a multi-dimensional world.

External to internal transfer:

It is Edmund Husserl who clarifies people's relationships between their mind, their perception and the realities of the external world. He declares that (3.0 pg 65) our life-world, reveals that '*contemplation* is privileged to the extent that it reveals the structures of the world and has them as a theme. These structures also underlie all practical activity, although they do not usually become thematic." The interest which is satisfied in contemplating and perceiving is the activation of the fundamental stratum which underlies every act of experience in the concrete sense of the word. (3.0 pg 65) "*Thus external perception, and the contemplative perceptive interest associated with it, has the privilege of grasping things in such a way that the tendency of the act of judgement toward confirmation can very quickly be fulfilled. So it is the objects of pure perception - simple, sensuously apprehensible substrates, natural things, things in their fundamental stratum as natural bodies - which as such are not relative and which, through all the relativities of our environmental dealings with the pre-given, maintain themselves as*

(3.0) Husserl, E., "*Experience and judgement*"

(9.0) Steadman, P., "*The evolution of designs*"

objectively stable identities and, in virtue of this, can be confirmed and judged." It is this consistency upon which multi and three-dimensional thinking can variegate in its' operations. ^(3.0 pg 65) Thus the act of *perceiving* and judging on the basis of *perception* is not only something invariant in all change and all relativity of environing worlds, but it is at the same time, as the coherent satisfaction of the interest of contemplation, in a modified form which includes the idealizations mentioned above, that attitude which underlies theoretical science and makes possible a confirmation with the goal of the objectivity, of validity "once and for all" and "for everyone." Hence perceiving and judging on the basis of *perception* are the modes of pre-predicative self-evidence on which the act of predicative judgement, as this is regarded by traditional logic, is based.

"The source of Aesthetic form":

Rose also has a biological explanation that potentiates multi-dimensional thinking. ^(6.0 pg 24) The "source" of aesthetic form arises in the fluid boundaries of the child's primary narcissism, now autonomously flexible in the adult. The structure involves a dialectic of control and ambiguity, thought and feeling/action, separation and fusion". The aesthetic experience emerges from participation in this source and structure. The need to keep oriented in a fluid, expanding reality lies at the heart of aesthetic form.

^(6.0 pg 24) From the myriads of stimuli in and around us, we single out specific elements and shape them into various cognitive and aesthetic configurations. *We construct as well as test reality.*

^(10.0 pg 165) Reflection and Realization:

de Chardin assigns the multi and three dimensional thought ability to the individual composed of his consciousness. ^(10.0 pg 65) "Reflection is the power acquired by a consciousness to turn in upon

(3.0) Husserl, E., "Experience and judgement"

(6.0) Rose, G.J., "The power of form," ("The psychoanalytic approach to aesthetic form")

(10.0) de Chardin, T., "The phenomenon of man".

itself to take possession of itself *as of an object* endowed with its' own particular consistence and value: no longer merely to know, but to know oneself; no longer merely to know, but to know that one knows. By this individualization of him or herself in the depths of him or herself, the living elements, which heretofore had been spread out and divided over a diffuse circle of perceptions and activities, was constituted for the first time as a *center* in the form of a point at which all the impressions and experiences knit themselves together and fuse into a unity that is conscious of its own organization".

(10.0 pg 169) **Realization:** Discontinuity in continuity: that is how, in the theory of its' mechanism, the birth of thought, like that of life, presents and defines itself.

(1.0 pg 35) **"Darsana":**

Omar Faroque says about expressions and visual literacy that (1.0 pg 35) thinking and seeing are intimately associated, where the Sanskrit word for philosophy is "*darsana*, meaning "*to see*". It is seeing past, present and future situations side by side and comparing them that makes thinking a *creative* process.

(11.0 pg 57) *Visual literacy includes two skills: visual acuity and visual expressions.* Visual acuity is an intense ability to *see* information or multiple messages in one's environment with clarity and accuracy. Visual expression is the ability to initiate visual messages while visual acuity is concerned with the visual messages we receive, visual expression is concerned *with the visual messages we send*. The two are interrelated as learning to listen sharpens speaking, acting or singing so seeing is a prelude to visual expression. As listening, visual literacy must be consciously developed."

(1.0) Foroque, O., "*Graphic Communication as a design tool*"

(10.0) de Chardin, T., "*The phenomenon of man*".

(11.0) Crowe, N., and Laseau, P., "*Visual notes for Architects and Designers*"

(11.1) There are three levels of visual messages: representation, abstraction and symbolism. Dondis explain each follows:

1. *Representation* which seeks to accurately record what we actually see or experience.
2. *Abstraction* which is a simplification toward a more intense and distilled meaning. Where we pull out from reality a certain essence.
3. *Symbolism* which is a forum of simplification of visual messages but it employs a surrogate or substitute image for what an actually be seen. *Designers often encode an overwhelming amount of information in a visual language which is both highly symbolic and abstract.*

The three-dimensional creative experience:

The vertical, lateral or cross section through the height of a building at its' critical location provides the architect wit the dominant vertical, diagonal and horizontal elements. He or she can translate and test the stacked two-dimensional beginning and prove its' vertical validity. As the architect asks the same informational questions about this as he or she did to derive his or her plan he or she learns that his or her's vertical adjacent connections, and relationships require as much consequence. The structure which forms his or her building such as frames, bearing walls, slabs, beams, etc. can suggest spatial possibilities and relationships. The architect can open spaces to below, above and diagonally and he or she can visualize vertical and diagonal circulation and inter spatial relationships. The architect can begin to emote, locate and build spatial ideas which deal with interior experience sequences, hierarchies and priorities. He or she can even *discover* images of details, spaces, features and connectors he or she never knew existed. The architect is now in a world led by the work. he or she is learning its' potential. *The architect's imagination is creating the third dimension and the third dimension is feeding his or her's imagination.* It is in this realm where the architect's thinking leaves the two dimensional to enter three-dimensional thinking where information, decisions and anlaysis is non-verbal but plastic, formal and

geometric. It is wholly a sculptural and aesthetic experience of virtual reality.

When we speak of three-dimensional thinking we mean the language by which a thought is conducted. Thought itself is the mind making a *form* and "having" a *form* in the mind. The mind can recall a form or *devise a form by recalling other forms*. The *forms* it may recall we remembered and stored as a permanent record of forms. Each form may be understood and familiar or may be *superficially stored as a silhouette, space, smell, sound, taste, or word (or its' spelling and exact pronunciation) without knowing its' significance or even meaning*. But we know the form, and with it and all the others we know can accept new forms and combined with the existing *create new forms*. This creation is thinking and this is the essence of *metaphors*. It is why we say that art is the making of *metaphors* and architecture, as art, too is the making of *metaphors*. Making *metaphors* is thinking and *forming* pure ideas from information, perceptions and the sense of external and internal stimuli combined with existing forms. It becomes another *form*.

To think, is to *form* a mental picture and when the vehicle of the thought is verbal, words: oral and literate the *form* is expressed similarly, but when the vehicle is geometrical, plastic, formal, material, physical, massive etc. the *form* is likewise manifest. An essence of the process of *forming* works of architecture where the manifestation of thought is a three-dimensional work is three-dimensional *forms*. The source, use and interrelationships of these existing *forms* explains the architects *metaphorical* process and means by which he or she reifies, manifests and exudes experience.

The *forms* of "*a priori*" learned *forms* encounters new perceptions of experience (with this time, site, client, and goals) and all the relevant extent experience of the project's reality. The

form: shape, fashion, mold; to arrange in order, come into existence, arise, make. The shape and structure of a work as distinguished from its' material. The essential nature of a thing. *Idea* come: into existence to take indefinite shape and arrangement.

The *form* is also the den, the resting place of a hare which in German is the "bau" translated directly means "dwelling". The *form, dwelling* and being is "man's" essence of "thought" and "being":.

repertoire of skills, abilities, language, methodologies, drafting, drawing, craft, art, painting, music, sensuality, passion, etc. recall *"in form"* as needed to reify the moments, experience into *"a form."* Formation can be intuitive, logical, random, consequent, inconsequent, reasonable, whimsical etc. But if its' set in three-dimensional *idioms* it will exercise its' selections to *"a form"* resulting in a three-dimensional manifestation.

The three-dimensional context for the architect is the weave in which he senses and perceives. These provide the information for decisions, now not on the basis of linguistical words, and verbal ideas but geometrical, plastic, and material.

The media of visual thinking:

(1.0 pg 39) Actually the most natural externalized medium for multi three-dimensional thinking would be full scale models built over a period of "thinking-time": both extended and compressed. However Omar Faroque expresses the expedient compromise of the *"graphic"* linguist saying that the natural medium for visual thinking is *"graphic" communication. Very little information is lost during a transfer of mental pictures or images.* "Graphic communication is multi-dimensional as is visual thinking. Thus it can depict the content of visual thought."

(1.0 pg 34) Both visual thought and graphic communication are ethnic synthetic and essential. Building and designing with models also enhances three-dimensional thinking by building a partial, volumetric, and planer experiences of a three-dimensional idea. (1.0 pg 39) Such an exercise emerses the mind into a three-dimensional reality where it experiences the multi-dimensionality of its' existence with an architectural idea. Both graphic and model communication brings reality to an otherwise obscure and tentative notion which builds confidence and provides immediate *feedback.*"

101. "I cannot remember that I ever loved any woman like this."
102. "Is that the first time? The moment of our love—the first time—
"I cannot remember that," I said, looking at her face.
103. "It is not the first time, for I have loved you in my dreams."—
"I cannot remember that," I said, looking at her face.
104. "I cannot remember that," I said, looking at her face.
105. "I cannot remember that," I said, looking at her face.
106. "I cannot remember that," I said, looking at her face.
107. "I cannot remember that," I said, looking at her face.
108. "I cannot remember that," I said, looking at her face.
109. "I cannot remember that," I said, looking at her face.
110. "I cannot remember that," I said, looking at her face.
111. "I cannot remember that," I said, looking at her face.
112. "I cannot remember that," I said, looking at her face.
113. "I cannot remember that," I said, looking at her face.
114. "I cannot remember that," I said, looking at her face.
115. "I cannot remember that," I said, looking at her face.
116. "I cannot remember that," I said, looking at her face.
117. "I cannot remember that," I said, looking at her face.
118. "I cannot remember that," I said, looking at her face.
119. "I cannot remember that," I said, looking at her face.
120. "I cannot remember that," I said, looking at her face.

epilogue

1. "I cannot remember that," I said, looking at her face.
2. "I cannot remember that," I said, looking at her face.