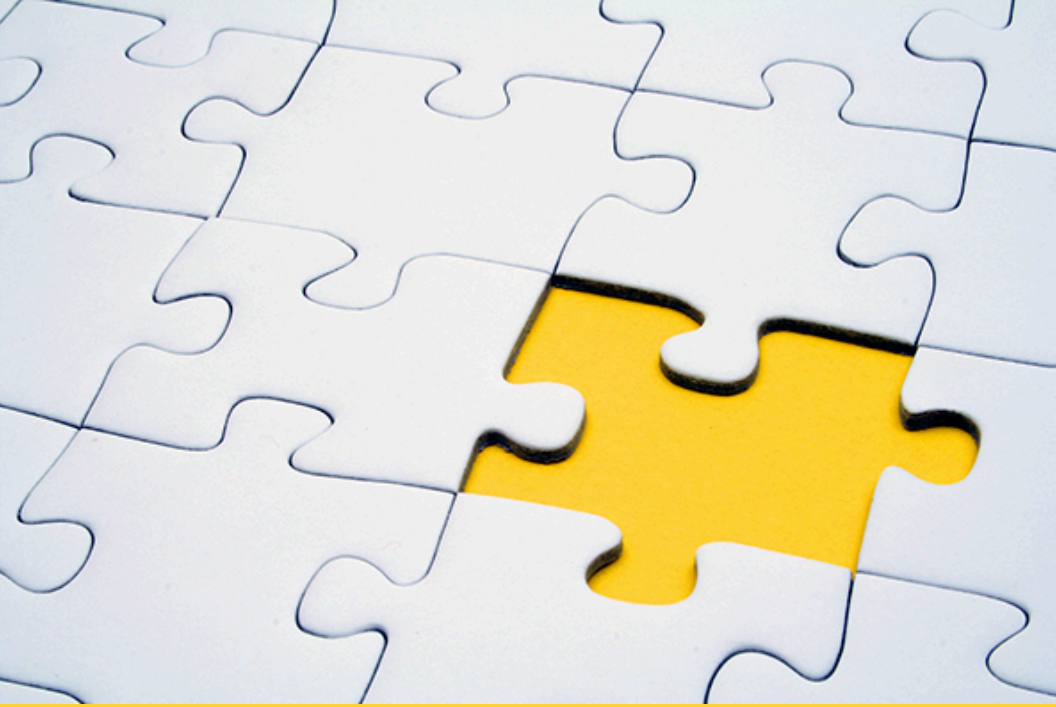

EXCERPTS AN UPDATES FROM

CASTLE OF CONSCIOUSNESS

By John A Ciampa

THE CASTLE

These words you are now reading came from inside one mind and, as you read, they have made their way into another mind.

Whether you are holding a tablet, or listening to an audio book or a holding a paper back, the thought transfer has occurred. Nothing new there, a century ago, I could have stuffed this page in bottle and set it adrift, and if you found it, the effect would be the same. Whatever else the message in the bottle says, like all messages, it also sings, 'sotto voce', the chantey of its mysterious voyage.

All communication has some sense of how it will be received and processed. All communication travels on carrier waves of underlying messages already in place: code keys such as language, protocols of form, and pre-existing ideas of content.

Like all words, these words will attach and attack earlier words which are already in your mind; and like all words these have been detached and derived from earlier words which came from other minds and continue to circulate.

The words make out ideas which network themselves into constellations of internal belief systems. The belief systems integrate into consciousness which seeks its own integrity, at first and later integration. Consciousness demands its own castle and then finds a way in and out. The idea behind these words is consciousness connection. The very word "idea" and the very idea of words implies a network of minds, in which outlying ideas are linked together

by words.There has to be a connection otherwise words and ideas would have no point.

As far as we know, we humans alone can send words that trigger thoughts from one mind to another, across the room or across the universe where they will wait to be received for seconds or centuries.

We seldom think of mind as part of a network, because mind is so personal and seems so isolated. But can it ever be isolated? Everything we know came from others. We each are dealt a hand of cards in the game of life. We do have to play the hand ourselves, but not the game. Like it or not, we are part of a network of like beings, living, dead and unborn.

It is obvious on the material level, like all gregarious animals that we communicate in order to survive. What is not so obvious, but nonetheless true, is the immaterial level where we survive in order to communicate. Communication is an essential part of connected consciousness.

Each mind castle comes to realize that it is also a relay station.

Thanks to the information age tinkers and the thinkers the past, present and future are winched together, closer than they have ever been before. Every mind has more and more access to every sight and sound, and every insight and idea that has ever been experienced, by any other mind.

Rather than taking brains apart, putting minds together is the new task for thinker and tinker alike. The tinker in lab has less and less to say in recent times. Too few pieces to too large a puzzle have come back from the lab and, and the subatomic pieces are each puzzles in themselves. Scientific systems for the study of

brains are based in the material world, with its atoms and molecules, which have shown themselves to be slippery.

Long before Heisenberg's principle of uncertainty, Turgenev wrote to Tolstoy:

"a system is like the tail of truth, but truth is like a lizard; it leaves its tail in your fingers and runs away knowing full well that it will grow a new one in a twinkling."[3]

I think Turgenev and Heisenberg would agree (and so would Nietzsche[4]) that all the scientific laws framed in their experimental proofs are also only metaphors, detachable metaphors like the lizard's tail.

The idea that we cannot measure particle location without affecting the particle's momentum and vice versa, leads to a bottom line of "uncertainty." The scientifically observed difference staters between the observed and the observer draws our attention to the distinction physical sciences and the mysterious realm of consciousness. A.S. Eddington, and J.H. Jeans saw this as the appearance of indeterminism in nature, which is another way of saying mystery realm.

The notion that we can never know the external universe for sure, implies that there is an external universe out there beyond our knowing (our limited measurements, and metaphors). Therefore it follows that every one's inside will always be uncertain about the outside. This internal uncertainty provides us with the drive to look out and reach out across the moat through the drawbridge of consciousness to the network of minds.

In the terms of our castle metaphor, the castle window provides a single unique perspective which knows from the drawbridge feedback that there is more. It is the discrepancy

between what comes in through the window and over the draw- bridge that keeps the drawbridge open. I see this as the engine of communication and so I call it communogenic enigma.

The communogenic enigma is like a nuclear chain reaction in that it is indefatigable. Likewise the yield of energy is astounding. There is no amount of communication that is enough, no amount of information which can fill the castle or even a single store room. The inside is as infinite as the outside.

Blaise Pascal in his Pensees, framed the concept of double infinities whereby the macro universe and the micro universe are each open ended, or limitless. Whether up through the telescope or down through the microscope, the further we look the more there is to see. Here we are simply claiming the same reciprocal infinities for the inside and the outside. Since it is to be reflective, the internal universe of mind must have the potential to be as open ended and complex as the external universe of matter. In their potential, mind and matter must be equal though they are not identical. Here again the slip stream between juxtaposed double infinities set in place by the communogenic enigma, fans the fire, continually. It oxygenates the communogenic enigma.

The more you communicate, the more you know; the more you know, the more you need to know, and the more you wonder: how can the external universe and its internal reflection look so much alike and yet behave so differently? In other words, it is the enigma of the reciprocity of these distinct realms that makes us wonder; it is the wonderment that keeps us checking with each other. That very enigma between matter and mind powers the communication between mind and mind.

No matter how great the knowledge obtained from the communication process, the picture is never complete. For our theory we need the 'unwhole', unholy, incompleteness.

We also need to assume that minds think about themselves in order to think about others, and think about others in order to think about themselves; and that minds think about themselves in terms which are incomplete but communicable. The incompleteness and the communicability are two sides of the same coin.

Do all minds think about themselves incompletely? All that are able to answer, would, by their need to answer, communicate their incompleteness. Any mind whose thoughts about self were complete would not need to answer; just as any mind (such as machine intelligence) whose thoughts about self were non existent would not be able to answer.

The Castle Wall: Mind and Matter

We have been suggesting a model for thinking about mind which separates it from whatever else there is, call it matter. Mind sits in the middle of matter like a bastion insulated from its rules. It is protected from real time and space, but connected somehow. It is a relay to other minds but it is also a castle onto itself.

The main castle wall, the line between mind and matter, and mind and other minds, must be continually re-drawn, even, if only to be erased in whole or in part.

Philosophies of mind, thoughts about thought, are as old as thought itself. We know about them only through communication. Had they not been set down and passed on

they could not be said to exist, and, by the same token, had there been no thought there would have been no setting down or passing on.

Generations of philosophers have wrestled with the fact that we do have thoughts and that there are things out there beyond those thoughts. Keep in mind that the words used here or anywhere else to describe mind are only metaphors, sand drawings, which we can use, modify and replace without becoming dogmatic.

We will make the point several times throughout this work that spatial metaphors are unavoidable in talking about mind, since thought must have some object as its focus. Just as mind, in thinking about matter, forces all objects to become concepts, it forces all concepts to become objects, in thinking about itself, metaphor- ical objects to be sure. Our castle is but a sand castle, which happens to have a wall to frame the juxtaposition of the two realities: inside and outside. It will dis- solve on the next wave but might help us think about thought for now.

There have been other more forbidding castle walls suggested in the history of philosophy of mind which have become the targets for centuries of siege.

Those early philosophers[7] who would permanently separate the inside and the outside, without connecting the two are called "dualists" by some, though that is not logical. To the extent that the inside and outside are not connected, we are confined to one or the other. The first mind to think up the wall would be con- fined to the inside of the wall where the thought occurred ("Cogito ergo sum"). Such "shut in" minds had to find a way to prove that there was an existence beyond the thinking before they could be called dualists.

Naturally, such a wall invited the attack of an alliance of "monists" which flatly denied the wall but were forced to implicate it in the very denial. Over their own objection, monists must be split in two: one faction which sees only the inside of the wall (also known as idealists) and one which sees only the outside of the wall

(also known as materialists). Of course, each of these factions must deny the

other, otherwise both would be dualists. Each must insist that his side of the wall

is the only one. It may have occurred to the reader that a one sided wall is hard to 8

imagine; it is equally hard to defend, as we shall see. The lesson from history is that our wall must not shut us in or out.

Rationalism and empiricism are other words that have come to represent schools of philosophy. It would not be accurate to equate these words with dualism and monism. Empiricists believe that everything internal comes in from the outside; while rationalists believe that some or all of thought was inside to begin with. Neither of these views need necessarily be monistic, since an inside and an out- side may be connected in both metaphors. On the other hand empiricists may deny the inside and rationalists may deny the outside.Then they become monists.

The "shut in" monist says that there is no outside, that is, nothing beyond what we think; by that is meant, no way to prove it except with internal thoughts and therefore nothing beyond our own thought, which is the same as saying that there may be an outside but we can never know it. To which one must ask: how can we even posit something we can never know? The answer inevitably looks beyond this veil of tears

for consolation, up and over the wall, to some sort of god or absolute ideal, hence the philosophical catch phrase "idealism."

This first perspective, the "shut in" view may more properly be referred to in philosophical terms as: phenomenology without ontology. (Ontology is the philosophical study of existence or being; phenomenology is the study of consciousness trying to perceive and comprehend that being.)

On the other hand, the "shut out" monist says that there is only an outside; which really means that there is no way to prove the inside beyond the outside objects which we can observe. Accordingly, we may observe the outside of ourselves and other humans, as objects, but can never get inside, so we can't say there is an inside which is any different from the outside. Here the inside is denied in favor of tangible, external, material substances, hence the philosophical term, "materialism," also known as "logical positivism," also known as "behaviorism."

This second "shut out" view may more properly be referred to in philosophical terms as: ontology without phenomenology.

Some dualists connect the inside and outside but with no clear connection, rather with considerable aberrations. Though we try harder and harder to clear up the perception process, we see only objects "through a glass, darkly" (St. Paul).

This third view puts a window in the thick castle wall, but a narrow slot of a win- dow with a limited, framed vista. We could call this third view the "window" view; or ontology subject to phenomenology.

Most of traditional philosophy fits into one of these three overviews.

There is a fourth view which is unannounced as such, but one which nevertheless underlies Plato's dialectic, Hume's "inter subjectivity," Nietzsche's metaphors, Sartre's "Being for Others" and Wittgenstein's "public language." All of these views (and there are probably others) rely on the simple fact that there are other minds in the same predicament, whatever that may be, which minds are in touch with each other. This fourth view, call it the "drawbridge" view is a communication theory which underlies all the other views of my work.

If we were to add yet another big word to those of the philosophy professors, it would be communogenisis (which we have already seen, a coinage on my part). Then we could call this fourth view ontology subject to communogenic phenomenology.

Like the "shut in" views this one admits of a separate inside, and like the "win- dow view" this one admits of aberration in trying to ascertain the outside. It takes for granted the fact that the fragmented view we see through the window slot may not be the whole picture, but sees it as part of a puzzle which we piece together through communication in and out of the drawbridge. Those to whom we talk, each have other pieces of the puzzle framed in their windows. As for the whole picture in the puzzle, I have never seen it and neither has any one else. As I see the big picture, it is simply defined as all the available pieces put together. From this view (leaving out whatever God knows) it follows that no one knows everything. But it also follows that everyone knows something. All the somethings taken together equal everything known. No mortal can know more than that, and every mortal is privy to

all of it, as long as he or she is conscious, and part of the communication process, the network of minds.

This theory sees communication as a by-product of the aberration, which in turn enhances the aberration. The communicant believes that there is a reality beyond the personal puzzle piece, i.e. other pieces which are out of sight, and out of mind, but within the sights of others and therefore within their minds which also have drawbridges.

The window alone permits only passive impressions from the objective world out- side. The drawbridge activates the impression process, or more properly put, "interactivates" it. The castle's drawbridge represents the more dynamic interaction between the various insides and the outside which each faces.

As for the castle wall in my sand castle, despite the undermining of materialists and the catapulting of idealists, it stands as long as it is useful to outline the relay of insights from my castle to yours.

Focusing on the consequences of the metaphor, for a moment, instead of its proofs, I submit that it will be a better world, if we embrace the distinction where- by thought is not a thing, which is actually to pay it greater respect while at the same time giving it the dynamic right to change. In which case we would be con- tent to address it only with imprecision, i.e. loosen our grip so as not break its tail off. The result is that subjects will be treated specially as distinguished from objects. Being subjects it would be enough to agree among ourselves that we deserve this special treatment.

Although it is not a thing, thought exists and is more powerful than most things which it encounters. Like electricity, its existence is evidenced only by the after- math of its circuit, which makes its presence difficult to grasp.

In order to talk about it in the present tense, in order to bring mind to mind, we have made believe it is a static thing, knowing full well it is not. Like electricity, it must become at least a metaphor, an analogical thing, in order for us to hold it in focus. And there is the rub: the metaphor is so easy to mistake for the concept which it represents, especially where the concept is so elusive. Here is where dual- ism comes in handy. The dualist can afford to post a caveat for all buyers of the metaphor. Implicit in the dualist view is the fact that we must have metaphors but should never confuse them with that non-substance which they implicate: they are two different things. That is the dualist safety net. We can suspend dis- belief to enter into the metaphor realizing full well, once we leave the theater, that the play is not life. Monists-materialists cannot make this separation they must insist that the laboratory model, or nerve cell is the mind.

The logic of the monist/materialist and the faith of the monist/idealist is dizzied by the tail chasing of the dualist. It is true that when the switch is thrown to acti- vate the metaphorical atoms in the dualist model, the inner circles will coil in on themselves. We become aware of our awareness of awareness. The dualist must make peace with the spinning. Understanding spins dynamically. Getting a grasp on consciousness inevitably involves tail chasing. In fact tail chasing is the only way out if you're shut in and the only way in if you're shut out. Self discovery is a reflexive reflex. It is circular; the infinite regress which monists dread is inevitable. That should not be perplexing if we accept the fact that mind is a realm that does not yield up its secrets to plane geometry; it swirls. Like a whirlpool one must relax in the swirl down to the vortex and then one can spring into the dimensionless, illogic of the subjective realm, the sand castle.

Again materialists might complain that this sounds like I'm saying that we can never "know" mind. That is not correct. I'm saying that we (minds) can never explain mind directly and completely. Self consciousness is indigenous curiosity turned in on itself; as such it is, as it should be, insatiable. Like all curiosity, its satisfaction is paradoxical. Each new learning reaffirms the unknown. The more you know; the more you know you don't know. We must accept this whether we talk about the inside or the outside, since the "knowing" in both cases is an interior phenomenon. This does not get us out of the ultimate crack between specification and speculation, such a vantage point will not provide us with a whole picture, but again, the whole picture would be a holy picture and all communication would be up instead of across.

"Shut out" monist/materialists object to the murky spiritualism which underlies the "shut in" monist-idealists, but fail to see the orthodoxy which underlies their own scientific whole picture, which like all whole pictures is a holy picture.

Behind the screens of every down to earth mechanical explanation of mind as matter, lurks some wizard of oz, taking the place of god. Ryle's impatience with the "ghost in the machine"[9] is really the secret desire to get rid of my ghost in order to establish his ghost in my machine.

Ultimately the ghost-less machine is not only lopsided but also a dangerous metaphor. It would have us believe that objectifying its own subjectivity gives it the right to treat all subjects as objects. Such subjects do not have the will to object. The fact that logical positivism applied to human behavior commits the ultimate existential travesty, goes unnoticed because the institutional nature of society values control over freedom. Individual wills which would normally

push against the control must be careful not to be hypnotized by the dazzling media put up by the institutions who would demolish all the castles in favor of a single warehouse; that is why the ghost in the watchtower must never sleep.

If it is true that consciousness is intrinsically conductive and therefore always susceptible to communication, then it follows that while human kind continues to exist, consciousness can never be permanently stultified, and even though it looks dead at times lying in the glow of the TV, it is only dreaming; and if it is dreaming there must be an awakening. The restlessness we see now might be the herald of a reawakening where communication instead of entertainment once again commands technology.

Heeding our own caveat, the metaphor used in this work must not be so handy as to be taken literally. It must give "shape" to the inside; translate the inside in outside terms; it must pluck the inside out, but tentatively enough so that it snaps back in, just before it is extrinsically grasped and measured. The metaphor must be elusive but accessible; it must be open but protected; it must be infinitely expansive and convoluted enough to fold minute impressions into vast concepts, a universe of contiguous, expanding, revolving outer space confined in the inner sanctum of a castle, a castle so complex as to defy architecture and yet so simple as to be primordial, child's play, a do-it-yourself hole in the sand large enough to contain the oceanic universe, inevitably dispatched on the ebb of the next tide.[10]

The castle, like consciousness itself, has always been a node for connection as much as protection. The castle must have enclosures for protection and portals for connection.

Just as connection is impossible without some protection; protection is pointless without some connection.

We admit of a real world beyond the castle: it is the thing nestled in, behind and between the non-things (minds); it both joins and separates all interiors. Like the sand and sea between castles, the exterior is at once barrier and carrier for all traffic.

The suggestion that the volume of the castle of consciousness is infinite, an interior black hole, a dimensionless, galactic non-space, will take some wild imagining. To confront the limitless expansiveness of consciousness one must deal with a certain vertigo. A feat worth accomplishing. Every day oceanic reflections waft in, unnoticed. So unnoticed is this transubstantiation, that most cannot tell whether the ocean is within the castle ; or whether the castle is within the ocean; whether outer space is a but a notion of inner space or whether inner space is but a reflection of outer space. Both are true. Each inverted sea resonates to the mysterious thrashing of the real sea, but each has its own storms, which affect the outer sea in return.

The rooms of the castle have no walls; all is swirling constellations and cones which funnel dynamically and deeply beyond the static two dimensions. The accretion of past experience and its whirl-pooling to the point of presence of mind and vice versa, suggests a disparity between the volume of the present and the past.The past must be compressed to get through to the present just as the present must be decompressed to waft back and join the past. The incorporation of the tiniest impression of a particular second back into the chasm of past experience and the bringing to bear of that chasm on the tiniest new impression calls to mind a bi- directional funneling or cone.

There is at every portal a constriction, a narrowing from the larger space of the castle to drawbridge. This inevitably involves a compression and decompression for all traffic between these disparate spaces.

The anatomy of the human brain itself reflects this dynamic. Without admitting that mind and brain are identical, we do know they have something to do with each other, and we do know that a compression occurs going from the larger cerebrum to the smaller cerebellum, where elaborate "how to" knowledge must be compacted into routines.

If we were to allow that there were separate parts of mind, we would have to, in the next breath, admit that all parts are involved in all the funneling all the time. Some are more pronounced at times while others are inhibited but nevertheless all partake of the energy of the continuous focused flow.

A tower atop the castle (it's hard to find a place for this in the brain, although it must exist in the mind) has instant access to all the funneling and swirling. Here lives the unpredictable intentional energies.

Back in the wall-less halls a galaxy of concept constellations, much larger in volume than a single 'drawbridge'-full, is always connected, however remotely. The composition of the 'drawbridge', if it could be isolated from the rest of consciousness, would show itself as a miniature of the larger patterns throughout the castle, a holographic cell, a fractal. The length of the drawbridge affords just enough walkway for working memory to address an expected external incident, given recent experience.

Were we to let the bean counters in with their slide rules to assess the spatial dis- parity between the narrow portal of the drawbridge and the entire storage vol- ume of the castle,

they would want to know "how many 'drawbridge'-fulls of instances could be stock-piled back in, say, the average forty year old castle?" Quantifying time as space, they would say, 1,261,440,000 seconds worth of events in 40 years with their equal and opposite impressions, coming in would have to be multiplied by induced and deduced abstracted concepts and we have added at least two more zeros: 126,144,000,000, give or take a few, not to mention the connections between all of these, which would give us a number as large as the one calculated by neurobiologists who multiplied the billions of neurons by 10,000 synaptic connections, or maybe larger. But who 's counting?

IMPRESSION
The Castle Window

Since the 'window' represents the presence of mind, it is the frontier of the interior, closest to external reality. Its processors are the first stop for all input just as the drawbridge is the last stop for all output. Imagine these portals: 'drawbridge' and 'window' as relatively tiny openings which allow traffic in or out, always, at least, poised for the exchange.

To bear the different kinds of traffic generated by the communogenic enigma, there come to be established regular communication channels, all of which wind their way up to the castle's sensory threshold.

The narrow event frame constrains input and output to and from the constellations of loose concepts within. Expression travels in its formal channel through the real world, by land, sea or air, through sensory mechanisms, until it is received, by specially functioning apparati which perceive, decode and decompress communication into a special domain of communication impressions and concepts within the receiver's mind.

The inevitable networking of minds, the circulation of impression and expression and the constriction of the event frame on communication assumes at each castle node, each mind, a propensity for coding and decoding. The size and shape of the openings, who the original architect was, or

whether they just evolved is beyond our scope. That there must be openings to every castle from every other which open and close under the command of the will, must be assumed for argument's sake.

In addition to will, the successful operation of the window and drawbridge takes skill. Skill is made up of bits of will. In other words, specific instances where the will is exercised in connection with a given task come together and form an almost palpable routine which seems to work automatically as a mini will in processing input and output. In the case of normal operation, there must be enough skill so that the code and other interpolation does not get in the way of the expression or impression.

We must know the codes and routines "cold." "Cold" knowing refers to the fact that the communication form's amenities, the code rules and any and all syntax- es involved form a kind of "sub-knowledge" which usually operates below any awareness level. The sub-knowledge affects automatic sensing routines as well as more internal interpretive processes. At the receiving end, interpretation involves steps or levels from simple match-up recognition of sense data to the formulation of general concepts. For now I only mean to suggest that there are levels of auto- matic procedural sub-knowledge which allow us to process. By sub-knowledge we mean momentarily below the intentional awareness of the will.

Percept

Percept is a word which has been used to refer to the input or impression processors. We should note that the words percept and concept are used slightly differently here than they have been used in traditional philosophy. In our funneling consciousness we force the percept into a smaller area closer to the instant; at the same time our spatial metaphor allows the concepts to expand and loosen indefinitely as they waft back into the cavernous recesses of the castle storeroom. If there is anything new here, or anywhere else, it is only in the shaping of these perennial insights.

Our percept is decidedly not the senses, as such. We have placed the percept in the interior world at its border with the exterior world but, (and this is repeated for emphasis) the percept lives inside the castle. The senses are on the outside, beyond the frontier of the external world; they are part of the material universe. Pupils, and ear drums are physical; their tissue can be seen and touched; their physical processes can be measured. The percept, on the other hand, is not mat- ter and cannot be seen by others; its invisible processes can only be detected in their aftermath.

The fresh impressions which the percept brings in, the perceptual catch of the day, also have no physical indicia, no weight or measure, no physical existence. They may more or less reflect the material world, and cause drastic effects on same, but they are not matter themselves.

The closer to the window or drawbridge, the greater any concept's interplay with the external universe, and therefore the more solid and the more utilitarian the concept. At the threshold concepts are honed down into almost palpable

"conceptoids" (a coinage), forged tools to handle the high speed input and output. Such conceptoids as the sub-knowledge used for coding and decoding, demand stability in order to be useful in forming other substantive concepts. Just as in any system the procedures cannot be subject to alterations as frequently as the sub- stantive content. You can change the car loads many times a day only if the car can stay the same all day. The conveyor conceptoids must be durable to invert reflected external space and time.

Part of the inversion process involves high speed recognition, matching sense data to inner maps and images, which are in turn related to what is already known. This makes it possible to orient our bodies in real space and identify real objects and subjects which confront us, so that we may prepare appropriate responses in advance of the actual transactions, without which sense would be nonsense. The recognition process is perfected and automatic before we learn to communicate, as a result it is taken for granted in most cases.

To begin with, these conveyor conceptoids are rough hewn. Rather than wear and tear, constant use causes further compacting and polishing, so that by the time the castle in question approaches maturity, the constantly used conceptoids become so small, so dense, so hard and so polished that input and output glide over them as though they were not there, but let one chip or slip and its resounding clicks, like a bad wheel bearing, command the attention of all within earshot.

Conceptoids reduce complex sense data into simple binary responses: unknown/known, normal/abnormal, expected/unexpected. A sudden realization of just how simple minded

these conceptoids are and how much we rely on them can provoke embarrassment or humor.

A woman whom I had known for some time was meeting me at a railroad station with another mutual friend. We were to leave town together for vacation. All the times she had seen me in the course of several years, I had a beard and mustache. This day I had shaved off just the beard. "Oh my, you've grown a mustache" she exclaimed at the first sight of my face.

The autonomic conceptoids of the percept involved in recognition processing simply signaled disparity between the expected face and the one now appearing. Since the one now appearing was simply kicked out by the conceptoids as altered, the mustache stood out as the alteration. Naturally she was unaware of this inter- nal process at the time and was mislead by it, but she could easily be made aware of what had happened.

"He was born with a mustache; it's the beard he's shaved off." She was reminded of the beard by our mutual friend's communication. In the embarrassed pause, she corrected her response and began to giggle uncontrollably.

On the one hand she was surprised to discover that such a crucial routine in her own mind could go off on its own like that, like another person in her head, or worse, a machine. This would provoke horror rather than humor except that she quickly realized the routine could easily be brought under the control of some higher intentional energy.

Every conceptoid which protrudes into the event frame, the presence of mind, is the tip of an iceberg. It is the nose of some cone of concepts which go to make it what it is, all of which could not fit into the narrow opening. One morning, still half asleep, I arrived in the bathroom with trash in one hand and laundry in the other. Before I knew it, I had almost

put the trash in the laundry bin and thrown the laundry into the waste basket. I saw, on time, that the core concept was not detailed enough for the transaction. Not enough of the iceberg was shown to be useful. Here the distracted conceptoids were mapping the sense data with only the distilled core of the concept constellation without the outer satellite rings where details were kept. It registered as "bin" and not the next broader step down to "what kind of bin." At the distilled conceptual level, laundry and trash share a common core, they both go into bins, both are refuse of a sort (one more recyclable than the other).

The truth is that these conceptoids are so close to the outside that they do ape material properties; they seem to have reflexes like a muscle, but they still emanate in mind in the beginning and the end. Rather than viewing this phenomenon as mind adapting to brain; it seems more true to say that brain is adapting to mind. Other experiments have shown that the intentional energies can reassign what- ever role the damaged portion of the brain was performing to other centers. We know very little about this because we can't really watch the brain, modern PET scans notwithstanding, but we can watch the mind if we choose to.

The point of all this is that, normally, awareness of input processing is subsumed by the input impression itself, subsumed, but not obliterated, unnoticed but not unnoticeable. The further point is that there are checks and balances in a single mind, especially where we consider communication feed back as part of that mind.

The conceptoids which invert the sense data, since they are almost organs them- selves have the benefit of both the experience of the individual organism and beyond that an inheritance from the group, be it family, tribe, species or

phylum. The larger the group the deeper its influence is felt, that is, the closer to the physiology of the senses themselves.

The following are some examples of mammalian perceptual abilities: stereoscopic image processing; offsetting light wave frequencies to compensate for the effect of distance so that color and scale remain the same as the object distance changes; interpreting still visual stimuli as motion. An example of an ability peculiar to our species would be the propensity to natural language and other communication forms. Examples of the bequest of smaller groups would be a particular language and other cultural habits. Examples of still smaller group influences could be found in a particular slang, or regional dialect and then the vocabulary of a particular tribe or gang and finally the vocabulary of a particular family.We have said, the broader the group from which the conceptoid is derived, the more imbedded or buried it is, and, it follows, the further it is from awareness. If all this sound mechanical and deterministic, keep in mind that these are influences and they are subject to as many variations as there are individuals. And the fact that they are normally below awareness does not mean that they are beyond it. The fact that we are thinking about them right now makes the point that none of this is beyond the lantern beam of curiosity.

Kant had the idea that some basic processing conceptoids must have been inside before the organism's experience began, before any impressions fed any concepts. He argues that these 'a priori' perceptual elements cannot have been learned. Later, Bergson, Lamark and others (mentioned in Mindex) speculated that some form of inheritance of acquired characteristics must be operating.

Centuries later, Crick and Watson, made their discovery of genetic communication, which suggested a range of sources for our space time constructs that extends beyond our particular space and our particular time. However, our aim here unlike those scientists and philosophers is not to prove which if any elements of consciousness can come in without the aid of communication; rather we take the position that whatever the inherited propensities, they must be advanced and perfected by communication after birth. And further that experience is the crucial step in their existence. For our purposes we do not need to resolve the nature/nurture conflict. We have suggested that there are in the castle metaphor, subterranean tunnels which supply some portion of the castle's contents which is as far as we need to go. We begin by positing openings in the castle which represent some propensity and/or ability to communicate, however it got there.

The openings may be more often open or closed according to the dictates of the external circumstances and the internal choices of the individual. Woefully, in the majority of cases, the openings never quite open fully from one day to the next no matter who or what is out there.

Even in the case of the well oiled window and drawbridge, they can never accommodate all of the unpredictable traffic. There is never enough input to know what is going on, and therefore there is always more going on than can be brought in. In the healthy mind this anomaly is humbling, not crippling.

Once the sense data are ironed out, the widow can convey initial impressions back into the looser, slower realm of concepts in some particular domain or storage area of the castle. Despite the fact that we cannot always guess correctly at the fit of what just came in with what is already in place, a

network of corridors and conduits effectively leads the impression off in a particular direction.

Percept and the Senses

In the earlier section, we established that the body itself including its sense organs was physical and therefore outside. The physics of the sensory response to external stimuli is also an external phenomenon. It is measurable just outside the win- dow. Palpable physical and chemical changes take place as a result of the confrontation of the object with the physical mechanisms of the senses. We can see pupils dilate, the ear drumming, even neurons firing, all obeying the laws of physics. Not so with the impressions which result. As elaborate as the measurements of modern technology are, we still cannot equate these registered physical changes with particular mental impressions. These sensory operations are pre- percept in our terms, still external to consciousness, but nevertheless indispensable to the formation of impressions.

The sensory quintet is made up of ensemble virtuosi, any one of which, if request- ed, will solo ad infinitum. The isolated sense of touch, for instance, would be happy to handle all of the information from the outside world - as in the case of Helen Keller. Even absent sensory impairment, there are temporary circumstances which exclude sight, sound, touch, or taste and, for example, leave the recognition of "fire" to the solitary 'smell' of unintentional smoke. One sense is enough to create the initial impression and signal the alert. Other senses may be triggered later for confirmation, but the initial object impression formed via the quicker "recognition" processors in the percept can be based on the

data from a single sense. The same is true of people, or subject impressions: recognition must be accomplished first by a single sense, and an initial object impression: the sight of the subject body (subject-as-object), the footfall of an intimate.

The arrangements for the sensory quintet when addressing subject communication are dictated by the sub-knowledge from the subject domain, such as ameni- ties of the communication form, which indicate primary and secondary parts for each of the senses. The percept conducts the sensory input with that stock arrangement in mind. The arrangement is furnished in advance by the form itself. Within the communication form, there are sub forms and sub-sub forms and then a history of similar transactions each of which further elaborates expectation, helping the percept to chose appropriate perceptual models from the sub- knowledge for the processing of sense data into impression.

The eye and ear usually play the primary parts in transactions between adult subjects, and will be the main focus of future discussion.

The older the child in our culture the less permitted the sense of touch is in the work of the percept. Helen Keller, notwithstanding, the sense of touch for adults in our culture is limited to occasional handshakes, rarer back pats, even rarer hugs etc.. Extensive touching is reserved for children and special adult occasions.

The same with taste and smell. As we move on from infancy we put fewer and fewer things in our mouths and up to our noses.

Whatever the reason, sight and sound emerge as the two primary sensory feeds in most adult transactions.

The same is now true for "mediate" forms, which were at first only mono-sensory (pictures, text, silent movies and audio only), but eventually were obliged to develop forms which address both these primary senses simultaneously. (talkies,TV)

Nevertheless traditional media forms persist where only one sensory feed is con- templated. It is interesting to note that in such cases, if the particular form offers no sensory feed for one of the primary senses, there is, nevertheless, a compensatory impression on behalf of the omitted sense derived entirely from internal sources. We have a picture, foggy though it may be, of a radio or phone voice, whose face we have never seen, based on an amalgam of subjects associated with that kind of voice. This ersatz impression is always veiled and is brought to light only with the surprise one experiences when finally seeing the real person behind the voice. That is not to suggest that one sense cannot predict for another. We do this often, more or less accurately, depending on the circumstances and depend- ing on whether the impressions are of object or subject-as-object.

It is more likely that the prediction of one sense will be verified by the other where places and things are concerned. I hear a sound associated with falling dishes; when I turn to look I am likely to find the sight of the expected shrapnel of bro- ken plates. Circumstances, either internal or external, can interfere with this sen- sory harmony where objects are concerned: I may be frightened out of my wits and have inappropriate visions based on innocuous sounds, but generally speak- ing, with objects, there are few surprises where one sense precedes the other.

With subjects (human beings) the opposite is true. There are more surprises than not. The radio voice already

mentioned is one example. Another illustration can be found in the jolting surprise of the sound of established silent film stars which created serious box office problems for the early talkies. The image alone of the star generated different bogus aural impressions in each of the fans, which were disappointed. When the movies eventually became bi-sensory, the first impression included both sensory feeds and there could be no disappointment, as long as the star looked and sounded the same in each film. This was true despite the fact that in some cases different actors were responsible for each sensory feed. The same is true today with singers who do not actually sing. If the producer feels that there is something about the subject's voice, regional accent, tone deafness, or pitch, dubbing can build a composite pop star who is immediately accepted as one by the audience.

We should underscore here that with multi-sensory expression there is more like- ly to be a sensory order, i.e. primary and secondary roles for the senses. Any one or more of the senses may be more or less de-focused to bring in the secondary impressions of any transaction. The particular sense or combination of senses imparts a unique wrinkle or earmark to the overall transaction which serves as an additional retrieval means where the resulting impressions may be otherwise filed separately. For instance impressions of the background scene which came in at the same time may be filed separately for topical purposes from the sound of a particular song, but by reason of their simultaneous entry, each through different senses, there are retrieval paths from one directly to the other, as we shall see later on.

What we have said so far is that concepts normally reside back in the 'castle' because of their billowing size but concepts can be distilled and honed by repetitive

reinforcement whereupon they become conceptoids which are compact enough to fit in the narrow openings behind the event frame. Included in these, are percept conceptoids which trigger sensory focus and trap a particular array of sensory impressions. This processed sense data is then further processed by the slightly larger conceptoids of the decoding variety which are involved in autonomic interpretation, the cold knowing or sub-knowledge alluded to earlier.

It follows from all that we have said that there is no direct exit from the 'castle' or 'tower' to the outside. All input and output must be funneled through the bottle- neck of the 'widow' or the' drawbridge', which compensates for its constriction by the speed and agility of its processing, which is sometimes hasty.

Percept and the Tenses

Sartre said in Being and Nothingness "I am not what I am and I am what I am not," which is to say that because of my freedom my past does not completely predict the present, and because of that same freedom and the march of events those possibilities which have not happened to me yet are also part of me.

The elusive present tense suggested by Sartre is reflected in the interplay between the castle and the outside world. Despite greater and greater attempts at speed, nothing can be done "presently," in the pure sense of the word; there is really no "presence of mind." At the moment of perception, the percept interpolates sense data, in that it fills in the blanks of present sense with past tense. This may take the form of low level adjustments in the physics of the sense data so that

color and scale remain constant as objects move, or, on a higher level, the visual sub- knowledge may fill in missing sides of regular shaped objects and add depth dimension to spaces, all from past experience. If we see the one side of an auto- mobile which is in view, we also see the other side, once the sensory catch is in the percept model for automobiles. The model provides the view of the other side based on its assumption, which is based on the past experience of the individual system, which is based on that of the group, the species and the phylum. Should there be a fluke, a car which is a red Ford on one side and an Egyptian sphinx on the other, the percept would shudder, but not shatter.

The percept interplays with the physical senses not only at the moment of perception, but before as well. Time permitting, the percept cocks the particular senses to be involved, before the instant of perception, according to what it expects. We look in expected directions for that which we seek, all based on what we have found in the past.

If we are desperately waiting for someone to show up at the train station, the expected head may be inappropriately mounted on many backs in the crowd. The expectation is dominating the sensory input which is instantly corrected with the first glimmer of contrary evidence, in normal minds. The more desperate we are the harder the correction is to make, until some of us reach a point of schizophrenia where we ignore the correcting sense data in favor of the internal model, which in that case is called a hallucination. For the percept the future is more or less predictable depending on how closely it matches the past, but never knowable.

It follows, then, that not only the future but the perception of the present too is unavoidably tainted with the past. Yet, molded by the past, and aimed at the future, the percept is as

close as mind can get to a present tense. In fact there is no instant that will sit still long enough to be dubbed as present tense. Once something is actually seen, smelled, heard, touched and/or tasted it is already his- tory, and it is that history that looks out to shape the non existent future.The pre- sent is but the torque between the remote past and the instant past; the present is more of a tension than a tense.

Though it ebbs at times, there should always be a basic inbound current eroding inappropriate past impressions and updating concepts and constellations. By that I mean, under the best conditions, in the best minds, the freshness of the last catch brought in by the percept gives it some impetus against the whirl of prior concept constellations. There is therefor, as an essential by-product of the interplay between the 'window' and 'the castle', a tug at the castle concepts in the direction of the outside world. The tug pulls at the inertia of the inevitably stale unrealistic world of the castle', which, if left to its own devices, would be content to make a future of the past, without reference to the new events confronting the percept. In the healthy mind the tugs keep the concepts tuned to the "present tension."

"Be here now," the Zen idea fashioned into the bromide of the 60's, was a noble exhortation, but like all exhortations, never completely achievable. No one was all there then, just as no one is all here now. Again, the best we can hope for is a tense balance between percept and concept, between 'widow' and castle. The tension is the existential torque which moves the senses to explore and which enables communication.

We agree with Polonius that there is "more in heaven and earth," than is caught by the percept, because not only is our own past not always relevant to the situation at hand, but

also we can bring only a small part of it forward from the castle to the business end of consciousness, the portals 'window' and 'drawbridge'.

The processing speed of the internal system, alluded to earlier, is also no match for the speed of the external stimuli. To compensate for the disparity, the percept does have the ability to bounce sense data off of the drawbridge into the moat, while it does something else. This is a pre-impression phenomenon since the wave or referral back into consciousness has not been completed.

This juggling allows the percept to appear to attend to more than one thing at a time. It's as though the percept flips out this primary sense data which floats for an instant, waiting to be caught again while the percept manages an alternative impression and then returns to the original floating sense data, and catches it; whereupon it becomes impression-catch and is ushered back into the castle. Again, some individuals' percepts are more coordinated than others, for whatever reason, and manage this operation better; they can attend to more.

As a result of its own experience and that of others, the percept has standing instructions in most situations regarding the order of foci. Of course there are surprises from time to time. With known objects, if the visual impression doesn't make sense, the eye will be redirected and other senses may be invoked. This pinch hitting is directly the result of the mismatch. If the incoming impression continues to be ambiguous, i.e. fitting in nowhere, the percept will direct sensory focus toward those external elements which might solve the ambiguity, always in favor of what is known, the

model. Even the unknown must be matched some- how to the known.

Should there be an apparent match, the percept is alerted to look out, first, for further stimuli that might reinforce the match, at times ignoring contradictory elements. This provides the empirical models with their own inertia. We prefer impressions which we can assimilate easily, rather than those which challenge. This accounts for the natural tendency to think we know rather than admit that we do not. Once again these process tendencies are not mechanical rules beyond alteration by the will.

Subject and Object Impressions

The impression has already been described as a non-material, an internal response to the physical operation of the senses, a step beyond the sense data. In the inter- play with the external world there is a premonition regarding the significance of the impression for the whole system immediately after the perception of the sim- ple object or the object containing the expression.There is always an initial "object" impression which may then go on to become a subject impression as well.

Where a human subject is actually involved, the sense data immediately throws track switches all along the entire intake process so that impressions will relate to earlier impressions and concepts of the subject. Many subsystems from the senses on in, must ready themselves differently because the transaction involves another human being.

One difference between subjects (humans) and objects lies in the fact that with inanimate objects, coordination of

sensory feeds is less complex. The senses may respond on a first come first serve basis to accomplish object recognition. With subjects the more difficult second stage of assimilation kicks back and affects the perception process itself.

With live subject expression there are more levels of sense data, since all the sens- es are forming impressions at the same time: some of the subject-as-object, some of the subject expression itself and some of the background objects. Because of this relative stampede of sense data and the free focus and spontaneity of the transaction, the live subject expression can be more easily misperceived.

Where live external subjects (people) are concerned, the loose ordering of sensory impressions is aided by "immediate" communication routines implanted in the sub-knowledge of the portals. The protocol and amenities of this sub-knowledge guide whether and how, which senses should be used. Who is sending and who receiving at which times. Whether there should be more listening than looking or vice versa; whether there should be any touching, any smelling, etc..

To the extent that inappropriate past experience with other subjects, skews the percept or sensory net, the live subject expression must fight off the distortion; in so doing the subject becomes more elusive resisting the bad fit. This is particularly true when the percept of the receiver tries an all purpose routine.

All purpose routines are linked directly to prefabricated constellations in the castle which are whole cloth subject concepts, ready to wear, one size fits all hand- me-downs. As a result, as is often the case, a complex subject may be cast in the loose fitting role of simply a "foreigner" or a "Frenchman"

or a "black," or "female." All the while the live subject is trying to avoid being misunderstood and at the same time trying to avoid misunderstanding the communication partner. The perceived is at the same time perceiving the perceiver; each is aware that the other possesses an image of him somewhere and both are trying to peek into the castle' of the other to find it, as well as catch an impression of the subject expression, all at the same time.

Unlike subjects, objects are not purposely elusive. Should the percept miscue with a pure object impression, there is more likelihood of a satisfactory retake, since the object is unaware and cannot attempt to compensate or react to the first bad take. Should we err in our initial attempt at capturing appropriate impressions of a live subject, it is all but impossible to bring the live subject back to exactly the same point for a re-take. Since the object is without a mind of its own, its behavior is less complex, hence more predictable. Even where object phenomena are complex we can weave successive percept routines and refine conceptoids so as to bring in suitable partial impressions.

In simultaneously processing subject and object impressions, the percept has, once again, to notch or crimp the flow of sense data to create the division required by the filing process. Here, again the wave metaphor from physics serves best.The crests and troughs of the wave have to do with subject and object impressions and also with sense data. Under normal circumstances, one does not completely disable the disengaged senses (the senses not directly involved in the transaction). The de-focused senses are still functioning at a very low level (not quite subliminal) and still bringing in peripheral object sense data which is "observed"

collateral to the communication transaction. These collateral observations form the trough impressions of the metaphorical wave, the crests being reserved for the subject in focus.

The trough impressions (also referred to as background and "contemporaneous extrania"), are carried into the castle along with the crest impressions. The col- lateral observed trough impressions are object impressions, since if they were subject impressions they would by definition occupy crests of their own carrier wave.

Once the object sense data is discovered to contain the nesting of a subject, the object impression falls to background as the subject takes the high ground, i.e. the trough of the metaphorical wave. Subject expression may not be background trough to anything and must be figure focus, which is not to say that peripheral impressions of subject-as-object (human body) may not be background. In fact, they usually are. They may also, of course, be the focus of attention with other objects as their background. We will see later that this would be a somewhat flat- ter wave than one containing subject expressions. (This explains the disruption of the purely sensual experience by chatter: the object wave of sensual impressions is being disrupted by the subject expression).

It should be clear by now that impressions of objects flow back in flatter waves than those from subject expression. Even where the object is the focus of attention, its metaphorical wave has less amplitude than subject impression. It follows that where the primary focus is on an object, and its impressions are interfered with by the more ample subject waves, not much gets in or out. I may be selecting a tie, trying to form a simple object impression of

what I see, while at the same time the salesman insinuates that my pants need letting out. I see nothing on the tie rack, as though my eyes were disconnected by what I just heard. Where the primary focus is the subject, the object wave can readily knit itself into the trough and become background to the subject impression.The sight of the beach and the coral are nestled in with the impression I have of the sweet talk I heard from a lover.

Naturally the will is the ultimate arbiter of focus. The practiced will can tune out a subject and attend to something else, but there the subject does not come in as background trough. Subject impressions are never background. What if I'm not listening to some one who is speaking to me, and they call me on it? How is it I'm able to recount some of the words, just to show I'm paying attention? Isn't that evi- dence that a subject expression came in as background? It certainly was not in focus, but that does not prove that subject expression came in as background. The fact that you manage to spit back the last phrase or two, is a function of the echo. I pointed out earlier that sense impressions which are not picked up and shipped back, will float around for a few seconds. For a short time they can be caught again by the percept.

Of course, attention is very supple in the mature percept and can shift in split seconds from one focus to another, catching pieces of several subject expressions. If I'm listening to one subject and another subject catches my attention, this initiates another subject wave crest, another transaction. I may alternate between transactions, forming two distinct feeds, two wave forms which only have the background or wave troughs in common. This helps me keep the balls in the air, as it were. I can keep making sense of each feed by

digesting every other gulp. Unless, of course, one feed became suddenly more demanding. But in each case the subject impressions occupy the crests of their own carrier wave of impressions.

Although trough impressions of the subject's body taken in with subject expression would be background or trough, 'object' impressions, communicative gestures of that same body would become figure in focus, subject expression. I am referring here to the significance of the gesture, not the hand itself, for example. Again the physical body and all the physical surroundings not directly involved in the communication become 'object' trough impressions. We saw earlier that when the mind focuses on the touch of a physical body, the flatter object wave needs some quiet background in order for the sensual impressions to flow. As such the contact is neutral object impression; it is the intended subject expression behind the contact which pleases or hurts emotionally, which communicates. With the proper timing and levels, we can harvest both object impressions of the lover's body for the object domain and subject impressions of the lover's mind for the subject domain (domains will be explained in greater detail below). Likewise we can turn the other cheek if we can neutralize the hostile intent which moves the hand and feel only the contact and not the "slap in the face."

With or without contact in live transactions we have both object and subjects waving through the same percept, with their different amplitudes, which adds to the percept's difficulty in dealing with subjects. The greater amplitude in the subject event involves more processing, more resistance and is more exhausting.

Again, this suggests that a pure object impression by itself, disconnected from any communication transaction, would be easier to process and more relaxing, with- out the sharp crest, pulled up by the jousting gravities of the juxtaposed minds, and therefore a relief; witness the occasional solitary trip to the desert or the sea where the regular low amplitude pure object waves feeding in from the percept create almost no difficulty in assimilation or we could call it "peace." This kind of input processing while it could never be exhausting, might get boring. Rather than tire of such impression processing, we might get restless eventually for the more complex subject transactions. For some the subject vacuum would be tolerable for longer, but clearly if we have sampled the lift of the high crests of subject impressions we long for them, and no amount of object or pseudo-subject media can take their place.

Beyond the flailing drawbridges in every subject interaction, we have an inevitable, intriguing and indefatigable face off of percepts and "prime subject constellations" (which will be explained further in the section on subject domain). Here in our treatment of the percept, it is enough to understand that my impression of another subject, at the moment, confronts what he thinks of himself. And so, he needs to know about me and what I think of him at the same time I need to know about him and what he thinks of me. Eventually the entire subject domain in each party is being compared. More often than not this is a disappointing process. We can, however, confirm some of our impressions which match up with the communication partner's; some not all. Since each system is processing impressions from the same outside world, the initial expectation is that the insides will be identical. Each is quick to discover irreconcilably

differ- ent concepts in the other, and as often as it happens, it always comes as a shock. Disparity between object domains can lead to logical argument and solutions; disparity between subject domains cannot be solved logically. It should be point- ed out, however, that there are, often as not, similarities between subject domains and, if exploited, those make for continuing relationships. It does not take much of this cross validation for relationships to continue.

pseudo subject impressions

More so than with simple objects, subject expression, because it is powered by intent, complicates the impression response. This is true for both live or "immediate" communication and "mediate" communication, although in each the com- plication manifests itself differently.

You can quickly identify a book by its cover, but you can't quickly "judge a book by its cover." In "mediate" communication (TV, Radio, Print, etc.), we have both a simple object perception and a nested subject expression, as well. The object impressions here are less impressive, i.e. less obtrusive than in live or "immediate" transactions. For instance, the body of a live speaker would be more distracting than the physical body of the telephone which carries vocal expression, for instance. If, likewise, the object impressions were to be attractive, i.e. supportive of the subject impression, then the media object impression would add less than the live object. It follows, compared to media transactions, all other things being equal, the live transaction is preferable only where the object presence (the body) is a positive influence on the intended expression.

Unlike the live subject expression, media expression, addresses a much narrower sensory range, both in terms of focus and number of senses involved. Because the subject

expression is fixed in an object (the medium), a particular sense is addressed to the exclusion of collateral senses. There is not the spontaneity of the live transaction and therefore not the sensory work, which is not to say that there might not be more intellectual work in decoding, etc.. It is this decoding of the intended expression that separates the paper with text from paper in general, separates the pseudo-subject from the pure object.

Not all pseudo subject expression comes to us fixed on paper. Thanks to the electronic revolution there are other forms which are more dynamic and purport to respond by providing relevant random access to different parts of the expression; these are so called interactive or multimedia which we have been calling "responsive systems." Still no matter how elaborate the computer program, the responsive system is non instantaneous pseudo subject expression and cannot deal with the full range of interaction.

If it is true that the potential of the responsive system can never accommodate the user like the potential of a live presence, it is also true that it could not con- trol as well either. No matter how elaborate and dynamic the display and no mat- ter how responsive the system, the form itself is less suited for manipulative expression. I doubt that any computer could manipulate a customer like a live sales person or that Hitler's speeches on CDROM could have managed the same amount of persuasion as they did in the live rallies. In the live setting of the rally the collateral response of the audience and the fuller sense data coming in from the entire experience made it possible for the expression to overwhelm any mitigating individual response. The same would be true with a one on one sales pitch which can bring out in the open any

reservations and effect a more tailored per- suasion than could be accomplished in a mass media expression.

Nevertheless, whether live/"immediate" or fixed/"mediate," the complexity of engaging another subject invokes a complicated sub-knowledge of routines which, over the years, have developed into regular forms with agreed upon focus. As we saw in dealing with the 'drawbridge', this sub-knowledge takes some of the surprise out of processing at the time of the transaction, but adds to the time and energy required for initiation (acquiring the sub-knowledge) prior to the transaction.

Where the subject or pseudo-subject expression is coded even to the extent that it uses language, the perception and inversion of the sense data must be followed by interpretation by the conceptoids in the 'window'. The conceptoids must also interpret in terms of the idiom of the relationship: what has been said before, the jargon of the shop for instance, or a particular family, two lovers, etc., all of which may be more or less accessible in the form of concepts or conceptoids which are the result of past experience. And we should add, that the conceptoids which were appropriate last time may well be inappropriate this time because of the volitional spontaneity of subject expression.

In our generation less and less communication involves live subjects. The more removed the live subject is from the expression, the less amplitude and wave force. While relaxing by the sea, the initiated reader can more evenly deal with a letter by or about John than John himself. The non -instantaneity of the medium makes it more and more removed from subject processing, and yet a communication medium is not just another object. It is not a rock. It is invested with the

soul of expression of another human. Still it is not "quick," now, when we hold it in our laps at the beach. The media subject is an object masquerading as a subject, no matter how life like the writer makes his subjects, they are not really subjects they are ink and paper. Ink and paper are object, but unlike any other objects, this one represents subject expression from which we glean and form a special kind of object impression. For that reason we must distinguish this from live subjects and yet not confuse it with run of the mill objects. I have suggested we call the expression in this object a pseudo-subject which will remind us that it is not a live subject and at the same time that it reflects some subject who is or was somewhere else, at this or some other time.

The note from John is expected to be about him and real events and other real people he and his correspondent both know. It is likely that a stranger finding the note on the beach will not be as involved in the expression as the correspondent from whose hands the note was snatched by the wind. The note is a private medium and while it uses the same basic language code it employs the language in a narrower context, or idiom code.

Public media is simply more broadly addressed and therefore must allude to group experience rather than individual experience. The group may be a tribe, a nation or entire culture, but they must have some concepts in common in order to be addressed in common. The important point here is how the structure of consciousness is revealed by pseudo-subjects. The ability and propensity in consciousness to create concepts out of impressions shows its hand in the creation of paradigmatic subjects. Heroes, villains, character traits which become characters, these are the conceptual

constellations of the part of the subject domain to which pseudo-subjects relate in public media.

Since with pseudo-subject impressions, the waves of incoming impressions are not as pitched as they would be if the live subject were actually present, they are less commanding and therefore, in one sense, more demanding, that is, more difficult to attend to initially. Hence the medium - communication form- must have its curtain, its conceptual frame to separate it from the other objects and focus the appropriate sense on the representative expression. This frame, which is more important in public media, helps us suspend our disbelief so that we can for the moment, trick our percept into thinking it sees a subject in the object stone, paint, ink, film, video etc.. This trick is accomplished by the special craft which is essential for media authors who try to make the non instantaneous seem instantaneous, without being present themselves, using only the flatter waves from the pseudo- subject.

Live performance is technically not media. While there are objects present which are actually pseudo-subjects, a kind of medium, such as sets and props, there are live actors who are addressing a public audience. This is on the very cusp of media and hard to distinguish from media. In the past I have classified "Live Performance" as an "Immediate" form because of the immanence of the live performance and the evanescence of their expression.[11] Nevertheless it was the precursor of media and pseudo-subjects. Although it was live -an actor was really present within reach of the audience- it was a performance and therefore the actor was not present in his own persona. He disappeared into the previously prepared role. The precursory medium was the proscenium

framed on the stage and lit in a special way so that focus could be drawn to this sub-world where pseudo subjects reside. Live Performance must have occurred first around the campfire, in the glow of which disbelief could be suspended, and heroism could be embodied in the gesture of the actor. This was the paradigm for media, the medium for pseudo-subjects.

Consider the magician: the skilled actor who represents the miracle worker. We always had in our conceptual realm a place for someone who could suspend the laws of nature. Even where we know it is trick not miracle, we can be engaged in the performance which dances between subject and object.

Where the magician is live: the magician himself is a subject. Therefore, percept impressions from his expressions have amplitude, sharp crests. The impressions flowing from the subject-as-object (his body) and other objects he manipulates, create object waves which have less amplitude, so much so that in joining the crests of the subject waves of his gestures and expressions, the object impressions become the troughs of the carrier wave. Nevertheless, the magician pretends to invite the eye to focus on the object, pushing attention away from himself. For the moment the wave tries to invert itself with the crests becoming troughs; the subject becoming background for the object as figure, but such a wave cannot sustain itself and only causes destructive wave interference, enough to cancel the visual troughs of object impressions, creating astonishing distraction, so that we lose track of the very object we are trying to attend to. No matter how he pre- tends to lead our focus to the object, we are blind to it and see only what he wants us to see - the subject expression. In the live performance the commanding live

presence of the magician is essential to the distraction, which is why magicians failed on television.

On television the magician is pseudo-subject and his objects are no longer real objects but also pseudo-subject expression: they are both pictures now taken by the camera man. There is no real disparity in the wave amplitudes between the so called subject and the so called objects - and so the trick falls flat. This is more than an explanation for the short lived appearances of magicians on TV; it is a call to think about the oxymoron "live TV."

TV, in the flexibility of its images and breadth of its focus, editing and special effects, is more magic than any single live magician could perform. The magician holds a candle to the sun. And yet the flexibility and power of this form does not obliterate all the older sub forms.

The puppet show which probably predates the magician is a live performance which translated well to TV. The stagecraft of the actor/puppeteer was enhanced rather than defeated by the magic of television and that is because we were always more interested in the characters portrayed in the puppet show. Punch and Judy were already pseudo-subject paradigms. The live actor hidden behind the puppet stage was not part of the impression, and so the magic of television made the characters more believable; whereas with the magician, the magic of television upstaged, and made the trick less believable. We need to believe or at least sus- pend disbelief in order for pseudo-subjects to make an impression.

We are always aware on some level that we are looking at the medium, an object with its processes, in which are nested representative pseudo-subject expression. The first job of media is to distract us from that awareness, that disbelief. Part of the unpleasant aftertaste of watching live TV has to

do with the empty shock of turning it off and finding that there really is/was no one in the room, despite the full color, close ups which were so engaging. We can more easily dispense with the mistrust which that conflict causes when it presents pre-crafted stories which allude to pseudo- subject paradigms, with whom we can identify as a group. It is important that because they are pseudo-subjects our relationship with them is vicarious; we know we'll never have to deal with them in real life. The compact we have with fiction, 'that pseudo-subjects shall never have to be dealt with as a real subjects or object', allows us to suspend disbelief. Even though we may worry about this happening in real life, we can take comfort in the fact that it is not real now, and so we can suspend disbelief and cry without pain as though something were happening to us in a dream. This fiction compact makes for easier assimilation of pseudo-subject impression.

The easier and more life like the fiction, the more attractive it is to the appetite for experience, even though on some level we know it is vicarious experience. These vicarious experiences, because of their distillation and packaging require less effort to acquire and assimilate (like fast food). As a result there is a natural tendency to fill the need for genuine experience with this easier vicarious experience. Vicarious experience results in pseudo subject impressions and concepts in constellations which are not as stable and are hard to build on. It is the constant crumbling of these vicarious constellations that generates the appetite for more and more, since the pseudo subject impressions constantly need to be replaced. Hence the gravitation of the mass audience to TV and especially TV movies, which fill the void of real experience (a void indirectly caused by them) with

experiences which we might never have dared otherwise; behavior which had to be repressed in the real world: sex and violence.

There must be some genuine experience in order for the vicarious experience to attach. If I have no impressions from real sex and violence in the object and subject domain, there can be no cross reference, no "integration" with pseudo subject impressions from a TV movie. However, very little real experience, i.e. very few impressions are required in order for us to be attracted to the vicarious experience offered by the pseudo-subject media. And once the easy acquisition begins, there is less and less time and energy for genuine experience and more and more need for vicarious experience. All this applies to our appetite for stories and heroes, the essence of fiction, the life blood of media.

If, on the other hand, the media purports to be "live" nonfiction, the real subjects and objects it portrays, for example the war in Iraq, have the effect of revoking the "fiction compact" and so we are not willing to "suspend" disbelief. We observe with our disbelief in tact, with our keener senses which are normally reserved for real events and yet we know we can't question and look around freely as we can with real live events. We must look where the camera man has chosen to look. Disbelief is compounded as it would be in any case where our natural perceptual powers are constrained. No matter how reliable the TV news, we cannot assimilate it as full fledged object and subject impressions. We have to keep forcing our- selves to believe. Except for cataclysms, news and public events will continue to have low ratings. Video, notwithstanding, it is only a report after all, and we don't know and can't question the reporter. The percept knows that its normal activities have been pacified,

and so it will not admit subject and object impressions into those domains. Instead impressions are sent to the shakiest of the constellations in the shakiest pseudo-subject sub domain. The fact that we may spend much of our time talking about the impressions and concepts from these constellations in this sub domain, does not attest to the strength of the constellations or sub domain, but rather to incredulity and the need for constant communication confirmation. The more far flung the so called "current" events, the less likely we are to have direct experience with them; the shakier the concepts and impressions, the more we look for confirmation from others who also likely have no direct experience. To whom can we turn for confirmation? Only back to the shaky pseudo-subject, on whom we now become dependent.

The dependency relationship never results in confirmation but only in further dependency. Even if one media source were to contradict another, it would not generate independent impressions; only additional unconfirmed pseudo-subject impressions and additional dependence.

Again this discussion is by way of introducing issues which will be dealt with in greater detail in the sections dealing with Assimilation and Integration. For now suffice it to say that these unconfirmed impressions are less integrated and less accessible. And so the magician's trick like the war in Iraq is boring fascination, an agonizing and constant source of disorientation.

None of this should be taken as a protest against pseudo-subject impressions and vicarious experience. Where there is no opportunity for direct experience, (a situation which is hard to imagine in this day and age) vicarious experience is bet- ter than none at all. If I had to be on the proverbial desert island, I would like to have with me my favorite books.

Favorite books seem to overcome the fact that the author and I have no direct knowledge about each other's lives. Somehow authors of vicarious experience in that medium seem to have reached out further by reaching in further; they seem to have been able to guess broadly about the communicatee's abstract concerns going in from their own direct experience to concepts which resonate with concepts in the mind of the reader, made out of the readers own experience which may be continents and centuries apart.

We already established that by dint of the funneling, the castle opens wider and wider as it goes back further and further from the 'drawbridge'. In our metaphor, the generous allotment of space for back issues allows for the loosening, elaboration, duplication and connection of concepts almost to the point of dissipation. Almost, but not quite; no concept is beyond reconstruction, and therefore, no concept is lost forever. We never allow a concept to completely dissipate and dis- appear. It may be so unused that it has disconnected from its component impressions but it can still be revitalized, recalled, and even re-instated. In our spatial metaphor it would have to be pulled together to be brought forward for expression or impression purposes.

It follows therefore that internal concepts or impressions in the remote reaches of the castle must be said to be "temporarily forgotten": 'temporarily' because all forgetting is ipso facto temporary; nothing can be proven to be permanently for- gotten, since one has to be able to be reminded of it in order to admit that it has been forgotten.

There is a blurring of space and time here. The castle being a larger space can also be viewed as a larger time. Access time for less frequently used concepts can be thousands of

times greater. Again this is a metaphor, and whether or not there actually is a space for concepts is not the point ; there is an external time which can be loosely associated with the storage and retrieval of concepts and impressions to and from the inner space. The time sense of the external real world does not touch the internal timelessness of the inner surreal world but does affect a contrast, even a conflict at times, where they are juxtaposed. For instance, during some external task such as input or output or some bipolar event such as waking from a dream or hallucination we are dazed by the juxtaposition of time and timelessness. Perhaps the theory of relativity should be extended to include at its loose end, the inner recesses of the inner black hole, which would have its own timelessness.

Our cavernous spatial metaphor is simply designed to help us visualize the relationship of functions: macro in the castle relative to micro in the portals of ingress and egress. Time itself is after all only a metaphor, an internal invention applied to the outer world. Getting around one metaphor with another is permissible in the conceptual realm: the opposing metaphor - "space" can often bring a new realization to its antipode - "time" with or without precise measurement.

In our spatial metaphor, with the arrival of the already condensed expression from another 'drawbridge', the resulting initial impression begins as a narrow, compact, extruded stream until it works its way back into the expanded space of the funnel where it decompresses and is amalgamated with other pre-existing impressions and concepts. In our castle inner space the concepts already exist or at least a place for them already exists. So that the new

impression needs only to add itself to some level of orbiting rings around the concept, depending on its age.

At each new level of reinforcement the concept's core becomes more and more dense which in turn potentiates its gravitational ability to hold more impressions in orbit. At certain levels of density a concept can attract to its gravitational field other lighter concepts. Should that happen, a larger belief system is formed which we shall call "constellation." The constellation's vortex, or core is now made dense by all the distilled implications of the constituent satellite concepts, dense enough to hold the concepts in orbit each of which has its own orbiting impressions. (Inner space must be as dynamic, complex and humbling as outer space.)

Constellations swirl in larger orbits which we are calling domains. There is one domain for subjects (human contact) and one for objects (places and things), all overshadowed by the 'tower' slotted between the castle halls and portals. No concept ever leaves its constellation and no constellation ever leaves its domain; they may reproduce or realign themselves, but they never leave once they've come in. In the normal realignment process, the forefront is called forward by external circumstance.

We have already implied that not all constellations are of equal gravity and magnitude. The core concepts of each constellation have more or less gravity which sustains more or less satellite concepts in orbit and impressions in the concept orbits. Repetition of similar transactions does not ipso facto add to the strength of the core and therefore magnitude of the constellation. It might be that some of the transaction impressions contradict or detract from the amalgamated effect of the pre-existing impressions; the

concept and/or the constellation is thereby de-stabilized and tends to dissipate.

The orbits of the more stable rotating concepts are tighter as they approach the core, hence the conical shape of the constellations. So much so that we can say the more stability, the more advanced the concept is toward the core of the constellation and the more stabile the constellation the more advanced it is toward the core of the domain.

The abstracted core of the domain is made up of constituent constellations and retains access back to them; likewise the abstracted core of each constellation has access back to all its constituent concepts; as the concept does to its constituent impressions.

If it is not obvious from what has already been said, perhaps we should make clear here that the constellations are belief systems which concern a particular object or subject ; their conical shape permits their vortices to pack in densely, and dynamically and form domains which are also conical and come to points next to each other. Because of the conical shape, the front of any constellation is a small- er place than the rear, and the front of either domain is a smaller place than the rear, since the whole structure narrows as it comes forward. Every part of every domain is connectable to every other part.

It is not a new idea for the castle of thought to have a core nucleus, which is a kind of ultimate fractal or DNA or hologram, a system which both generates and

At the very core of consciousness where all domains, constellations, concepts and impressions converge, there must be a system of super concepts. The super concepts are naturally strengthened and weakened by fall out from all the constellations in the domains behind them.Super concepts

include general notions such as quantity, quality, etc.. These core constellations of super concepts (like Aristotle's predicates) are distilled, generalized systems; they are functional tools like the conceptoids of the 'drawbridge', except that their greater size and density creates a gravity which guides the concepts in all constellation cores across the domains which in turn hold together the entire consciousness.

If we were forced to decide whether the super concepts are given or made, we would trap ourselves interminably in the "nature/nurture" tarantella, which can only be avoided by a simple sidestep which allows both answers: a natural propensity for these concepts must be nurtured by object experience and refined by sub- ject experience (i.e. communication from other subjects).

The super concepts must begin to crystallize as a result of the first induction and deductions from subject and object domains. Thereafter they proceed at a differ- ent pace in each castle.

Since it takes a mating of both domains to produce the super concepts, they continue to be an integrating force between the domains. The normal mind explores the object universe and codifies its experience, at the same time the distilled experiences of others are being passed on and processed.

The dynamic interactive division of matter and mind, and then mind into domains and domains into constellations, while it may seem over drawn, avoids a lot of the philosophical muddle that occurs when psychological and logical analyses collide. This muddle has been a cloud on epistemology and newer fields such as cognitive science. Take for example the work of H.H.Price[13] which is concise

and clear in describing recognition processes, but then provides two conceptual tools which eventually collide with each other. The "sign" he describes as an antecedent to an experience; later he describes a "symbol" as another kind of antecedent which indicates another kind of event. The distinction between sign and symbol would have been so much more accessible had there been a subject domain and an object domain. The sign could have been explained as that which causes the object domain to induce its expectation of what might happen in the physical external world of objects: clouds mean rain, day follows night etc.. The symbol, on the other hand could have been more easily described as an expression of the non-physical world of other subjects' minds which bridges into pre- set codes and concepts which reside in constellations. The distinction in Price's undivided universe is never fully appreciated. Of course, he separates thinking and experience for us, which is analogous to our inside and outside, but once inside the castle there is no hall or corridor or room to distinguish between direct experience with objects and indirect experience which comes to us through communication from subjects.

Price's distinction between universals and resemblances also haunts the logic of what follows. Resemblances are those standards by which things resemble each other. Universals are those characteristics by which we describe the objects we perceive: red, big, many, one, one thousand. He eludes Plato's idea of those qualities existing over and above and before the external event, (as one must if philosophy is to keep from becoming religion), but does it no more successfully than Aristotle. He is swallowed up in the same Aristotelian quandary whereby those qualities are "somehow" invested in the things themselves ("in rem"), which leaves

dangling the issue of how they got into mind. In fact we are never sure how the characteristics or qualities got to wherever they are, inside or outside. My theory is no better on the issue of the genesis of concepts but we have added the domains which at least leaves room to sort out what came in from others.

Our super concepts or universals are essentially the same as Price's and Aristotle's, except that we are locating them more precisely at the junction of the domain cores to signify the confluence of learning from other subjects (communication) and learning from objects (direct experience). Also from that position they can be the part of the root system of all other constellations or belief systems which flower in either domain.

One super concept, quantity, refers to the fact that all objects have dimension and number. It allows me to conceptualize the entire forest in a single reduced set 16,000 trees or 60 acres or 60 billion acres or 60 light years. Whatever the set, it has imbedded in it the rules for composition and decomposition.

Quality is a super concept which induces sense data into pre-sets such as color, shape, etc.. (Plato says these are shaped by basic ideas and forms.) While there are physical sensations involved in the realization of the quality, they alone would not explain the resulting internal dynamic. It takes considerable communication experience for us to learn the colors, shapes etc., and then attach them to sense data. This occurs as a result of the "integration," which we will look at in detail later on.

Because the dense super concepts are so far forward they precede the distinctions further back in the funnel shaped inner space. There are concepts which fall out of the super

concepts which do attach themselves to a particular domain. For instance, 'preference' is a key concept in the prime subject constellation within the subject domain which depends on qualities.

Whether something or some one is desirable or undesirable is purely subjective and has to do with how they interact with the prime subject constellation. These subject concepts may be referred to as feeling. Feeling is a permissibly vague word because it is meant to include the illogical and irrational concepts of the prime subject constellation, but again the feeling attaches to qualities.

Identity, is a similar second level key concept at the core of the object domain, also connected to quality and quantity. As in the classical theory of resemblances alluded to above, identity attaches quality and quantity to individual objects. Classification is implied in identification; they are two sides of the same coin. I need classes to identify and I need identification to classify. Identification and classification allows compression and coding of expression as well as decompression and decoding of impression. Common nouns are classes of objects which call forth particular identities in various circumstances. While we put them in the object domain, they are not cut off there; identity inevitably arouses relational preferences and feelings in the subject domain.

All language, then, is a proliferation of super concepts which results in a hierarchy of connective code flowing through the core concepts of every constellation and therefore out to the satellite concepts and their impressions, and back in as well.

In the subject domain where all constellations should remain unfrozen, there is the irresistible tendency to apply the object standards derived from the super con- cepts to

subjects. I am not referring here to identifying the subject's physical (object) being by means of qualities and quantities; that is appropriate. Rather I am referring to the unfortunate attempt to make a solid object out of behavior. The reification decried by Sartre involves the misapplication of basic thoughts about objects to subjects, which are themselves thought castles. We struggle constantly against permanently labeling people as "cruel," "kind," "brilliant," "stupid," "loved," "hated" but more often than not succumb. This freezes the constellation floating in the subject domain; no longer dynamic and volatile it falls to the ground. Another aspect of this rampant propensity has to do with applying the same object labels to our beliefs and feelings about ourselves. Whereas in the prime subject constellation, our belief about ourselves, should remain as loose as a gas in the dynamic subject domain, the application of such a label causes the self to fall into a glass case stillness like a labeled rock in a geology exhibit.

This is another way of saying that the physicality of the super concepts should be left to apply to the quantities and qualities of objects (including the physical bod- ies of subjects) and those impressions should be separable from any associated feelings which are the dynamic product of relational events in the subject domain.

Keep in mind, that all along, we are using space to talk about time. The narrow pocket of space it takes to contain all these seeds could not contain the forest that is their inevitable issue, and yet by spatializing the time lines they suddenly become visible in the present. Without a spatial metaphor, it is difficult, if not impossible, to imagine the interplay between the cores and all the far-flung progeny of the super concepts, in the remote recesses of a domain

coming from and to such a narrow point. Somehow we cannot believe that so much can come together in one point. The only way to conceptualize this is to make an object out of the subject. But an object for visualization purposes only. The geometry is not the 'geos'.

Imagine a box of pencils. If you were to hold a box of sharpened pencils together tightly by their points you would see that the volume of the hemisphere described by the erasers, which seems to be so much larger and broader is, nevertheless, a function of the length of the pencil, and that neither the broad surface of the hemisphere (cortex) or the length of the shafts intrudes into the narrow proximity enjoyed by the tips. Yet each is a function of the other, so that to expand one is to expand the other. We begin to see how an enormous and continuously expandable volume can come together in a small set of connected points which provide direct, straight line access at every angle out to the entire broad surface of remote initial impressions. And we can imagine that the closer we move along the shaft of the pencil toward the points the more condensed the space becomes.

We see also that this coming together or funneling must be paid for by compression. If the vortex at the narrow nose cone is to reflect all the concepts in its cor- tex, it must contain extremely boiled down or distilled reflections. However, that which is boiled off is not completely lost as long as the flow is dynamic and reci- procal and can go backward and expand as easily as it comes forward and contracts. It needs to flow both ways, zoom in and out, to take advantage of the efficiency of its shape. This dynamic rusts easily without the lubrication of constant exercise.

Castles, pencils and any other imaginable metaphorical space are nevertheless simple earthbound metaphors which

require elaboration from the macro space of cosmology and the micro space of particle physics to allow for the dynamics and uncertainty in the interplay between impressions within concepts, within constellations, within domains, within minds, within the network of minds crossing time and space.

Domains

We have said in so many words that domains are simply constellations of constellations which come together in the same way at their points. One domain deals with physical objects, that is, places, things and bodies, and the other deals with subjects, that is, human expression - including media (media is referred to as pseudo subject for reasons discussed further on). At any given moment, from the 'tower' at the top of the castle (and at the rear of the 'drawbridge') a domain looks like a dynamic array of points which are in fact iceberg tips or constellation vortices which have an affinity for each other in terms of the outside event to which they seek to relate. The outer reaches of the domain must be accessed through the core concepts of those constellations where, as we said, there is kept a kind of general directory of paths. Naturally, the well trod path is more accessible. Once into the outer reaches of a domain's constellations, cross referencing to contemporaneous impressions in other constellations is possible, which often appears as involuntary recall by association.

Where impressions are the result of external events (whether or not a purely internal event is possible, we assume that there are external events which are causally connected to internal impressions), the domains are not equally poised.

The object domain is somewhat forward of the subject domain, since every trans- action with the outside world, whether it involves persons places or things, involves a primary perception (identification, orientation) of those objects.There are circumstances where one is rapt in thought and the outside world seems to be left to its own devices. Even there, the thinker's body is sitting or lying on something, the skin feels temperature, the ear hears, there are smells etc., all of which may be ignored in the sense of focus, but the sense data is coming in, if only as background. The fact that it is coming in is borne out by the fact that one can be made to recall some of these seemingly ignored sensory events after the fact. You didn't notice that the neighbor was cooking cabbage when you were deep in thought, but when it comes up later, you can testify that you knew that.

With mixed subject and object domain traffic, the subject domain has more or less difficulty lining itself up for action depending on the internal and external circumstances.

The direction of the flow for the new impressions has to do with whether the trans- action's direct or indirect experience are more pronounced. It is this basic distinction between incoming impressions which re-selects the domains just after the sense data from the objects is processed. Despite the fact that in live communication we have indirect impressions about the substance of the expression (that which is talked about) flowing to the subject domain, we also receive direct impressions about the subject-as-object (his body, his clothes, etc.) which are routed to the object domain. Likewise we may be having an experience with an object and be putting together our report of the experience in the subject

domain, or simultaneously integrating our direct experience with what we had been told previously.

Here as elsewhere ontogeny recapitulates phylogeny. Domains can be plotted phylogenically or ontogenically, which means that the developmental steps in the individual consciousness parallel the evolutionary steps in the species.

In the evolution of consciousness, the pre-communication species would have had only an object domain for processing direct experience. So too in the pre-communication developmental stages of the individual human mind, there would be only one kind of impression and one kind of assimilation. For the child, the nose he plucks is only object at first, it takes time and communication experience before the nose distinguishes itself as a sensitive kind of object, flesh, which is connected with another consciousness whose feelings can be communicated. The object domain remains primary as a first stop for all incoming impressions, although in phylogenic development as in ontogenic development, it is soon backed up by a second domain.[14]

When finally the communication stage is reached (by the species or the individual), a new class of impressions must be processed beyond the object domain, in a new way. Because the source is no longer simple, palpable, objective nature, but rather other subjective consciousnesses, the mind is forced to do things so differently vis a vis the subject that an entirely new division must be created, conceptually of course. This is when the subject domain separates itself.

The subject domain in the life of both species and individual at first handles immediate communication from live subjects and then later must deal with communication from distant subjects. This distance creates a new level of

indirection, which demands yet another special subdivision of the subject domain for what amounts to "pseudo" subjects. The subdivision or sub-domain for pseudo subject impressions, in our metaphor, has not yet split off as a separate domain.

We have already seen that in a live or "immediate" transaction there are object impressions which have to do with the communication partner's physical appear- ance. With media, there is also a preliminary direct impression of the pseudo sub- ject medium, as object(the color of this book), which quickly becomes extraneous to the communication experience, but is an essential first step. (For instance in finding the book again, the object impressions are involved) There are, how- ever, by definition no object impressions of the communicator. The 'subject-as- object' impressions of the absent media communicator himself are inaccessible. These transactional facts change the processing of impressions so substantially as to demand more structure and sub-knowledge than can be managed by a super concept or a constellation core as posited at the fore of the two domains, and yet not so much as to demand an entirely new domain. Suffice it to say, for now, that while media is the youngest child in the house, it is old enough to demand its own room, if not its own apartment.

The names I have given to the two domains are object and subject. I call the newer sub domain for media: pseudo subject. I am reluctant to fix a date for the phylogenic or ontogenic development of this new sub domain, except to say that with the species, as with the individual consciousness, it begins with the development of any form of media, the first use of any material to leave behind or send a message.[15]

As for dating the evolution of the older subject domain that too must be purely speculative. All we have is historic communication to fall back on; falling back beyond that is falling off. Developmentally, the cleavage between the two main domains is well established by the time the normal mind reaches maturity, or else its lack is so noticeable as to demand drastic social reactions.

Subjects must be treated differently than objects in their perception and conception. Even if we choose to ignore the distinction, it is forced upon us eventually.

The placement of communication at the core of existence continuously sheds new lights and shadows.

Assimilation has a different phase and wave form in each of the domains. This has to do with whether the impression is a direct or indirect result of the sense data, by which the impression is shaped for either of two assimilation processes: induction or deduction. The observation impressions which result directly from sense experience assimilate in the object domain by induction. That is, similar observations come together to induce the more abstract concept from impressions. In the subject domain, including the pseudo-subject sub domain, the coded overtones of the incoming sense data supply meaning according to deductions from concepts which must already be in place as communication sub-knowledge.

Object Domain

We have already suggested that, anthropologically and developmentally, the object domain is more rudimentary, beginning with the simple ability to form direct impressions out of sense data. This earliest, primary domain has

constellations of concepts which relate to directly experienced objects as objects; subjects as objects and pseudo subjects as objects.

"Object as object" refers to a continuum of inanimate phenomena which range from places to things: or we could look at it as ranging from objects which "con- tain," to those which can "be contained," i.e. a "place" contains the perceiver, whereas the perceiver contains the "thing." With or without tools the body of the perceiver, which is itself the primary object, can move a "thing" around as opposed to moving itself around in a "place." In the middle of the place/thing continuum there are hybrids. A mobile home a large aircraft or boat, for example, is a thing when we are moving it, but it is a place when it is moving us. The place/thing range is simply based on size relative to the body, the prime object. The prime object constellation in the object domain contains impressions and concepts induced from direct sensory observations of one's own body. The prime object constellation (the sense one has of one's own body) is the oldest and the largest in the object domain, containing the fruits of consciousness' earliest forays with the outside world.

We can divide the kinds of understanding which results from perceptual processing in terms of that which requires figuring out as opposed to that which is immediately recognized, or more quickly recognized. Lets call the quicker under- standing- recognition and the slower one interpretation. We have seen that the interpretive kind of understanding involves the appeal to sets of rules of syntax and lexical catalogues of agreed upon meaning to be attached to the distilled code. This is all the business of dealing with subjects which belongs to the subject domain.

Whereas, the quicker recognition seems to map the input to known pat- terns for a yes or no. This may have repercussions in the subject domain, but at this beginning point it is purely object. "Yes," that is the face of my mother; "no," I have never seen that face before; "yes," this is my front yard; "no," this is not the street I was on last time I was here, etc..

If we were to look further into the process, in terms of the prime object, we would find ourselves zoomed into a process within a process.That process involves a kind of scaling to the prime object. This relative scale is a threshold for the recognition process. For instance, the relative scale of my home and immediate surrounding to my body match up with expectations before I conclude the mapping and matching and positive recognition step. I expect to be so much smaller or bigger than the object thing or place, when that expectation is fulfilled, I can go on and recognize.

We are seldom aware of the prime object scaling, except when the threshold trips us up. When I look out the window of a plane, my street and home look smaller than I do; therein lies the first trip- recognition fails at the threshold, because the relative scale is off: they are supposed to be bigger than I am. When I returned to my grammar school classroom, again I trip over the threshold, the desk, and the room itself were supposed to be so much bigger than I was, and they are not. The prime object has grown, but not the relative scale and so there is a collision of the two processes. Since the recognition process is more routed to the object domain, its cognitive style is inductive: I induce sensory feeds into a picture which I regis- ter against maps made from previous pictures. When the two systems collide, as when I am in a plane and some one or some medium tells me that is my home

and I fail to recognize it; or when the family and friends agree that this was my grade school classroom and I have no reason to doubt but I do not recognize the tiny chairs and desks, I receive a psychic jolt which may tickle under some circumstances or may perplex under other circumstances. In either case we are predisposed to communication and resort to the subject domain.

As we have already seen, the general principles or core concepts of the object domain constellations can be, "integrated" topically with those of the other domain.

"Subject as object" refers to the physical being of the subject as opposed to his/her communication import. The body of a communication partner inevitably generates object impressions whereas the expression coming from that body generates subject impressions. Either may be preeminent regardless of the fact that the subject-as-object impression must come first, sequentially speaking. For instance identification of a communication partner necessarily involves subject-as-object impressions, which then triggers instant recognition of physical features from the object domain: skin, hair, foot fall, gate, tone of voice, handwriting, etc., but depending on how fetching the communication is we may lose sight of those objects, or contrariwise, we may not be able to focus attention beyond some bod- ily feature, due to the relative magnetism of subject as object. We saw earlier that these constellations of impressions and concepts which are needed frequently, can be distilled so as to have micro-representations in the conceptoids of the 'draw- bridge', but we should note here that before that would have been possible there had to have been an original set of impressions and concepts in a constellation back in the castle.

Pseudo-subject-as-object refers to the fact that any medium containing subject expression may be perceived in its physical existence over and above the subject message which it carries, the book's cover, the paper and ink rather than the words, the video rather than the images which it generates, what the cat sees when he looks at these words. All these are in the constellations of the object domain.

Subject Domain

In the developmental cycles of the species and its individual members, as well, the subject domain makes its appearance along with the ability to communicate in any form. The subject domain begins as a single prefabricated constellation of a few impressions and fewer concepts about people in general and what they have to say. Later differentiation creates the need for additional constellations for types of people and finally relatively more stable differentiated constellations of individual people are formed based on their repeated subject expression which eventually becomes a communication relationship. All of the subject domain's constellations are much more volatile and flexible than those of the object domain, but nevertheless they must hang together to be useful.

One subject constellation, the 'prime subject', in addition to being the oldest and largest in the subject domain, is the most volatile and unstable, changing from minute to minute. It contains impressions and concepts related to self image, the back wash of communication transactions. This 'prime subject' constellation is more or less integrated with the impressions of the perceiver's own body, 'the prime object'

constellation in the object domain, but is qualitatively different. Like all concepts in the subject domain it is deduced from the larger picture of me which I gather from others.

The result is a feeling which can only be semi-described by words. How can we be more precise about feelings except to give them one of the vague words connected with feelings: happy, sad, blue, depressed, etc.. Really, all we are saying to ourselves and others is we''re up or we're down. We know no more than that for sure. We try constantly to find out why and often resort to communication with other subjects in our quest to understand and control feelings. And some of us after long bouts of more or less formal communication with many or few come to have "a grip on our selves," on our prime subject constellation, whatever that means. There are no psycho mechanical rules which can reliably explain feelings. The operation of our prime subject constellation in the subject domain is merely a place for these complex concepts. The implication of our theory, however, clearly attaches positive and negative feelings about any one or any thing to positive or negative feelings about the self.

The communication impressions which find their way to the subject domain in general are larger and looser. This domain contains our impressions of what others think about objects or other subjects including ourselves based upon what they have told us. It's as though the parliament of constellations have a constituency of outside subjects (people) for whom they speak on various topics which are them- selves subjects and objects. These concepts may be accessed based on the source of the expression or may be cross accessed based on the topics within the expression

itself.The topical access is also the route of the integration dynamic with the opposite domain. Sometimes we fail to

attribute; that is, we forget from whom the particular impression was received. The copy of such an impression tends to drift over to the object domain only to find that it has the wrong shape for assimilation with other concepts there. It must then find its way back to the subject domain constellation from which it fell ; from there it can be topically integrated with (as opposed to assimilated into) the appropriate object domain concepts.

When the subject is too new to have formed a full fledged, stable constellation, we continue to use, for assimilation of first impressions, the generic prefabricated constellations about other people in general or types of people; otherwise communication would be impossible.

Once several concepts have formed from and about a particular person, a particular constellation for that person breaks off from the prefab constellation. At that point, and subject to continuous revision, a kind of affinity index is distilled in the core of the constellation, which indicates the level of trust and intimacy and preference along with other expectations in connection with future transactions with that subject.

This affinity index should not be confused with the access order within the domain which is the result of the proximation dynamic. In other words, how close you feel to someone does not explain how close at hand the constellation is. Rather, prox- imity is dictated by frequency of access. The greater the frequency, the shorter the distance between the constellation and the nose of the domain and, therefore, the 'drawbridge', or presence of mind. Undesirable subjects involved in our everyday lives are closer, regardless of their intimacy or preference level. In other words the familiar constellation which is close at hand is not necessarily the one to whom we

feel the greatest affinity ; hence not the most credible or desirable. Try though we may, even constellations of hated subjects will find their way to the front of the domain with frequent communication exposure. And contrariwise no matter how much we love someone with whom we seldom communicate, their constellation goes to the rear of the domain: out of sight out of mind.

The fact that subject constellations are handy only accounts for the speed with which we can store and retrieve impressions to and from their array of concepts. Familiarity may breed hasty storage and retrieval, or "contempt," in which case the handy subject constellation remains prejudged, not unlike the concepts in the original, generic, prefabricated constellation. We know of too many cases where repeated exposure in a stagnant relationship, with its concomitant frequency of access and proximity, does nothing to enhance the constellation or in any way change the affinity index. Exposure alone does not affect the affinity index one way or the other ; special combinations of internal and external events are necessary.

The affinity index is reflected in the prime subject constellation. How close, how intimate, how trustworthy a subject is has everything to do with what we think he or she thinks of us. Someone who respects us is likely to be respected by us etc.. In terms of our spatial metaphor this simply describes a reciprocal dynamic between the prime subject constellation and all other subject constellations.

This can only apply vicariously in the pseudo-subject sub domain, since we can- not know the pseudo-subject, or media author and how he or she feels about us specifically. Nevertheless, we can feel close to an author, imagining that he would have respected us had he known us directly. This is

pseudo affinity, hence the pre- fix "pseudo" applied to subjects in the sub domain.

Pseudo-Subject Subdomain

The relatively new subdivision in the subject domain demonstrates the changeability of the human condition and the long term adaptability of structure in the side- real history of consciousness. Not only can new concepts grow out of new impressions, and new kinds of constellations grow out of new concepts, but enough new kinds of constellations can even manage to grow their own new sub domain.

Media, defined as anything which can carry human expression, may have played a tiny part in the preceding millennia, but has become an all encompassing part of the modern human condition. So much so that, if the life of the species were to be defined in something other than physiological terms, this added trait might qualify as the hallmark for a newly evolved species: 'homomedians'. We must add that for a relatively short time in the projected life span of this evolved species it looked like the name of the species might have to be "couch potato" since the bulk of the new mediate communication ability had been expended in passive TV transactions. Never have so many spent so much time spending so little energy. The bulk of this passive media time is claimed by the entertainment industry, for the time being. But, like everything else, this too is changing.

And so the dedicated sub domain includes constellations which have to do with every form of media, including responsive systems which is what we call any media driven by

computers (machines that have the capacity for programmed responses).

In the pseudo subject sub domain of the castle the concept constellations are organized first around the media from which the impressions were received. Unlike in the main body of the subject domain where the constellation is more likely to organize itself around a "live," present communication partner, here the constellations are organized around the medium, and only after considerable experience does authorship reflect itself in the constellation. Just as in the main subject domain, regular transactions call for the establishment of concept constellations so that the communication relationship can be made more efficient. But here in the pseudo subject sub domain the amenities and protocols and basic impressions of the medium are conditions precedent to any subject content.

This can happen in the main subject domain as well where the form is highly structured and the role of the individual communicator is predetermined: for instance in a ritual we store and retrieve based upon the role as defined by the form rather than individual subject expression: that some one is a priest is more significant than the fact that he is a fool or a genius; the vestments or robes of office obscure the shape of the person whom they adorn. Just as with vestments, the medium is the key concept around which information is organized for the initiated. It follows that for the uninitiated the same information would have to be organized around a live subject or not at all.

The medium is itself an object; as such it generates a collateral impression in the object domain which distinguish itself from other object impressions, other things, and places. Nevertheless it functions as object impression providing us

with thing-like and place-like guidance which gives us a grip on and gets us around in the medium, but not in the message. The medium is not the message. The message only uses the medium to get from one castle to another.

These "medium as object" impressions must be integrated with the pseudo sub- ject impressions which result from the message itself, but they should be thought of as living in different domains.

With this conceptual tool in place, the difficulty which some of us have with some of the modern media can be seen as a failure to integrate the media object and pseudo-subject impressions. We may be highly skilled and sensitive in the communication process generally, but find ourselves with an electronic book which we cannot open, thanks to some obscure software design, or some basic incompatibility between the kind of content and the form, or some mental block we ourselves have, some disintegration between domains. Progress in interface soft- ware design should have as its ultimate goal the facilitation of the integration between the media object and the pseudo-subject message. Although this is more art than science, in the final analysis it should be obvious to the media purveyors that the book is, or is not, easy to open. By that I do not mean to imply that the book is some paradigm for the delivery of textual pseudo-subjects. It may turn out to be much too difficult compared to some newly discovered form. At the moment it has hundreds of years of initiation and convention on which it may sit solidly, but that may not be forever.

Other epochs were content to have knowledge wrapped in code. The extensive initiation required in order to implant the sub-knowledge of code keys was seen as a test of worthiness. This served certain social needs, namely the

exclusivist need to partition the elite from the unwashed masses; the latter being confined to their oral culture. With the decline of Calvinism and the growth of democratic institutions came the realization that knowledge is more valuable when shared, than when hoarded. Literacy became the goal of compulsory education and some knowledge was shared in the form of the printed word.

More recent developments in audio visual media, with its more inclusive code, purport to challenge printed text as the only channel for knowledge. The proliferation of media forms spawned by this massive inclusion is now almost too obvious to mention; not so obvious, however, is the effect of the code changes on the information.

Questions like is mass media good or bad lead to other questions about core values. Questions regarding the media's efficacy in, say, changing attitudes have lead to the development of a major industry, trying desperately to root itself in some objective principles, but alas we are not objects. Effects of any communication phenomena can only be evaluated by internal subjective standards which must involve intent. From the sender's point of view, the intended effect of the expression can be compared to the observed effects of similar expressions couched in different forms. Such comparisons can be made not only between forms within the mediate class, but also across class lines between mediate and immediate forms. Is this comparing apples and oranges? I say it is a fair comparison since the different fruits are paid for with the same currency, communication time and energy. For media professionals the notion of cost efficiency is not amiss in comparing forms of human communication in terms of how well they deliver the intended effect. But, naturally that is not the only standard. One must eventually

look beyond mere delivery at how well the intended effect matches the actual effect and how well that meets the short term and long term needs of the audience.

This implies a responsibility on the part of the professional to understand the effects of the form in which he professes. A phone book should be designed for quick access to any particle of information; a novel should be seamless so that no particle wrinkles the smooth shadows of the illusion and the vicarious experience they provide. The form must fit the content. The content must fit the need. Again, this is ineluctably subjective on either end, which means that comparisons and distinctions must ultimately be accepted by each of us for ourselves. Nevertheless, one's ideas about these effects may resonate with those in other minds. For instance the notion that interactivity between pseudo subjects and other subjects is better than passivity is now widespread and driving the internet revolution.

In our sub domain metaphor, the pseudo subject expression, 'objectified' in passive media, has none of the capacity for immanence, interactive spontaneity, or volitional volatility of live or "immediate" subject impressions. Despite the fact that it represents the expression of other humans which is technically 'subject', the communicators are not in privy with their audience, not within their personal grasp, don't know each other personally, and cannot feed back directly to each's 'prime subject' constellation. This is not bad or good in itself. The fact that the media communicator is not in our lives may be the only way one can come to receive certain insights which finally shed light on the concepts and constellations of the actual subjects and objects who are in our lives. The long dead distant author who seems some how to know his reader personally presents an intriguing esthetic

mystery. Here, the presumed lack of relationship and the pseudo intimacy of the pseudo subject potentiates the network of minds, the myth of the universality of consciousness and therefore communication. Despite the fact that it isn't usually all that it can be, the "mediate" impression is only limited by the live experience of its audience and the imagination of its author.

We have sketched the structures which result from the human propensity to divide, classify and organize. We have seen divisions between impression and expression apparatus in the 'drawbridge' and the divisions of impressions, concepts, constellations and domains in the castle, and we have not been able to avoid mention of the dynamic interplay between those metaphorical structures. It is as though the structure could not be teased out from process itself, and so the structural analysis has been peppered with out of place allusions to the dynamics. Now we shall turn more directly to those dynamics.

THE CASTLE HALLWAYS
Dynamics of inner space

We have seen that a constellation is called forward in the domain on an as needed basis, as is the concept within that constellation; this implies two kinds of realignment action: one which makes the constellation more 'proximate' within the domain and one which reorders and re-weights the concepts within the constellation.

The rearrangement of the concepts within the constellation is triggered by the interaction of the constellation with the inbound impression. We shall formally dub this dynamic assimilation.

Assimilation of new impressions in turn affects and is affected by proximation, the external alignment, or the coming forward of particular constellations within the domain and the position of the domain itself.

Both proximation and assimilation are affected by and affect the traffic between domains; call it Integration.

Those constellations at the forefront of each domain are closer to the 'drawbridge' and at the same time, are closer to each other and more connectable. Nevertheless each remains true to its respective domain.

Once again: Assimilation refers to the reshuffling of concepts within the constellation to accommodate new impressions. Proximation refers to the reshuffling of constellations within the domain and the repositioning of the domain itself, so that the relevant constellations are closer to

the drawbridge for the expected duration. Integration refers to the bridging between the domains of affiliated concepts deal- ing with related topics.

Assimilation

Some concepts are reinforced by assimilated new impressions which means that others are weakened, relatively speaking. Any realignment of concepts within the constellation must be reflected in its core.

Incoming impressions may be the result of direct experience headed for the object domain (induction)or may be the result of indirect experience, through communication (deduction) headed for the subject or pseudo-subject sub domain.

Where subjects are concerned, as we have maintained all along, whatever the intent, a person may only recycle ideas or feelings or conclusions; since expression is but an arc of the circle, a slice of the circulation that is communication, it can never be wholly original.

We must keep in mind that whatever meaning comes to us by way of communication impressions was a concept already digested once and then regurgitated and re-assimilated.The expression may contain various levels of the details which lead up to the concept. In other words the transplanted concept may come with or without a schematic to its components, or the components may come without a spelled out concept. You may tell me only your conclusions about what you think; you may tell me your conclusions and some details of what you think; or you may tell me only details and

let me draw my own conclusions. These levels apply whether or not you are telling the truth.

Each of these leads to a slightly different assimilation process in the subject domain. In the first case I am told what to deduce. In the second case I am helped with the deduction. In the third case I am allowed to deduce in my own way. In this third case the deductive assimilation involves more of my own older core concepts which were already in place in the constellation cores.

How well each of the three styles or levels of communication content will be assimilated depends on the circumstances and the relative status of the parties. For instance an expert is not expected to bother to explain, if timing is critical, whereas a teacher who doesn't explain is no longer teaching but preaching, and that may or may not be acceptable depending on the internal and external circumstances of the student. An artist is expected to draw everything but conclusions. Whether in the plastic, dramatic, or literary arts, the job of the artist as defined by the cultural consensus is to present details and especially those which have been overlooked by the general population; they are to be presented honestly except that they may be highlighted by accepted distortions.

No matter how essential and sacrosanct the imported concept, it expects to be reshaped each time it finds itself in a new mind. Likewise, all assimilated impressions will have some effect on belief systems (constellations) in both domains. The effect may be so small as to go unnoticed or maybe large and dramatic. The effect may augment or diminish the power of an established constellation and that may have an overall positive or negative effect on the

particular conscious- ness, which depends on who, what, when and where.

With live or "immediate" communication the level of interactivity in the particular form will usually allow for more piecemeal assimilation, in that the expression can be broken up into pieces by the receiver's interactions. The questions will poke and reshape the expression. The fact that no spontaneous questions are possible with media means that expression must be taken at face value, which is good and bad, as we have already seen. The fact that I can reshape live subject expression, likewise is good and bad depending on the shape of the expression and the quality of the interactive reshaping. "Immedia" can be ruined or perfected by the communicatee's interaction. Either class of forms can accommodate every level of content which may be meaningful or meaningless. The level and the value of the content are neither facilitated nor impeded by the form as such.

It should also be noted that, while all "Immedia" has the capacity for interactivity, spontaneous interaction may be curtailed by the particular transaction. The resulting passivity should not be confused with the passivity of Media. Being passive in forms which anticipate interaction, being silent before a live presence, has its own side effects for both sides of the communication transaction.

In every case, once the impression is in, there is an 'assimilation' shake up, along with every thing else that is going on. It may happen that, simultaneous with the 'assimilation' of a particularly momentous impression, a 'proximation' reshuffling within the domain may be mandated as well as a new 'integration' between affiliate concepts in

the different domains. All this may occur in the blink of an eye or may be spread out over years.

Relatively speaking, and all other things being equal, the process in the object domain is more regular. The sense data which become sense impressions are fair- ly consistent with each other. The induction which occurs from impression to concept also follows regular, that is ,predictable steps. The more action we take in relation to the object impression the more multifaceted the impression will be in the constellation. In other words if we saw it and felt it and carried it and rolled it and sat on it and bounced it we create a new relation to the object with each action.

The same is true with impressions of a place, except, there, the action is likely to be reflexive, that is movement of the body (the prime object) within the perceived object (the space) rather than manipulation of the perceived object; nevertheless, the same direct proportion exists: the more movement the more orientation. Repetition of paths(impressions) through the space reinforces the place concepts and constellation.

And yet assimilated object impressions, as objective as they are, are not impervious to assimilated subject impressions, as we shall see.

The focus of this work being communication, we will not delve into the assimilation of pure object impressions in great detail; instead we will look more close- ly at subject impressions, the product of the communication process.

Prescriptive Assimilation

Where the observations are too new or too few, communication convention creates special relationships

whereby others may think for us. These are prescriptive communication relationships, part of everyday experiences for domains where constellation cores are blown out or haven't come together yet, i.e. minds disoriented by reason of long term or short term stress or inexperience. Teachers, doctors, parents, etc. think for their dependents on a daily basis. Their dependents assimilate mainly wholesale concepts. In what most would call a healthy situation, however, enough time is left for the object domain and active observation and induction of home grown concepts, which can then be bridged("integrated") to the imported concepts in the subject domain.

The specialization of our own information age presents a special case for prescriptive communication. As the complexities of the industrial age proliferated into the information age, the knowledge base became bewildering. It had to be broken up into thousands of tiny pieces each consigned to its own specialist who was excused from initiation into the other fields. These focused minds were expected to function like single constellations rather than whole minds. If we needed to know something about birds we consulted the ornithologist and the entomologist for bees, and then we accepted their communication prescriptively, provided it was adequately specific and specialized. We demanded that the concepts be detached from any more general concepts. We expected information from our specialists not interpretation. That would make the prescription palatable, but alas we are finding out that interpretation may be inevitable. The specialist cannot avoid functioning as a whole mind with all of its paradigms, hopes and fears; and the same is true for the audience of the specialized concepts.

With prescriptive communication a wholly transplanted constellation can come in as subject impression. This means that deductive processes alone generate supplemental concepts. The concept may have no genuine affiliate in the object domain where the inductive processes can check out the deductive processes. We think we know all about cabbages and kings without ever having seen either. As prescriptive communication continues, without sufficient integration of direct experience, the object domain gets lazy and there is increasing reliance on the subject domain for ready made concepts, 'givens'. The resulting slow down in the inductive processes in the object domain is particularly crippling. It tends to limit the forays for direct experience. It confines the percept to only those situations which are likely not to be challenging. The greatest fear for democracies whose electorates are also mass media audiences is that the unbridged domains become disintegrated and unbalanced. The individual system becomes less and less able to check things out generally for itself and more and more dependent on the prescriptive communication resulting in loss of independent decision making and loss of freedom to conformity. Parenthetically, at the other end of the spectrum, abject resistance to the suggestions and guidance of others, as in the case of the so called "sociopath," leads to isolation of the individual, and loss of freedom to confinement, all in the interest of social order.

School

We are all subject to confinement to some extent, only the institution varies. We must go to school and try to stay there as long as possible; the more school, the more status. School

as we know it involves primarily prescriptive assimilation. Despite valiant efforts to change the process, tradition prevails.

Each year more and more dead young minds are thrown out of school wrapped in diplomas and tattooed with test scores, the most disastrous of which is the score which condemns aptitude to predictable limits.

Once branded, prods shuttle subjects, object-like, through the cattle chutes of economic institutions where convention crucifies the few on plus signs and etherizes the many on slabs of minus signs.

The numerological mind invented the chutes because of its impatience with the imprecision of the verbal mind and words like will, spirit and freedom. However, by virtue of the self perpetuating ideas called forth by those old words, it is impossible for mind to be nailed up or weighted down. According to the long established consensus or myth which underlies those words, those who have been nailed up will eventually be taken down and those who have been "etherized on a slab" must rise again. The angry rumbling in the streets and the nervous guilt in the ivory towers might be the herald of this awakening. Pluses and minuses confront each other now more than ever before and look at each other suspiciously as if to say, "How did you come by your number?

The notion that all education should nourish and free the spirit has been gone now for just about as long as the numbers have been around. Bean counters have always questioned freedom in favor of order. But now some beans have begun to question order.

In a sense the entire culture, as large as it becomes, must be passed on prescriptively to each new member of the generation. Compulsory education laws make school learning

both a right and a duty, but not a reality. The dependent must keep still and silent, keeping the subject domain proximate and assimilating for more and more hours each day and more and more days each year and more and more years each generation. By way of a sop to experience and induction, "home- work" was all that could be prescribed.

All knowledge depends on other minds and that linking with other minds requires an implantation of coded sub knowledge. The traditional school works on that painful implantation often without demonstrating the connection it affords. The young mind might be more formative if the objective of all the drills and practice were well formulated and demonstrated. We hear nothing about the network of minds. In fact, we hear nothing about the mind itself until we get to university, which means that the majority will never formally learn what makes them tic. All of this is prescribed; it is assumed that the student has no say since he or she is uninitiated; this makes for an agonizing conundrum.

To all groups from the smallest family to the largest nation, prescriptive communication is essential to acculturation. Without acculturation there can be no communality which is the essential grid of communication. And yet without allowances for confirmation by direct experiences of the individual, the grid becomes a cage rather than a network.

It is interesting to note that even when the opportunity for interaction presents itself, the children of mass media must be lead. To such a debilitated audience, live expression can be especially binding and blinding. I speak, once again, of the circumstances where the live audience is forfeiting the interactivity inherent in live ("immediate") forms rather than simply not having any to begin with, as with passive media.There and then a power vacuum is whipped up by the

collateral response of the live audience which lends awesome strength to the prescriptive expression. This power vacuum empowers the communication as many fold as there are individuals melded into the live audience so that the subject impression swamps the regular confirmation dynamic; the resulting disintegration between subject and object domains pushes the mind back to helpless infancy and blind faith.

The most horrible example of such a blind faith, which inevitably leaps to mind, is the mass suicide of the congregation of the late Jim Jones in Guyana, or David Koresh and his Waco Texas carnage and other cults which self destructed on command from the leader. Like faith healing this faith wounding communication addresses the very instinct for survival routed at the core of being. This is not the first time communication asserted itself as an end rather than a means; and not the first time as a dead end rather than a "living end," words taking the place of life itself. Louder than all the soldiers and civilians lead to their deaths by battle cries, these fields of corpses cries out, because this flock was done in by its shepherd, mothers taking their children with them leaving only their silent screams to haunt the history of prescriptive assimilation forever.

Perhaps the ultimate irony in the human condition is that communication has the potential to save us from natural disasters and yet can lead us into unnatural disasters of our own making.

Lest I appear too bleak on the indirect experience of the subject and pseudo-subject domain (communication), in the next breath I should point out that, it is the unique development and integration of that domain in our species which brought us to the top wrung of the evolutionary ladder (if only by our own reckoning). The great ideas have been

passed on to us through subject expression and through media without which we would have no understanding of subjects or objects. But even though subject impressions about objects may stand for generations, eventually someone's bold induction catches up with deduction. Experience wears down contradictory beliefs which it cannot confirm.

Proximation

In addition to being a formal, categorical division, a domain, in our metaphor, is a controlling order. By that I mean the system dynamic we called "proximation" allocates contact exposure to each domain. In other words, there is only so much room at the front. Because of the cone shape there is a bottle neck from castle to 'drawbridge'. Not all subject constellations, or object constellations can ride in front. The front seats are allotted to the domains and then from that allotment, seats are allocated to the constellations within their domain. Based on life style and circumstances, the domains must align themselves and put forward the sub domain and constellation order that will most efficiently handle the current inter- play of the 'drawbridge' with the outside world. Since lifestyle is a choice, the will decides directly or by default how much of the limited access to provide to each domain. This allotment and alignment takes account of both long term and short term choices. It looks at the time of day, the time of the year and the time of life. Whether we are at work, on holiday, at war, acquiring, retiring etc. will determine whether we spend more or less time with which objects, subjects or pseudo-sub- jects. For each of us

choices are based on individual circumstances and yet there are enough general patterns to talk about.

One child may watch more TV than another, or more than he will when he is older, and so the overall allotment to the pseudo subject domain is adjusted, almost involuntarily. That implies, ipso facto, less time for interaction with subjects; the domain's alignment tends to make the continuation of this practice easier than changing. Having chosen a life style for a period we are predisposed, often without realizing it.

Of course the allocation can be changed by the will, but with some difficulty. The allocation may be a life long habit in which case it is even harder to change, but not impossible. As solid as it feels at times, no internal predisposition is rigid. The allocation as between domains is usually more long term, i.e. less flexible than the alignment of constellations within the domain which means that the pattern of spend- ing more or less time with subjects (people), objects (things and places), or pseudo-subjects (media) is more ingrained than the pattern responses to particular objects, subjects or pseudo subjects. It is harder to break a media habit than it is to switch from one medium to another. It is easier to come from a desert to the sea where "objective" nature is the only food for the senses creating flat, even impressions, than it is coming from the desert to the office demanding subject interaction.

Consciousness, being non-material, is ever formative. Nevertheless, the durability or flexibility of some patterns seems almost concrete, at times. For instance for some, transactions with subjects present seemingly, life long insurmountable difficulty while objects present no difficulty at all.

Viewing the phenomenon against the backdrop of our spatial model, we can say that some special minds function normally between the 'drawbridge' and the object domain of the castle, but not elsewhere. In spite of complete lack of ability to deal with subjects, there seems to be no lack of predictive ability flowing from the direct experience with objects. In fact in some cases there seems to be an almost magical expansion of this ability only because the object domain, and more particularly a few of its constellations and super concepts have barricaded themselves in at the forefront of the castle nearest the 'drawbridge', frustrating the normal back and forth reallocation/realignment rhythm of the proximation dynamic.

Around the turn of the Century the term 'idiot savant' was applied to individuals capable of remarkable feats with objective phenomena, especially abstract objective super concepts while at the same time being unable to relate appropriately to others. Connection between the remarkable computational skills of these individuals and the equally remarkable lack of communication ability provides a clue to the interplay of the integration and proximation dynamics which further confirms the basic distinction between subject and object domains.

The information age has already identified the "computer nerd" as a distinct personality type, whose live communication skills seem to be as far below normal as the computer skills are above normal. If one were to view the computer nerd as a modern idiot savant and view programming as kind of pseudo communication, using the machine as buffer he would also see that the pseudo-subject is closer to object than to pure subject.

In addition to programming vertically for prospective users there are also horizontal links through computer networks of these peculiar minds, which is more communication then would have been possible had live social skills remained a condition precedent.

In addition to domains aligning themselves for a particular life circumstance, constellations within the domain may do the same.

Some time after assimilation within the particular constellation, the relevance of that constellation to external circumstances may change. If the constellation is about to become more relevant to daily life, the constellation moves forward within the domain, so as to be closer at hand.

Unexpected change occurs more in some lives than in others. In those the proximation dynamic is more supple.

There are regular predictable changes such as the seasons in the temperate cli- mates which cause a "re-proximation" in the object domain several times a year. We find ourselves with new surroundings, flowers, birds, screen windows instead of storms, mosquitoes instead of snowflakes, all of which moves the constellations around so that the right ones are handy.

In the pseudo-subject sub domain the particular medium we confront must draw the appropriate constellations to the fore, in order for us to assimilate appropriately. The media communicator and the media form, help us perform this proximation by certain techniques: "curtain raisers," easy opening lines which make the proscenium disappear and at the same time call forth the right constellations for both the medium and the message.

Authors in every medium know that opening lines should not strain credulity and should not otherwise be difficult,

since so much psychic energy is needed to raise the curtain on the inside, as well.

The same is true in the subject domain proper. Live subjects know not to burden the delicate early stages of a relationship with too heavy an expression. New relationships ipso facto necessitate considerable proximation, shifting and repositioning subject constellations so that the new one can be handy. How can we ever forget the tumult of teenage proximation: childhood dependency relationships changing and receding, new friends, lovers, new self images all pushing for the foreground.

A more subtle proximation takes place as a result of epochal social and technological changes in life style. My own subject domain was configured very differently before feminism, computers, TV and jet travel. The reconfiguration can only be observed in the rear view mirror by those who have lived through epochal change.

Actually in the proximation dynamic the constellation moves forward only relatively speaking. What really happens is those which have less current business are eventually forced back, kicking and screaming, leaving the others a step closer to the front. This selection by inhibition is reflected in all the aspects of attention focus. Figures come to the fore by virtue of the silencing or flattening of the surround or background.

Each concept in each constellation in each domain demands a front seat; each feels itself appropriate for whatever assimilation task. Everyone clings to the fore- front or leaps forward to volunteer every time. It is for the proximation dynamic to hold back the constellations which clearly should stay out of the way. It is this systematic

inhibition of irrelevant constellations and domains which accomplishes the appropriate proximation.

Retiring a constellation always involves a deliberate effort, i.e. someone or some- thing needs to be put behind us. And yet in every case the new front left by the re-ordering always comes as a surprise; it's as though the relativity is counter instinctual.

This explains the strange bedfellows phenomenon whereby in the subject domain we find ourselves intimate with someone who seems never to have been chosen. The spouse leaves, the co-worker's constellation is closer without seeming to move. Or as Harburg says in his song: "If I cant be near the one that I love, I love the one that I'm near." Although it works in the song, "love" may not be the right word for the proximate companion.

Integration

A live or immediate subject expression which tells about a place or thing sends impressions to the subject domain; in addition impressions about the object of the subject expression must be integrated with direct experience, if there is any, in the affiliated concepts and constellations of the object domain. In the subject domain we know what so and so says about that particular object, which also helps fill out the constellation on how so and so thinks generally. The expression may be about any object, any subject or pseudo-subject (media), on any of the various content levels of detail and/or abstraction. What Harry tells me about a particular movie characterizes the expression in the movie and Harry's general impression of the movie and may include the process

within Harry which leads up to that particular impression. In addition everything Harry says about anything tells me something about Harry, what Harry thinks of himself and what he thinks of me. The points of contact between our two minds include: Harry's constellation in my subject domain; Harry's body constellation in the 'subject-as-object' constellation in my object domain; the movie's constellation in my pseudo-subject sub domain; my own prime subject constellation in my subject domain, as well as all the counterparts in Harry's mind.

It is a natural tendency to integrate our own object constellations, no matter how remote, to the subject of the conversation. Where there is no parallel direct experience, this is done by interposing a bogus constellation which tenuously and tentatively links the domains, waiting for some relevant experience. The use of the word bogus here is meant to conjure up something "false" in the sense of false teeth, or a false limb, an artificial construct standing in place of the real thing.

A single experience with a subject or object may not be enough to form a stable constellation, in which case the subject's or object's inner reflection may remain as concept or impression precariously attached to a larger undifferentiated hypothetical or bogus constellation. (The place marked for new concepts.) For instance the impressions of a new person who looks like my uncle Mike or is like him by reason of circumstance will be attached to a cloned bogus constellation from the uncle Mike constellation. As inappropriate as that may be it serves until such time as there is sufficient experience for that new subject constellation to differentiate itself, tailor itself, at which point it becomes its own constellation. The same is true for

thoughts about places and things. The Coney Island constellation clone will serve as a bogus constellation for Miami beach until impressions from Miami reach a critical mass and form their own constellation. The peach constellation will serve for the mango until the mango differentiates itself with experience.

The integration of the bogus constellation in the object domain with the pseudo-subjects are responsible for the giddy passion to see mass media communicators in the flesh, or touch them, "press the flesh," forming a genuine object impressions including bringing their autograph home for the object domain.

The direct impressions of the mass communicator's physical being (object impressions) plays differently than pseudo subject impressions derived from the media image. Because it must be integrated with pseudo subject impressions, it may enhance or detract from credulity. While the direct impression may bring a closeness, a sense of reality to the subject, it may also afford too close a look at the hero's clay feet. The media impression on the other hand may be doctored to remove those impressions which might blemish the mythic heroic illusion.

"Gut feeling," we say, refers to some kind of intuition or sixth sense. This may be more properly explained in terms of remote integration of contemporaneous but seemingly extraneous background object impressions. For instance in evaluating the veracity of his expression, we may, without becoming aware, weigh in the fixed focus of the car salesman's eyes, the steadiness of his hands, the openness of his stance, or other body parts, and from these create, through integration, a subtext for the subject expression.

With a media pseudo subject, although there is no object domain path for these background observations, there are, nonetheless, background observations. The media with all its ability to focus our attention cannot prevent the spill over of some attention to the pseudo object background details, which must be deposited in an escrow account for integration purposes. With a political candidate it is not so much the talk of the talking head, but the unintended features of the head itself. The talk is what the spin doctors think we want to hear, but the head itself may tell our "gut" more. These subliminal details need not be genuine object impressions to be accessible to the senses. The live subject may be standing too far away to disclose his shifty eyes, which may become all to clear in the media close-up. Spin doctors and handlers have become aware that charisma plays differently in a TV close up than it does in a live address.

These subliminal details are what made the method actor especially suited to movie close-ups, providing a gut level truth to the lie of his performance.

I should not leave the reader with a negative impression of integration with bogus constellations. Bogus constellations are essential to many valuable communication transactions between parties who have disparate experience, such as, master and student, parent and child. Here the student forms bogus constellations which enables him to practice the form before attaining the essence. The bogus constellations allow a premature integration with other concepts in the subject or object domain. In the healthy dependency relationship there is a constant pres- sure to replace the bogus integration with impressions and concepts from inde- pendent experience. Active experience reflected in the object domain then

reshapes the hearsay in the subject domain, also through integration. Here the same integration dynamic results in independence.

The prescriptive assimilation we saw in the section on Assimilation disables the integration dynamic; as if to say don't try to integrate this with your own object experience since you're not ready yet. Earlier we saw that the same is true of the fiction compact where the conventions surrounding the form, are designed to aid in the suspension of disbelief, i.e. the disabling of the integration dynamic, so that the hypothetical truth of the microcosm may be accepted at the bogus constellation level in the object domain. But in both long term dependencies, such as childhood, studenthood, therapy, and short term dependencies such as audience-hood, the bogus constellation in the object domain and the suspension of the integration dynamic is licensed for the period, and when the period expires, the bogus constellation pops like a bubble leaving only the itch for direct experience and integration.

The more independent the mind, the shorter the license for bogus object concepts; i.e. the greater the impatience with hypothetical truth, and the greater the need to integrate direct experience. Such minds bolt from dependency relationships as soon as possible and revolt against subjects who rely solely on authority. They must create their own truth, must learn everything the hard way the unique way. Even if we do not subscribe personally, we admire this independence, especially in Western Civilization, hence the mystique of the maverick.

Though it is never wholly integrated, it is the practice, if not the nature, of Western consciousness to constantly scan itself incessantly, striving, for integrity (domain integration).

The inevitable inconsistencies spawned by the internal processes set themselves out for act and expression.

Activity, while it is not inevitable, is a propensity rooted in the biological fact of "motility" a potential which separates us from all other "sessile" organisms (those plants which just stay put for whatever the environment dishes up). We do have the power to manipulate our environment, whether or not we choose to use it; that is an ineluctable fact of our existence which confronts our external subjects and objects. It is that potential which brings with it the propensity for direct experience. Even though it seems to have disappeared somewhat in the industrial age, there is a difference between the "village smithy" and the "spreading chestnut tree." Even if only in the fact that as he forges his own chains, he wonders why the few must see themselves as freed up only in as much as they tie down the many.

Integration and Assimilation Order

Every thing we know, we know from the integration of direct experience and communication. Integration necessarily involves confirmation or contradiction of one knowledge by the other. Since each knowledge enters at a different time, the issue arises as to whether the advantage, if any, goes to the earlier or the later. Conventional wis- dom gives the "first impression" a foothold just because it was there first. Does this apply whether the first impression was direct experience or a communication impression?

To answer this question we must first reassert the difference between assimilation and integration. Subsequent impressions addressed to the same domain obviously confirm or detract from the concepts and constellations built around

the earlier impressions; that is every day assimilation, a dynamic which by definition accommodates subsequent impressions. Assimilation seeks to accommodate the interior knowledge domain to the outside world. My continued direct experience with sails and wind which results in a series of impressions, each directed to the object domain builds and changes the shape of the particular constellation which deals with that particular object. So too the string of subject impressions which result from a long relationship mold and shape the constellation in the subject domain. Here again the inside knowledge system assimilates and adapts itself to changes from the outside which are subsequent.

With integration, separate domains are juxtaposed. Presumably assimilation updates have occurred within each domain at different times to keep each cur- rent with the outside world, and now a purely internal confrontation of one interior domain with the other occurs. The domains may be consonant or dissonant, that is, one domain may confirm or contradict the other. We are less concerned with confirmation except where it is subsequently contradicted. Where there is contradiction, since the conflict is purely internal as between two knowledge sys- tems, the assimilation order in each domain weighs in.

Both common sense and common law take into account the importance of the assimilation order where the different kinds of knowledge must be integrated. In showing witnesses mug shots of criminals, U.S. Courts have held that the detective may not precede the viewing of the photographs with any expression of his own. (US vs. Stovall). The courts have reasoned that the impression formed of the detective's comments, coming in first, might suggest and otherwise contaminate the witnesses' purely visual recognition. In

recognizing (or not recognizing) the suspect, the witness is integrating a direct impression from the object domain, where he/she made direct observation at the scene of the crime with a subsequently assimilated impression from the photographic medium more recently taken into the pseudo subject domain. Then there are the impressions from the live authority figure in the person of the detective in the subject domain which the Court has declared would have undue influence in the integration mix. This is more than a legal maxim; it is a communication theory and a theory of mind deal- ing with the effects of integration.

There is by definition a rear domain (the term "domain" is meant to include sub- domain) in which the first impression is assimilated and then a subsequent domain where impressions of the same external event arrive and then possibly a third set of impressions in another domain. For instance the assimilation order in the law case described above was object domain and then subject domain and then pseudo subject subdomain. The Court said that it should have been object, pseudo subject and then subject. Newly assimilated impressions in the forward domain which must be integrated with affiliated impressions in the other two domains, may: confirm concepts in both the middle and rear domains; or confirm in the middle and contradict in the rear; or contradict in the middle and confirm in the rear; or contradict in both middle and rear. Returning to the witness-detective-photograph, the viewing of the photograph might have contradicted the original impression and confirmed what the detective said (that's what the Court was worried about); it might have confirmed the original impression and contradicted what the detective said; it might have confirmed both, or contradicted both. In each case the problem of

integrating the different domains presents a different set of influences, but in each case the assimilation order within the domains has an effect on the integration between the domains. It may be that the deciding factor in the integration is the fact that the live expression is much more authoritative and therefore a stronger assimilation than the observation or the media exposure, but if the weight of the impressions were more or less equal in each domain, would the last impression dominate because of its currency? Would the first impression dominate, because of its foothold? Or would the middle impression dominate because of its pivotal nature? And would this hold true in every case within the individual regardless of which domain came first? Would it hold true for groups of individuals?

To lay all this out in the form of a table of possibilities is by no means meant to suggest that the mind is somehow controlled by mathematical rules. Since I have no desire to make such a suggestion or burden these pages with formulae, I put such a table in a footnote for the mathematically curious.[16]

The table simply isolates 24 combinations of possible assimilation orders for each of the three domains as a backdrop against which to try out actual impressions. As in all human communication issues, nothing is so simple. Still the assimilation order will have some baseline effect in the integration process, and this sim- ply underscores the importance of domains in thinking about thought.

Disintegration and Mass Media

Applying the possible assimilation orders to mass media impressions we could: hear about something from mass media, then from a live subject and then be exposed to it directly, or be exposed to it directly and then hear about it from a live subject and then from the mass media, or hear about it from a live subject, then from mass media and then have a direct experience with it.

We could go on and lay out each of the 24 possible cases outlined in the foot note, but that can be done by any who are so inclined. I would rather use this time and space to focus on one scenario where the mass media exposure is neither preceded nor followed by any direct experience. That is more often the case with most of us and therefore it bears some in depth analysis. What happens in the object domain where there are no direct impressions?

We have said that a bogus constellation may be put in place as a spacer to off-set impressions in the opposing domain where there are no actual concepts or impressions. This has important ramification for the basic anxiety of the mass communication audience.

The bogus constellation would normally generate an urge to fill the gap with additional experience. But where bogus knowledge is so far flung, relevant direct experience may no longer be possible. This would have been much less the case prior to the arrival of mass media, so much so that I think we can safely say substantial changes have occurred in the human condition since the arrival of mass media, hence the pseudo subject subdomain in our metaphor.

With the staggering amount of information to which we are now exposed by mass media, the pseudo-subject impressions

and concepts come faster and faster from further and further away. Since they are less and less likely to find an appropriate jury of concepts in the object domain, and since commissioning direct experience from which such object concepts can be induced is not practical (in the time available, we can't go to the White House, Iraq, Somalia and Yugoslavia to find out for ourselves), the vacuum pulls at the 'drawbridge' to bring in some ready made concepts from which confirmation can be quickly and easily deduced. Naturally these concepts would have to come from subjects or other pseudo-subjects who presumably have direct experience. Since it is less likely that we find live subjects in our personal lives with experience of any kind in these far-flung events, we must settle for more indirect hearsay from the very pseudo-subjects we seek to confirm; we must accept pseudo-subjects confirming pseudo subjects.

The ever expanding volume of bogus constellations generated by mass media which cannot be filled with real experience results in a disintegration between the subject domain and the object domain. We talk more and more, about more and more things about which we know less and less. We have a greater need to share a movie or a news story on topics of which we have no direct knowledge. Communication between two subject domains neither of which has any objective experience tends to undermine confidence which is the buttress of each communication relationship. This affects quality not quantity. More and more mediate impressions assimilated into the pseudo-subject sub domain cannot look to any impressions from direct experience in the object domain for integration, and so they look eagerly through the subject domain to live communication for confirmation, which we know, on some

level, is unreliable. If I learn something from a "mediate" source, with only bogus concepts in the opposing domain, even where another live subject shares impressions with me, I am sitting on a one legged stool and must be held up by others just like me.

The disintegration just mentioned, of course, effects the entire dynamic: it reach- es back and affects proximation in that the pseudo subject subdomain cements itself into the front slot; it affects assimilation within each of the domains in that the normal testing for fit with other concepts becomes more haphazard. The over all effect of this disintegration has to do with the fact that contradiction and confirmation is replaced with deference and faith.

The linking of the current return to worship and revelatory consciousness with domain disintegration is not far off the mark. Self confirming religious expression which can only be accepted on faith is more acceptable in the disintegrated domain where it cannot be confirmed or contradicted. The editorial based on bogus knowledge, like the sermon, seldom generates particular impressions which can be taken apart and matched up with experience at the lowest level. The editorial like the sermon expects to find no experience in the opposing object domain and so is unconstrained. Revelatory religious preaching, like mass media must be venerated because it cannot be validated. The similarity between religious and mass media veneration has forged a link between form and content, the form being TV and the content being TV evangelism.

God and TV make apotheosis inevitable for inexperienced captive audiences. There has to be apotheosis, because if those playing God were seen as ordinary fools like ourselves, subject to confirmation, they could never be exalted. With

inter domain disintegration comes the regression to the dependent psyche of childhood which was entitled and expected to accept everything on faith.Though we seem to grow to independence and maturity the need for authoritative self confirming concepts remains in most of us. TV personalities and preachers fulfill this need. "Fulfill"is not the proper word since it results in no real satisfaction but rather the kind of consumption connected with addiction, which is why we often chose the easy answers, which in turn force more bogus spacer concepts in the object domain, exacerbate the need for more easy answers. Addiction is the only condition which could explain the doggedly persistent loyalty to the TV ministers, even after they are exposed as charlatans by TV news anchors. But who will weigh the TV news anchors?

Is this truly a new problem. Are there any new problems? It depends at which level we look. It is truly amazing how just about any issue can trace one side back to Plato and the other back to Aristotle. Surely the argument about the effects of something as modern as the integration of media expression should be an exception. And yet it would not be stretching their words much to say that Plato was against it and wished to establish censors to prevent it. (Republic 377 C; Laws 659); and Aristotle was for it in that passive non-involvement offered a purge of the spir- it which could never have been possible with real activity. (Poetics, Esthetics, Politics)

One of this generation's finer thinkers Mortimer Adler in Art and Prudence, (New York: Arno Press,1978) examines the sides of this issue in depth, beginning, of course, with Plato and Aristotle. He reasons well that mass media (movies particularly) should qualify as poetry in the sense in which the

term was used by both Plato and Aristotle. After more than six hundred pages of logical and historical analysis, he concludes that mass media, like the poetry extolled by Aristotle and scorned by Plato, is in fact communication and communication is the life blood of democracy. A brilliant defense of form without any mention of content. Had Adler seen "Terminator 2?" Did he ever watch Pee Wee Herman on TV? Surely he must have bumped into an occasional producer and had a close up look at the Hollywood, Barnum and Bailey mentality which distracted the masses of 1990's for no other reason than profit. How many of the TV generation could read his book? He forgave mass media for its lack of sophistication and found other intel- lectuals (John Dewey and T.S. Elliot, to name a few) to agree that kitsch for the masses was the salt for their daily hard earned bread. But would he say that any amount of salt was good? Even salt can reach toxic proportions!

I cannot, with him, justify our present media culture by analogy to Elizabethan England. Shakespeare might have been purging the spirit, but we are trapping it, separating it from the body, so that the body can be force fed, without interference. One must connect the content to the intent of the mass media purveyors for a look at the whole picture. That may mean lots of answers instead of one, and that may be closer to the truth, but power and control is the mad dream of most media moguls which becomes the bad dream of most media slaves.

Powered by the right intent communication can be the liberating influence of the spirit in the free society, but with the iron crosses and iron curtains scarcely tarnished, we know all too well that communication can just as easily be the shackles of that very spirit. I would say to Adler and to

Plato and Aristotle, it's not the "poetry"; it's the poem itself that bears our scrutiny. Before and after mass media, immediate communication too has been and will be used to enslave as often as to liberate. It depends on the content which depends upon the intent. The mass media intent now puts money before people without a moment's hesitation.

With mass media, the finer net is broader cast, so fine and so broad, the captivity is hardly noticeable but nonetheless binding and blinding at the same time.

The less than full lives itch incessantly in the area of the object domain. A large portion of the world economy in modern times is built on that itch of disintegration. American, Japanese and European mass media cultures and the underlying consumerism which reshapes the planet for tourism and entertainment are all built on that itch.

Harnessed in the neckties of their dependency, the new information age stiffs fix their eyes on the freedom in the subway poster, dreaming that one day the senses will be free to form their own object impressions of the tantalizing pseudo-subject images. For some, the day will come when the object domain proximates to the fore to feel the sand, each foot for itself, but the shoes are shined and waiting, and the office chair is waiting, and all that will be left of those ten days is some post card impressions and the indenture of the credit card bill. For others, the theme park will further displace the object domain by surrounding it with make believe subjects.

Fortunately, "get a life" is not the only message of this medium; there are always some lives which yield to the mind's demand for positive integration with actively generated object concepts; they act; they have a life. Is there any other life?

There is another side to the argument presented above which rues the empty object domains of the mass media dupes. One of the aspirations of the so called "information age" is to provide even greater access to the knowledge of the culture which comes in mainly from pseudo-subjects to the pseudo-subject sub domain.

We have been pushing technology for greater and greater channel capacity for pseudo-subject expression, both to store it and to send it. That means we can be reached from further away faster with instantaneous new pseudo-subject expres- sion, and we never have to throw it away. We can compress and store all of it and have it on hand. In addition to less object experience and changes in the quality of subject experience, there is also a change in the quantity of subject experience, i.e.less of it. That means more pseudo-subject and less subject, and therefore less intimacy. Is that a bad thing, ipso facto? Certainly there are internationalists who would associate intimate subject relations with parochialism which would be an impediment to world order. If we love and trust only those we know personally, that may mean we mistrust all others; that enables bellicose localism. Ireland, Yugoslavia and Somalia, notwithstanding, it may be that the pseudo-subject impressions enable a sense of belonging to a larger family – MacLuhen's global village.

Another side effect of the impersonal network of minds is the reduction of dependency relationships and prescriptive communication from narrow specialists. We can afford a more general knowledge if the responsive computer next to us can provide "just-in-time learning" on whatever details we need. For example real live lawyers would become less indispensable if we could ask a computer about what is legal. Of course, the ultimate information must come from

someone, and that someone may be wrong but it is easier to check when channels are open to so many others. Maintenance, for example, could become manageable if computers could guide us through our ever expanding realm of complex gadgets. Responsive computer systems could be tireless in developing new skills and knowledge dished up for the slowest learners. All of this is by way of consolation for the empty object domain across the way.

One might be justified in wondering if not worrying about whether the object domain will become an evolutionary vestige like the hind brain? Can it be disintegrated completely, forever? And if it did, would we be another species? Can we become hot house plants which can actually grow in the artificial glow of a passive media show, a new kind of photosynthesis? I originally started the next ques- tion with the word "Can" which made the final question consistent with those which preceded it, and then changed it to "Will," not solely for alliteration sake but for philosophical accuracy. The final question is: [Can] Will the will wilt?

THE GHOSTLY TOWER CHAPEL
Consciousness, will, imagination, recall

The undeniable spirit in each of us always thinks before we speak or act, i.e. imagines, decides, chooses. We may not think enough at times and too much at others, but some interior non mechanical process always precedes word or deed. It might be in the fraction of a second before a practiced golf swing or the months before a major life change. Even in the fleeting thought behind a smile or curse, we can and do rehearse every scene in the backstage of shadows and whispers. The rehearsals are acts of will as well as the performances. The predominances of will in intentional beings explains the contamination of memory with each recall. From the tower we see what lies outside the castle and that colors how we feel about what is in the castle. Memory influences will less than will influences memory. Each time a memory is summoned by the will from backstage and put back, it is never the same, since it has been shaped by the handling.

It is difficult to speak of the will since there is no object or subject that is called to mind; there is nothing so small or so large; nothing as slow or as fast in the material universe. The denizen/s of this "tower" are neither singular nor plural. Regardless of how many material sheets we seem to see there is only ghost or ghosts or both or neither. While the 'tower' is

subject to pressures resulting from the dynamics of either castle or 'drawbridge', it, nevertheless has ultimate control over both.

The metaphor here seems to contradict itself. There are volitional energies under the control of the ghost in the tower which seem to be unconstrained and free and yet there is the mechanical process of storage dynamics and retrieval routines. Which is controlling, the mechanical or the ghostly?

We have already seen that the philosophies of mind (whether or not they are called psychologies or cognitive sciences) which emulate the natural sciences are out of place anywhere on the inside and especially here in the tower since they assume a dead machine which follows rules. Modern philosophers since Nietzsche such as Dilthey, Weber, Scheler, Jaspers and Sartre[18] have all insisted on another kind of understanding, other than scientific explication, one which does not imply a set of mechanical rules. Mechanical rules ineluctably imply a rule giver. The rule giver is a problem because it is someone who only makes himself known through some human whom we cannot question, since the message is not his. The ghost is unpredictable, indefinable and runs the same risk as the rule giver, except that we can see the ghost's effects in each person clearly and can charge the person with the acts of the ghost. Of course that last statement is true only if there are rules against which the ghost operates as background.

Once again this leaves us with an enigma and the reader by now can guess that the next sentence will urge that we leave the enigma undisturbed. Like a magic trick, the interplay of the ghost and the machine must continue to mystify if they are to work their magic. The resurrection of dead subjects, clear pictures of lost places from childhood, sounds and smells of

long gone objects are subject to some rules, but rules which operate within the total freedom to focus on them or not, to think or not, to be or not to be.

The tower is the haunt of the will, the ghost who is not seen but sees all. The lantern beam of the ghost is awareness and can be turned to highlight any part of the castle. The lantern beam can appear anywhere in the furthest recesses or window or at the very tip of the drawbridge. The beam may find an incoming impression or an outgoing expression or the recall of a concept, or single impression. The recalled thought may enter awareness pursuant to a voluntary request or it may tumble into the lantern beam accidentally, uncalled for. The beam may be turned onto dreams or fantasies, whole domains, constellations, concepts and/or single impressions. All that is in the beam is subject to the scrutiny of present aware- ness. All that is in the dark awaits awareness, and in the meantime continues to exist and process.

Should the focus of the beam widen to include all of mind, naturally the light would be spread thin and become dim: awareness would be without detailed resolution. Likewise should the focus be narrowed to a single impression, the light of the beam is at its strongest and awareness becomes myopic: intensive rather than extensive. As far as we know the lantern can turn and move anywhere in the cas- tle and its beam can focus broadly or narrowly, which is not to say that it will. That is up to the individual will which may chose never to move or re-focus the lantern.

Voluntary Retrieval

Voluntary retrieval may be conscious or unconscious. The later would involve such things as hypnotic and psychoanalytic recall; the former – conscious voluntary retrieval – would involve every day remembering.

With the lantern beam on and under control, the 'tower' is open for business and pushes rhyme to yield to reason: rules gleaned from the outside are taken into account. Practical considerations guide the 'tower' management and constrain but do not determine.

During any second of waking consciousness, voluntary retrieval may be triggered by the will responding to some external circumstance. Access to the back log of impressions is limited only by the ghost's maneuverability and focusing skills.

All retrieval, all 'recall', is necessarily past tense, but the voluntary variety, by definition is linked to and reshaped by the "present tension" in the window or 'draw- bridge'. Voluntary retrieval is triggered directly by the will. At some precise moment the will asks for the recall of some concept or impression. "What is Ed's wife's name?" "What is mother's zip code?" "What is the capital of Alabama?" Phone numbers, protocol, directions, operations, lines from a script, notes from a score, all must be recalled from some earlier time when they were stored for just this purpose.

We saw earlier that what is in the constellation depends on the nature of the original transaction which generated the impressions, and the activity surrounding the percept catch. The more interaction with the subject or object at the time of

the transaction, the more sense data will translate into impression detail. Detailed impressions and/or more general concepts are copied out of the constellation swirl to form a kind of packaged report which frames itself in the beam of awareness.

The report may contain fewer details than are contained in the constellation, but the report cannot contain more than came in the first place. If there are fewer details in the constellation because of a lesser degree of interaction at the time of the transaction, then there are fewer details available to the voluntary recall report.

It follows that in the voluntary retrieval of pseudo-subject impressions, because of the passive nature of traditional media, reports are skimpier. This means fewer detailed impressions are included in the report. Often the will tries to make up for this lack of interaction by repeating the transaction over and over again. Reading is passive and we know that one reading will not make for much remembering, so we might re-read many times in order to insure the detailed recall we need. Television is even more passive and advertisers realize that one passive exposure to an ad will not make much of an impression and so the ad is repeated over and over and over again. Still it may not be as memorable as what some one said to you in a live conversation in which you participated.

Constellations which are closer at hand by virtue of proximation will be easier to reach by voluntary retrieval, but relatively speaking the retrieval will be less fruit- ful from the pseudo-subject sub domain, than from other domains, all other things being equal.

We have already pointed out that no subject, pseudo-subject or object concept is voluntarily recalled as such.

Instead the beam follows a path back to a domain and then to a constellation, through the nose cone core concept. More or less efficiently, from the core, with the help of the constellation directory a tracing of the path is included in the report. The path tracing facilitates subsequent retrieval should that be necessary.

The timelessness of consciousness does not mean that we are ignorant of time. We are aware of time on the inside just not bound by it. In fact, everything is time stamped by the percept before it goes into the castle. The order in which the percept catch is taken in can bear upon voluntary retrieval. If no other criterion presents itself, the will may back track on the path of temporal order until it reach- es the particular concept or impression.The temporal path has nothing to do with the topical path, i.e. how the impression is classified, subject or object, or pseudo subject and then by constellation, etc.. The temporal search is able to follow the footprints of assimilation according to their vintage until it comes to the right constellation, where ever that may be.

Just as with a library where it is usually not practical to bypass the card catalogue search and begin by reading the first page of the first book on the first shelf, the temporal method of voluntary retrieval is usually fruitless where much time has elapsed between the original impression and the recall. Nevertheless, when the will has lost the topical key and is unable to take advantage of the organization of consciousness, it does not throw up its hands; it must do something, no mat- ter how fruitless. On occasion the temporal path does find its mark where very little time has elapsed between the original impression and the recall. Crawling back through the entire temporal order of impressions of fairly recent vintage might work where there

are not too many. For instance back tracking over every second of the few minutes which passed since I turned off the ignition and walked into the house might be practical, sifting through every single impression back up to the time when I put the keys down and thereby remember where I put them.

Notice where has entered the equation. The temporal path inevitably involves the spatial. The body is always someplace at any particular time. Although the spatial path is often the path of "involuntary retrieval" it may become a tool of "voluntary retrieval." Not only with particular impressions of subjects and objects, but even in the willful retrieval of abstract concepts, it can help to remind one's self where one was located when the impression occurred or when the concept was induced or deduced. Likewise finding one's self in that particular place can bring back, involuntarily, concepts or impressions which originally occurred in that space.

Just as with time, space is, according to Kant, an 'a priori' concept which is indispensable to perception and therefore conception. Following Kant, we have given all concepts a return address as well as a time stamp. On some level we keep track of the place and time in which the percept catch occurred, no matter to which domain it was routed.

In terms of our integration dynamic, the spatial path integrates the place range of the object domain with all of the impressions which occurred in that place but may have been filed elsewhere. The where can refer to a part of a room, or a part of the world, and it is always linked with a time.

Prior to the discovery of moveable type when copying text was more arduous, the few texts available would have to be stored in the mind and recalled accurately on command. This was done by associating words and concepts with

places. The where technique developed for this voluntary retrieval made poetry, law, medicine, and religion possible. Intellectuals had to acquire this skill which dates back to Simonedes of Ceos (556-468 B.C.) and includes such notables as Seneca (55 BC - AD 37) and other rhetoricians who dazzled their students by recalling long strings of seemingly disconnected ideas, even reciting Virgil backwards. The art of memory continued to be the key to transmitting the ideas of the civilization up through the middle ages and beyond. Cicero, Plutarch, Thomas Aquinas and an assortment of kings and scholars all were remarkable in their voluntary retrieval skills. Giordano Bruno (1548-1600) in his Shadows of Ideas, circa (1582) sought to demystify the skill and suggest some scientific explanations. Still his technique involved the association of the intangible idea with a tangible place; only this time the place was not so tangible, but was orderly. Bruno used the wheel of the Zodiac as a mnemonic device.[19]

The precise retrieval of text by means of imaginary location is a lost art, especially now when we can carry half a million pages around on a 5 inch disc(CDROM) and can find a particular word in that text in seconds. Still we must recall at the will's command names and other words.

The bulk of voluntary retrieval occurs along the topical path and involves some topical key, like the key word in the library card catalogue. It occurs to me that I should season the sauce to make it more Italian. The word oregano comes to mind. Oregano is a spice and even in someone else's kitchen I can figure out where to look for it.The word oregano leads me to spice, and then on to spice rack; screw driver to tool, and so forth. Or I may wish to remind myself of the song on the radio. Song leads me to maybe popular song,

then maybe to the era, or the per- former and finally the title. All done with words, used as keys.

Some would say that the syllable of the word is actually the key to one kind of voluntary retrieval.The fact that we often have to process similar sounding words with similar predominant syllables before we come to the right one, provides some evidence of how things are organized in some minds down to the very parts of words: phonemes, particles of sounds. Pictures of my last trip to Oregon may flash accidentally in my mind on the way to finding the oregano. All they have in common lies in the sound of the word. Even where the retrieval involves extensive imagery and visualization, the pictures come only after a taxonomy of verbal "concept" labels is processed. Some who watch their own minds work deny the verbal step. I can only say that I must think verbally at the concept level. I can, on purpose, right now, retrieve a visual report of a piece of furniture in my aunts flat where I played when I was six (half a century ago), but first, almost imperceptibly I must sort through some concepts: which aunt, looking for a name; once, she is named, I can see her face and hear her words, all in the silent vacuum of the ghost's sallow lantern beam. I can do the same for anyone I know by name. Proper name is a word for subjects by which we assimilate and organize our impressions of them, if we don't know their name we apply descriptive terms, still in words.

Involuntary Retrieval

Like voluntary retrieval, involuntary retrieval may be conscious or unconscious. Conscious involuntary retrieval refers to accidental catches while looking for something else. Where an external subject or object "reminds" us of someone, something or some place, the assimilating new impression has the beam follow- ing it and it accidentally finds the associated memory in the constellation. Just as if we are retrieving socks from where they belong and in opening the drawer we see some old memento in the sock drawer. Reaching for the socks is a conscious act of retrieval but what we found was not willed and therefore is involuntary conscious retrieval.

Involuntary unconscious retrieval refers to dreams.

When the ghost sleeps and the lantern is out of its control, even in the most mundane 'tower', reason yields to rhyme. The imaginative side of the drawing board is in full swing.

While the body sleeps, and the busy input and output processes of the 'draw- bridge' are retired, the constellations back in the castle continue to whirl spitting out misfit impressions and spinning off copies of amalgamated concepts, all of which combine to produce mysterious fictional catches, subjects and objects which are not actually addressing the senses or the percept, and therefore are not bound by the external physics which reflects itself into the 'drawbridge'.

Since these nonexistent subjects and objects do make impressions, one might wonder whether these fantastic experiences are assimilated along with the real ones. In most normal minds there is a standing distinction between real and

fan- tastic experiences; which is not to say that fantastic experiences are not felt at all. Those sketches from the fantastical side of the drawing board, make unusual connections which test the harmony of the concepts within the constellations and the constellations within the domains. These phantasms reverberate rather than assimilate for the shortest time in the appropriate constellations of the appropriate domains, but having no reinforcement from the outside, the effect disappears as the day wears on.

In many cases we are not even aware of the results of the reverberation; we may simply be comforted by the pleasant fit of the fantastic experience, or, more like- ly, discomfited by it. The details of the fantastic experience may reoccur, reproduced by the same internal agitation, but they are virtually impossible to recall, until they are selected to become expression. Whether or not we actually speak about them or act on them, we must frame them with words or images as though they were about to become output; at that point they are re assimilated, this time with the lights on, and now they can be accessed by voluntary retrieval. Somehow all of this "blind man's bluff," 'what if ' game is incorporated into the will's fore- casting and planning.

To the extent that fantasies are not consciously dealt with, they will force their way into the beam of awareness. Day dreams and the so called "Freudian slips" are classic examples of this bubbling over.

Involuntary retrieval ("recall") is generated by the more subtle fall out of the cogitation process. By that I mean those repercussions of 'assimilation', 'integration' and 'proximation' which are not felt directly, not taken up consciously at first for whatever reason and tumble into focus by accident.

Involuntary recall may be the result of random association of past impressions with present circumstances, "the present tension." Involuntary reports may be single flash impressions, day dreams or night dreams, whether conscious or unconscious, they are unplanned by the will. That is not to say the will has no control over them, but by definition certainly did not directly invite them.

Some things keep popping up in the beam of awareness ringing around like a bad penny, and we don't know why. If we stop and look at the constellations which have recently been voluntarily contacted and check the vintages, we might find a pattern.

Unexpected memories may be dragged in as an involuntary by-product of when and where's voluntary retrieval efforts in the sense that they were not sent for but happen to be attached by association to the voluntarily retrieved concept report. "Association" is the most inert, that is, the least dynamic form of conceptual connection. It is a single solid bond which provides a unidirectional access path from a host or primary impression to a trough or background impression. The trough impression never becomes a moving part of a concept as such, but is merely a bar- nacle on the hull of a particular concept. By contrast, the primary imbedded impressions are moving parts of the concepts and as such are subject to the effects of all the dynamics: assimilation, integration and proximation. Associated trough impressions just tag along for the ride. The fact that these trough impressions were conscious but involuntary when they came in means that they cannot suggest themselves to the voluntary retrieval tools of the will; they cannot be willed to come to mind except on the back of their host concept, which is another way of saying that we can be reminded of

these things but are not mindful of them. These uninvited background or trough impressions can also come forward when they are shaken loose from their host and wash up on their own in involuntary retrieval. Trough impressions can show up without their host concept in night dreams and day dreams.

While it appears to have nothing to do with the "present tension" (the here and now), the involuntary apparition, the dream, night or day, is triggered by a complex interplay of internal conditions- unsettling proximation- and external conditions. The calm after major interior storms caused by highly charged emotion- al events or unusual circumstances, such as the preparation of creative expression; major life changes and any other "shake up" in the castle will find a flotsam of detached trough impressions – "extrania."

This mysterious appearances can just as easily be called an unintentional association. An old friend, an old song, a brooding sky, a familiar place, or a tea cookie without, and/or a particular set or sequence of emotions inside can drag the contemporaneous extrania into the beam of awareness.

The tea cookie, a "madelaine" is alleged to have triggered the tidal wave of trough impressions and their crests which found their way to Proust's 'tower' and poured themselves into his classic multi volume novel, Remembrance of Things Past.

The obscure details dredged up by the fertile mind of the fiction writer are made up of these trough impressions which breath subjective life into crested pseudo- subjects.

We need not be asleep for this involuntary retrieval to occur, but we cannot be fully awake either, that is the will cannot be in the act of maneuvering and focusing the lantern. We may be walking down the street and internal conditions in

the 'draw- bridge' are lax enough so that castle pressure favors an outbound flow and then when we see this old Chevy in the outside world, teen age memories come rush- ing in unasked for, enough to fill the back seat with bitter sweet emotion. The images that come to mind when we hear an old familiar song are not voluntary retrieval; we have not asked to retrieve these memories, even though we may have asked for the song.

Involuntary retrieval triggered by reminders in the outside world provides a constant connection between the inside past and the outside present tension, whether we like it or not, the match of inside and outside if forced on us.

Another kind of involuntary retrieval has to do with a more general feeling in the 'drawbridge' which finds a match back in the castle. Some particular set of exter- nal circumstances creates an overarching gestalt (or pattern of impressions) of which we may be unaware; in other words, we are aware of the parts but not the sum. In the store of memory there may be another period where that same pat- tern or sum of impressions came in and suddenly the contemporaneous extrania attached to that earlier constellation's concepts find their way into the beam. For instance, all the particular impressions created while packing for a picnic in the mountains sum up to a certain unconscious feeling, or expectation on the more abstract level "outing" which matches up to a particular trip to the beach we once took, suddenly a face we haven't thought of for years comes clearly to mind, or we start humming a long forgotten tune seemingly "out of no where." Unless we know enough to rise to the more abstract level "outing" there appears to be no connection between the involuntary retrieval and the current events.

In most minds uninvited impressions continually drop in and out. The intrusion of these involuntary retrievals, along with the amazing detail which can be dropped in our laps from so long ago and so far away, makes us wonder whether anything, no matter how seemingly insignificant, is ever erased.

We have given the name "day dreams" to the longer periods of involuntary retrieval. Involuntary day dreams may become fantasies which then become expectations which may be consciously chosen by the will as models for future action. At that point, however, we have shifted out of involuntary retrieval, the conscious processes have taken over and we are hatching ideas and plans which involve the will and voluntary retrieval. Most involuntary retrievals do not find direct application to 'tower' plans.

Like night dreams, day dreams seem to be unordered side dishes; however, unlike night dreams, the lights are on in the 'tower', and the 'drawbridge' is open for busi- ness while we are day dreaming. Consciousness is functioning, while these images wander foreword and so they come as distractions to be disposed of; whereas, night dreams command our full focus and may not be disposed of or dealt with at all. In fact the next day's conscious awareness may find only a footprint, a redo- lent scent of the dream, and, as is often the case, may chose not to set out in search of the dream.

recall of dreams

With the 'drawbridge' closed for the day, and with the lights out in the 'tower', revealing scenarios may be staged where virtual development, secret fears and frustrations are given an even freer hand to make their own connections. We have

all experienced the brake of focus slipping so that the lantern swirls freely out of control. Impressions of objects and subjects which fall within its beam seem to slip from their orbits and cavort freely into all the "wrong" circles.

We have already said that dreams are not recalled at all by many. Those who do recall their dreams, may do so regularly on a voluntary basis or may have the recall triggered by something which occurs during waking consciousness or a scene from the dream which flashes again across our minds almost spontaneously. The recall of the dream is a recomposition of impressions which we do experience at the time of the dream. We can say that the dream occurred only after having convinced ourselves that it did with circumstantial evidence, such as the aftertaste, or some feedback of another subject who heard us cry out or watched some electronic device that suggested dream sleep. The point is that the forgotten dream is not forgotten forever. We know it is there by its effects and we know it is sub- ject to recall. Unlike the behaviorists, we need not reject all that is not currently in view. We know enough about our minds to know that the beam of current awareness is not the whole story.

In addition to the experience of the dream at the moment it occurs, the recall or retrieval of that dream must be a subsequent event, which comes in the form of either a voluntary or involuntary report. If it is an involuntary report of an involuntary report (an after taste, or nebulous feeling left by the dream) we cannot apply our rational processes to mitigate the effects; such an effect can pressure the will to output acts and expression which we come later to regret. Whereas if it is a voluntary report of the involuntary dream we can deal with it with the light on in the 'tower' and all the

logical powers of both domains handy: induction from the object domain and deduction from the subject domain.

Psychiatrists and Psychoanalysts agree that there can be tensions and other emotional residue from dreams which can be misdirected if they are not attended to. This un-deciphered dream residue can ruin a person's day, or month or life depending on how powerful the tension is and how repressed it becomes.

On the other hand there can be elevating residue from dreams. Prisoners in concentrations camps and others stuck in horrible circumstances report euphoric dreams the residue of which is sustaining for days, months or even years. Starving people experience satiety in their dreams, just as sexually deprived appetites expe- rience satisfaction.

While B.F. Skinner has called the unconscious dream channel the sewer of the unconscious, others have attached deep significance to dreams. C.J. Jung for example and others see dreams as opening deeper layers of collective consciousness which connect individual minds, subterranean tunnels between castles. Philosophers have had any number of explanations of dreams. Artists claim to derive inspiration from their dreams as though they were visitations from the muses. Jaynes claims that there were periods of cranial development where dreams were thought to be visitations from the gods.[20]

A more functional theory would have dreams testing the integrity of the entire system. "What if " scenarios or deep seated fears manifest themselves as fantastic events and exercise the system's responses.

One school of thought seeks to install a watchman in the dark tower. This "lucid dreaming" (appendix) as it is called

contemplates a state of partial waking (what James Joyce called hypnogogia) where the shadow of a will can at least make some choices. Raising one's hand in the dream to look at it, invokes this level of lucid- ity. Lucid dreamers claim extra vitality, self understanding, equanimity and power which comes from the development of this skill, but then so do dieters, joggers and born again Christians.

Whether we dream lucidly, whether we are haunted by repression, whether we can at will remember anything or hardly anything, retrieval is the rear view mirror that keeps us going forward. Without a background there could be no foreground. It is the retrieved copies of concepts with imbedded footnotes to detailed impressions which are the fabric of all future plans, tried on for size by the imagination.

IMAGINATION

The 'tower' is also the space for the imagination, which would, of course, be power- less without some semi-autonomous connection to past experience. Every conception is based on voluntary and involuntary retrievals of concept reports, which are brought back to the 'tower' and then played out in fantasy. The fantasies are freely acted upon, or not, by the will and passed onto the 'drawbridge' to be executed.

There seem to be two sides to the drawing board in the 'tower', one side proposes and the other disposes. Imagination pressured by the needs of the individual concocts a wish list which is then most often pruned on the

practical side of the drawing board. Most often the practical side prevails; so much so that in more cases than we care to admit the imaginative side is eventually silenced. In such cases plans are no longer original. They are provided by others.

Yet before it is quelled, in its natural state, imagination knows no bounds in the inner 'tower'. It can cause strangers to walk and talk, kiss and kill; it can lift and turn planets or parts of an electron.The imagination can see things that could never hap- pen as well as it can see things that are about to happen in the next instant.

To some degree all of our inner 'tower's' have this extraordinary ability to preview output. The pre-views are more accurate with objects than with subjects but that doesn't keep the imagination from trying. After split seconds or months of incubation we may execute the act or expression envisioned in the plan. It never turns out exactly as we envisioned it, especially the unpredictable consequences in the minds of other subjects. Nevertheless consequences are predicted, however inaccurately.

In addition to the far reaching aspirations which shape lifestyle, the everyday work of this predictive ability simply gets the body through the day, deciding in a wink how wide to open the door for self and/or companion, how far back to reach for the chair, or sensing how it feels to be kept waiting as one rushes to be on time. The general sensitivity and sympathy for fellow humans which makes us cooperative in small group activities and civilized in larger political activities is the product of imagination's forecasting ability.

Even in the brief look before the leap, the imagination, calling on the prime object constellation, can see the body flying through the air with just enough lift to land on the other side of the puddle. Just as in the brief instant before the

delivery of a critical line, it can imagine the response in time to provide just the right tone and timing.

The same imagination is involved in the extended comprehension of mediate expression; it can walk through seconds or years of complex activities in the life of a fictional character which may change our plans as much as any real experience.

A natural concomitant of acknowledging the boundlessness of freedom of the will is the mature realization that it is never too late to change a plan and never too early to make one.

As far as we know, these 'fancy' foresights and free hand sketches of the future are unique to our species. Some would argue that other animals plan ahead freely and are capable of intentional deception, vice and virtue. Scholars have shown that birds can feign a broken wing, offering themselves as easy prey to lure a cat from the vulnerable nest of chicks. Wolves apparently are capable of similar behavior. Whether this should be classified as evidence of intent or merely complex instinctual patterns has raised a furor of argument which is not relevant here; since we are concerned here only with human minds which clearly do fantasize and plan good and bad behavior and expression which contributes substantially to the work and whirl of human consciousness.

We have also seen that the whirl and the flow are subject to a diaphragmatic pres- sure balance at the junction of the 'tower'. When intake 'drawbridge' activity is high, the pressure favors the inbound flow of impressions; when the castle energy is relatively high the pressure favors the reverse outbound flow, but we must keep in mind, these are simply pressures which the will may chose to ignore.

evaluation

Guilt, that emotion which is unique to willful beings, suggests itself in the planning stage, but attaches only after the act or expression is realized. It then becomes a nagging plan of its own in the dark 'tower'. Guilt notwithstanding, every act and expression is premeditated. The premeditation may be unannounced or excused, but it is there, should we focus the beam on the tower itself. There is always a wish list, hidden in some not too remote pocket. The wish list caused the imagined concepts to take to the stage, taking the roll of the subjects and objects. All this hypothetical drama pressures the will but does not move it without some evaluation of the motive.

Whatever the pressure behind the plan, the imagination foresees the effects and the will evaluates them in terms of the larger plans and intentions of the individual as a part of some group. This implies gregariousness as an indigenous feature of consciousness which is, after all, consistent with our communication theory.

On some level in some indefinable interval, the will decides whether the project- ed effect of the planned act separates or links the fate of the individual to the fate of others. In other words, there is a range of priorities and values: from immediate gratification of the one to the long term satisfaction of the one in the context of the many. Evaluation is an awareness of motive.

As to its genesis, once again we shall side step the nature nurture argument and play both sides of the fence. It is enough for us to say that the evaluation/motivation dynamic is present in every human consciousness; it initiates us into the community of communicators; it is the sine qua non of civilization: in Kant's terms, the "categorical imperative."

It is our position that the freedom of the whole is not determined by rules cover- ing the operation of parts; this must be acceptable even if it makes the explanation incomplete. The route of the bus driver may be utterly predictable 999 times out of a thousand, but there is always the capacity to leave the predictable route. Exactly when and how that departure will occur is not predictable and therefore can never be completely controlled by the laws of science, physical or social.

It is a short step from there to the position that all output is the result of some freely chosen plan however, well thought out or impulsive.The plan may appear to be dictated by others but it must be passed upon by the will, freely, before it is executed.

In addition to providing a space for the will, the 'tower' is also the diaphragm of cogitation whose vacuum pressure controls the 'drawbridge's breathing in of impressions and the breathing out of expression. It mediates the push and pull of external circumstance and internal response, as well as that of internal circumstance and external response.

The first physical movement which brings the output beyond the 'tower' and beyond the 'drawbridge', manifests the internal skill but does not contain it.

Skills- micro wills

Whether we are developing propensities or removing blocks or both, it is the "doing" metaphor and not the "being" metaphor that accounts for skills, even if the doing seems to be more difficult for some than others.

If we admit that all skills must involve intentional energies, then we admit that we are all nothing to begin with where skills are concerned, and therefore equal in that regard. Every plot starts out barren. It follows, further that all skills are unnatural additions, which involve some counter instinctual exercise to hone down some concepts into durable conceptoids which can fit into the tiny sub- knowledge at the narrow 'drawbridge' of the cone of consciousness.

Why then do some accept the challenge of development while others do not? Because they choose to? And why do some choose to? The question 'why do some choose' falls in on itself; it erases the notion of choice. Choice cannot be predetermined if it is to be the well spring of the ineluctable flow of psychic energy. Choice and action are two sides of the same coin.

This is the kind of metaphor which succeeds because it results in action; it is proactive. Those metaphors which fail to result in any action can be said to be reactive: "the raw deal"; "God has not chosen me"; " I have no talent"; "there is no water under this plot." Whether or not it is true, the adoption of the reactive view leads to inaction: "there is nothing to do." Of course, that is not true. If it were true, then those who embrace inaction would be at peace and they are not. They are restless, miserable reactors who would destroy life overtly or destroy consciousness inversely by some chemical or sensory distraction. They are the zombies in our

midst which existential bad faith has created. God helps those who help themselves, or you could say God will not help the helpless.

Where do we begin to dig? Anywhere is the answer. It's the digging not the dirt which creates the skill. The hole is simply a monument to the digging, the exercise, which is the skill, is the courage to reach beyond. The feeling of riding a two wheeler is quite different before and after the first time. Once the counter instinctual skill of leaning the wrong way is experienced the instinct is offset, changed by courage, by will. We can do something we could not do before and therefore we are different. It took courage to leave where we were and leap into a new unknown condition which we only know about from others. The more we leap the more courageous we become.

The so called "math block "or any other so called "skill block" may well be part of the basic inhibition or fear of altering consciousness which on another level is the glue which holds consciousness together, and yet we must come unglued if we are ever to change anything inside.

Whether for better or worse alterations of consciousness appear to have dire consequences when viewed prospectively, which disappear when viewed retrospectively.

On yet another level the stasis and fear of change comes from the need for acceptance, which is the underside of the affinity index at the core of the prime subject constellation. For whatever reason we connect our present acceptance level (a fiction in the minds of other subjects) with our present inventory of skills. The fear is that should we change the inventory, we will "lose" some of this acceptance. "Lose" should be read as "change."

This fear is often referred to as fear of success. It is not wholly irrational. The acquisition of each new skill does change the configuration of individual consciousness and therefore its syzygy in the network of minds. It changes the prospects for all expression and therefore all relationships. Success will be a new condition and therefore a different condition. The price of the new status haunts us only in the sense that we confuse status and stasis.There is nothing static where consciousness is concerned, and there is no fixed status in the network of relationships. Commitments change slightly every hour; feelings are colored by each transaction. Each transaction is willed on each end. Every mind is moving all the time. Every relationship is moving all the time.

The idea that we must work on relationships with communication partners is haunted by the implication that the basic ingredients of self need work to become acceptable, to become communicable. The tension between the realization that change is demanded by communication and the implication of status insufficiency creates a backwash inferiority complex which in the best minds becomes a paradox. Accepting the paradox releases its energy to the will. "You're never good enough" is just another way of saying "you're always getting better."

Focusing on the first leg of the paradox is crippling. The feeling that some level of skill might represent the entire mind in other minds is shattering. The prime subject constellation cannot stand for that; it drops its own pressure to deep lows, sucking at and skewing all the skills in the 'drawbridge'. Very little can come in or out. It has the same effect either way: a balk, a shut down, a block. Mind refus- es from the deepest level of its infinity to be summed up finitely in another mind,

yet it needs the other mind's subtotal to balance its own books. The network of minds which invites the skill at the same time inhibits it.

Each of us more or less embraces that paradox and each of us comes out at a differ- ent point where skills and blocks are concerned, which has to do with our individual choices. Realizing that there is no freezing the whirl of communication, presents us with a dizzy hope wherein we can accept and guide the changes in ourselves and accept the fact that not only are there differences from one person to another; there are also dramatic differences in any single person from one time to another.

Feedback is unreliable and the self image which depends on it has a very narrow balance point, which is extremely hard to hold in the best of times; for the rest of times, we're gliding up or sliding down. Up or down the mature 'tower' knows not to trust the prime subject constellation completely. We are never quite content with the image the other holds of us, but sometimes it is the only grip we have and so we hold on, and then another day dawns and the connection is effortless, the feedback delicious; the messages we intend seem to be received.

"Intent," in our terms, is motive applied to a particular output or behavior; as such it is taken up again in the section on output and expression. I raise it here as a stepping stone to the evaluation dynamic which is a function of the tower.

Intent in verbal expression may not be as obvious to others as it is in overt acts, nevertheless, it does underlie in all instances. I speak or write or gesture because of an idea I have of what I want to communicate, but there is always

implicit in every statement, in varying degrees to be sure, why I am communicating, for whose benefit.

If communication is truly reciprocal, based on mutual concern, it has a more sub- tle energy which makes it acceptable. If it is self-serving, it is hard driving, pushy or manipulative which makes it resistible. (Manipulative is a kind of pushy which is disguised as "reciprocal" or "concerned" expression.) Intent does not pertain to the form or content of the output, and so, in a sense, it must be behind all forms and all content. It is a drop shadow which lends dimension to output so that it may be seen as deep or shallow.

Intent may not be isolated in advance by the communication partners; it is sensed, rather as the after glow of sharing or the chill of shoving. Shoving has to do with priorities; sharing with values.

By priorities I mean intent or plans which are shaped by the survival needs of the organism. To achieve one priority is to generate another. On some level we know that the human race is never won. Yet the needs of the body continue to demand attention and instantly become priorities which become plans in the 'tower' which become action or expression out of the 'drawbridge' which meets the need only to have it re-emerge.

The survival needs occur on many levels: it may be that a job promotion or other prestige has as its end some security and the desire to make oneself attractive for breeding purposes, or simply to dominate others.. There are always new obstacles to surmount, new struggles, new priorities, and in the end, the same old result: the body and its needs do not survive. Viewed from the point of view of survival, life is a waste of time.

Values, by definition, are less subject to circumstantial change than priorities which are by definition shorter term needs. And yet values are not in themselves more influential than priorities. In fact, except in rare cases, priorities will win out when they are in conflict with values.

Still values provide the haunting imprimatur on all plans hatched in the 'tower'. Even when prescriptive communication reconditions the will, as in military brainwashing, still on some level the evaluation goes on and must at least be actively repressed, but cannot be ignored.

Awareness of these 'tower' processes whereby intent is imbedded in content is much more elusive than those of the 'drawbridge' where content is fitted to form. But like the tiny rapid processors of the 'drawbridge' they are not beyond our awareness. We often find ourselves discussing them, as we are right now.

EXPRESSION
The Drawbridge

Output is the final fallout of an outbound flow from the castle to the 'tower' where reports and reflections of concepts are rejected or redacted and incubated by the enigmatic intentional energies and eventually hatched into plans and sent on to the "frontierior." There in the 'drawbridge', facilitated by routines of smaller unnoticed processors, specific intent is crystallized and the required parts of the body, which are in the outside world, are commandeered. These body parts express the intended content which is contained, constrained and delivered by the chosen form. Communication output, then, involves Intent, Content and Form.

There must have been a time when making and sending, or call it production and delivery, were more inseparable. Before media, when all forms were "immediate," the production of the expression was in effect its instantaneous delivery. To produce was to deliver. There were only sounds and visible gestures including physical contact. To express was to impress; there was no separation.

With the advent of the ability to store expression, thereby cheating time; and the technology to extend it instantaneously, thereby cheating space, we entered the "mediate" epoch of our communication existence. With any

media a single expression can reach more people in space and time, more than without media, ('immedia). Media has not only the capacity but also the compulsion to cast itself as broadly as possible, to "broadcast." Without willful control this compulsion lead naturally to mass media. Assuming that the psychic, waking energy for intake is finite, it follows that the more media, the less room for locally generated expression. In fact, for reasons described earlier, it is easier for expression to be imported from another time and space. This means that there are fewer overall sources for expression, and since more people must be reached with the same expression pool, there must be more homogenization of expression. In other words: to cast broadly is to cast thinly.

In the post media – PM– epoch, expression could be made and then delivered to a different time and/or place. This non instantaneity necessitated new levels of sensory coding. The very first symbol carved on a tree demanded a new compartment in the present mind for decompression and interpretation of stored code, which code had to be carried around for as long as the symbol would last on the tree. If the symbol were to last past a lifetime the code too would have to last and be passed on. Language itself was an aural code, and the 'drawbridge' had to have routines for making language long before visual codes and forms were developed for storing and sending it. The visual codes for written language were sufficient for more than half of the millennium.

For whatever reason media's compulsion to expand reached its fever pitch in the twentieth century. On the inside this necessitated more and more psychic space dedicated to more and more decoding apparatus: still images, mathematics symbols, moving images, etc.. And since a code was in place we might as well have some more expression to

which it could be applied. The new expression natural- ly pushed at the code for expansion, and then the expanded code invited more expression, and so the forms grew like Topsy.

The work of fitting form to content became more and more complex, and more and more people became involved in the task. So much so that futurists predict that in the latter stages of the information age, nearly all would be employed in information related industry. More expertise in more codes was required to fit content to mediate forms, with a back wash effect on intent. The emphasis would be on production values and delivery systems, the making and the sending, rather than on content, on meaning. In other words there was a paradigm shift of focus from the nexus between intent and content to the nexus between content and form.

The gap between production and delivery left room for more preparation and mastery of codes for new forms, more production skills and techniques which would also have to reside in the 'drawbridge' and autonomically command those body parts involved in the external act of expression. While the body itself had less and less direct involvement in the Post Media epoch, it is still a sine qua non for expression: there has to be a body for there to be an expression no matter what the intervening media. As it was in the beginning, and will be in the end, the production step still involves external physical acts, some body parts, however slightly, must noticeably move on the outside, at the behest of the inside, in order for there to be expression. Pure thought transfer is still impractical, if not impossible.

What is it that body parts do in connection with expression? Before answering that question perhaps it would

be wise to have a list of those body parts which can be or have been involved in human expression.

In voice production, which results in aural delivery (i.e. addressed to the ear, hence the name "aural" from the Latin word for ear), the lungs and diaphragm produce an air pressure on the vocal chords; the mouth cavity and skull are resonating and projection chambers for the raw sound. The raw sound is then articulated by the tongue and the rest of the system in a joint, more or less coordinated, effort which produces various tones and frequencies of sound for verbal and non verbal aural expression.

Aural expression, however, is not the exclusive province of the vocal system. Communicative sounds can be produced by the hands and fingers and feet, still without tools. We can snap our fingers and clap our hands and tap or stamp our feet without using any other material and send to the ear.

Also without using any thing other than body parts we can communicate to the eye or the cutaneous sense of touch. We can make hand signals, facial expressions, and physically touch the communication partner in any number of ways, still without using anything other than body. Any of these body signals, except for physical contact, can then be extended or stored by any number of means for remote delivery. (Remote delivery of contact is considered in the sub-section on violence under Content, below.)

The use of body parts exclusively, call it primordial production, is important because it is a kind of core from which expression drifts further and further and back to which expression aspires more and more, the further it drifts.

By now the ear has been treated to sounds produced from every kind of material imaginable. Sound waves in the audible range have been beat out of, plucked out of, and blown out

of everything from dead animal parts to computer chips. Once a tool is put between the body parts and the ear of the beholder, the fulcrum of the sound moves out from the body and so the body parts themselves are no longer "making" the sound but "causing" the sound. This means blowing and fingering instead of singing and clapping. Now the control of the body must be extended through another level of indirection. The fingers must imagine not the sound that they themselves would make but rather the sound that they would cause on the instrument. Likewise blowing gets very refined, embouchures, and breath control and other coordinated skills bring the instrument closer to being a part of the body.

Fingers are key in visual as well as aural expression. Hands and fingers may "make" an image or "cause" one via camera triggers or key strokes on computers and type- writers. Fingers, and hands, give effect to the visual imagination in "making" or "causing" pictures or three dimensional objects. Whether the tool in the hand be a computer or paint brush, pen, camera, or a chisel, eventually a skill level is reached whereby the tool, with more or less slop, becomes an extension of the body which is under the direct control of the 'drawbridge'. With each new extension of the body there is more and more technique to be compressed in the 'draw-bridge'; more slop to be snubbed up between the intended expression and the actual content.

There are times when the entire body is used to express, as in dance, sports and drama, in which case there may be no tool as such but nonetheless skill is required: the body itself is vehicle for the will and skills of the expression routines.

In such cases nowadays the body or bodies are often the object of a secondary expression in the form of a picture- still

or dynamic or other commentary. In which case we have an expression of an expression.

The picture maker's expression(the picture) has as its object another subject and her body expression (the dancer). Here the two subjects are both capable of expression and they may vie for the role of primary expression. If the outer expression is Degas painting a static image of ballerinas, the painting upstages the ballerina. If a network cameraman is shooting the Bolshoi Ballet, the picture had better take a back seat to the ballerina or the audience will be too surprised. The form dictates the expectation and delivers the content each time to a unique point within the range of expectation. All of which more or less fulfills the intent which powered the expression in the first place.

To recapitulate, all impressions come from objects and subjects. Intentional messages from subjects become communication when they reach other subjects. All communication from other subjects is about objects and/or subjects.

In order for communication to be effective, it must be appropriate, interesting, and believable. All of which can only be managed by sensitively imagining the potential receivers.

The appropriateness has to do with the code which might be in place at the other end. The interest has to do with the circumstances of the receivers. The believability has to do with the intent of the sender.

Every communication whether it be a teenage phone conversation, the autobiography of a saint, or a made for TV movie is tagged with its underlying purport – who is saying this and why, and its report – what is being said. What is being said must be somewhat predictable.

If expression were completely unpredictable, communication would be impossible; likewise if expression were completely predictable communication would be unnecessary.

In information theory, Claude Shannon points out that it is the entropy, or randomness, or degree of unpredictability, which creates the need for the level of complexity in the expression. I never get to know my closest associate well enough to stop wondering, and that keeps us talking. I must keep in mind that the range of options is infinite; anything may be forthcoming, a kick or kiss, a sigh or a cry. No matter how long I've known her, she remains the product of free choices and she may choose to respond to a situation in an untoward way. I share memories with her. I know some of what is in her castle. I communicate with her on a reg- ular basis and I know about the biases which affect her impressions and the routines which affect her expression, but I can't know her will. I can't determine what she will do no matter how much I try, even if she were my prisoner. That vagary makes some humans resort to the terrible order of power; while others learn to relish the freedom. She is not just the present mind in her 'drawbridge' and the stored thoughts in her castle. She is more. She is a tower.

Output, generally defined as behavior, is a basic function of all living things. Every living thing behaves, that is, responds to its exterior environment more or less actively. If we were to define activity as the ability to move around in and affect the environment, we could arrange all forms of life on an active-passive continuum: the sessile plants on the passive end and the motile animals on the active end. At the active end of the spectrum, the animals would range from simple amoebas to complex mammals, with humans at the end of the mammalian

range of the continuum (if only by our own definition). At the end of the range of creatures and at the end of that creature's sub-range of activity would be life's most complex possible output, and that would have to be human expression. This most complex output includes not only simple danger signals and mating calls but also messages which seek to reflect ambiguous inner thoughts and feelings.

As with all output, expression bridges the gap between inside and outside: its roots are on the inside and its routes are on the outside. Like any other output, each expression, once it is released, ripples through the exterior universe changing everything, however slightly.

Hatching expression necessarily involves the compression of concepts into tighter more solid signal which can fit across the drawbridge, and then be further com- pressed by the actual coding of communication forms. Once received the code is decompressed in the decoding and then further decompressed in the assimilation into impression and concept. (Curiously enough, the natural internal compression and decompression has spawned similar external procedures in electronic communication and storage technology, as though the outside construct were imitating the inside from whence it came.)

The compressing output processors of the 'drawbridge' themselves have compact, durable, facilitating micro-components, or conceptoids. The metaphorical circuit board or diaphane for these micro-elements, like the input processors, come in via genetic and/or cultural communication. As we saw earlier, output conceptoids contain the propensity for message coding, and then language, and then a particular language and particular vernacular and so on. These crystallized group influences

apply not only to verbal language, but to all amenities of all forms of communication.

Expression may take the form of spoken or written words, symbols, music, pictures, or it may involve any kind of gesture including physical contact. expression with or without physical contact is output and, as such, is in the physical world. After it is hardened and compressed by the autonomic processes in the 'drawbridge', and then directed by intent to bodily movement, it can be seen, heard and or felt by others. Just as with the inversion of physical sense data in the input mode, where the 'drawbridge' makes "nothing" out of something; here, in the out- put mode, the 'drawbridge' makes something out of "nothing." These are every day miracles.

Some psychological theories would put what we are calling 'autonomic' 'draw- bridge' processors or routines outside the scope of "consciousness" and therefore beyond intent. I must see all routines as part of consciousness in that conscious- ness is all of what we know of ourselves and not only that to which we attend at any given point. This introspective attention is merely a function of the will look- ing around at different parts of the whole system. Earlier we saw that the item which finds itself in the lantern beam should not be taken as the sole contents of the castle. To confuse awareness with consciousness is to confuse the light beam with all of inner space. While at one point we may not be aware of the autonomic conceptoids, we know that they are there waiting to be recognized. At any other point, at will, we can move the light and become aware of them. We can do this on our own initiative. This involves some magnification and refocusing, since everything is smaller and faster in the 'drawbridge', but we can be aware of the smallest, fastest moving components of the 'drawbridge' and therefore it is

with- in our consciousness. This is not a semantic dalliance; "unconscious" and "unaware" have different implications. "Unconscious" should mean unable to attend as opposed to "unaware" which implies the ability to attend but not the choice.

We are conscious of these high speed conceptoids; we can command them and do before after and also very narrowly during 'drawbridge' operations.

So close to the outside material world and so compacted by the extrusion into the 'drawbridge', it is hard to keep in mind that conceptoids are mind rather than matter. They are less fluid and more crystallized, requiring long years of shaping before one is smooth enough to employ in the 'drawbridge', but they are still part of consciousness and as such are subject to communication and pure acts of will whereby they can be refashioned (admittedly with some difficulty). Should they be temporarily displaced by disruptive input or output, or "back-shelfed" by extended inactivity, the will can restore the original order with normal effort. However, should a conceptoid need to be supplanted, in place, by a new one, a much greater intentional effort is required. Retiring or unlearning a verbal or musical routine, for example, seems to require twice the work as it did to acquire the skill, and then, while the old one is being retired, the new one must be learned.

Some of our output may not be intended for circulation, not directly. Instead it may be just shadow boxing, practicing, exercising. The exercise compacts by repeated access, a particular path of conceptoids. It brings forward extruded copies of larger concepts into the smaller 'drawbridge' and then hones and polishes them so that they may do the same to similarly directed expression. We choose to do this

consciously. All of which could be distinguish as practice not performance, but can we say practice and performance aren't connected?

Every skill we've ever learned teaches us that the complex output which it enables does not happen without consciousness, which includes conscientious practice.

Clearly there is control of the 'drawbridge's output elements just as there is control of the input catch; it's just that the obvious stream of not so obvious commands occurs so rapidly and so minutely as to go unnoticed much of the time, but not unnoticeable. It is true that the technique of an accomplished pianist is eclipsed by the musical expression, but the technique was put in place intention- ally and it is still there; witness the fact that aficionados can tune it in. Language skills, which are just as practiced and automatic, if they are not finely honed, actually stick out above and beyond the expression, they become more noticeable.

Intent

By our definition, there is no such thing as an unintended expression. In common parlance we say that an expression was "thoughtless," but we cannot mean that it was produced without thought. Some thought, however faulty, must be involved The bow must be stretched and released for the arrow to fly and that takes intention. Of course, it never lands exactly where we wish, and sometimes we miss by a mile, but the expression itself is always intended.

The intent is crucial, otherwise output would dissipate in the external noise. It stays together as signal through the

entropic noise because it is powered by intent and bound by code and convention, which ironically constrain while they contain. Expression is not intent; intent is internal and non-material; still intent pushes and pulses expression signal; signal is real; it is external and material. Once it is put out, it is "output," a material effect loosely representing non-material, internal concepts which are enhanced by the output.

"Expression sharpens impression." Where the interior is concerned, the more we give away, the more we have.

When I write or otherwise express my impressions, something about the potential sanctity of the communion will make my own internal impressions more lucid than they were, sitting unframed in my own mind.

On the other hand should the intent behind the expression be devious, the back wash will reinforce only false impressions, which might have otherwise been neutralized, which is how we come to believe in our own lies once they are told. But believing one's own lie is a non sequitur. It is meant as a figure of speech and not an excuse for dismissing the will. Deluded is not the same as helpless. On some level we know the difference and continually choose the false content.

Traditional theologians, and ethical philosophers separate human action from all other action in the universe on the basis of intent. Unlike any other animal or artificial intelligence or instincts or reflexes of other motile systems, all our plans and routines, no matter how automatic, are subject to volition.

Only subjects capable of intent can expect their expression to form the kind of impression which would find its way into the subject domain. Objects, the direct impressions of which are confined to the object domain, by definition, cannot express themselves; objects are without intent, passive and

indifferent about our impressions, and are simply there to be observed or not.They can be, and are top- ics of expression, but the expression itself must emanate from an intentional being, a subject. If we admit that there is intent behind content and look deeply into the 'purport' we can feel a generally positive or negative intent. If communication has to do with our need to connect, it would follow that the negative intent and its effects would be disconnecting whereas the positive intent would be connecting. Disconnecting expression would be powered by an intent which failed to take others into account and thereby distances the subjects involved in the transaction. After an expression powered by positive intent we feel closer to the subject and subjects in general; whereas, after an expression powered by negative intent we feel further away from the subject and subjects in general.

Intent affects the fit of content to form. It is the passionate heat of the brighter intent which bonds content to form like a welders arc. On the darker end of the continuum where intent is cold and calculating, the weld is weak and content breaks loose and rattles in the form, making us aware of both. The rattle creates its own noise over and above any signal. Under normal circumstance, the rattling noise puts us on guard, makes us aware that the communication is not whole, that the communicator is distant, uncaring, mistrustful and untrustworthy. We know on some level we are being deceived; we know that content has been copied from some power formula which objectifies subjects and shows which way they roll with which punch; we know it is shoving not sharing.

Nevertheless, we may go along for a time. The very coldness which distances us also strikes a fear in our hearts,

which is sometimes persuasive for a time. Likewise we do feel the warmth when positive intent bonds content to form and, by definition, we appreciate this.

Reputation may tend to lead us in the direction of a communicator whom we know to be capable of positive expression, but once we have the expression in our grasp we must apply the evaluation criteria de novo regardless of track record.The past may hint at the future but does not determine it which is why we affix the gold star to head of the page not the head of the pupil. It is hard to believe but often true that a heretofore honest well motivated communicator can proffer less, and a heretofore less worthy communicator can suddenly, for whatever reason, rise to the occasion.

Attribution

In order to assist the receiver in evaluating intent we must know who is sending the expression. We look at the signature on the 'purport' tag which has to do with attribution of content, that is, the declaration of the communicator's relationship to the origination of content. This may be implied by features of form or may be more or less stated at the outset within the content. Nevertheless we take it up here because it has to do with intent. I must know to whom to attribute the con- tent and therefore the intent in order for me to judge. "Considering the source," in the words of the old bromide, may result in prejudice rather than judgment, but nevertheless the source must be taken into account.

The communicator may be originating the content or interpreting the content of another, or simply delivering it. In the case of simple delivery the content is attributed to the

originator. In the case of interpretation the attempt is made to attribute that overlay to one communicator and the original expression to another and each is judged independently. Communication conventions (some of which have become laws) teach us what to expect in the way of delivery. An actor is said to deliver a script ; a postman delivers a letter. Both deliveries are essential to the communication reaching its mark, but the role of the go-between in each case is very different. One delivery agent has an interpretive license, the other has none. In fact, if the postman does any interpreting he goes to jail; whereas no matter how defacing the actor's interpretation, he cannot be prosecuted. Such is the range for delivery agents, i.e. subjects who are passing along an expression which is not their own. There are a number of other instances of delivery where the delivery license with- in the form sets the expectations regarding the scope of interpretation.

The intent of a musician has a wider range of influence over the expression. If the written music is the primary expression, say for example in a Bach fugue, we expect the interpretation in the performance to enhance the intent within the music and not go beyond the written notes and dynamic markings. Even where, as in the case of Bach, there could be no metronomic markings indicating the precise speed (since the metronome had yet to be invented), we expect the performer to research other performances back as far as possible so that the original intent of Bach is loyally served as nearly as possible. If on the other hand the performance is the primary expression, say for example in jazz, we are disappointed if the musician does nothing more than play what is on some prearranged page.

Implicit in every form, is a range of 'attribution' from passive delivery to active origination; the closer to active origination, the greater and the more complex the role of intent. If I hand you a book of poetry with my handwritten inscription in the cover, I am doing a bit more than delivering the book; I am recommending or endorsing it which I may do with some positive or negative intentions, and yet, it is clear that I had nothing to do with originating or interpreting the expression between the covers. Still the endorsement alone may figure into the impression process more so than the poetry, depending on the weight of our relationship, relative to the weight of the relationship which comes to be established with the content itself. In the case of the uninitiated, the endorsement has a powerful role. The music my father liked and recommended to me as a child stuck to me for life.

The TV cameraman shooting the ballet, as compared to a painter, is a secondary subject with very little license and yet he is not just the postman delivering a let- ter. He does compose shots even if he is carrying out directions, and while the shots may become standardized, he does have some choice, and so his intent affects content more than, say, the postman's. We know this on some level and only become mindful of it when this consensus of attribution is violated. We expect an ordinary television camera to bring exactly what it sees with some slight interpretive range, which should be unobtrusive. The fact that cameras on net- work news are now run by robots is a testament to the intent required of the cam- era in such an automated mediate expression as talking heads.

The predominance of writer or speaker depends not only on the form itself but may come down to the particular

expression/transaction: we expect the screen writer to be invisible when we are watching our favorite movie star; whereas with a writer like Shakespeare if all we see is acting we feel cheated.

Facticity

Another expression label which works in the processing of expression has to do with the realism of the content. This declaration has to do with the relationship of the content to external reality. Once content has been attributed to its rightful author, that author must, however, subtly declare whether what follows is fact or fiction; whether this is a report or a comment on observed facts or whether it is wholly invented and hypothetical. Integration between domains is essential to the facticity determination. Subjective expression (inventions, imaginings) may ultimately link subjective domains on the expression and impression ends, but in most cases the expression includes references, however oblique, to the object domain. Even with announced fiction with no facticity claim, the story must be peopled and placed and propped with objects. Likewise the expression which claims to be purely factual cannot be purely objective. It may bridge the objective domains of author and audience but not without passing through subject domains on both ends. The object facts come with impressions of the subject as passion- less as that subject tries to be. In sending the facts the 'expressor' must harbor some impression of the audience and this influences how the objective facts are presented and how they are evaluated.

In Aristotle's terms: I must let you know in advance whether I am about to tell you what happened as I witnessed it, or what I think about what happened or what I think might happen (Poetics, 25).

As a communicator I know that I must in sum or substance say which domain the content came from, I must mark it somehow: objective or subjective. Just before the content unfolds itself it reaches back toward intent to make its "intention" known (for instance the facticity discussed in the section on intent). There must be some more or less obvious signal whereby the content reports itself to be nonfiction, if that is what it is.

Nonfiction, might involve everything from taking events apart into facts to putting events together into abstractions: report or commentary. Fiction, on the other hand, is a license beyond commentary where the communicator is allowed to invent the facts to populate a theory, which must accurately reflect the forces behind the facts. There is an old adage among writers of fiction to the effect that good fiction has to fall together like facts; and there is an equal and opposite adage among journalists to the effect that the facts of a good news story must read like fiction. Both tell us of an underlying expectation that content push at form in the direction of its nearest neighbor.

In addition to declarations of facticity (fact or fiction), the pre-existing consensus between sender and receiver, galvanized by the report tag, must also lay the topical groundwork for the content itself. What does this have to do with intent? To the extent that I feel justified in hiding this, I am being dishonest and contemptuous of my audience. I can sugar coat that contempt so that it is swallowed by my audience but in the end we are both poisoned.

Content

Intent is not content; it powers content but is not itself "expression." It should be clear by now that expression routines are not expression. Expression routines facilitate expression but themselves lack content which is a function of the whole system of interior consciousness.

The interplay of minds generates the need to formulate content. It is content which then drives form. That is the primordial communication condition, which changed only when form crystallized and grew a life of its own. At the point in the history of human communication where form became ritualized, it began to drive content, but always behind the scenes. If it were obvious that the cart was before the horse, the arrangement would be unacceptable. If I called you closer to begin a conversation and then announced that I had nothing to say, but would try to come up with something now that you were listening, you would soon come to ignore me. This is just what happens with mass media channels. A slot in the form is reserved with no specific content in mind. The authors must find things to fill the columns or air time whether or not they have anything to say.

Content is made under the guidance of intent and then sent through available channels or forms. There is no suggestion here that intent leaves off where con- tent begins or that content leaves off where form begins. Each is a layer within the other; each is indispensable to the other, although we can and often do think about them separately.

Content is a manifestation of subject. It is less than the total subject from which a particular content proceeds but it is a fractal particle of that total subject. The total content of my self expression is my self for all who know me. All who know me are the total extent of my subjectivity. It is through communication that they know me and through which their feed back causes me to know myself. All of this builds the subject domain of consciousness from which expression proceeds. Before it becomes expression in the outside world, it incubates for a fraction of a second or several decades until it finds intent and then it shapes itself for the out- side. It is at this point that it becomes content.

We continue to use the word content to describe the particular message of an expression, the meat of it, the guts of it in the outer world, but that is actually embodied content, i.e. content which has formed itself. Theoretically, if we were to disembody content we would be closer to intent than to form. Content has a subjective component, where it proceeds from intent, and an objective compo- nent where it attaches to form. Because of its subjective nature content seeks to transcend time and space; this drove form to extend content across space and to store content beyond time. Form facilitates content but is not content.

I am continually amazed by the confusing of form with content. "Is TV bad for children?" "Does multimedia work as a learning tool?" Never any mind paid to 'what TV'; 'what multimedia'. Surely there are effects of form, but it is futile to discuss them in a vacuum, without content (and, of course, the intent which pow- ers it). Perhaps there must be a degree of familiarity with the form before content dawns. Would we question the effectiveness of "the book" as a learning tool, with- out considering what is between the covers? I don't

think so; any dialogue which raised that question would by now be quickly met with another question: which book? As we have already seen our appreciation of content lies somewhere beyond our initiation into the form.

There are the generic topics which steer the impressions toward certain established constellations in the mind of the receiver. The content of a particular expression may contain a mix of any one or more of these generic topics all pursuant to the underlying consensus.

The topics can be divided in many ways. I like to keep the count to the fingers of one hand, choosing five words or labels, (all five of which begin with the fifth letter of the alphabet, numerologically auspicious, if nothing else). The ordering of these five concepts, like the fingers of a hand, is essential. This ordering is a kind of conceptual evolution, like the biological evolution of the human hand itself. The nearer one finger is to the other, the better they work together. Starting with the highly evolved, recessed thumb which works well with any of the other four fingers, the five generic topics would be: Economic, thumb, Education, index finger, Entertainment, middle finger, Eroticism, ring finger, and Esthetics the pinkie, or little finger. Each of these terms should be taken in the broadest sense.

Economic, in its broadest sense, refers to anything to do with survival. It is the easiest topic with which to get attention. The survival instinct is easily excited by fact or fiction. The appetite for violence is an exploitation of the normal and natural interest in survival.To the extent that media authors excite this instinct with- out adding anything to our understanding, they are peddlers of distraction. If there is no insight into the violence, no warning, no curing, the violence can be said to be purely prurient, that is, no reason for telling

or showing the violence except to capture the audience's attention and, of course, their money. This exploitation is encouraged by the laws and mores of our mass media culture because no real harm can be scientifically linked to exploitation, but philosophically the answer may come out differently, which we will see in the last section.

Education, the index finger, means any kind of instruction or information. This includes all formal and informal settings as well as all forms of immediate and mediate communication.

Entertainment, the middle finger, includes any form of play or release. It needs no justification, but nevertheless much justification has been offered: "all work and no play makes Jack a dull boy."

Erotic, the ring, or fourth finger, includes any content that has to do with the sexes getting together for continuation of the species.

And Esthetic, the little or fifth finger, would include any kind of pure art or science or philosophy.

The distance of each finger from the other provides a handy guide as to which messages are more likely to mix best in a single expression.

The division of topics into five broad categories is, of course, completely arbitrary. One could chose any or all of the thousands that appear in the upper right hand corner of library cards. The point is that there is a tag beyond the particular con- tent which is used by the mind's inner librarian to prepare interest for comprehension. This propensity to classify is part and parcel of human intelligence and an undisclosed but nevertheless crucial part of the expression process. These tags may differ in each consciousness but there must be some consensus or the expression cannot find

its mark. The mere establishment of the classification implies orderly relations between the classes.

One need only look at one's daily intake of expression to see these relations at work: recipes for different circumstances predict the palatability and miscibility of generic topics. Erotic and entertaining topics in my picture or poem will be seen to mix well. I know that I can mix entertainment and education in my economic presentation and that it would be counter productive to mix in any erotic expression. Or in some expression the opposite may be true. The recipes may be intentionally altered by the expression for effect, or may be complied with for effect. In either case they are effective, albeit undisclosed in the mix. The topical mixing guidelines are the product of a consensus which is transaction specific, which means that the same mix might work under one circumstance and not another, taking account of the parties involved and the macro and micro timing in their lives.

Sometimes the mixing guidelines are more outspoken. Witness the moral and legal outcry which followed Maplethorp's attempt to blend esthetic and erotic content. Codes of decency and so called "blue laws" which regulate public expression are also outspoken attempts to provide a rigid recipe for the mixing of content which is always an affront to the chef/artist. Nevertheless both artist and censor allude to an underlying link between topicalized content and intent.

If the tags are right, the expression will find its appropriate audience to whom it will be interesting and believable. The received expression never is completely conforming to the intended expression, or in the words of the bromide "content

never equals intent"; nevertheless the behind the scenes declarations affect the evaluation of a particular content.

The content declarations are mutually interdependent. Where one declaration suffers, the remaining one must bear more weight. For instance, take a hypothetical case where content is tagged "Educational" and "non-fictional fact" about, say, an Indian massacre. Since the "facticity" declaration, will be the hardest to chal- lenge because the incident is removed in time and space, more reliance will be placed on the topical tag i.e. whether the content is truly Educational. If it appears that there is no apparent Economic ax being ground and no underlying Entertainment motive, no Erotic or Esthetic motive, any of which would tend to push the "factual" declaration toward a fiction license, an educational motive might be accepted. The next test this hypothetical expression should anticipate is the evaluation of the attribution declaration: who is it who says this happened? If we don't know him chances are we judge him by his institutional affiliation. An ivy league professor will be believed before a colleague from a lower caste. In the hypothetical example posed, the evaluation of declarations might boil down to just that: the fact that the author of the content is associated with a reputable institution. There being no content to the contrary, that will carry the evaluation process and the content will be accepted by most as a historical fact.

The relationship of non factual, speculative or hypothetical content will be judged on the basis of how well the speculations explain the facts which they address.

If the expression declares itself fiction, the author asks a broader license which may or may not be granted based on the author's reputation, or failing that critical acclaim, or

failing that the particular fit of content to form and the resonance the content creates with prior impressions.

All of these criteria have to do with the extent to which what is expected by the receiver is anticipated by the sender. This expectation may be satisfied directly or may be played with, but it is the string on which the beads are strung.

Content for most adults is easy to make and deliver; in most cases it is ordinary every day expression addressed to a small circle of known communication partners, but in some, the intent rises to loftier, or at least more ambitious aspirations, to reach unknown communication partners - an audience; in which case the inspiration must be compressed differently; the content must be coded for forms which reach out beyond our space and beyond our time to receivers we can only imagine.

Some of the skills involved in this public communication take a life time to acquire. The product of those skills is a published content which is either spread thin enough to reach the many, or is piled deep enough so that only the few can penetrate. In the former case, evaluation is simple and follows the guidelines described above; in the later case, it is so difficult, the larger audience looks to the few cognoscenti for collateral evaluation.

The experts who tell us that some new great expression has found its way into our midst can never be specific in their rationale.

There are clues, however, to which content might stand the test of time. For exam- ple, we have already noted that super content powered by super intent seems to bend form to its ends. That is, there is something about certain rare brilliant content that is so well bonded to the chosen form that it transcends the form. This interplay of form and content is

extremely subtle and while it is there to be appreciated by the few experts in the first instance, for some reason it is not available for most members of the mass audience, or so the market studies would have us believe.The value assigned to this super content, if it is accepted at all by the larger portion of the audience, is accepted more out of deference than appreciation.

There is a subtle perhaps unconscious conspiracy which supports the deference in lieu of the appreciation. There can be no doubt that appreciation in the first instance would be more desirable. But that would involve more work on the part of the uninitiated and then, of course, we wouldn't need the expert. Assuming that most ordinary folks prefer to do less rather than more and assuming that it is quite normal and natural for the expert to enjoy his prestige and position as one who understands more than others, there would be a natural bias on the side of deference rather than enlightenment and appreciation. The expert might find himself making things more complicated and obscure than they really are to make himself indispensable. This would be disingenuous miscommunication and it does go on, but so does genuine expert expression. In the case of genuine expertise, the intention is to enlightened and bring more independent appreciators into the fold which does happen as a result of appropriate critical expression.

As for the value of pre classical or sub classical expression, non experts and experts all differ among themselves "It's a question of taste" usually announces the end of the discussion of value. Though we may not always agree we cannot resist making these qualitative judgments about content. And since we do make such judgments they must be based in part on some shared concepts which

resonate positively or negatively to certain content. The problem is that the value standards by which content is judged may not be shared by all. But there must be a significant consensus about value for a culture to exist. The fact that most people are defer- ring rather than contributing to such a consensus does not detract from its power.

We expect that the experts are in possession of these values and can apply them consistently; we are surprised when this is not the case. Each form has some official body of experts which pronounces on value such as the Academies which presents awards for poetry, advertising, books, photographs, paintings, movies, music, and so on. And there are international awards that are even more prestigious: Pulitzer, Nobel and others. But the choices of these experts do not alone explain which content will survive the test of time.

This "test of time" is not a physical test which can be applied objectively. It should be noted that any stored expression will physically stand the test of time, whether it is a photo of aunt Minnie pressed in my grandfather's family bible or the Mona Lisa. They are equally preserved in their form, but not in the public response to their content. Standing the test of time has to do with consistent and continuous approval of the quality of the content by succeeding generations of experts and their following, which may be a self fulfilling philosophy. Do the new experts challenge the old experts or merely follow them? If there are eternal verities as Plato suggested what is there to challenge? On the other hand, if it is all based on consensus as Aristotle suggests, then by definition the consensus changes and experts should reflect those changes.

The evaluation by experts adds a dimension to the attribution declaration which travels along with the content. In the case of the classics, the expert evaluation is an imprimatur which stamps the content sacred and thereby assumes more of a role than the content itself. It is difficult to look beyond the expert opinion since the only criterion for "classic" which one can find begs the question. To say that expression is classic if it stands the test of time is tautological.

Either way, experts or exegetes seem to be an essential part of the process. Were it not for the mid layer of critics, publishers, teachers, editors who point out greatness for us, most of us would never find it. There is general agreement that there must be standards and some sort of experts to apply the standards, formally or informal- ly. This applies to public content, which is to say "published."[22] Still, it is my belief that one must constantly challenge the choices and even the credentials of the experts; anything less would lead to dogma and imprimatur.

We recognize the difference between expression which is published and therefore subject to these standards, and that which is wholly private. I may decide that a story my father told me is great, and I may decide to tell it to my children, which does not amount to publication. In that case our private opinions of value are all there is. They may, of course, be shared by the smaller group, and still be unknown to the public as such.

We pointed out in the previous section that with the advent of mass media there is less and less private tradition for expression. More and more people rely on fewer and fewer sources for expression. Media technology bridges the natural barriers which used to insulate separate cultures. The

massive approval of inter- national and inter cultural communities is harder to resist. Individual ideas about value are easily swamped by such tidal waves of mass approval, which may come together just to be together and not because there is any genuine agreement on value contained in the particular expression on which they focus. With such massive phenomena there is more opportunity for misunderstanding and therefore more of a tendency to judge credentials instead of work. It is the band wagon and not the band that gets us marching in step. All of which should impose a greater responsibility on the professional communicator to push away from the addictive adulation which inevitably corrupts intent and therefore content. We cannot rely solely on the experts to guard against this.

The danger is that without the constant re-evaluation of content even the so called experts and exegetes get lazy.They find it easier to refer to the mythical life of the artist as opposed to the art itself. It is all too easy for the alter boys of art to ring their bells and have the congregation genuflect every time the word 'art' is mentioned, rather than inspiring genuine awe for great human expression. Where all that is inspired is obeisance, with no heartfelt appreciation, in the end, we are left with the flat images of saints and heroes, and there is no evidence that they do anything more than sell baseball cards.

The baseball card mentality, where the famous are assumed to be the worthiest of our attention, has surely done more harm than good. It has lent credulity and mass appeal to the likes Jim Baker, Jim Swaggart and Jim Jones without even a look at the content of the expression, let alone the intent. It's as though, because of our increasing reliance on collateral evaluation, we no longer have the where- withal to

evaluate content in and for itself and must rely on reputation. After the President speaks, we wait for the TV anchor to tell us what he said and whether it was important. We need the announcer to explain the super bowl.

The reflex of deference and even blind faith predates our mass media culture. Some say it has its roots in the notion of aristocracy prevalent in Western society long before mass media. And yet to say that such a foible is inevitable, would be to ignore the very same will that poses the question. There must be some choice on the receiving end as well as on the sending end or the equation collapses.

We know that all communication content comes from identifiable subjects and has a topical perspective on objects and subjects, at various levels of detail or abstraction. We look at the tags and we do have a choice to learn to look at the content itself.

Violence

I said earlier that physical contact is a form of output and went so far as to say it was a form of expression. That is clear for all forms of affectionate contact (hand- shakes, hugs, kisses, holding, dancing, sexual contact) but what about violence? Isn't violence a break down of communication? How can we put a slap in the face in the same category as a pat on the back? The truth is, the slap in the face is, in the definitional sense, an expression of an internal state, in this case, hostility, which is output, yes, "communicated" to someone else. We can disapprove of the content of any form; we can even outlaw certain content coupled with certain intent but we cannot so easily rule out the communication

channel, the form itself. The very act of outlawing certain content acknowledges the inevitability of the form which would convey it. Whatever laws govern the coming and going of forms, they are not made by any particular generation. Like the disappearance of the small toe, such formal change in communication is only subject to more gradual accretive energies. Kick and kiss are different content which use the same form "contact," and that form may change or disappear some day, but today it is part of a long standing communication matrix.

It follows from what we have said that content cannot be physically separated from intent especially where the content is imbedded in a form. The same is true of violent content imbedded in the "contact" form. Nevertheless social sanctions aimed at certain kinds of content turn on the particular intent, leaving aside the difficult task of how that intent is to be determined. Always it is ex post facto and often it is determined circumstantially.

The circumstances surrounding a particular communication transaction are easier to prove than the intent lurking behind the content. And so we are allowed to presume certain intent from the surrounding circumstances. Still the rules are hard to apply. Where the circumstance is that a parent is spanking a child, the presumed intent may be benign, but spanking may be permitted in one instance and may constitute the crime of child abuse in another instance.

Like other forms of communication, violence may occur directly in "immediate" forms or indirectly in "mediate" forms. In "immediate" transactions where the parties are within touching distance, all forms bristle with the immanence of potential physical contact. Should one body touch the other

directly "immediate" expression causes "immediate" communication impressions at the other end.

Direct physical contact cannot reach beyond the time/space presence of the par- ties, but indirect contact can. I can cause something other than myself to reach you and touch you in some remote time and space: I can throw something, or fire a rocket or program a robot.

Where one party's body intentionally triggers some inanimate device which cause the other party's body to be contacted, "mediate" communication occurs, since the moment of contact brings with it an inevitable impression, even if it is the last one in the recipient's life. The use of missiles as missals may be the most horrible and deplorable message, but a message nevertheless with negative repercussions which change the communication relationship of the parties. To place such negative output outside the scope of expression is to place them beyond comparison with alternative content and therefore beyond analysis, which would be more disastrous than any single act of violence.

Form

As expression moves from the invisible inner space to the outside world it takes on a particular shape and then a force and finally a form. We have spoken of this metamorphosis in stages we named intent, content and form.

Intent is internal and therefore spaceless and timeless. Content which is the manifestation of this intent has one foot

in the subject domain and one on the draw- bridge, where it meets form.

Form is in the material external world in the sense that it commands objects which ultimately results in physical transfer of the expression. There is also an interior aspect of form in that impressions and concepts, which we have called the codes of form exist in the mind of the participants. This text is a physical form which is what it is on the outside; at the same time it responds to internal expectations about what text should be like: set from left to right, spaces between words etc.. The expectation is mental the text itself is material. Form bends material as much as possible to bring together mental expectations and mental content.

In this bending and shaping sense, form is object which connects subjects. As object, form is attached to its time and place, that which content seeks to transcend. In the last section we saw that the value test for content was that it stand the test of time. Form's test of time is that it must be current; therefore it has to change with the times.

The size of the audience and the senses to be addressed are examples of external circumstances which the internal codes of form seek to address. These subject codes inspire long term objects, rooms, buildings etc.. We may refer to all of this as form. What goes on in a church involves external, material architecture as well as internal, immaterial codes. The communicator in immediate forms ("im"= without, therefore literally "without media") is live and present as is the audience. The first job of form, there is to apply the content to the internally coded expectations of its audience including cocking the sense of that audience for reception. The physical senses of the audience are object, like the chairs on which they sit, the lectern. These external objects in

themselves are not form they are the trap- pings of form. No particular material prop, or internal code is form as such.

What is form then? Form is the combination of all the trappings and internal codes in a particular agreed upon shape so as to accommodate a particular kind of expression. Is the expression form? Does form include the sound of the words from the pulpit, or the lectern, or the dinner table? To the extent that they comply with the internal codes and use the physical trappings they are a particular manifestation of the form, which we have been calling expression. Expression is not form as such.

This is a difficult distinction but one worth making. There could be no expression without form. And except for Plato, there could be no form without there having been expression. Expression must occur within a form or it makes no sense. We said at the outset that intent, content and form were inseparable. Now we must perform the difficult task of trying to tease them apart just for the sake of analysis.

In its object manifestation expression is the physical sound waves which carry the subjective content from the mouth of the speaker to the ear of the listener in such a way as to excite certain internal coding mechanisms at both ends which cause the content to be more or less understood. Form is channel for expression. Expression is purely external; form is both external and internal.

Besides the internal codes which form commands there are, as we said external objects, trapping of forms. Included in those trappings are the senses. That which must be decoded must first be perceived and become sense data which is then processed for meaning. We must know where to look at which time, and also have a fairly specific idea of what kinds of things we will see and hear. Form arranges all this. For

example, unlike large groups, small groups arrange themselves so that focus can easily shift from one primary communicator to the other. Size and arrangement of audience make it possible for the proper focus on the primary communicator. A meeting room for seminars, a class room for lectures, a theater for live performances, lighting and seating arrangements are form's object trap- pings which facilitate sensory focus; as such, the external trappings of the form help trigger the internal code of the form: I know I must remain quiet in the performance hall except to applaud. I know I do not normally applaud in the meet- ing room and should expect to say something; I do not applaud or speak in church.

Just like the internal codes, the external trappings encompass more than one particular expression, which is to say that there may be more than one expression which makes use of a particular form. The expression is this lecture, not the form of lectures in general. It complies with the internal code for lectures in general; it occurs within the external trappings for lectures in general, but it is not lectures in general. It is this lecture with a worthless or valuable content and good or bad intent. TV is a form. TV is not good or bad, the particular expression or program is good or bad.

The material elements of mediate forms are more palpable. Elsewhere we have drawn taxonomies which emphasize a distinction between pre and post-electron- ic mediate forms.[24] The letter, the book, the painting the photograph are examples of pre-electronic or static forms, which will be gone into at length further on in this section. We raise the distinction here to make the point that with all mediate forms the external physical trappings are more obvious (than with

immediate forms) in how they command the senses; but only with electronic mediate forms is the control of internal codes almost invisible. The codes for reading text are much more identifiable than the codes and syntax for watching movies.

Nevertheless all mediate forms call forth mental elements, expectations and routines, which allow the form to transfer the expression.

An example of a material element of a pre-electronic mediate form relating to internal code can be found in the letter where a material space is reserved on the page for a signature. Both sender and receiver, assuming they are initiated in the correspondence form, know where to sign and where to look for the signature. This enables the recipient to attribute the content and then evaluate it appropriately. These material elements take the surprise out of the sensory, perceptual and conceptual work.

Because electronic mediate forms are dynamic the internal codes which they address are more subtle and elusive. Cuts, dissolves color, graphics etc.. are hard- er to pin down in terms of just how they affect the internal processing codes.

All forms, immediate, mediate, static or dynamic, compress and direct an array of more or less expected sequences of sensible, meaningful cues. The codes addressed by the form may depend on other codes. In other words, one code may imply another code. At this level, communication forms are simply displays for codes.

So far we have suggested that all forms involve one or more levels of code which address one or more senses. The senses addressed by the form affects the breadth rather than the depth, or layers of code. Every culture provides forms to accommodate various levels of complexity, from the sublime to the ridiculous. The theater's proscenium allows for

concentration on the deeper layers of dramaturgical and linguistic code. The letter's signature mentioned above facilitates the complex attribution code. The printing code for the text on this page enables the verbal processing codes. The close up in the movies readies me for another level of dialogue which I must process differently.

Both mental and material elements of the code may be set out somewhere in the real world. To the extent that a code is laid out in a single dictionary or lexicon of meaning, the code is lexical. Language may be a lexical code. A lexical code lends consistency to the forms supported by such codes and, at the same time, impos- es constraints: consistency in that it can rely on pre-established meaning and syntax without having to re-establish them each time; constraint because it limits the usage to only that which is approved and it limits the audience to only those who are initiated in the lexical code. Initiation in the lexical code is arduous and counter instinctual. As such, lexical codes are more exclusive.

Where the multiple codes are lexical, their effects are compounded. In other words you have to know all the code, and the code within the code. A failure of either level code will exclude comprehension completely.

If I were to publish a Russian play in print form, the price of admission would be initiation into two codes: language and reading, both of which are lexical and either of which is exclusive. You would have to know Russian and also have to know how to read. Knowing one or the other would not be enough.

Initiation in non-lexical codes is instinctual; as a result it is more widespread. Reading facial expressions and gestures involves non-lexical codes which are so basic, even animals are initiated at infancy. The non-lexical codes have both a

broader band width or channel capacity and a broader constituency. They are elusive and amorphous and so the expression can never be sure just what impression will result through the codes. Nevertheless, they are less constraining, and more suitable to carry the emotional as opposed to the factual component of the expression: that which Stanislavsky referred to as the emotional subtext. Before leaving

Russian drama, we may borrow another thought from Stanislavsky which illustrates the difference between lexical and non-lexical codes. In drawing distinctions between the spoken and written word, Stanislavsky pointed out that there are a thousand ways to say "Good night," but only one way to write it.

If the Russian play were performed instead of printed there would be multiple codes. Again the price of admission is two codes: you would have to know Russian and you would have to understand the non lexical codes of gesture and expression. Here, however, there is a half price ticket. If you did not know Russian, your understanding of the non lexical codes would buy you some meaning.

If the Russian drama became a movie there would be three codes at least. To derive the full import of the expression one would have to know Russian (lexical) one would have to understand human gestures (non-lexical) and the syntax of cinema (arguably non-lexical). Possession of any part of either of the non-lexical codes would result in some pay off.

We have suggested that the consensus which underlies these non-lexical codes transcends cultural and ethnic boundaries, and even biological boundaries.The implication here is that coding (compressing and decompressing fuller meaning) is a communication propensity not only of our species and related apes, but also of all mammals, and it

follows further that there must be a built in propensity to make, store and use codes wherever animals need to associate. The lexical code, however, seems to be an iteration of this basic coding propensity peculiar to our species or actually just a few cultures of that species.

One often overlooked aspect of code has to do with the price of initiation, i.e. the time and effort required before one is able to interpolate and participate in the code. There is initiation in every culture but levels of lexical code initiation vary from culture to culture. Anthropologists tend to separate cultures based on whether or not they have a written language, which is after all, a lexical code. Oriental writing and reading use different dimensions of the page in that the eye must be trained to move vertically rather than horizontally. Yet each makes use of the page which is in formal terms a lexical code in a two dimensional static display, which addresses the eye alone.

Written music, mathematics and maps are other examples of lexical codes which make use of static two dimensional displays. Because these forms are based on lexical codes considerable initiation is required before any meaning can be derived. Musical and mathematical notation are obviously lexical codes, but maps might be confused with pictures. Make no mistake a map is not a picture. A map is a representative form which demands initiation into the lexical code of cartography "legends," scale, color-coding, and other graphic conventions. With the code in place lines can become state boundaries and angles mountains and colored ink ocean; without the code all of this would be nonsense.

We have been looking down into the bowels of the compression or coding process, down into the depth of form,

let us look out again at the trappings of form which command sensory focus.

The number of senses and the degree of control demanded of each form has to do with the potential sensory richness of the expression or the channel capacity, also referred to as bandwidth. In live or "immediate" communication, the channel allows for sight, sound and touch, although all those senses may not be addressed directly by a particular expression, the form must have the capacity to deal with them. This makes for very complex forms, as we have seen in our brief look at the immediate class of forms.

Where the expression is imbedded in a medium, the breadth or bandwidth is reduced.The possibilities of where and how to focus which sense is minimal com- pared to immediate forms. Still much of the capacity goes unused in "mediate" forms by most expression. Each form presents an opportunity to compress the expression differently, within the capacity afforded by the medium, and each expression or content is affected differently by each form, but it is rare that we feel content bursting the seams of the form. All of which are considerations not only for the impression side but for the expression side as well.

The first exercise of the will in the expression process involves the choice of a class of forms: immediate or mediate; if mediate, the choice of a medium and then a form which turns out to be more or less suitable to the expression. The choice of a class of forms and even a particular form within that class may be influenced by the proximation dynamic which we discussed earlier. If this is a particular time of life, or season or day of the week, I may be predisposed to a particular form through which to channel my expression.

The proximation dynamic is frustrated with passive, electronic, media forms. If I have been involved in TV movies for some months or some years and have some- thing to say, it may be too difficult for me to select my most proximate form for my expression. The expression is then repressed. This is an unusual feature of our culture and may explain the undercurrent to move TV towards interactivity.

Since most known cultures have more than one form and many have the freedom to choose, there are always these choices after the content becomes crystallized in the 'drawbridge' and before it becomes expression. Even in a so called primitive culture, I can decide whether to dance with the group or seek out a one on one circumstance, or carve a tree or draw with a stick in the sand, physically touch the partners or not, etc.. Forms are more or less appropriately chosen which can only be determined after the fact, when feedback informs the sender of how well the intended message was received.

The ability to adapt the content to the form may be the result of inborn talent or acquired skill or both. Whatever the reason there are varying degrees of fidelity between intended expression and impression. It is not simply a question of luck. Many are in the right place at the right time and are not listened to. Somehow intent brings the communicator to the form and the content to the audience. I am more inclined to use the word "mystery" rather than "chance" to describe the pre- disposition of certain minds to share certain content through certain forms at certain times "Mystery" at least invites curiosity and hypothesis, whereas "chance" closes the question with a non-answer. Still even with the advantage of being in the right form in the right place at the right time, most content fails nevertheless.

Most communicators are not able to say what they mean; a few do manage to say what they mean, and a very few manage to say more than they mean. These we call masters. Mastery and mystery are silent partners.

One of the indicia of mastery is a melding of intent, content and form. It's as though the facilitation of intent into content and content into form is so smooth that the layers merge and cannot be viewed separately. In the section on intent it was suggested that the heat and light of super intent melts and amalgamates content and form, but, of course, before that can happen that same super intent must be sharpened by a dedication which results in mastery of all of the codes connected with the chosen form.

The depth of code in the form both constrains and facilitates content, as we saw, but does not power content. Well formed content gets nowhere without intent. Only intent powers the content, sets it in motion and more or less keeps it going through the form, providing it with various degrees of impact on the impression side.

Historically, form and its codes must have developed first around the urgent survival messages which had to be efficient and demanded that immediate group members be initiated in certain redundancies. In other words if a particular condition seemed to repeat itself with the same effect, then the sign and signal for this event could be symbolized and the symbol could conjure up the appropriate warn- ing impressions. This implies some period, prior to the factoring out of redundancies, in the object domain where communication partners were without code and were guessing at meaning. This seems implausible, especially in light of inborn non-lexical coding propensities in other animals. It is more likely

that codes or pre- code propensities are inborn, and go with the territory in gregarious animals.

There is some dispute over whether form is uniquely human or whether there are in fact code displays which would qualify as forms in animal communication. Once again we need not solve that puzzle here. Whether or not they are more basic, "forms" are part of human communication.

If ontogeny does in deed recapitulate phylogeny, we might guess that the percentage of total time required for development and acquisition of uniquely human linguistic codes and forms would be the same for phylogeny as ontogeny: in other words, the same for the species as the individual. If it were true that the child becomes initiated in the basic linguistic codes of his group in ten percent of his total life span (without any particular level of mastery), we could then apply that proportion to the life span of the species (10% of 2 million years), which would give us 200,000 years to put language in place (not necessarily lexically coded yet). Once again we seem to be stepping into the trap of historical determinism.

While the ready acquisition of codes implies an 'a priori' propensity towards codes and sets of codes or form, it does not follow that a particular set of forms was inevitable.

We cannot say that television as a form or mass media was historically determined or that the idea of the global village was inevitable. Propensity and ability by definition are not whole pictures but merely frames. It is the individuals and their choices that paint the pictures in those frames. Media as we know it came to pass just as it did because certain individuals willed it, and others accepted it or acquiesced. Therefore it follows that it may change at any time, beyond

recognition for the very same reasons. The same is true for any particular medium, such as with the conventions and codes which go to make up this book.

As for the emergence of the eye and ear as the primary senses for adult communication, we can say that it could have been otherwise. Communication's mediate and immediate developmental history looks like the only path, looking back, but with a little imagination and logic we can see how different choices might have changed the course of communication history. Nevertheless, we must live in the communication world in which we find ourselves, and the only point in imagining others is to underscore the fact that the only thing which is inevitable is choice. Where we are now, in terms of communication practices, is the result of thousands of big choices and billions and billions of little ones.

Development of Form and the Generation Gap

"Generation gap" is a term that characterizes what is perceived as a chasm of dis- continuity between generations. The Forms of human communication are hand- ed down from generation to generation via the natural acculturation processes, and yet the panoply of forms do not remain the same from generation to generation. Each generation exerts its unique view of the basic communication need on their legacy of communication forms. And so forms change dramatically between some generations and not so dramatically between others. Two obvious insights are before us regarding our own generation, neither one original: first that there seems to be an ever widening generation gap which wasn't there before and second that there seems to be an untoward restlessness with communication forms that results in an increased rate of change where the forms are concerned. What is the connection between these changes?

I am suggesting that these two changes are connected in that some of the forms themselves may be responsible for the generation gap and vice versa. The responsible forms are those which cluster around formal education.

Formal education is a new thing if we look at it from the perspective of the entire history of human communication. Compulsory public education occupies an even narrower portion of the historical spectrum(less than a century). Whatever else "school," brings us, it clearly interrupts the relationship between the child and the family group. In place of learning from older relatives, the child learns from teachers and more importantly fellow students. This was assumed to be beneficial as a matter of form, regardless of content: which teacher, which expression, compared to which parent, etc.. Here is where the rip in the fabric begins. Parents and their forms are more and more formally rejected and the child's education and initiation is removed further and further from what were once the child's primary communication partners.

Previously (for millennia), children learned what they knew from their original teachers, their parents, and more closely emulated those parents. Of course, that was limiting in many cases, and made the accident of birth a powerful arbiter of life style and intellectual progress. A cobbler's son was most likely to be a cobbler and the tradition of forms of communication handed down to him by his forbears would most likely remain in tact. By taking the son from the cobbler we opened up the possibility for deviation and, of course, deviance. This is not an evaluation of formal education, merely an insight into the price of progress. It may be that immigrant children rise above the station of their parents, but not with out los- ing some communication with those parents

for whatever that is worth to each side. The loss may be more emotional than intellectual. For some the gain may outweigh the loss. But the loss is there and pulls at the available forms of communication for satisfaction.

This explains how the lonely orphans of the industrial era could be so easily brought together as "mass audiences," despite the fact that each knew in his heart that this was not real "togetherness; the association was not sustaining, but its promise could not be resisted. And so the loneliness pushed at the next generation of forms. "Phone sex" on TV, "multimedia," electronic forum, virtual reality; some how the computer is being asked to personalize the association of the mass audience member. But with the senses available to it, can the new forms address the emotional needs, the needs for warmth and affection that the original group provided?

Form and Sound

For whatever reason, we have chosen that the primary forms for adult human communication address the eye alone, the ear alone or the eye and ear together. When the eye and ear are addressed together by a single form, it seems to follow that the eye usually dominates.

In addressing the eye alone the expression content may have as its intended destination the other sense, the ear. The same is true for the expression addressed to the ear. To the extent that the sensory boundary is crossed, it is bowed or plucked and generates overtones. These are independent of the features of content; they are an effect of form.

The sensory address coded in the form (auditory, visual or audio/visual) affects the linearity of processing on the impression side. This must be taken into account on the expression side if the form is to be effective.

The ear is by nature designed to receive concatenated or chained signals. The physiological equipment of the ear is percussive (drums, hammers, anvils etc.) which means that whatever the intermediate coding of the expression, the final sound itself must be further coded into a sequence or chain of taps. A higher number of taps per second represents a higher frequency of sound and then the tone or wave form of the sound must also be represented by variations in the same sequential stream of taps which become vibrations. The sound wave must then be decoded and interpreted further inside into agreed upon meaning.

Auditory expression may contain spoken words or other sounds: it may be verbal or non verbal. Whether verbal or non verbal the sound must pass through this physical interpretive sequence. The physical processing potential is never up to the potential of the speed of vibrations from the physical universe of the actual sound waves. The range of the humanly audible is but a fraction in the total spec- trum of sound waves. This naturally poses the classic philosophical question of whether a sound which cannot be heard by human ears can be said to exist. With the aid of other instruments inaudible waves and their effects may be perceived and then it is legitimate to propose their existence without hearing them direct- ly. If they can never be perceived by any sense aided by any device, they cannot be said to be within the experience of any human.

Our main concern here is with sounds within the humanly audible range, from which significant expression can be deduced, provided of course the ear and aural processing systems are working and, provided the appropriate code is in place.

As with all forms and their codes, there is an initiation period required to imbed the code at both ends. The expression may be too fast or too slow depending on how well ingrained the code is at the receiving end. If it is well compressed and residing in the autonomic routines of the 'drawbridge', the expression can afford to be faster; if it is still loose and partially conceptual back in the subject domain of the castle, then the expression must be slower to be decoded and interpreted. In each of us under each new circumstance, the inner ear, the brain and the impression and conception process have their own speed.

It is customary for the sender to take into account the facility of the listener in small transactions where there is ample indication of the optimum speed. When the audience gets larger, the sender is more removed and the individual requirements are less and less possible to determine, let alone accommodate. Long before listeners reach the level of mass audience, even in a large enough auditorium, the customization of the expression to appropriate decoding speeds is impossible, and least common denominators or other arbitrary levels must be selected by the sender.

Processing speed is an outer limit. By that I mean it is a threshold above and below which no sense data can be sent on for further processing. There are, of course, other inner limitations in each process, depending on the age, condition etc. of the listener in question. The inner ear is not "inside" for our purposes. It is physical and is outside and part of the object universe; therefore it can have dimension, weight, and other physical attributes including limitations. The limitations of the so called "inner ear" are part of the outer limits mentioned above.

The physical outer limits apply to form only and not to content. Content can find its way around sensory limitations. Otherwise a deaf or blind person would be incommunicado, and that is not the case at all. We have made the Dualist point continually in this work that consciousness is not the same as the physical uni- verse which it confronts and that to confuse the two leads to the acceptance of physical limits as limitations on consciousness, which happens often, but not because of any natural law which governs consciousness, rather because we set the limitations conceptually ourselves and then observe them.

There is great social support for the internalization of limitations, so much so that it is harder to imagine limitless consciousness than it is a nice neat box in which the mind is contained. Despite the fact that we accept internal limits as real, inevitably and continuously, they are transcended. For many, breakthroughs keep us off balance enough to keep consciousness from hardening into a monolith. Out of joy, or sorrow, relaxation or emergency, consciousness, for whatever reason, transcends that which, up to that point, appeared to be its limits. This applies at the expression end and usually results in super intent and content which pushes form in some new way; and it applies at the impression end where consciousness mysteriously and suddenly finds ways of keeping in step even where the expression is beyond the pale. We can point to these peaks in our own experience, but by definition these are unusual; usually the limits apply and usually miscommunication occurs when sender and receiver do not allow for the limits. It should be underscored here again, however, that good communication, while it takes account of the limits, at the same time pushes against them.

This applies to form as well as content, and more particularly to the sensory work attached to the particular form.

Aural expression uses sound in many ways; sounds which may be produced and delivered to the ear by any number of physical or inanimate tools. As we pointed out at the beginning of this section, aural expression may be verbal or nonverbal. Verbal expression may but need not be aural, although we are assuming here that verbal expression was only oral and aural to begin with. There are a host of non-verbal sounds which are nevertheless communicative.

As I write these words for the eye of the reader, I could have chosen instead to make sounds addressed to the ear. Any such sounds could have been sent instantaneously or recorded for non instantaneous delivery. Should I have chosen to go beyond the precision which these words offer, the sounds could have been nonverbal music and effects, for whatever that would accomplish; nevertheless, as sounds, they would have to be absorbed in the order in which I set them down, one at a time. Had they been nonverbal musical sounds they could be absorbed in the order in which I set them down but more than one at the time. The resulting harmony or counterpoint between the parallel streams would be less predictable in terms of the meaning it created on the impression side of the equation. Whether verbal or non verbal, all sound involves dynamic linear coding and is therefore evanescent - here and gone. This means that the links of expression must be solidly forged by timing if the expression is to hang together.

Generally speaking the resort to recording, or non instantaneity while it costs time in the delivery speed, allows for the preparation of the content.

As we saw, the sound itself can be generated by any number of physical and/or mechanical and/or electronic devices - everything from plain old vocal cords to digitally sampled computer sounds and everything in between. Whatever the final form and compression scheme, some level of mastery must first be acquired, its expression routines compressed and polished by practice and kept at the ready in the 'drawbridge' to facilitate the expression. The mastery involves collateral physical and mental exercise, aimed at underlying codes for processing sonic expression. Such things as meter, rhyme, harmony, rhythm, syntax, vocabulary are examples of underlying codes which facilitate sonic expression.

Nonverbal Sounds

Nonverbal expression may address either of the two primary senses, i.e. it may be visual or aural. We shall consider the aural first, that which is based in sound. The inarticulate, indefinite codes of the nonverbal sounds range from the simple two sided codes of happy snaps, claps and gurgles to unhappy stomps, growls and screams, all the way to the inexorably complex feelings generated by codes of musical expression. I have suggested that musical expression cannot be expected to deliver a precise message which is not to say it is meaningless. Its meaning is ineffable, imprecise, but may be more impactful and long-lasting than verbal expression.

Musical sound although imprecise also demands compression and decompression. It is impossible to explain musical sound with words, except to say that the inspiration or plan for the sound is nonverbal and so is the feeling generated in the listener. Still musical sub forms are further classified in terms of length, depth, instrumentation and style

all of which helps in our decoding. The musicological study of these codes and sub-codes is a discipline unto itself which I do not intend to examine here with these broad philosophical strokes, except to say that they exist as a more detailed analysis of the compression and decompression of this enigmatic, nonverbal, aural human expression.

Verbal sounds

Verbal expression too may address either of the two primary senses: the eye (visu- al) or the ear (aural). Verbal expression invokes the more elaborate codes of lexical and syntactical language, about which numerous linguistic treatises have been writ- ten. Here, again, for our purposes, we need only point out that verbal sound has the capacity in its meaning for more precision than non verbal sound. A saxophone solo would be hard put to provide me with directions to Chicago; likewise words might be hard put to match the impression of Chicago conveyed by the "blues" from and about that place. Verbal sound may be metered as in read poetry, as such it is clos- er on the continuum to musical nonverbal sound or may be randomly spaced as in conversation. In either case, over and above the sound of the syllables, a lexicon of meaning is invoked when one chooses the particular sounds of verbal language.

Forms bending as they do, verbal sound can bend toward musical nonverbal sound and acquire some of the broader emotional capacities of those imprecise codes. Likewise

musical sound can bend toward verbal sound giving up its moody content for some precise almost lexical allusions.

With the addition of sound recording and sound transmission to the arsenal of communication forms, a great new dimension was added to extended verbal sound. Even with the communicator not being present, I can have his tone of voice, inflection and the other dimensions of verbal communication to which the ear is sensitive. Why bother reading? As we shall see in subsequent sections read- ing offers other advantages, and was once the only solution to extending verbal expression beyond the present time and space. Now however it has become increasingly easier to store and send verbal sound. Books on tape are flourishing as of this writing. I personally have had deep communication experiences with books on tape, as deep, it seems to me, as with books in print (assuming the con- tent was equivalent). Millions now have chosen to give their eyes a rest and lis- ten to a book on tape. It may be that the eyes are closed or watching the road or doing something simple while the ear processes the full dimension of the verbal expression. Decades earlier, the radio won a place in the minds of those same mil- lions and continues to hold its ground for news and commentary. It offers extend- ed but not stored verbal expression without using the eye. Many prefer the news and commentary of radio to that of printed text.

With the refinement of digital audio, personal computers have been given a voice. It has been years in the making but there has always been a communication need to talk to and listen to the computer instead of reading text and processing symbols. Digital audio has now made that possible in even the smallest personal computers. Digital audio also invades some of the retrieval efficiency of electronic text. The bits and bites

of a digitally stored spoken word can be recognized by databases and other retrieval strategies. So that now for the first time random access is possible to stored spoken words. Very little use has been made of this feature up to now because it is still too new. The alternative route of storing and retrieving the words as electronic text and then translating them as sound is much easier and takes advantage of the text processing tools already in place, but some- thing is lost in the translation. As Nicholas Negroponte of MIT's media lab once pointed out, all the computer voices sound like drunk Swedes. But that will change. The Swedes will sober up and computers will acquire appropriate intonation. One solution is for the computer to copy the voice print of a particular real person speaking similar words in similar situations. This kind of emulation is how children acquire speech.

Form and Light

The light that finds its way to the eye may be observation headed for the object domain or expression headed for the subject domain. As with sound based expression, light based expression may be verbal or nonverbal.

Light travels to the eye faster than sound travels to the ear and it is not concatenated or chained into sequential pulses. That is, the visual sense data does not line itself up single file and wait for some bones to tap messages back to the brain. Instead iris, rods and cones, working in parallel, can reflect complex images simultaneously on the retina. Saccadic movements of the eye then respond to the form's focal controls to perceive the external elements of expression as

distinguished from unfocused observation where no subjective form is imposed.

If I look at a rock I experience vision, not visual expression, not communication. If I look at a picture of a rock I experience visual expression and communication. What is the difference in these two visual feeds? The painter Escher plays with this question visually. He confuses the border of visual expression, the picture frame, with other frames which are visually observed in simple visual observations. In our terms the difference is taken care of by the domains. The visual observation of the real rock in our metaphor of mind would be processed for the object domains; whereas the visual expression (the picture of the rock) would be addressed to the subject domain and filed under author as well as topic. Nevertheless, both involve the eyes, and the processing of visual sense data.

The eye can also be used to process linear visual symbols, printed text, which may and often does represent sounds. If I read a book, made up of phonetic alphabet, I am experiencing bogus visual communication in that my eye is being used as an ear. Should this be classified as visual expression?

We have seen (heard) that not all communication is visual and that not all vision is communication, and now we add that not all visual communication is purely visual in that some streams of visual expression really represent sound. Text is not the only form of visual symbol which represents sound; musical notes also represent sound, non-verbal sound, but nevertheless sound.

Visual symbols which represent sound are processed like sound, as a linear con- catenated stream, taking no advantage of visual parallel processing. You must read this text in a line

from left to right. The fact that you can look at the entire page all at once does no good. (Speed reading is dealt with below- a partial exception.) You cannot grasp all the words you see at once. You must read them one at the time. The time maybe much faster in some cases than others, and you may skip over some words, but the form expects you to read the words one at the time. Since this verbal expression is destined for the ear, it must use the nonlinear eye linearly.This will sound cockeyed to future communication scholars, as tortured as hear- ing about a picture. The same sensory juggling is required of the thousand words about a picture which come in through the ear but are really addressing the eye. Why not give us the picture and spare us the thousand words? Only in the case where we have no access to the picture would the words suffice as a kind of hearsay.

Likewise we asked in the previous section why not give us the verbal sounds instead of symbols representing them. The 19th century communicator would point to the mountains of space and time. "I can't bring you the verbal sounds unless you are here or I am there." And so reading and writing: the storage and transmission of visual verbal symbols was justified. You no longer had to be there, and all the people who weren't got the message through their eyes, but only after they learned to read.

Using the eye in this peculiar way became the habit of a select few, the learned. Eventually it came to pass that if any idea was important it had to be fixed in print- ed text. The printed word took on another dimension, collateral symbolic significance became attached to the code depending on where it was printed, the sub code of a sub form: newspaper, magazine, journal, book etc.. Soon many sub-sub forms offered themselves to embellish the printed word with this

other invisible layer of meaning.This additional layer of meaning is what keeps printed text afloat in the face of the sea changes wrought by the new winds of the information age.

In addition to the exclusive peep hole into the warehouse of information stored as printed text, the eye of the reader developed some other peculiarities which added to the staying power of printed text. A skilled reader can re-engage the non-linear processing of vision in reading the linear text. Scanning and skimming and changing the dwell time of the attention span makes the printed text much more perusable than stored audio. Even with audio scanning which is available on the newer audio devices, the eye is faster than the ear in how it moves and absorbs words. Of course, to the extent that the tones and pitches and spaces between the words contain meaning, the eye is at sea.

The advantages of printed text do not, however, secure a future for the paper industry. Printed text becomes more affordable, more portable, and more perusable in its electronic forms. Books are now being offered on floppy disc to be read on portable lap top computers. Months of reading fits in a shirt pocket, and each electronic text affords random access to key words which can serve as links to other texts. The electronic version of this very text and the companion electron- ic encyclopedia MindexTM are a handy example.

A looming question for text, whether on screen or on paper, is: does it have a life of its own as a form, or does it exist as long as it serves content? In other words as technology makes more direct non lexically coded forms possible will there still be a place for text? For instance if I can interact with still and or moving images and or audio; if I can talk to them and have them tell me what I need to know, and if all that can fit in a

pocket size storage device which can be networked through satellite to other systems, will I still carry a newspaper around under my arm and try to open it on a crowded bus; will I still want a book in my lap? These are important and timely questions to which I have no answers. By posing them it is not my intention to deprecate text ; I would be hard put to do that here. But there is no doubt that text as a form will have to do something which cannot be done by the other forms. What other forms?

We can divide media which is addressed to the eye in any number of ways. What we have been doing here divides nonverbal pictures or graphics from verbal visual symbols, because each invokes a different code in the interpretation. The symbols, such as text, involve a lexical code which, like verbal aural expression, makes for more precision. The nonverbal images invoke non-lexical codes which makes for broader, fuzzier meaning, like non-verbal aural forms. Another division could be based on whether the visual expression, symbols and/or images, is couched in display which is static or dynamic. Unlike aural expression which is ipso facto dynamic, even when it is stored and replayed, the display of visual expression, whether symbol or image, can be either static or dynamic. These two divisions create four categories of forms of visual expression: static symbolic, static imagic, dynamic symbolic and dynamic imagic.

Static Visual Expression

Since static media can display both linear visual symbols and images, we must become aware of the effects of each in different circumstances, with different con- tent. And further we must think about the effects of mixing symbols and images in the same static display. An example might be a magazine where the image may be intentionally related to the text, i.e. depicting some event that is spoken about in the text; or the image may be unintentionally or subliminally related, such as when an ad is juxtaposed to certain news items which may relate to the ad tangentially.

static symbols

Taking symbols first, that category would include the earliest Sumerian marks on stone, sign carvings on trees, mathematical symbols on a printed page or any other static medium and, of course, ordinary everyday printed text. The marks on this very page are static symbols which invoke a lexical code where the meaning of each symbol is spelled out in other symbols. Despite the apparent tautology, somehow the symbols create meaning in the minds of the reader.

In the case of this particular language the alphabetic symbols are designed to rep- resent the sounds of the words - which makes this a "phonetic" alphabet. Not all visual symbols amount to a full blown language, and if they do, they might not represent "phonetic" concepts addressed to the ear, rather they might represent "iconic" concepts addressed to the eye. Oriental languages which use pictograms are examples of this other kind of symbol. The iconic symbol may be, graphic or pictogramic, in that it may be more or less

abstract in representing its constituent object, or subject or concept. Iconic visual symbols, because they are symbols need a lexicon to set out exactly what is represented by the symbol. Like all symbols which rely on lexical codes, initiation must be in place at both ends in order for them to be understood. The differences between phonetic and iconic lexical symbols is outweighed by the similarities. The so called phonetic alphabet may once have been cryptic pictures themselves. Scholars differ about whether or not the letters of the present alphabet were originally pictorial references , but like the oriental pictogram they have long since passed the point where that which is pictured is self evident. Both the phonetic and pictogramic alphabets are no longer pictures; they are symbols; symbols which symbolize something. That makes for an extra step in processing the expression.

We said that with the phonetic alphabet, the eye is being used as if it were an ear, and it should be pointed out that there are some who claim that after long practice they can eliminate or minimize the role of the ear in the interpretation of visu- al text. But still this text represents sounds which bear their meaning and there is an extra step, however quickly it may be taken.

How the static symbols are generated and laid out also has its effect on content. A hand written note, a business letter and a telegram each with the same words would create slightly different impressions. I am old enough to have drawn these symbols from a well, that is an ink well. Continuous flowing ink from pens, type- writers and now computer printers are the material trappings of this form which has changed the mechanics of the expression. The preparation time is no doubt affected by stopping to dip for ink, and the

handwriting always created overtones to the content, just as the selectable fonts of the word processing programs I am now using add or detract from the intended content. Nevertheless, trappings aside, the channel capacity of the text form is substantially the same. The same in that the expression generation process on the inside is essentially the same: the intended expression must find its way through the lexical code and skills in the autonomic conceptoids of the 'drawbridge', which then string letters into words, words into sentences and sentences into formatted pages which convey the expression. And on the impression side we are still converting verbal symbols into meaning.

All media even in its earliest form was a time bridge and if it was distributed, it was also a space bridge. All media prior to electronic media was static image or symbol. The first stored expressions that we know about were static images and static images are still in wide use today.

Wrought Static Images

By static image we mean a two dimensional expression that conveys meaning without the intervention of a lexical code.To the extent that the visual expression is imagic it is non linear and non-sequential and therefore spacing takes the place of timing. All visual communicators know this and use it to make and deliver visual expression.

Static images must be carried by media, whether stone tablets, paper, canvas or other static display. As we saw on the impression side, the medium results in a mix of object and pseudo subject impressions. The latter make their way to the pseudo-subject sub domain, and the former to the object domain. That routing has significance for us here on the

expression side in that the medium is governed by a form which dictates how the image is made and sent.

Images can be wrought, that is rendered by hand with the help of some secondary tool, or they can be captured with the help of some optical device or some combination of both.

The static image whether wrought or captured, because of its independence from time and timing, allows the eye to proceed in its own path at its own pace. With all static images the eye is free. This, of course, means that no single path is the correct one. The multitude of possible visual paths is the gift of form which the content works against to lend impact to the visual expression. Composition and chiaroscuro (use of light and dark) are some of the tools at the visual communicator's disposal to trap the emancipated eye of the beholder. To the extent that the eye is trapped into the subtle patterns a second, unannounced, imprecise level of communication occurs. Like the more abstract overtones of harmony in musical expression, this second level may delight the viewer without any precise aware- ness. Not only is the depicted object referred to but a more abstract pattern sings a harmony or counterpoint for the eye, the total effect of which is greater than the sum of its parts. The subtlety of this second level is linked to the esthetic plea- sure which it affords.

In this connection the skilled wrought image communicator has more work to do, but by the same token more can be done, and therefore there is a deeper chan- nel capacity, if not a broader one. Compared to the captured static image the wrought static image can afford to be more the direct offspring of imagination and intent, more internal.

Captured Static Images

The static image captured by a camera is limited by the size and shape of actual objects. Much can be done with lighting and processing, but the reflection of light from that figure is the basic element of the visual expression. Here again the exceptional content pushes against this effect or limit of form for glory. Lenses, chemical and digital image processing and any other tools of the form notwithstanding, the external object which becomes subject expression is more control- ling than in any other form of human expression. This restriction on the expression side has an equal and opposite effect on the impression side where the photograph demands credibility.

The fact that the wrought image preceded the captured image historically has some communication significance. The initial coding for 'imagic' communication was dictated by the wrought image. Those codes had to be followed by the captured image if the second level of communication would occur. Surely life experience itself attributed the "brooding" to heavy clouds, but it was the painter who set that into esthetic code. While there are no rigid lexicons of meaning as with symbols, there is some codification of the collective experience regarding the significance of pictorial elements. It was the wrought image with its codes and visual tradition which influenced the esthetic sensibility of the photographer. The codes had to be addressed if the captured image was to communicate and then the code had to be exceeded if the captured image was to establish itself as an independent form. This is a challenge for each new captured image.

One feature of form which helped distinguish the captured image was its speed. Even with the long exposure time of early capture devices, the overall rendering time was shorter than it was with wrought images. And so the communicators of the time pushed the technology for greater and greater speed and facility of process. Eventually humming bird wings could be captured mid stroke for the eye to peruse at its leisure. These figures could never have posed for the painter, nor could anyone have imagined this piece of reality exactly as it unfolded. It was not very long before the static captured image was assured a place in the hierarchy of visual communication.

The speed of image capture also meant that the single visual communicator could make more images in a day, or in a career. A broader range of subjects and objects could be brought to this visual expression. Instances that would have been lost to the painter could be brought home in the camera. Needless to say this changed the course of the wrought image as well as the captured image. It forced the hand of the wrought image maker further toward imprecision, that second voice, or second level where the camera's speed had no advantage. Modern so called "non-objective" or "impressionistic" or "abstract" art can be viewed as the re-establishment of the wrought image form with new levels of imprecision in the underlying code.

Still the forms could not settle down each to their own turf. Once the wrought image became less literal, more abstract, the captured image followed suit. So called fine art photography escapes the literal reflection of the object.

Now with electronic imaging the line becomes even more blurred. The fact is that images can now be partially wrought and partially captured.To scramble our analytic tools even

further the "bastard" image can also be displayed in a dynamic passive, interactive or static medium. In other words. I can take a photograph with film or electronic camera; I can then scan the photograph into image processing software in my computer and then use computer graphics to change it in an almost infinite number of ways.The product of this mixed compound process can now be printed on paper as a standard static display, or it can be displayed as an electronic still image or it can be animated so that it becomes part of a dynamic passive display or it can be pieced into a more elaborate responsive display which purports to be interactive.

This mixed form has yet to established its own code which often results in mis- communication. For instance credibility demanded by the photograph is now subject to question. Subjects and objects that were not and could not have been together can now be seamlessly pieced together in the captured image. This loss of veracity for the captured image has negative effects on journalistic sub forms which offer facticity, but affords new latitude to broader artistic license. The captured elements can be manipulated into as much of a complex expression as might be contained in any wrought image and still within a much shorter time.

The mixed digital image has quickly found its own distribution channels. High publication costs traditionally created a necessary super structure which served as a topical bottleneck.The visual expression had to pass muster through editors and publishers before it was disseminated. Now that is less the case. One can desk top publish one's own work eliminating the superstructure and whatever good or bad effects that had on content. This is true for all expression, not just visual expression. Demassification of

audiences has already resulted in a broader range of top- ics serving the broader range of interests which was always there but had to be ignored by mass communicators.

Dynamic Visual Expressions

Dynamic visual expressions may include either symbols or images. The dynamism of the visual expression may be linear and passive (which points back to aural expression) or it may be responsive, also refereed to as interactive. Below we shall examine both kinds of dynamic images and symbols.

Dynamic Symbols

The category of dynamic symbols would include such things as electronic text in its passive form or it could include the responsive kind of dynamic symbol such as hyper text.

Symbols such as text are normally presented in a static two dimensional visual display which holds still for the eye, but with the advent of electronic screens other possibilities emerge for better or worse.

Until now the dynamic potential of the electronic screen was not exploited for symbols. Electronic text would just sit and wait for the eye as though it were on a page.

Most recently, however, the dynamic capacity of the two dimensional electronic display has begun to be explored. In one sub form the text drags the eye along in it a preordained horizontal line which moves away from the eye, left to right; while still another moves the line of text toward the eye, right to left. In either of these cases the expression is evanescent, demanding a certain timing in the perception process, which

is atypical for visual expression. Scrolling wire service news or stock prices across the bottom of the TV screen, or scrolling text advertisement on an electronic bill board follow a new shakier code of dynamics applied to symbols. Neither sender nor receiver are sure how the text will move, how it should move, or why it is moving at all. Linear passive dynamic displays share the quality of "evanescence" with aural delivery systems. In such a case the sender rather than the receiver decides the dwell time. Time is the key word. These symbols aimed at the eye are timed to be here and then gone. Even where it represents evanescent linear aural expression visual expression traditionally stays in a particular space and waits for the eye movement however long it takes.

That was its strength. Adding timing in a passive dynamic display will have to fight this sensory tradition in the 'window' and build new conceptoids and processing routines.

Adding responsiveness to the dynamic potential of the new display would be to allow the eye to chose the direction and rate of flow with which it is most comfortable, and possibly stop the flow and step out to a collateral stream, as in "hypertext."

An MIT psychologist, Mary Potter demonstrated to a meeting[28] the effects of a stream of dynamic text, where single words popped on and off in the center of the screen. The result of not having to move the eye seemed to improve both speed and comprehension, so much so as to raise the question seriously: why move the eye when you can move the text. She also demonstrated in this dynamic display the nesting of representational images which added substantially to both speed and comprehension. Where and how occasional images might fit into a dynamic display has come

a ways since the Potter experiment especially in the use of icons to represent computer commands.

The dynamic display, such as the personal computer screen, seems to violate all the paradigms of the traditional forms. The lap top I am now using will afford dynamic passive or responsive text, image and/or sound within the same content. What to do with all that capacity remains a challenge. Informal experiments which I was involved in explored the effect of the sound with text. The sounds could be directly related, as in pronouncing the text which is being scanned by the eye; or they can be collaterally related: relevant sound "effects" such as the sounds of the train when we are reading about a railway station, sounds of the sea when we are reading about the sea, specially selected background music, etc. Some of these seemed to have the effect of prolonging our ability to concentrate. It seemed to me that in creating an appropriate background mood for the con- tent, the sound milieu relieves the fatigue of processing symbols in a vacuum. The involvement of the ear in this secondary expression seems to close focus and enhance attention, provided, however, that there is coordination between the pri- mary and secondary expression. If text were being read, for instance, against a background of random radio music, the same might not be true, because there the attention focus is subject to alternation between the two streams of expression: neither fit as secondary expression since both were intended to be primary. Furthermore, each is in a different form.

The problem of triggering the sound at the appropriate time requires some unobtrusive input which will let the computer know where the eye happens to be at any given moment. The key is to slave the evanescent aural stream to

the eye without loosing its flow. This was not accomplished in the informal experiments mentioned above. But we saw enough to know that done correctly, this bisensory feed (combining dynamic, responsive symbolic visual expression and non-verbal aural expression) could become a new form. (Children's books are now avail- able with stored audio effects: trains that whistle when a button is pressed, etc.. Since the sound has its own button, it is not background; the child has to stop reading and listen.)

There is a history prior to electronic media of the visual enhancement of text. Ads, already mentioned, comic strips and photo novellas for years have searched out formats for combining text and image. Again, the image may relate directly or indirectly to the text and it may be captured or wrought. The effects of the dynamic capacity in the new electronic displays and the possible interactivity open these combinations up to a world of new possibilities. On its new electron- ic page, text may provide selectable enhancements which may be audio or video.

A somewhat related example, can be found in silent movies which involved primarily dynamic images over text which was accompanied by live music (presumably the accompanist was intending, however successfully, to fit the music to the scene). This eventually became a compound audio-visual form with both moving images and a complex sound track containing music and effects in the control of the original communicators. Just as with the movies, the sound in the audio enhanced text can be directly or indirectly related to the import of the text, and as such it can be speech, music, or sound effects.

Dynamic symbols may be non instantaneously stored or instantaneously transmitted. If instantaneously transmitted

they may be one way, as in wire service or teletext, or they may be two way as in electronic mail and all the networked information transferred between computers.

The non instantaneous dynamic in stored symbols emulates the interactivity of the earlier "immediate" forms where the receiver of the expression could ask questions. Instantaneous systems, "on line" continually develop front ends so as to relate the computer complexities back to some other already known communication forms. Each of these nascent forms is now groping for internal amenities and external trappings with which to build their new codes.

Dynamic Images

Dynamic images are not fixed in their medium; not painted on canvass or print- ed on paper, or carved in stone. They are electronic images. Listing all the possibilities: whether wrought or captured, dynamic images may be sent or stored and then displayed as single static images (printed on paper) or dynamic sets of images on electronic screens. Leaving aside the reversion to static display, the dynamic image (which now means dynamically displayed) can be passive or responsive in its dynamism.

Three coins each with two sides: production (wrought or captured); delivery (sent- i.e. transmitted electronically or stored -i.e. shipped physically in some medium), and finally display (passive, i.e. linear or responsive, i.e. interactive)

In its delivery, it may be projected to any size group, privately displayed on small screens, or any combination thereof. The larger the audience for the single dynamic display, the more passive it must be. It is too difficult, at the

moment, for the single display to handle simultaneous interactions from multiple viewers.

The first work of the dynamic image was to depict motion. This was accomplished by means of a sensory trick. Even before the discovery of film it was known that the eye would infer motion from a series of rapidly presented still images. This sensory aberration now known as persistence of vision became the tool of visual communicators at the end of the last century. At first a mechanical device (kinetoscope) flipped images in and out of view causing the eye to see motion. Later pioneers such as Leland Stanford captured the images on rolls of film. The sequence of registered static images exceeded the speed whereby the human eye could distinguish between separate frames and motion was inferred from frame speed. (This limitation of the visual senses makes one wonder about the authenticity of all perceived motion in the object universe. Maybe they were separate scenes and the motion we saw was not there or is substantially different.)

This trick of perception meant that the dynamic of the display had to be limited to one linear direction and one speed. Nevertheless the new dynamic display was able to capture motion and with it more explicit emotion. The action and behav- ior of subjects and objects could be depicted instead of merely alluded to as with the static image. However, visual communicators began to realize that there was a price to pay for the benefits conferred by the dynamic. The eye could no longer be invited to take its own sweet time to wander freely, as it could with static images. The eye and the processing behind it had all to do to keep focused on the illusory movement and all the complex action in its content.

Visual expression empowered by this linear passive dynamic moved straight away from the traditional non-

linearity of static visual expression including the esthetic principles. It moved in the direction of live or immediate theater. Figures were no longer models but actors. It moved so far away, so fast, that the static image, wrought or captured, maintained the place it had secured for itself in the visual communication hierarchy.

Quickly established in its own turf the linear dynamic visual expression, the movie, soon discovered that its content was not limited to acting. It could depict nonfiction as well as fiction, information as well as entertainment. Although distracting entertainment continued to be its main dish, it also delivered wars, dis- asters and other curiosities from everywhere to the home town movie.

The fact that it played to live audiences over a preordained viewing period and was mixed with live music in its earlier silent period complicated the technique and talents which went into its production. Image capture was the basic technique of film making, but beyond that scripting and film editing were soon dis- covered to be essential to the pacing which held the interest in the new linear motion. Whether the content was fiction or nonfiction, the form demanded some overarching story or plan as well as a visual rhythm.

Because there had to be a story, there had to be morals or rules from which the story is deduced. For a time this lead film authors back to literary themes. The form was pointing toward its own depth, but financiers were distracted by its breadth, and rather than join the soul searching of other forms, American movies decided to borrow trite, tried and true themes which could be easily understood, and justify the enormous distribution potential of this new form. Scary scenes could be presented as in no other form, with all the dynamics. For a time film became more of a roller coaster

ride than a communication form. The cliff hang- er and chase were the central theme with a character thrown in to promote identification. We should make clear, however, that the decision to stick mainly to kitsch was not the effect of form on content, such an effect could have had quite the opposite result, rather the kitsch of early movies can be explained as the effect of intent on content. In other words it could have been otherwise had the movie purveyors intended it to be.

The dramatic moving image which needed dialogue looked back to text for a time, which appeared on the screen as separate cards between scenes and also below the dynamic image. The text in this sequenced linear form was necessarily evanescent. Like the moving picture it couldn't wait for the eye. Film makers had to be continually reminded that the new form had given up the eyes nonlinear processing.

Eventually, since the movies' paradigm was now linear it made sense to add sound to the linear processing. The tradition of live non-verbal, aural expression- musical accompaniment - was carried over into the talkies. Exactly how or why the idea for musical accompaniment arose is not clear. There was of course the long tradition of music accompanying live performances such as operas and ballets. Whatever the reason, the external trappings of the form were pushed to deliver simultaneous ("synch") sound including music along with the dynamic moving image. Now movies had it all, or at least more than any other form in terms of sensory array. It could deliver dynamic wrought or captured imagic or symbolic visual expression as well as verbal and non verbal aural expression all in the same transaction.

So overwhelming was this sensory smorgasbord that for its first audiences con- tent was overshadowed. It didn't much matter what was being expressed; the form out dazzled all

other components of the expression. Eventually an amalgamated esthetic code began to emerge which had the pictorial standards of static imaging and the dramatic and literary codes of theater and other fiction. I shall not argue whether and which movie content qualifies as art, and certainly nothing I said earlier in connection with Adler's book can be taken as a limitation on con- tent in general. The truth about so called "great" content is it must be chosen at both ends. With movies, if not demanded, it was certainly not precluded by this form, or any other form, since the depth of content is a function of intent.

The fact that so much capital was involved in movie making did put control in the hands of financiers. Their mind set was not that of the artist. Whether because of the artist or the audience's aspiration, somehow the technology was pushed to reduce the cost and size of the tools and thereby place them in more hands. The new tools freed the movie maker from the studio.

The dynamic electronic image permitted seamless, undetectable digital alteration which pushed this captured image with its esthetic, legal and ethical expectations more toward the wrought image. As of this writing, electronic video techniques can merge images acquired anywhere under any circumstance with any captured or wrought images obtained and created anywhere else. Sets and scenery need not exist in the physical universe to become part of the picture. And more importantly capture devices for image and sound can be held in one hand and the magic of processing can be done on a desk top. With all the enhancements of form, significant changes in content are yet to be forthcoming.

Perhaps the impact of the digital imaging revolution has not weighed in fully yet. Taboos are being violated, but new

codes and amenities are yet to find their place. The fault is not all on the expression side. The form's internal codes have not solidified, and that is not the fault of the audience. The external trappings move so fast: cable, cassette, movies on demand, home made movies, so much to watch, and now the computer a responsive system, joins the band, offering interactivity, multimedia, virtual reality. We are not sure yet what to expect and so how we can we be satisfied?

Responsive Dynamic Images: Multimedia

In our analysis of form we have tried to say things about form in a vacuum, that is, form separated from content and intent. At the same time we have suggested that it is mistake to consider form without content. In justifying these seeming inconsistencies we need to consider the purpose of the analysis. If we are trying to evaluate content and we speak about form in a vacuum: "TV is bad or good," there is an obvious mistake. Bad and good are subjective value judgments which need to be applied to subject content, which TV show. I might deplore every TV show I have ever seen and that would be valid because I'm talking about content. I cannot make a value judgment about form. In that sense form is object and objective, subjective value judgments apply to subjects, including content. In talk- ing about form in a vacuum, then, we have made no value judgments, and have tried to confine the comment to descriptions of the object, the form. And yet, we have implied that in addition to affecting content, forms affect each other. This puts form in the driver's seat again, makes it the subject of a predicate. If form is not a subject how can it do anything like affect other forms? The con- fusion here arises from the intimate connection which

this particular object has with its subjects. Form contains and is contained by subjects. Therefore, it is handier, if imprecise, to speak of form when referring to related subjects at either the expression end or the impression end. It is a semantic quirk to speak of form as though it were content and intent. The object comes to represent the subject, because it is more solid.

This happens in describing other subjects as well. For instance in describing the action of a pool player we say the cue ball chased the eight ball into the pocket, or jumped off the table. The cue ball was really responding to the force of the cue in the hands of the subject which supplied the aim and the force, the action. When we use the word form as something which affects other forms, we must keep in mind that form is an effect of consciousness. When we speak of any action of form, we are really speaking about the consciousness which uses form to communicate.

When we imply that forms would like to be what they are not, we are describing the intentional action of the subjects not the object. For all subject consciousness, and so with its forms of expression, lack defines the path of becoming: one can- not aspire to ground that is already held, already accomplished. Form seems to move forward in the direction of what it is not, even if that means circling back on itself. Remember in applying Einstein's curved outer space to our internal, metaphorical space, we borrowed his idea that there are no straight lines. And so in moving forward, form reaches back. It curves back around to find " immediate communication. In moving toward "interactivity," all mediate forms could be said to be moving back to immediate forms.

If "immedia" was all that was required why did we go to the trouble of inventing "media." Obviously on some level,

"immedia' was not enough. We needed to communicate beyond our reach. There were people we cared about beyond the range of our voices, beyond the line of sight, and even beyond our own life time.

The first aspiration of man the "symbol maker" was for forms of expression that could bridge space and time. Man the "tool maker"[29] bent his efforts to the task and forged new forms. The forms pushed technology for new ways to extend and store expression. Eventually, as far as form was concerned, expression could be as far reaching in space and time as anyone could possibly imagine or intend, and as an added bonus, addressing multiple senses at the same time.

The space bridged by the universality of mass media brought more people together in the sense that they saw themselves as citizens of MacLuhen's global village, but did not necessarily feel closer to each other, and certainly felt further removed from their own back yards. The time bridged by the incredible amount of stored expression has meant less time for our present interest in our own proximate lives. It is no wonder isolated mass media audiences craved to interact with the medium.

As paradoxical as it seems the tool maker of the modern information age has once again bent and reshaped his tools to oblige the symbol maker.

Production even with the new tools is now further complicated by the new dynamic display which we have been considering. With the addition of the computer, the dynamic of "dynamic visual expression" was re-deployed to be more responsive. In other words the order of the frames at the time of production is not necessarily the order at the time of display. The permutation and combination of orders possible with the same number of frames means that hundreds of

thou- sands of movies can be made out of the same set of images, and now the task is to fit the user to the most appropriate set of images. Which user? Under what circumstances? Without the linear path and pacing of movies, what is the new responsibility of authorship?[30]

Unlike traditional media, modern responsive or interactive multi media has taken to actually allowing the communicatee to instantaneously mix into the non instantaneous content. For the media author this means that the communicatee must be contemplated in more elaborate detail. The media "users" can try out somewhat constrained personal moves within the media content thus blending and bending the original content in their own direction. The result is a pseudo- subject impression that leans very heavily in the direction of the object domain. I put these "responsive systems" [interactive media, multi media, virtual reality] at the edge of the pseudo-subject sub domain nearest the object domain, but not in the object domain as such, since there is still non instantaneous media involved, prepared in advance by a human subject, therefore a pseudo-subject expression.

As the "multi" in multimedia multiplies the delivery potential at the impression end, it multiplies the production problems at the expression end. A multimedia presentation of the rock picture we took at the beginning of this section would need to cover all the visual perspectives that the viewer might have if he and the actual rock were together. It is possible to allow the user to change perspective from top to bottom, or to either of the four side views. The multimedia might put him under the rock where he could not have been otherwise. Six images is six times the image capture work involved in the original photograph; making them randomly accessible involves framing instructions to a strange new beast, the

computer, and then graphically designing a user interface on the electronic screen that will make it clear to the user how to get from one to the other, (navigation) and at the same time let him know where he is at any particular point (orientation). That interface work brings the work load of the author/ authors up to about ten times the production effort of the original photograph. And what about going into the rock? What about its history? What about its geography? It's geology? It's chemistry? Its archeology? Shall we go on? And that is just a rock. Imagine if the object were a subject.[31]

Some would say the new form must appear to spontaneously respond to the variety of communication partners who might "use" it. So spontaneous is human consciousness that substantial changes occur in the minutes during the display, let alone the months or years it takes to prepare a responsive (interactive) program.

We know by now that any communicatee in any form of communication is at best a moving target which makes all communication a hit and miss proposition. And we know that this existential paradox has traditionally haunted all forms and has always had a proportionally greater impact on the non instantaneous forms which afford greater advance preparation, but in a vacuum. Historically, with tradition- al forms, a rule of thumb arose to compensate for this relation of unpredictability to preparation time. The unwritten rule simply mandated that the longer the preparation time, the deeper the content. We all live on a sphere; the deepest point is the one closest to everyone. Long term non instantaneous media of the past - novels, sculpture, etc. have always tried to justify their preparation time by deal- ing with content which would have, at least, longer shelf life if not current wider distribution. (The incessant allusions to mythological

subjects can in part be explained by the often misplaced hope that if the subject had been around some thousands of years it might more likely continue to be around and of interest for enough years hence to justify the time it took to chisel the content into its form.)

Still the question remains: are there any eternal verities where content value is concerned; if so how do we apply them to the new media.

In an earlier section we took seriously the "disintegration" effect of mass media.

We said that the object domain was deprived of direct experience and even the appetite for direct experience which communication ought to inspire. What about modern responsive media, is the same disintegration to be expected?

The responsiveness of modern media does create a synthetic experience. These synthetic experiences, to the extent that they allow the users real choices, break the vicarious "tele-trance" and presumably the addictive appetite. They can, theoretically, enhance the capacity for real experience by providing conceptual exercise, theoretically! Again we find ourselves speaking of a form without considering the content and the intent behind it. While we can not speak about form in a vacuum, we can make a generalization about the content we know about in this form and the intention and propensities of subjects now using it. In the end despite its new dimensions, it is still a form of communication, and as such it can never take the place of direct experience. This is basic to the division of subject and object domains.

I have heard new media vendors quoting Confucius who purportedly said:

"I hear and I forget.
I see and I remember.
I do and I understand."

If he did in fact say that I'm sure he must have been referring to direct experience, and not any form of indirect media experience which I'm sure would have bog- gled his mind and left him wondering with the rest of us about what and whether we are "doing."

Virtual Reality

One form of highly responsive dynamic visual expression closes off peripheral attention and encapsulates the senses in a "virtual reality" through which the viewer appears to himself to be moving. In order to accomplish this, the dynamic image set has the awesome task of responding appropriately to the movements of each user's entire body or any of its parts. The ramifications of all the possible moves of all the possible parts of all the possible users presents the expression with a combinatorial explosion of responses to be programmed, which leaves one won- dering whether it ever can be done with any sense, which is not to take away from what has already been accomplished. No matter how flexible, there will be a limit to what the program can anticipate in terms of user interaction. Interaction may not be the right term, since it is only vicarious or virtual activity.

Science fiction about the new media seems to toy incessantly with the possibility of erasing the line between mediate expression and immediate experience, between the

subject and object domain. In the fictitious scenarios, the new responsive capacity of the medium is potentiated with everything from the chemistry of hallucination, to brain implants which conspire to leave us in a world where authored pseudo-experience can compete indistinguishably with real experience. And, again, the day may come where the largest possible audiences can no longer distinguish between objective experience and pseudo-experience. But even in that world someone will have to make and /or distribute the pseudo- experience, the virtual reality; to do that, that person would have to know the difference. Even if the sole purveyor, the wizard of oz, is the only one who knows the difference, there is a difference. So, Turin test notwithstanding, we can say with philosophical certainty there will always be a difference.

Practically speaking we are nowhere near the point where the question even arises. In fact, there have been some training and educational experiments which appear to allow new levels of exploration for the pseudo subject sub domain. The expression aspires to pseudo experience. But, again, by definition as long as there is an author the expression can not be commended to the object domain as expe- rience, unless it becomes indistinguishable from real experience. There is, of course, an object experience with the media object: the knobs, gloves, goggles, etc., just as there is with any media object: the TV the book, etc.. That should not be confused with direct experience with the media subject, which is impossible. But can it be "virtually" possible, i.e. seem possible to the user. For virtual reality to confuse the domains and be taken in as direct, objective experience, it would have to be as spontaneous and complex as real reality.The author who could man- age that could rightfully

claim the title, God. By comparison, virtual reality is a tempest in teapot, which is not to say that some day, some expression carried by the virtual reality form might not rise to highest level of content heretofore known; that has not happened yet. I have had more believable virtual experiences with the content found in novels than with any "virtual reality." Perhaps because the form is too new and so much attention is paid to the form ignoring content, as with all new forms.

We know and expect that all great content bends and aspires to escape its form, whatever that is. With current virtual reality expression, the form has been try- ing to escape itself without the aid of content. The form itself purports to delude, to erase the larger "mediate" class boundaries, the subject /object domain border. So does every form when it starts out. This one uses its object trappings to trap more sensory focus, but ultimately some subject will have to feed that focus some interesting, believable expression.

It has always been true that certain communication rings so true that it almost takes the place of actual experience, but only "almost" and that always has to do with the innate willingness to suspend disbelief. The suspension of disbelief comes as a given in any communication transaction. It is yours to lose and it usually is lost by most communicators who cannot bring themselves to openly share. Virtual reality seeks to employ the object trappings of form to insure the suspension of disbelief. A ride at the fair can make you think you're going somewhere by simply making you dizzy but not for very long. There must be content. No form can go on forever without content and no content can go anywhere with- out intent.

Castle Preservation

It is not only true that spontaneity of consciousness presents difficulties for communication; it is also true that communication presents difficulties for the spontaneity of human consciousness. From the very beginning consciousness had to constrict itself in order to engage in communication, even in primordial "immediate" forms. Language itself is constricting, not to mention the relationships it portends. The more ingrained the communication relationships become, the more demanding the expectations of the communication partners. So much so that the more involved we become in relationships the harder it becomes to develop any new habits or skills. We discussed at length the fear of success and can see now that any new habits would change the outward manifestation of our consciousness to the others on whom we depend for communication. Often it seems that intellectual and psychological progress has to be forgone in the name of relationship, because of the communication it offers.

We saw that the more imperfect the communication, the more dependent the relationship and the greater the irrationality, so much so that happiness, advancement and even life itself may be sacrificed. Simply put, communication has its price some pay much less for more; some pay much more for less. That there is a price for "immediate" or live communication relationships is not news; that there is a price beyond cable fees for mediate relationships may be a surprise to some.

As of this writing the government and media are almost raving about an "information superhighway" (also known as

the National Information Infrastructure). It seems a certainty that the technological genie will provide interactive channels in every home. It has just begun to dawn on some that the channels themselves are empty; someone must decide what level of information and interaction is either "desired" or "necessary."

There is the rub: is the basis of the decision "desire" or "necessity"?

If it is "desire," the media moguls will use these channels to manipulate that "desire" so that people will promptly return home from work and promptly, with the flick of a finger, transmit their earnings back through the media channel which will replace the store, the movie theater, the bed, and even the theme park where all the money used to be spent. The vagaries of life will be reduced by the new technological efficiency and some would say, "so will life itself." The media mogul wants a couch potato farm, the ultimate in totalitarian order. The couch potatoes seem to have no long term plans just short term desires for distraction. In giving the mass audience "what they want" the totalitarian order passes itself off as having been freely chosen.

To propose giving the mass audience "what it needs" is to appear fascistic and totalitarian. Nevertheless, there are those who feel there is a "necessity" to enhance the individual in the free society by teaching and learning over the new "information" channels, but this would clearly have to be imposed on the couch potato. Irony of ironies: the good guys are in the black hats and the bad guys are in the white hats: those who would keep society free must be on the side of government control, while those on the side of freedom will use that freedom to create the quintessential tyranny.

The great danger is that none of the concerned legislators seem to object to the mind control of mass media; they only object to the sex or the violence, some particular content. In other words, you can own all that attention, just don't use it to make trouble. This is tantamount to a declaration that there is nothing wrong with exploitation per se as long as it doesn't lead to some other trouble. Which is like saying violence is OK as long as it doesn't lead to injury.

Can we say, categorically, that there is anything wrong with exploitation? Can we even define it legally or philosophically? At first blush, there seems to be no consensus that would define, let alone, oppose mass media exploitation. However, if we looked at the broader field of communication instead of just media, we might find some common law, common sense and common consensus about this most basic human process.

Throughout human communication laws and social mores, if only by implication, acknowledge that there are some who know more than others, and that there is a duty commensurate with this knowledge privilege. The privilege has to do with the fact that the greater knowledge commands the attention of the lesser. Before mass media, the misuse of that privilege, the violation of that duty, has always been viewed as odious and has been severely sanctioned with small and large ,more or less bloody revolutions. Teachers, doctors, lawyers, rulers and other knowledge professors, and even parents have been held to higher standards; con- sequently those who intentionally miscommunicate to dependents have been subject to greater sanctions.

When mass media came along it argued that its message was not that kind of communication; it should not be held to "information" standards since it was "entertainment." What is

entertainment? Is it the same as art? Whether or not it is art, there is a license which allows greater access to audience, and there is a duty implicit in the license. Every culture demands that eventually the art must have some redeeming social value. Somehow the media mogul has avoided the test of "redeeming social value."There are a few who have been brought to justice for their comparatively harmless sexual peep shows, but the rest have a free hand to kill and maim on screen with impunity. What is worse, their repetitive ads would garrote the priceless gift of human attention, keeping the headless mass dancing to jingles on the treadmill of consumerism.

The public communication license has always been a knowledge privilege for the communicator who has more to say, a pass key to the minds of some audience. One would think the larger the audience the more demanding the test for the issuance of pass keys. Would any sane society settle for a pass key test based sole- ly on price? Known burglars whose sole motive is plunder could obtain pass keys as long as they paid the price, which they would pay out of their plunder. Communication would become lies. Could that happen? Has it happened? The laws say "public interest" and commissions are supposed to see to that, but they don't because they fear censorship.

Censorship is a bad word in a free society; exploitation is not. Censorship is not bad in and of itself; exploitation is. Exploitation is bad because it is a violation of the basic human communication pact: shoving instead of sharing. Censorship is bad if it is used badly. The fear is that there are no standards by which to judge the censor. But there are standards which we use to censor everyday communication all the time. We won't let people lie to us continually without

shutting them off. If mass media were held to the standards which govern other human communication, the holders of the pass key to millions of minds, would have as a condition, the enhancement of those minds attending. How are we going to know that? Ask them. That should be the first job of the information superhighway: 'askevision' instead of television.

Because the effects are scattered and slow to be realized some thinkers tell us we are in the midst of the greatest unrealized human catastrophe ever. Our global village has been turned into, not just a "vast wasteland" as one commissioner called it, but a toxic dump. Historians will no doubt agree that the exoneration of mass media from this basic human communication responsibility has made possible the most destructive communication relationship in the history of humankind: that between the mesmerized mass audience and the manipulating mass media moguls; so much so that communication skill has been redefined as manipulation skill. The "would be" social science that supports the mass media empire simplifies all the complexities of human behavior into one simple rule - "repeat a lie often enough and it will be believed." This blitz maxim was deplored in the hands of dictators but not advertisers. Any one raising any doubts about the effectiveness or morality of this maxim is banished by both leaders and followers alike.

Emerson said that the two things which are most deplorable are the infidelity of the learned and the devotion of followers (The Gospel of Emerson, edited by Dillaway, Unity Books, 1939). Bad leaders and devoted followers perfectly describes the mass media relationship. Mass media can no longer avoid the imposition of standards by declining the responsibility of leadership. One who commands that much

attention is a leader, a leader, in fact who commands more attention than any other in our history, and therefore should be more responsible not less.

What would communication technology be like if it weren't dominated by the sin- gle minded profit moguls? Some of the channels could be listening to the people instead of selling all the time.The government would become more responsive and more interactive, more democratic. Education could be furnished to every indi- vidual on an as needed basis. Stress and misconduct could be counseled and mon- itored through communication channels. No individual would be so anonymous that he could become a mass murderer without anyone ever knowing who he was or what went wrong. Could communication have dissuaded the wrong doer? It does every day.

The last philosophical hitch we must deal with in our communication theory has to do with the self determined existential position by which consciousness was characterized on the one hand and the inevitable centrality of communication on the other hand. On the one hand we're saying mind is what you make of it and on the other hand we're saying you are born into and therefore subject to communication. Does that put communication outside the scope of self determination?

Consider the first rudimentary expression, the smile. Babies seem to smile before they can be taught to do so, and even if we take the position that they are mimicking adults, from whence comes this ability to mimic?

Anthropologists tell us that some other members of our phylum, the apes, also smile. If we say the smile is primordial, we must also include the frown and so we already have an innate range of expression. The face is more than something

to be fed; it is a part of the prime object manipulated by inevitable subjective energy to communicate. Are these biological laws? And do I have to obey them?

It may one day become crystal clear from the DNA double helix in all its transcriptions that communication is a biological built in, but nevertheless that can only mean that form is predisposed not content which is subject to intent. Any and all communication may (not must) be chosen. Life itself dangles on the same "to be or not to be" ; that is the question which we must answer every day in choosing to live. If we answer in the affirmative, we live and to live is to deal with the next question: how and to whom shall we communicate. Keeping in mind that this basic urge can be perverted and even reversed by willful acts at times, and that those acts may be judged by others and controlled, we still come out with a pattern that implies some resistible push toward the connections between minds.

Whether the push will be resisted or re-directed is uncertain.

As we said at the outset, uncertainty is the basic ingredient of all curiosity, and curiosity is the basic ingredient of all reaching out. We all reach out at some time in our lives. There are many opportunities to reach the few; there are few opportunities to reach the many. If this was such an opportunity, I hope we made the best of it.

Mindex Digest

HISTORY OF THE CASTLE WALL—DUALISM AND PHILOSOPHIES OF MIND

Early in Eastern thought, Maia (illusory perception) was distinguished from the world beyond the senses. At the same time, the very beginnings of what we now call Western philosophy also wrestled with the distinction between mind and matter ("wrestled" without succeeding in an orderly separation of the two).

Thales the Ionian in the sixth century B.C. is often the first to be considered in any historical perspective of Western thought. What Thales thought is hazy at best; what he thought about thought is close to conjecture. Can we say that there was any separation between mind and matter in Thales' conceptions of each. Probably not. Like all Ionians he was searching for a principle which would unify the seemingly separate observations of the real world.The idea of separating the unifying principle from that which it unified was most probably anomalous. Gods permeated all things and were taken seriously as far as we know. Still Thales conceptualized fundamental substances whose changes shape the world. Though these may be dismissed as loose threads from the vestments of theism rather than genuine philosophy they do, if only by implication, put the issue of mind and mater on the human agenda. We have an internal concept, primordial metaphor trying to explain all that is outside, albeit without realizing the difference between the explanation and that which was being explained.

Pythagoras (c 570 BC) another early thinker was also in search of a unifying principle but may have dealt with the implications of dualism more directly. He explored the idea of harmony. Harmony is the universal rule which provides nature with stability. Harmony was quantified and reduced to measures and geometry which explained the forms in nature. Here already we see a distinction between objects and their forms. Division was essential to Pythagoras and his followers. In fact Pythagoras may have divided all of reality into ten steps.[33] The first five having to do with inanimate objects; the sixth with vegetables; the seventh with animals; the eighth with humans; the ninth with the ultra mundane, and the tenth with the gods.

The ninth step seems to distinguish the realm of soul and possibly mind. Still both are governed by the same harmonious rules which govern external reality. Metempsychosis is the process by which the soul left the body and migrated to another being up or down in the hierarchical order depending on how much was accomplished in the preceding life time. The order of this harmonious set of rules was so appealing that it became the credo a utopian society founded by Pythagoras in Italy which apparently flourished for several generations and which may have been visited by Plato.

As for any dualism in Pythagoras, if it were not announced as such, it could fairly be implied. Actually the same is true of even earlier Greek thought where the soul is described as distinguished from the body. Such a distinction, and therefore duality, can be found even in the earliest Greek poet Homer.

It would be a serious error to classify Pythagoras as a shut out monist because of his "materialist" explanation, since for him and his followers harmony and geometry suggest a separate realm which can be reached by mind. As we said and as we shall see all Greek views can be said to contain "dualist" implications, and, in fact, the same goes for all subsequent views including those which sought to repudiate dualism. This is consistent with our view that dualism underlies any metaphor which would separate out mind for consideration.

In the next generation of Greeks, Parmenides (ca 536 BC), living in Elea also searched out the unifying principle in external reality, but concluded that it is rea- son which bestows unity on the plurality which is in nature. Ideas and ideals are where the unity is to be found. As such Parmenides is an "idealist" rather than a "materialist." But unlike other "idealists" his is not necessarily a "shut in" view. To call his a "shut in" view, we would have to imply that the unifying "reason" he distinguishes can never come to know the external reality. And we cannot say that. Parmenides may have concluded- if we were to put the question to him directly- that although "being" is one; the notion of oneness is distinct from the illusory reality of appearances, and this separate reality comes to us through mind.[35]

If we cannot claim Pythagoras or Parmenides as the father of dualism, a generation later we have a more sure paternity in Heraclitus (ca 500 BC). He lived in Ephesus in Greece where he saw double more clearly; that is, he recognized the fire of life and the separate ethereal elements of wisdom and mind in general. Duality is integral to Heraclitus' thinking. The reader may well find a conundrum in the statement that "duality" is "integral." Such is life in the dual realms. No sin- gle

logical closed system applies to both realms. It is the yin and yang which both divides and unites the circle. Heraclitus saw opposites which come together and separate. Included in this opposition would be mind and external reality. Since the two are opposed, one can only touch the other, cannot merge with the other. This means that what we know on the inside is a fuzzy picture of a very fuzzy process outside. Although the name given to the offspring of his teachings might not have occurred to Heraclitus at the time, it seems clear that he would not hesitate to claim" dualism" and what it has come to stand for today. In the history of Western ideas, this could well be the beginning of ontology subject to phenomenology. We shall call Heraclitus' the first "window view." (Nietzsche holds Heraclitus above all other Greek philosophers.[36])

Empedocles (ca. 490 BC) a Pythagorean and contemporary of Heraclitus who lived in Sicily and Greece, suggested four basic elements: earth, air, fire and water which were attracted and repelled by two basic forces: love and hate, or more closely translated: joining and separating energies. The joining force spawns, creates and binds all the elements of the sphere which includes everything physical. The separating force isolates any or all of the four elements which causes destruction, degeneration and decay. But, not to worry, life is reassembled and eternally recycled. He used this metaphor to touch off an early medical science as well as a kind of physics and earth science, again mainly focused on the outside. Unlike Heraclitus, and in keeping with Pythagoras, Empedocles' opposing forces seem to be much more predictable. As such they would attract the Atomists who were to follow and use this idealism to seed of a long strain of materialism. Empedocles' concepts, which have been largely rejected as

explanations of the outside, still tell us a great deal about the inside from which they came. Empedocles spoke of sense perception as illusory bits of understanding which are more misleading than instructive. It is only through the loftier mind that we can truly observe nature and thereby become one with it. This reflects the influence of Pythagoras, but it also sounds like Parmenides. In Keeping with the Pythagorean dualism, there is a separate dynamic made out for mind in that Empedocles taught that what we come to know changes not only each of us but the ethos of man.[37] This can be read as a network of minds, but it is not clear that communication is what Empedocles had in mind. Where that ethos is in terms of his basic elements is not clear. Here again there seem to be cracks between the concepts of the recycling external elements and that which is actually out there, but the implied dual- ism is easily ignored as it will be by his followers. Empedocles' teachings will be steered by his followers away from Pythagoras toward a monistic materialism.

In the next generation, Democritus (ca. 460-370 BC) and Leucippus in the "Great Diakosmos" (a lost work written by one or the other or both) set down the germ of what might be called the bedrock of materialist theory which persists to this day.

In defining the outside they said nothing happens by chance, i.e. there are mechanical rules; nothing exists but atoms and empty space (there is no mention of mind occupying that void). Atoms are indestructible and eternal; and nothing can arise out of nothing.

The theory goes on to talk about the activity and configuration of atoms. The number of possible configurations seems to be infinite which would gravitate against the idea that there are "mechanical" (which one must

take to mean "finite") configurations. The configurations went to make up everything including mind, soul, God and anything else imaginable. Interior consciousness is cast in the exterior elements and therefore does not exist as a separate realm. Democritus maintains that thinking is a bodily state.[38] Mind is also composed of atoms which are rounder and smoother, as is soul. Mere perception is distinguished from the atom-ic reality which can only be known by higher thought. Keeping in mind that thought too must somehow be explained by the material atoms, we see that this is not a confession of dualism, but rather another unwitting implication. Had they realized that they were speaking about mind in material terms, they would have seen the metaphor implicit in all theories of mind.

We have made the point several times throughout this work that spatial metaphors are unavoidable in talking about mind, since thought must have some object as its focus. Just as mind, in thinking about matter, forces all objects to become concepts, it forces all concepts to become objects, in thinking about itself, metaphorical objects to be sure which should not, in our view, be confused with real objects. The atomists' "shut out" explanation of the universe is an unannounced interior con- cept which sought to wrap itself around all external objects. The interior concept itself was only a metaphorical object with dynamics borrowed from outside forces such as wind and seas: i.e. the denser atoms swirling in a vortex to form constellations. These were still only mind not matter.

What was unthought by these philosophers was that mind describing matter is forced to describe itself in the process. In their attempt to describe the outside, the atomists were, unwittingly, describing the inside, the dynamics of the belief

sys- tems. In my work, I have appropriated this primordial metaphor to visualize con- stellations of concepts in the various domains of the castle of consciousness. The atomists, with their "shut out" view, may have bridled to learn that their concepts might be used as internal metaphors, or, it may have been so obvious to them, they never thought to mention it.

Epicurus (342-270 BC), is taken out of turn because he relies on Democritus for his ontology without phenomenology. Epicurus was born in Greece after Plato and Aristotle, and lived in and around Athens but appears to have no under- standing of their work whatsoever. But he knew the teachings of Democritus. For Epicurus, the mind and soul are incorporated in the body.[39] While there are distinctions drawn between what the mind sees and the invisible atoms, there are none drawn between mental impressions and the visible (atomically configured) objects which cause them.

Epicurus animates the atoms in a free fall in which they careen into vortices, swirls, and eventually become sufficiently irregular to make determinism impossible and leave room for free will. This early materialist defies one of the basic tenets of materialism, the bed rock of science, predictability. Science needs everything to be governed by material rules so that it is ultimately predictable. If it can be weighed and measured and located, then changes and eventually the laws that govern those changes can be understood. Epicurus, like the atomists before him, does say that everything is material, composed of atoms, but some of these atoms cannot be understood completely. Some are so small, the ones that go to make up the human soul, that they are imperceptible. Would that we could ask Epicurus: isn't an imperceptible particle really another name for mysterious

interior non- substance? Doesn't something that cannot be grasped, need to be separated from those things which can? Epicurus was more absorbed with the important work of inventing agnosticism and humanism and banishing superstition and fear of gods and death. He undertook the Herculean task of getting his fellow humans to focus on and take responsibility for the here and now whereby they could reduce their own self inflicted pain and achieve pleasure and joy. He would hard- ly have noticed that he had bumped into the wall without looking inside.

We should not leave the reader with the impression that the inside was never spoken of directly by the early Greeks. Protagoras (the Sophist) is also a monist; while there is only one side for him, it is the inside. Protagoras suggested that thought is really all there is: "Man is the measure of all things"[40] which means that what we conceive on the inside is all there is. Significance, "the measure," is all inside. Was Protagoras suggesting that there was no outside beyond our thoughts ("measure")? Plato thought so, as we shall see.

Protagoras' protean "shut in" view lives a long life, on through British and German idealists who relegate external reality to the larger mind of God or spirit or other absolute. Whatever the 'other worldly' device, there is no realizable outside for humans, no way out of the castle.

Whatever one thinks of his prescriptions and political answers, one must admit that Plato immortalized the questions for all philosophy to follow, no less the issue of dualism. It should be clear from what has gone before that Plato did not invent the notion of dualism, if he did it would simply be a singular invention, nor did he discover or observe it for the first time. If dualism is basic to the human condition, it should be obvious to any careful observer before and after

Plato. Plato's articulation of this observation, his metaphors, his extrapolation and interpolation of the observation into all areas of philosophy, are what is astounding and continues to provide the agenda for thinking on this subject. Even to this day, the most recent explorations of mind by such authors as phycisist/philosopher Roger Penrose are accepting of the duality of Platonic realms.

If the duality is indigenous to the human condition, it seems superfluous to describe which thinkers influenced Plato in arriving at his distinctions. Nevertheless scholars do suggest that the notion of mind body dualism in Plato may have come to him from his exposure to Pythagoreans while in Sicily. And further that Plato's philosophy is, in a sense, the lynch pin between Heraclitus, on the one hand, with his world of appearances and multifarious flux, and Parmenides, on the other hand, with his one and unchanging reality.[42] By positing two worlds, one of the senses which is always in flux and uncertain, and the other which is universal and unchanging, Plato explains Heraclitus to Parmenides and vice versa.

Plato can agree with Heraclitus in that the interior perception is distinctively fuzzy, always changing, always a slotted view through a slit of a window of what is becoming, but not so with knowledge. In describing the domain of knowledge Plato can agree with Parmenides the knowledge is knowledge of all, all that came and went and is coming and therefore one and unchanging. Knowledge is the whole picture; perception is puzzle pieces.

This is a double dualism, if you look at more closely. There is the duality between mind and body and then within mind itself there is the dual distinction between the Heraclitan flux of perception and the unified, universal, eternal knowledge, or the layer of the soul.

Can we buy the first distinction without the second? Can we distinguish between the physical and mental realms without making the leap to the absolute ideal knowledge? Hegel would say no. You can't have a mind without a soul.

There is a distinction between Plato's (and Promenade's) whole picture and our whole puzzle. What Plato's whole picture is, only god knows; our whole puzzle is simply all the pieces in all human minds which is not quite as inaccessible as god's mind. Still I'm willing to admit that our notion of mind takes one step into the ideal realm and may be forced to go all the way one day, but not today.

Today all we need from Plato is that there is an inside where mind resides subject to sensory ambiguity and an outside where subjects and objects reside, which may be imperfect manifestations of absolute, perfect ideals. The ideals are a kind of mathematical, perfect third realm above the two we need. All we need accept here is the first distinction of dualism, an inside and an outside in this down to earth human world. Absolute truth or knowledge which rises above sensory ambiguity about the outside may exist, and we may chose to believe that all of us or only some of us have it, but I could not and do not need to prove that.

If Heraclitus provided the window with its questionable view, whatever else he did, Plato insisted that there must be more. The "more" in our terms is a communogenic phenomenon. What you don't know you ask about, talk about. What is not in the castle is potentially linked in by means of a drawbridge. This would not be news to Plato. Plato adds a place for the drawbridge, that is, an essential role for human communication in his dialectic, his road to absolute knowledge.

Plato's Theaetetus, in suggesting that mere sensation leads to ambiguous perception, describes an interface between the material and immaterial worlds, an imperfect one, but an interface nonetheless. By implication, he asks the question: ambiguous as compared to what? The answer must be some absolutely knowable external real- ity, a full blown outside which is not fully realized on the inside, but, (and here is the place for the drawbridge) the inside conception can be constantly improved. Reading Theaetetus together with Phaedo and Meno, we see that the whole picture may be a divine phenomenon but one to which the human mind is privy.The whole picture is in every mind but it is forgotten, obscured, and so through dialogue and dialectic (human communication) it can become more and more clear.

Plato asserts the essential balance of his dualism in Theaetetus, where he refutes the Protagoran idea that there is no external reality, no outside truth. He chides Protagoras' "shut in" relativism for equating the interior of the wisest man with that of the baboon: how can one say that both are equal unless there is an external standard against which to match each interior mind. Further, any mind which judges Protagoras' mind to be false must be true. And so Protagoras, without an outside, has an inside which implodes.

In Phaedo, Plato deals with the nature of the body and the nature of the soul as being opposed. He proves that knowledge must be there before the body and therefore after the body. I should point out here that we do not need the mind to be immortal in order to draw distinctions with the body. For our purposes, simple human communication passes thought on beyond the body; the thought may or may not last forever, but it does transcend the body and therefore is distinct from the body.

In Phaedo, Plato associates soul with eternal forms, with perfect being. This is a kind of soul which is "ideal" and "metaphysical" but not "shut in." Plato connects soul with mind, and connects mind with body. The actions of the mind affect the body and the actions of the body affect the mind.

Plato's castle wall may have a parapet for vaulting over the top, i.e. transcendence, divine ascension, but that is not the only way out. There is also a window, which admittedly provides a slotted view, but a window nevertheless, and a drawbridge for dialogue. In philosophical terms we are calling Plato's views (including Socrates) dualism: ontology subject to phenomenology with the seeds of "communogenisis."

Plato's exoneration of the ideal knowledge and the otherworldly absolute forms to which the mind could aspire might have been perceived as a "shut in" view by Aristotle, which set him looking for ways around the castle wall.

In his early writings, Categories, Aristotle, still under the influence of his teacher Plato, was looking for a way out. He set out to describe external reality as if he needed no window through which to view it, since there was no wall blocking it, no inside. He organized all of external reality, "being," in terms of substances which were discrete and elemental and capable of "predicates" (which in Greek is 'categoria'). This is a "shut out" view, ontology without phenomenology. Like all "shut out" views, some key is always left at home on the inside, some internal concept which undermines the "exteriority." With Aristotle, it is the predicates.

Predicates are qualities and quantities, locations, conditions, etc.; these are concepts which demand an interior dwelling place. The "predicates" (and later in his Metaphysics) the "universals" and "attributes" have no being, i.e. no external

exis- tence. Unlike Plato where they do exist as pure forms in a divine realm, Aristotle insists that they do not exist as such: they have no "being" only "belonging." That is, they are applied to substances, those things which do exist. Which raises the question, where are they before they are applied? We must answer on the inside, but we are putting words in Aristotle's mouth; he never admitted of an interior as a separate system. Even where he describes perception and conception, he ties the process to the physical object outside. The concepts themselves come from experience with the outside universe.The attributes they make out "inhere" in the external substances, which doesn't answer the question about where they were before the experience with the substances. Aristotle's remains a "shut out" view: ontology without phenomenology. His belief that nature and man are forever and subject to the same principles which can be discovered makes him the philosopher of science.

Despite the fact that he too was called the father of science, there is no question that Descartes' castle had walls. He demonstrated the wall's impenetrability by banging his head against it, loudly, to the astonishment of generations to follow. In his famous doubting procedure, Descartes established that what was brought inside the wall through the senses was not identical to the things outside the wall which addressed the senses. At first blush, this distinction, this wall, appears insurmountable, "shut in," since there is no way out; no real proof of anything; the existence of everything being in doubt. The only existence which could not be doubted is the doubter's, who must exist in order to doubt, hence the famous cog- ito ergo sum. It flows naturally from this that there must be two realms an interior where the doubting (thinking) goes on and an exterior where that which is doubted resides,

or as Descartes put it in Discourse On Method, Part IV res cogtians and res extensa. Descartes distinguishes the physical realm as "extending" and therefore having dimension. It follows that things physical can be measured whereas things mental cannot. (What would this great patriarch of mathematics think about the use of numbers to determine the intelligence which created them?) So we have a wall separating the dual realms. What about a window?

In his second and sixth Meditation, Descartes deals with a kind of interface in his inevitable dualism. There are things and thought and he himself must be a thing which thinks (Meditations 105). The body is subject to the systematic doubt, but the mind which is doing the thinking, the doubting, is not. Therefore the mind is not the body and vice versa. And yet, that which is thinking must be a kind of substance with a kind of existence beyond a single thought. It is a men- tal substance rather than a physical substance which is not identical with any particular thoughts.

We begin to see daylight through the wall between the two substances; even if the light arises from nothing more than doubt, it should be framed. We should therefore say we have here a very small, very slotted window. The fact that Descartes' substances, physical or mental, depend on nothing for their existence except God, begins to sound like the only way out is up, (i.e. the only possible interaction between the two realms is "other worldly"), but, again, as with Plato, in spite of the divine connection, we do have a "here and now" duality with at least a passive interface between the inside and the outside. Descartes' philosophy should be classified as a "window" view: ontology subject to phenomenology. There is no mention of any drawbridge.

Hume's notion of "inter-subjectivity" is the first sign of a true drawbridge. No working model is in place, but certainly all the parts are there.

The same is true for Kant, who was inspired by Hume's castle. Kant's castle also has a "window" view and the implication of traffic between castles, but no work- ing model of a drawbridge, no communication posited as a center piece for pure reason. For Kant the wall of dualism had to be firmly in place, dividing internal reason and understanding from those objects which stimulate the manifold sensations of perception. His interface of these two phenomena is an interface, a win- dow which depends on the wall. If there was a wall there must have been an inside and an outside. There is no question about an inside, where else would Kant have put his "transcendental knowledge," his "concepts," his "will," his "analytic" reasoning, his "a priori" knowledge. The "a priori" concept of space, in fact, is responsible for the very division of inside and outside, which are in the end spatial concepts. If the outside was an inside concept, was there really an outside? There had to have been an outside or there could have been no inside effects. Where else would his "synthetic" knowledge, his "a posteriori" come from? The interplay between these two realms is the window in Kant's castle which provides a decid- edly framed view. Kant says in his Critique of Pure Reason that we learn from nature (read as outside) not as a pupil at nature's feet ready to absorb anything and every- thing but rather we come to nature as a judge with preordained questions to which we obtain answers framed by the questions. Therein lies the window with its incomplete vista. Not much is said about a drawbridge, however.

It should be made clear at this point that the window is not a developmental feature in the philosophy of mind. That is, once it appears it does not grow wider and wider. The window appears in one generation and then disappears in another only to reappear again then disappear. All the British idealism which followed Berkley, for example, turned away from Descartes back toward Protagoras. In Germany there were still more "shut in" views despite the fact that Kant insisted on a wall with a window. German idealism such as Fichte's subjective idealism; and Schelling's absolute idealism could find no outside to believe in.

No mention of German idealism would be complete without some more elaborate mention of Hegel. Hegel's idealism is not as clearly "shut in" as, say, Protagoras'. While it purports to be scientific monism, it does not deny the inside as such and the label "shut out" fits only loosely. Hegel goes beyond Kant who believed that the inside could never encompass all of the outside. He reduces the dualist notion that mind might be in error when contemplating external reality by pointing out that such a statement might itself be subject to the same error. Through this logical loop he comes back to his notion of limitless absolute knowledge, which encompasses everything. There is clearly an inside process for Hegel, but one which is governed by the same sort of master rules which govern the external universe. There are stages where things and thinking are apart. This is understanding or the analytic phase and eventually we come to a synoptic thinking or synthesis. These phases of nature apply to mind as well. This suggest the labels monism and materialism. Hegel referred to philosophy as a science, but a science of ultimate mental concepts not experiments. He

wanted a single system which would explain the inside and the outside, a single truth.

Hegel would say that the road to that truth is more of a science than an art. Images and metaphor are the subjects of art which along with religion is a lower mental pursuit and too subjective to ever be an ultimate system. Hegel points out that in the natural, healthy, pre-philosophical state we do not think about thinking. It is only as we grow older and more weary that we think about thought. In so doing we create a dualist muddle and lose ourselves in it. In this Cartesian muddle we always feel ourselves as separate and apart from reality. This is unbearable and cannot be called "reason." There is no question that Hegel would bridle at the label of "dualist" but he does speak about thinking as separate from the objects of thought. He would no doubt call this separation an early incomplete stage of analysis -"understanding" as opposed to "reason." There is a self and a conscious- ness of that self, but true self consciousness includes the whole picture.

Hegel insists that to achieve self consciousness we must address and connect with other self conscious beings (The Phenomenology of Spirit, p110). This is very close to our assertions regarding the centrality of communication. The difference lies in our agnosticism which can also be viewed as humility whereby we cannot accept that any consciousness is the same as the totality of the external universe. Our whole picture is all the pieces of the puzzle as they are put together at any one time. For Hegel there is one whole picture apart from the puzzle pieces. At the risk of playing with labels, Hegel's scientific monism which would synthesize mind and matter requires a great leap of faith. Like all materialism

there is an underlying idealism; like all monism, there is an underlying dualism.

By now it should be clear that any lack of fit may be the fault of our puny categories rather than the great philosophies which they seek to contain. Imprecise though it is, hopefully the classification will help organize some of the previous thought. Admittedly, our wall and its "shut in" or "shut out" classifications is not water tight. A number of so called "shut in" views have a way out, usually over the top as in the case of the idealists, who resort to the sky hook of metaphysics to get beyond the wall which we put before them. Other shut- in's will have to slip under the wall, as we shall see presently. It is worth distinguishing these from the "window" and "drawbridge" views which provide a humanistic, earthly egress.

Some castles include subterranean tunnels.They are the work of monists who eventually came to the realization that they were imprisoned by their "shut in" views, and dug their way out; or monists who were "shut out" and had to dig their way in. Underground tunnels were dug and re-dug by "shut-in," outbound philosophers such as Henri Bergson and psychologists such as Carl Jung, with his idea of the "collective unconscious"; and "shout-out," inbound biologists such as Lamarck, with his idea of inheritance of acquired characteristics and Lamarck's follower Samuel Butler.[43] In our own generation, inbound "tunnelists" can also be found in the ranks of physicists, geneticists and philosophers such as Fritjof Capra,[44] Lyle Watson,[45] and Theodore Roszak.[46] In all these views, whether or not a drawbridge is contemplated, the important passage between castles is subterranean.

At this point we must pay our respects to Sartre's existentialism. Sartre's Being and Nothingness and his Nausea provided much of what we needed for our communication theory. Sartre himself would like to have been remembered as hav- ing established a monistic materialism [Critique of Dialectical Reason. Vol. I. Theory of Practical Ensembles - (Humanities Press, Atlantic Highlands N.J., 1976)- p180], a "shut out" view, but I cannot help but see dualism in his distinction between "being in itself " - the term used for all outside things, and "being for itself " - inte- rior consciousness. I realize that, nominally, both these states partake of being, but that connection is nominal; they are truly different states, even by Sartre's own observations. It is true that if you divide anything into two, conceptually there must be a whole of which both partake, but here the meat of the theory is in the division and not the combination. That is where the emphasis must first be laid, in the distinctions drawn by Sartre between consciousness which is "nothingness" that is no-thing, and things which are real, physical things.

Consciousness is different because it is not determined like the objects it address- es. That is the whole point of Being and Nothingness: a point which is badly weak- ened if we try to connect the two into one over arching monistic structure.

The first tenet of existentialism is that only with humankind does existence precede essence. Unlike with other forms of being (such as objects), there is no "essential" human.There may be an essential bowling ball or watermelon or paper cutter.There the essence may precede and tell us what the bowling ball should look like, how it should perform, which are good ones and poor ones compared to the essence, but not with humans. Humans are free to create their own essence. Consciousness is free. The will is free in the

nothingness between it and any physical brain and body (between implies duality).

With this freedom comes responsibility for every act, and the instinctual shrink- ing from that responsibility which is existential anguish. We tend to treat others as though they are objects; others tend to treat us as objects. (This is a statement about drawbridges.) We want to escape our freedom and its concomitant, awe- some responsibility and so we subjects borrow the mechanistic determinism of the object world. We want to behave as though there were forces beyond our con- trol which make our choices and our actions not our fault. That is cowardice, "bad faith" according to Sartre.

Since subjects are not controlled like objects; there must be two different worlds interfaced in Sartre. Subjects are free, objects are not.To find the difference between subjects and objects, one must look through both eyes at the duality. Subjects and objects can only be distinguished by the fact that one is mind and the other is mat- ter. I am not the first to find dualism behind Sartre's subject/object distinction. In The Cambridge Companion to Sartre (Cambridge University Press, Cambridge, and NY, 1992), p14, Hazel Barnes points out that Sartre has been called both dualist and idealist in spite of his own protestations toward monistic materialism.

I think that so many labels apply because Sartre's Castle is made of glass.The lines are fine and easy to miss and often we are looking through walls without realizing it. Yet there is an inside and outside and, of course a window of perception. The castle does have an opening - a drawbridge which is paradoxical but nevertheless does allow traffic to and from other castles. Sartre deals with the drawbridge in "Being for Others" an eternally exquisite paradox, a part of Being and

Nothingness. There the inevitable difficulties of human relationships are underscored almost to the exclusion of any of the benefits. One drawbridge is open only to find the other closed. Nevertheless there is traffic and drawbridges to support it.

It is this elusive undetermined subjectivity which is the paradoxical energy of communication. We see this paradox again and again through out this work. Whatever philosophy professors think of Sartre, I think they would have to agree that Sartre would have opposed any scientific materialism which would treat subjects like frozen objects determined by external forces. This is the thrust of the modern "shut out" materialist, monist views which deny any interior, any free will. Sartre would be on the other side whatever that was called.

The Siege of Science

Unlike philosophy which appears to be content to go in circles, science charts a straight line course toward a single unequivocal truth. Our castle blocks this advance. We have circled the walls with argument and relocated the various portals, but nevertheless the castle stands in the face of old and new scientific" shut out" views, which gather now below the very parapets and clamor for its removal. We have not dealt with these in any detail in our initial tour around the castle wall, since it seemed more appropriate to save the confrontation for a later time when the sand of the castle might be baked by the heat of additional exposure and thereby be more able to withstand the inevitable siege.

The truth is: there are large numbers out there, many more than the few Greeks mentioned earlier, who would prefer the castle flattened and the sands of reality neatly raked.

After the Greeks, the elder generals of the army of science hale from the seventeenth century A.D.. Telesio, Campanella and Cyrano de Bergerac all attempted to combine materialistic views of physics with a sensationalist psychology. They and Pierre Gassendi (1592-1655) sought to shake loose from the heavy hand of the church and return to Epicureanism and the atomists. Of course, they would not risk heresy and being burned at the stake. Gassendi quickly admitted that the atoms were not eternal as the Greeks suggested and that they were not infinite, but rather were created and determined by God. This ontology is a curious mix of materialism and idealism, but nevertheless a "shut out" view since the specter of phenomenology is discounted.

Thomas Hobbes (1588-1679), two thousand years after Epicurus, locked himself out of the castle, but then followed Epicurus' path back through that same tunnel. He too said everything was physical, but he too could not deny the realm of sen- sation, emotion, soul and god, and, of course, that latter class of things had to be made up of physical particles, "phantasms," which were beyond perception. Once again a material (outside) which except for its name might be immaterial (inside).

The next wave made for the wall directly. From the next century (the 18th), the more virulent French scientists used as their battering ram medical discoveries. Materialists such as Dr. Maubec (Principes Physiques de la Raison et les Passions del'Homme - Paris, 1709), and Diderot (Le Reve de d'Alembert) together with the more celebrated Julien de La Mettrie (1709-1751) elevated medical science to a full fledged

philosophy of materialism. De La Mettrie argued that the soul could not be the life force, otherwise, how could organs detached from the body continue their activity after death. How could muscles continue to function after decapitation? He explained conscious sensations purely in neurological terms. A view taken up by modern materialists. De la Mettrie chose a title for his book that would leave no doubt about any immaterial substances. The title says it all: there is nothing governing man but a simple set of mechanistic rules. His book L'Hommme Machine (1748) was a call to arms across the generations and the centuries, including many writing today.[47]

D'Holbach (System of Nature 1770) explained consciousness in terms of changes in our internal material state. Action was motivated by brain state changes. Free choice or motiveless action was an absurdity. The particles of this matter have as their primary qualities gravity and inert force but relate with each other with sympathy, antipathy and affinity (sounds like the "love and hate" of Empedocles). Here again, from our castle wall, we can spot the redolent imprecision of immaterialism hidden among the measured materials.

Lavoisier and his English counterpart Priestly sparked a revolution in chemistry and established a purely physical science whose only appeal for certainty was to external, material substances. This chemical siege set fires which lasted for the next two centuries and which would have burned the castle to the ground by now, except for the cold water thrown in the nick of time by a more modern physics and the principle of uncertainty, but that is jumping ahead in our story.

For all intents and purposes the siege of science was successful as far as any one knew at the time. Human

consciousness and human behavior were no longer the subject of flowery speculation. If any one was to examine these things they would have to be scientists, not philosophers. Philosophers only had to understand other philosophers, scientists had to understand nature and prove that they did by making it jump through their experimental hoops. The human body was part of that same nature and so was mind.

The 19th century exploration of mind by the new social scientists recognized no wall or dichotomous reality. Driven on by the unquestioned exactitude of the physical sciences these materialists were sure that the great new hero, the scientific method, was about to wrap itself around everything, and then everything could be explained. By the time the twentieth century rolled around, a blind precision had plotted the dimensions of consciousness down to the decimal. Concrete numbers like IQ were so handy for social controls they were accepted by all social institutions. There was no alternative which could match such precision, and if there were it was not worthy. "If it can not be measured, it can not exist" was the motto of this virulent "shut out" view.

Throughout the 20th century, institutions clamored for a psychology that would join neurology and provide physical controls of elusive mental states. Cognitive scientists to this day dismiss free will and human dignity as irrelevant with logical positivist arguments. These were assertions of power rather than intellect. If mind is part of the material machine, mass communication can become mass manipulation; spin doctors can come out in the open. Meanwhile, philosophers bury their heads in the sands of word precision.[48] Any ambiguity or mystery is rejected rather than explored.

The latest fire ball to hit the wall is Behaviorism, a philosophy of mind which addresses only external behavior and avoids the dichotomy of things mental and things physical, and also the tail chasing of the dualist views.

The seminal Behavioral, modern, "shut out" view is Gilbert Ryle's,[49] whose concepts gave rise to 'concept-less' Behaviorism, which, we shall see presently, goes in its own circles, has its own tail chasing. Ryle would have us eliminate the distinction between internal and external. Like all "shut out" views, Ryle demands his ontology without phenomenology: according to Ryle, all we can say about human behavior is what we can observe on the outside.The idea of internal motivation creates an unnecessary, unprovable dualism. Deal with the behavior on the outside and there is no need to think about premeditation on the inside.

And here is the missing key left inside: this fiat is itself a thought, a premeditated concept. Any prescribed method for interpreting behavior would have to be generated by preconceptions, interior thoughts. What the Ryle's school and the impatient Behaviorists are doing is ignoring all minds except their own, from which springs the one master metaphor, which they call external reality. Admittedly this is neater than the Rashomon of realities, one to every customer, including poets, and fools, but "neat" has a price to be paid to the organizers.

The behaviorists abhor the fact that with mind mysteriously tucked away on the inside we can never tell precisely what anyone had in mind. I would agree that as a dualist I cannot tell definitively what you have in mind but I should like to make what seems to me an important modification: I cannot "tell," but I can "ask." In the asking a communication consensus is created with its own symbols and semantics

which may be too fuzzy for the logical calculus of cognitive scientists, but is certainly better than trying to impose a set of rules that mechanically links "stimulus" to "response" ignoring the "mentalism" in between.

The argument that everything on the outside is at least visible is no justification for the rejection of truths on the inside which may be invisible, like the will. The will is invisible and not mechanical, not an object at all; subjective in fact, but effective nonetheless. Which objective rules can explain the function of choice without erasing it? Which "shut out" view can explain freedom without erasing it? The dreaded slack between inside and outside is the space where freedom reigns, upon which the concept of human dignity rests; any attempt at tighten- ing that slack whether in the name of scientific or political order is strangulation. To say "I would not chose to live in a society where choice was no longer possi- ble" is not possible. The fact that some are always prepared to physically struggle with oppressors establishes the belief in choice beyond social order. Any philo- sophical argument against the existence of an amorphous free will is nothing more than the banner of a stronger will about to overpower weaker wills, always in the name of order. This solid grip ends the tail chasing by breaking it off, but the lizard escapes and grows another in a twinkling.

Monists of the materialist or idealist persuasion, shut in or out of the castle whether Ryle, or Schelling or Hegel are equally opposed to the wall between the two realms of mind and matter which each embraces separately. Although each has a different name for his single reality, they are really the same. One calls every- thing mind; the other insists on calling everything matter, but it is the same "everything," which is

one.[50] And so, they should get together for the attack, each on his one leg. They would, of course, fall into each other and never reach the wall. How could the theory in one case have any concept of matter without a mind to conceptualize, and how, in the other case, can a mind have any concept with- out the reflection of any matter which surrounds it.

One last modern philosopher needs to be invited to what remains of our castle siege. Other commentators would place him with the attacking force, but I think he would stand with the castle defenders. Wittgenstein's theory of public language in his Philosophical Investigations (Oxford 1958) is a dualist "drawbridge view" if ever there was one. Without saying so, in so many words, Wittgenstein posits the inevitability of communication, and this implies a wall and a human channel through it without resort to metaphysics. Priest[51] suggests that Wittgenstein's negation of private language undermines the wall completely. But Wittgenstein's sense of the word "public" needs an opposite in order to exist. In other words if there were no private there could be no public. Wittgenstein does talk about sensations as though they were on the inside, admittedly without using the dualist's terms. The baby's pain is pre-verbal and private, in that sense it is inside, and so are other pre-verbal sensations by definition. Suffice it to say, Wittgenstein's refutation of a purely private language is really the opening of a drawbridge in a wall which must be there to support it. The compulsory "publicness" of language implies an inevitable connectivity for consciousness.

We have given too little space here to too many philosophers. By way of justification we should point out that our purpose in this sketchy historical review was merely to

give the reader a flavor for the two sides of the story, both of which are more amply represented in MindexTM

Footnotes

- 1 Even Johnson-Laird(supra), who champions the computational or mechanical view of mind and has made an exhaustive search of all kinds of experimental results, has no faith in neurology; he says in his prologue p xiii "Unfortunately, however, neuroscien-tists have so far discovered hardly anything about the neural mechanisms of thought."

- 2 Philip N. Johnson-Laird's Human and Machine Thinking (Hillsdale NJ, Lawrence Erlblum Associates, 1993) is a fine example attempting to constrain verbal concepts into a logical calculus; there also at pp. 167 et seq. is an exhaustive list of other books and studies of modern psychologists and cognitive scientists all focusing on terms.

- 3 Ivan Turgenev wrote to Leo Tolstoy in (1856) "Would to God your horizon may broaden every day! The people who bind themselves to systems are those who are unable to encompass the whole truth and try to catch it by the tail; a system is like the tail of truth, but truth is like a lizard; it leaves its tail in your fingers and runs away knowing full well that it will grow a new one in a twinkling" in Daniel Boorstin's The Discoverers (New

York: Vintage, 1985) p 81

- 4 see Sarah Kofman, Nietzsche and Metaphor Stanford, Stanford University Press, 1993 - the reader of Nietzsche on the subject of mind and science will no doubt notice close parallels. Once again it was not scholarship which accounts for these parallels; since I was not aware of these ideas until after this work was nearly completed. Minds think- ing about mind must coincide eventually.

- 5 see Kofman, (supra)

- 6 This map/territory image is Alfred Korzybski's - the founder of General Semantics

- 7 See, Descartes, in Mindex Notes, at the end of this book

- 8 See Mindex Notes at the end of this book

- 9 op cit.

- 10 When hand meets sand, castles seem to be inevitable. The mind's hand dreamily sketches enclosures. Will this castle enshrine an original theory? By the very nature of the castle and the terms of the theory itself, it cannot. In fact, the learned reader will discover many theories echoed here none of which were intentionally plagiarized. Rather the intention was to freely sculpt whatever the mind's eye saw. The similarities may seem incredible at times, but it is true that the foot notes and

links to other works were all inserted after this castle was made. If the reader accepts this then another truth about mind trying to conjure itself awaits realization, a pre-communication link on which we may proceed.

- 11 see my earlier work: Communication the Living End op. cit.

- 12 The fascination of this holographic or fractal phenomenon whereby each cell contains the whole and vice versa reaches the level of philosophy in the hands of a number of writers: Arthur Koestler in Janus (New York: Random House, 1978) speaks about a hierarchy or holarchy of holons or whole subwholes; as does George Leonard, with his discussion of "holonomy" in The Silent Pulse (New York: Bantam, 1981) pp. 69 and 79. Koestler relies upon the works of Itzhak Bentov, Stalking the Wild Pendulum, (New York: Dutton, 1977), and, of course, the seminal work of General Systems Theory put forth by Ludwig Von Bertalanffy, Robots, Men and Minds, (New York: Braziller, 1967). The arts have an equal fascination with the concept from Blake's "Eternity in a grain of sand" to the 13th century Mahmud Shabistari 's "hundred seas" disclosed in a "rain- drop," The Secret Garden, trans. Johnson Pasha (London: Octagon Press 1969) p.26. All of these and many more writers of a similar bent can be found well compiled and ably commented upon in Litvak and Senzee, Toward a New Brain -Evolution and the Human Mind, (Englewood Cliffs: Prentice Hall, 1986) including at pp. 148-149 an account of Karl Pribram's belief that the brain is the organic equivalent of a hologram.

13 H.H. Price, Thinking and Experience (London: Hutchinson University Library), at p160 he admits the confusion and then undertakes a clarification, which never quite works.

14 Cf Studies of Roffwarg, Muzio and Dement in J.A. Hobson, Sleep (New York, Scientific American Library, 1989) p 79 et seq. where it was noted that REM sleep is significantly higher in children during the development of their body's ability to move around; as though a virtual reality were being used to build the object domain's sense of places and things.

- 15 The division of subject and object domains flows naturally from our earlier view that communication is central to the human condition (see Ciampa, Communication: The Living End,Philosophical Library, NY, 1987).

- 16 If we were to represent the negative or positive effects of syzygy by a simple binary value- a plus/minus, we could lay out all of the scenarios in a kind of table.
  Scenarios of subsequent impressions
  (+ +) double confirmation: Middle confirms, Rear confirms, (+ -) confirmation followed by contradiction: Middle confirms, Rear contradicts, (- +) contradiction followed by confirmation: Middle contradicts, Rear confirms (- -) double contradiction: Middle contradicts, Rear contradicts.
  These four scenarios have actually set many a stage or screen drama in motion primarily because of their subterranean power. In our little theater of the formula, we shall uncover them and so loose the dramatic energy, but hopefully gain some other kind of insight. We must keep in mind that here as in life, the four scenarios may be played out by different casts drawn from the same small repertory company. The different cast brings a whole new dimension to the scenario. The leading role of the assimilating forward

domain may be played by the object domain O, subject domain S, or pseudo-subject domain P, with the two supporting roles played by either of the two remaining domains. The six possible cast configurations by order of appearance are:

- Cast Configurations
  OSP OPS SOP SPO POS PSO
  If each of the four scenarios were played out by each of six cast configurations, an new impression might find itself in any of 24 situations.
  The 24 generic arrays would look like this: double confirmation (+ +)
  footnotes 2

O+S+P
Object domain assimilates, Subject domain confirms, Pseudo-subject sub domain con- firms

O+P+S
Object domain assimilates, Pseudo-subject sub domain confirms, Subject domain con- firms

S+O+P
Subject domain assimilates, object domain confirms, pseudo-subject sub domain con- firms

S+P+O
Subject domain assimilates, Pseudo-subject sub domain confirms, Object domain con- firms

P+O+S

Pseudo-subject sub domain assimilates, object domain confirms, subject domain con- firms

P+S+O

Pseudo-subject sub domain assimilates, subject domain confirms, object domain con- firms

Clearly in the case of across the board confirmation order is less critical; it might make for stronger confirmation in one array than another, but relatively speaking less criti- cal than where there is conflict.

confirmation followed by contradiction: (+ -)

O+S-P

Object domain assimilates, subject domain confirms, pseudo-subject sub domain contradicts

O+P-S

Object domain assimilates, pseudo-subject sub domain confirms, subject domain contradicts

S+O-P

Subject domain assimilates, object domain confirms, pseudo-subject sub domain contradicts

S+P-O

Subject domain assimilates, pseudo-subject sub domain confirms, object domain contradicts

P+O-S

Pseudo-subject sub domain assimilates, object domain confirms, subject domain contradicts

P+S-O

Pseudo-subject sub domain assimilates, subject domain confirms, object domain contradicts

contradiction followed by confirmation: (- +)

O-S+P

Object domain assimilates, subject domain contradicts, pseudo-subject sub domain confirms

footnotes 3

O-P+S

Object domain assimilates, pseudo-subject sub domain contradicts, subject domain confirms

S-O+P

Subject domain assimilates, object domain contradicts, pseudo-subject sub domain confirms

S-P+O

Subject domain assimilates, pseudo-subject sub domain contradicts, object domain confirms

P-O+S

Pseudo-subject sub domain assimilates, object domain contradicts, subject domain confirms

P-S+O

Pseudo-subject sub domain assimilates, subject domain contradicts, object domain confirms

double contradiction: (- -)

O-S-P

Object domain assimilates, subject domain contradicts, pseudo-subject sub domain contradicts

O-P-S

Object domain assimilates, pseudo-subject sub domain contradicts, subject domain contradicts

S-O-P

Subject domain assimilates, object domain contradicts, pseudo-subject sub domain contradicts

S-P-O

Subject domain assimilates, pseudo-subject sub domain contradicts, object domain contradicts

P-O-S

Pseudo-subject sub domain assimilates, object domain contradicts, subject domain contradicts

P-S-O

Pseudo-subject sub domain assimilates, subject domain contradicts, object domain contradicts

17 The famous Asch experiment sought to isolate the internal and external circumstances which bear upon the pseudo-subject impression. In the Asch experiment the contradictory input came after the fact from the subject expression of peers. (In a significant number of cases the peers were able to change eye witness testimony of what had been seen on the screen.) Asch did not weigh in the fact that the original target impression was the result of a mediate, pseudo-subject expression. He equated the observation of screen images with real objects. We cannot from this vantage point decide whether the results would have been different if the inner belief was the result of an object impres- sion, or other subject impression. Nevertheless, the effect of the medium, whatever that was, was ignored. Also the effect of the impression order was ignored. Would the result have been different if the persuasion- the subject impressions from peers- had come before the viewing of the medium, rather than after

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• 18 See, Goldthorpe's "Understanding the Committed Writer" in The Cambridge Companion to Sartre (especially pp 150 et. seq.), Ed by Howels, (New York,

Cambridge University Press, 1992)

- 19 See the "Lost Art of Memory" in Daniel J. Boorstin's The Discoverers (New York, Vintage Books, 1985)

- 20 Jaynes, Julian Bicameral Mind

- 21 We could do more dividing and divide the expression process into verbal and nonver- bal, and/or word and deed. And the words, deeds and gestures could be clustered into particular forms of human communication, where expected codes; convention and syn- tax constrain and compress expression on the one hand, and on the other give it speed and efficiency. But, except to highlight once again the compression-decompression of all forms we shall not bother with particular forms here. Later in this work we shall take up form again in terms of its interplay with content and intent. In an earlier work the particular forms of human communication are presented in taxonomic hierarchies - Ciampa, Communication the Living End (New York,: Philosophical Library, 1987).

- 22 In the earlier work Communication: The Living End (supra) All "Immediate" forms are divided into two categories "Public" and "Private." The Private forms are for small numbers of communication partners and the Public forms are for larger audiences.The theory assumes that all thoughts are connected to communication processes directly or indirectly and does not leave a taxonomic space for wholly private thoughts. cf. Price, op cit., pp. 153 -160 where symbols for

communication may be used for thought not con- nected to communication. To which I would add "not directly connected to communication at a particular time," but can we not find a connection between those thoughts and thoughts which are eventually communicated?

- 23 I came to different conclusions in my earlier work. This position seems more logical and more philosophically correct.

- 24 Ciampa, Communication the Living End (supra)

- 25 Learned from Stanislavsky's able student Lee Strassberg in a personal interview

- 26 D.O. Hebb in his cell assembly theory suggests a neurological basis for the interpreta- tion of sense data- even in lower animals. His famous blind mice experiment showed that rats raised in darkness, i.e.. without visual experience, could distinguish forms as readily as those raised in light. See Hebb, The Organization of Behavior: A Neuropsychological Theory (N.Y. John Wiley, 1949); and Essay on Mind and Textbook of Psychology, 4th Ed. (Lawrence Erlbaum Associates, 1980 and1987, respectively)

- 27 John Sasson, "Who on Earth Invented the Alphabet," Visible Language Vol XXIV Two (Rhode Island School of Design) Providence 1990, pp. 144-163 see also Edward Chiera, They Wrote on Clay (Geo. C. Cameron ed.), (Chicago, Univ. of Chicago Press, 1938)
David Diringer, Writing, (London, Thames and Hudson,1962)

G.R. Driver, From Pictograph to Alphabet, (London, Oxford University Press,1976) Roy Harrison, The Origin of Writing, (London, Duckworth, 1986) S.N. Kramer, History Begins at Sumer, (Philadelphia, The University of Pennsylvania Press, 1981) A.R. Millard, "The Infancy of Alphabet", World Archaeology, no17, pp390-396 Joseph Naveh, Early History of the Alphabet, (Jerusalem, Hebrew University of Jerusalem Press, 1982)

- 28 American Video Institute Proceedings, 1980, Columbia University (AVI TAPES) se also Mary C. Potter, "Representational Buffers: The Eye-mind Hypothesis in Picture Perception, Reading and Visual Search" in K. Rayner (ed.) Eye Movements in Reading Perceptual and Language Processes, (NY, Academic Press,1983) and Potter, & BA Faulconer, "Time To Understand Pictures and Words," in Nature 253,437-438, 1975; and Potter, MC Valian, BA Faulconer, "Representation of a Sentence and its Pragmatic Implications: Verbal Imagistic, or Abstract," 1977, Journal of Verbal Learning and Verbal Behavior 16, 1-12

- 29 "Tool maker" and "Symbol maker" are Lewis Mumford's terms not necessarily used by him in the sense of cheating space and time Technics and Civilization (NY, Harcourt Brace & Co.,1932) also The Myth of the Machine: Technics and Human Development (N.Y. Harvest /HBJ, 1967)

• 31 In the past, I have classified four generic kinds of cognitive experiences which can be synthesized for the user of the modern responsive systems(which includes multi media) and which may be a help in the initial design for the author. These four applications answer basic expression processing and may be used one at a time or in combination.
The four applications are:
The archival interaction which satisfies the need to understand objects in terms of their external topical relationships to each other, by providing relational access to banks of images and data meaningfully classified.
The anatomical interaction which satisfies the need to understand objects in terms of the internal structural and functional relationships of their parts, by providing dynam- ic access to appropriately segmented images which can be put together and taken apart.
The cartographic interaction which satisfies the need to locate objects, by providing point of view movement and orientation within video models of geographic space.
The simulation interaction which satisfies the need to deal with subjects and objects in complex systems by providing believable scenarios of text, audio, and images which respond to user decisions with consequences which are appropriate for the system being simulated.

• 32 Dr C.S. Russel, a prominent psychotherapist and psychosynthesist and author read this manuscript and commented in the margin at this line: "current theory suggests relationships survive longer when such

progress is allowed."

- 33 Hawks, Cyclopaedia of Biography, NY Appleton, 1856, p743, et. seq.

- 34 Hare, Barnes &Chadwick, Founders of Thought, NY, Oxford University Press, 1991, p17

- 35 Hawks, supra, p675

- 36 Sarah Koffman, Nietzsche and Metaphor, trans Duncan Large, (Stanford, Stanford University Press, 1993), pp. 19-21; 74, 75,108,117, 153, 163

- 37 Jaspers, Karl, The Great Philosophers Volume III, Trans. Ehrlich, NY, Harcourt Brace, 1993, pp 46 et. seq.

- 38 Jasper, supra, p23

- 39 Jasper, supra, p73

- 40 Hawks, supra, 737

- 41 Penrose, Roger, The Emperor's New Mind, NY, Oxford University Press, 1989 Here

Penrose draws a distinction between the algorithms which can be computerized and the loftier realm of ideal mathematics.

42, Hare, supra, pp 16, 17, 19

- 43 Samuel Butler, Unconscious Memory

- 44 Fritjof Capra, The Tao of Physics; (Boulder: Shambhala, 1975)

- 45 Lyle Watson, Supernature (New York: Bantam, 1973)

- 46 Theodore Roszak, Unfinished Animal (New York: Harper and Row, 1975) and Person/Planet (New York: Anchor/Doubleday, 1976)

- 47 Johnson-Laird in Human and Machine Thinking (supra) writing in 1993 quotes De la Mettrie in the frontice piece of the book

- 48 In Theories of Mind (Houghton Mifflin, Boston 1991). Stephen Priest presents a lucid analysis of several modern science/philosophers who call themselves materialists and determinists. Their theories seem to me to be no more than word play. They see their role as dishing up hypotheses for the experiments of the brain dicers. The self fulfill- ing prophecy lies in the fact that the proposition is tailored to be proven only by scientific experiment. Of course, the scientific proof can't be evaluated because it isn't here yet and so these hard-nosed material philosophies are simply bald statements that invoke verification from absent sources which is the same as an idealist resting his case on god or some theological proof. Nevertheless we are grateful to Priest's book for bringing all these perspectives into focus.
  As an aside, I should point out that Priest's book drifted into my hands years after my own theory was concocted

and revised. I stumbled across it on a book store shelf and found that it had anticipated so much of what I was thinking about and writing. No laboratory experiment will ever explain how I could conceive of my "uncertainty" argu- ment at the same time Priest did without any open communication. Minds each know- ing nothing about the other often come up with the same thoughts about thought.This mystery bends our minds toward idealism.

- 49 Gilbert Ryle, The Concept of Mind, Stephen Priest (op cit.) calls behaviorism "logical behaviorism" because he sees it as connected to "logical positivism" (that rigid view where nothing can be true unless it can be logically proven). I agree. And he puts Ryle in this category. I agree again. He also puts Wittgenstein in this category. I disagree (see discussion of Wittgenstein below).

- 50 Stephen Priest (op cit.) makes the important point that monisms merge. In other words, the materialist argues that the mental is really physical; while at the same time the idealist argues that the physical is really mental. In the end they are both saying the same thing, which is that the mental and physical are one, and are simply arguing about what name to give it.

- 51 Priest, Stephen, Theories of Mind (supra)

footnotes 7

NOTES ON MINDEX TM

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