

A THEORETICAL ANALYSIS OF THE IMPLICATIONS FOR  
ART EDUCATION OF PRESENTATIONAL AND  
DISCURSIVE MODES OF COMMUNICATION

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ABSTRACT

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The attainment of Man's elite animal status was greatly enhanced by his skilful development of verbal symbolism, the language currency that provided him with the ability to create identifications from perceived reality, and permitted him to evaluate, conceptualize, reflect upon, and communicate his opinion of their relationships and meanings. Man so gained an access to the accumulated records of human existence, but ironically was now restricted in his potential for future awareness. The very nature of his dominant verbal language thought processes inhibited efficient 'reading' of perceptual capacities and so reduced Man's ability to fully encounter future realities.

Since the communication processes of formal education are primarily verbal, and scholastic ideals are measured through linear discourse, sensory development is

discouraged, and declining perceptual acuity promoted by conceptual extravagance. Difficulties in encoding and decoding sensory information become evident when Man encounters the need for visual literacy. With a more sensitive understanding, this discipline for visual comprehension could favourably promote perceptual efficiency and provide a more complete understanding of twentieth century technological-video communication.

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PART I

INTRODUCTION

## CHAPTER I.

### THE STUDY

#### A Problem Statement

It is this writer's contention that outmoded practices in formal systems of education have created the high emphasis on the language skills that now permeate our society. The constant demand to communicate within a level of Verbal Language as the control measure for understanding, has produced the effect of stifling enormous human potential. This same attitude has caused visual literacy and the language of Art to be treated with alarming disrespect in all levels of instruction in Education.<sup>1</sup> Understanding and reacting to our visual world, namely our ability to perceive, compare and contrast those qualities that give us meaning, and our ability to mould, create, and rebuild those qualities has suffered a prejudice of ignorance that makes a mockery of efficient communication and an adequate society.

#### Purpose and Significance

Many of the problems confronting society today are the result of inefficient modes of communication. We are



aware of some of the reasons for this inefficiency but others are not so obvious. In the Survey of Literature section of this chapter, the writer will attempt to illustrate that some of the causes of these problems are closely related, and that it is Man's verbal language that provides this significant contribution. The writer will also state some of the demands for a new literacy, a 'visual literacy', an alleged prerequisite for understanding in this video-technological era.

In the main body of the thesis the writer will be concerned with an investigation into the nature of Communication, Verbal Language, and Art as they operate within society. Special emphasis will be given to the processes by which Verbal Language and Art express meaning; how we accumulate and categorize facts in Perception; and the information the field of experimental educational technology has to offer with its research into single and multi-channel communication processes. It is anticipated that this investigatory portion of the thesis will serve to support the writer's belief that Verbal Language and Art are compatible and certainly beneficial to Man's thought processes, but only when on their own terms. When an imbalance exists in their respective importance, the human communication system is subjected to bias, and his relationship to his environ-

ment becomes less than ideal.

It is anticipated that the value of this thesis be in its general accumulation of information from various disciplines, and it is for this reason that the writer has occasionally provided an interpretive commentary either in the text, or in the references. It is hoped that this information will be of value to students, teachers, administrators and media technologists and programmers, in their attempt to discover more meaning from educational communication.

#### Literature Survey and Discussion

In this Survey and Discussion the writer intends to provide an encounter with some aspects of the problem considered relevant when attempting to trace communication problems in society from the antiquated teaching methods in schools. This brief review covers the following topics:

Technology; advances, and change

Communication; encoding and decoding difficulties

Education; actual and ideal

Languages; verbal and nonverbal

Literacy; definitions

Meaning; Man's search for ...

The Future, with Art

It is anticipated and this will illustrate the writer's view that there is a need for a closer investigation

into the nature of Verbal Language and Art in Communication, and that by considering the over-all "problem-cause" the writer will be better able to reveal any pertinent evidence.

It is, perhaps, fitting that the survey should commence with a written commentary concerning auditory information gleaned from what is usually considered to be a visual medium for communication: television.

An American soldier<sup>2</sup>, released from eight years of confinement and alienation from North American culture in a North Vietnamese detention centre, noted, with alarm, some of the remarkable changes that had taken place in his native United States.<sup>3</sup> He opinionated that North American Society had become "soft" in his absence, obsessed with "non-necessities". This, he suggested, was due to man's newest and greatest problem - the inability to cope with prosperity.

Commander Denton's single example of prosperous non-necessity was that of "wrap-around sound in the automobile". One can only speculate as to his other observations, but it is of interest to note<sup>4</sup> that he chose a development in the field of electronic communication.

What Commander Denton considered 'prosperity' could be interpreted as change, for electronic sound media was part of his environment before capture, yet not as sophisticated as today. We have apparently accepted this gradual

change in the relatively short period of time without necessarily considering ourselves "soft". Yet what has this change done to us without our knowledge?

In a recent book<sup>5</sup> Caleb Gattegno stated that he was "introduced" to television late in his life.<sup>6</sup> He consciously studied what he saw for three years, and discovered that his observations were a revelation to others that had allegedly had the benefit of experiencing a much longer exposure to the medium.<sup>7</sup> He propounded the theory that television was "... the companion of man's sight. . . ." <sup>8</sup> and that sight could be a remedy for adapting to the complex situations encountered in our society.<sup>9</sup> Gattegno also purported<sup>10</sup> that technology would advance the purpose of television to the extent that all canned knowledge would be readily available to the home consumer when his inclination so desired.

One must wonder if man is capable of making intelligent use of these technological advances. According to Kenneth Winetroun,<sup>11</sup> they have created a new medium for communication, the electronic, and with this, the electronic bombardment of our senses has created a "New Sensorium".<sup>12</sup> As a result of this situation, he claims that our receptive apparatus is being enlarged and perhaps refined.<sup>13</sup> To facilitate efficient use of these rapidly advancing<sup>14</sup> electronic media, Winetroun suggests that we must acknowledge

this "New Sensorium" which he defines as ". . . the emotional-intellectual-sensing process by which we take in perceptions and organise these perceptions."<sup>15</sup>

According to Borden,<sup>16</sup> any interference<sup>17</sup> in the way these perceptions are acknowledged and organised would result in prejudice, and therefore an inefficient communication. In the view of Beggs, communication already creates major problems for society. He states:

If all the problems that plague the organization and operation of human society were placed on a rank order of small to large or single to complex, communication would have to be included close to or at the top of this continuum.<sup>18</sup>

The importance of such a problem to human society is revealed by Duncan:<sup>19</sup> ". . . man as a social being exists in and through communication; communication is a basic to man's nature as food and sex; . . ." A. Walden Ends<sup>20</sup> promotes a further import for communication when he states that ". . . communication is the heart of teaching and its process the veins and arteries through which knowledge flows."

Assuming Walden Ends to be accurate, then schools must hold an impressive station in society, for, as Maynard explains:

. . . it is the educator's main responsibility to prepare our young for the explosive changes of today. His job is to help the young with this opportunity (for the first time in history) to deliberately organise our civilization around the process of social change.<sup>21</sup>

Social change is quite dependent upon the rapid development of technological media and the effects of that media on the citizen; i.e. his ability to "read" the communication effectively. Maynard discussed the educator's responsibility with attention to the present.<sup>22</sup> Davis and Torrance<sup>23</sup> more specifically deal with the future. They state:

In our progressive contemporary society it is becoming more and more important for us to concern ourselves with the kinds of person the future needs. For the educator this is an extremely important problem for it will ultimately determine what will be taught and how it will be taught.<sup>24</sup>

In connection with this reference to the need to define the content and methodology of formal educational instruction, McLuhan<sup>25</sup> observes that the problems now being encountered by the educational system and therefore our society, were not so apparent in former times. He states: "When all kinds of information flowed slowly into our society, educational irrelevance would be corrected by self-education and individual brilliance. That won't work today."<sup>26</sup>

Wiman<sup>27</sup> concurs with McLuhan's statement when he suggests that the role of the teacher must be redefined in an attempt to prepare him for the momentous changes in educational practices.

. . . perhaps the most important will be an ever growing awareness of the need to know everything

possible about effective communication in the classroom. Learning to communicate should permeate the entire teacher-education program, so that teachers will know, not only how to acquire knowledge, but also how to impart knowledge effectively to others.<sup>28</sup>

Harold Taylor<sup>29</sup> also recognises the importance of the education of teachers when he says: "The education of teachers lies at the heart of everything that matters in the life of the world's people." McFee<sup>30</sup> concurs with Taylor,<sup>31</sup> and suggests like-Walden Ends<sup>32</sup> that efficient use is not being made of the media, especially the visual media. She states that traditionally "... too few teachers or students are educated to use this communication (visual media) to best advantage." She continues, "In our traditions of education, most emphasis has been on learning through written languages and mathematics and scientific symbols."<sup>33</sup> Walden Ends deals with the implications of this situation when he states:

... this conception and approach is severely limiting and a most inefficient method of instruction due to the many complex variables<sup>34</sup> which interfere with the process of communication. To teach is to communicate; everything else is deception.<sup>35</sup>

Dominick<sup>36</sup> also implies that a verbal dominance actually interferes with the educational process. In her article of 1963 she states:

In order to communicate with more purpose and meaning, we of necessity should tend toward a language which is productive and understandable to both "speaker" and the "listener" . . . an

awareness of both verbal and non-verbal factors is essential in order to arrive at a more complete understanding of human behaviour.<sup>37</sup>

Winetroun supports this opinion when he states that we have essentially "shifted from a print-literary era to an electronic era in communication. The language-print monopoly is gone."<sup>38</sup>

Steven Barley, employed by the Eastman Kodak Company<sup>39</sup> and involved in an experimental program incorporating photography and verbal language teaching at Green Chimneys School, New York State,<sup>40</sup> reveals an astonishing effect of verbal dominance in school communication.<sup>41</sup> In a paper entitled

"Why Visual Sequences Come First", he states:

The declining perceptual acuity concomitant with high emphasis upon language skills leads to a low perceptual recall as an adult. This involves problems in encoding visual information and making it correspond with verbal information.<sup>42</sup>

The latter part of this statement can be partly explained in the writings of Susanne K. Langer.<sup>43</sup> She states that there are different modes for obtaining and expressing meaning from (and through) our sense perceptions. Very simply, these can be classified as verbal and nonverbal, but this writer intends to use Langer's terminology of discursive (verbal language - successive), and presentational (visual art - simultaneity). It would be economically unwise to investigate their similarities and differences in this



outline survey, but reasonable to emphasize that an attempted transfer from one semantic mode to the other to obtain meaning is an extremely difficult process. Gunter<sup>44</sup> implies that it<sup>45</sup> is well-nigh impossible, and suggests that to expect a child to switch between the two during the course of the schoolday activities, (i.e. from 'academic' to 'artistic' activities), leaves the child not only with a sense of defeat, but possible rejection of further presentational activity.<sup>46</sup>

In addition, Gunter points out that as the school's communication systems are predominantly discursive in nature, and the subject matter itself treated as predominantly discursive (due probably to the influence of the communication method used and their lack of any other vehicle of expression),<sup>47</sup> there is not much chance for intelligent interaction with that requiring a presentational<sup>48</sup> reasoning.

Even when presentational modes of communication are introduced into the learning programs of schools, pictorial or visual "stimuli" are treated as "aids" that supplement rather than complement the value of the instruction.<sup>49</sup> The official 'Handbook for Teachers'<sup>50</sup> for Quebec Teachers issued by the Quebec Government insists that all pictorial displays are "aids" and require<sup>51</sup> titles and explanatory captions.<sup>52</sup> It recognises that audio-visual instruction stimulates, and

that it provides clearer and more accurate ideas than could be obtained through verbal explanation. But, it insists "they" only to be treated as aids!<sup>53</sup>

Apparently, some educational organisations consider that visual qualities, like those encountered on television, are a supplement to required communication, yet if we accept Gattegno's definition that television is ". . . the companion of man's sight . . .",<sup>54</sup> and also acknowledge that some eighty percent of all our perceptual intake is through visual sense perception by means of the eye,<sup>55</sup> then we are apparently ignoring the considerable potential for development through man's visual perception, and along with this, presentational simultaneous reasoning.<sup>56</sup>

It is not the children who want their education less connected to presentational media. They find such media stimulating and exciting.<sup>57</sup> Today's children are even called our "TV Generation".<sup>58</sup> Fransecky states:

Today's students . . . expect much of their learning to be related to the eye, to learn to "see" creatively and to communicate visually as well as verbally. Because we expect an educated person to be able to put everything into words, we experience a sense of defeat when a feeling refuses to be captivated by verbalisation.<sup>59</sup>

It is as if we must attempt to become more literate to better understand our environment. Traditional definitions of literacy implied a verbal comprehension but as

Cameron and Platter indicate, ". . . it is too narrow to serve the needs of today."<sup>60</sup> The mass media demand a new literacy,<sup>61</sup> and if we can agree that television communication demands extra concern because of its status in society, then we need to develop a visual literacy - a literacy that enables us to recognize and cope with all aspects of vision, and not to dwell on the decisive portions,<sup>62</sup> but concentrate also on those ephemeral trivialities which McFee isolates as the "subtle influences".<sup>63</sup> She states:

The major question which the impact of TV and mass media on society raises for us is whether we do, or can, give students the tools with which to evaluate the obvious, and subtle messages of this one way communication system.<sup>64</sup>

However, Neil Hickey, columnist in a popular weekly TV schedule<sup>65</sup> indicates that some effort is being made "to demythologize television and make it as commonplace a two-way tool as the telephone".<sup>66</sup> But as Eisner<sup>67</sup> indicates, as convenient as the telephone is:

The media research must extend well beyond the task of attempting to determine how to convey more efficiently what is now carried in words . . . not . . . so concerned with using visual modalities as conveyors of discursive data . . . less concerned with using verbal response modalities for determining effects of nondiscursive input.<sup>68</sup>

Perhaps if man can enter into a more meaningful relationship with the media, the problems encountered in perceptual differentiation<sup>69</sup> (viz., the ability to perceive,

compare, and contrast qualities that give 'meaning'<sup>70</sup>) will be reduced, and Man be better able to understand and control his purpose in life, better able to enter an objective encounter with reality.<sup>71</sup>

To accomplish this, this writer believes that changes in attitude to classroom communication must be made now at the elementary level of education.<sup>72</sup> Incessant teacher chattering, harmful use of visual media, and the lack of competent exposure to art results in what Eisner calls ". . . a crippled if not castrated conception of human potentiality."<sup>73</sup> Winetrout lends support to Eisner's statement, and acts as a fitting conclusion to this introductory chapter when he states:

. . . as we close out on the twentieth century and enter the twenty-first century, art has a high probability of being a major survival technique for man; and the educational system which ignores this probability weakens its own potential for survival.<sup>74</sup>

PART II

AN OVERVIEW ON COMMUNICATION

## CHAPTER II

### ANIMAL SYMBOLICUM

#### From Percept to Concept

Mankind has matured in his advantage over other forms of life. His communication systems for the interpretation of sensory experiences have been increased in a potential over and above that needed to simply exist.

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Illustrating a remarkable ingenuity, Man has structured the essence of this advantage into a discipline that can be communicated. He has called this discipline Education. Ideally, Education is synonymous with Communication, which is in itself synonymous with Life.<sup>1</sup> This ideal exemplifies the process of adjustment required to co-exist with an environmental state that is a constant transition.<sup>2</sup>

It is the author's intention that Chapter II illustrate Man's achievements towards his elusive, ideal Life.

It is the commentary: "From whence, to where?"

The essential difference between Man and Animal<sup>3</sup> is that Man has developed the capacity to explore possibilities provided by his sense data.<sup>4</sup> An animal reacts to his

perceptual information with the basic notion 'exploit' or 'avoid'; that being necessary for survival will suffice.

Man, however, is quite different. Man stores his perceptual information and builds himself an extra wealth of experience, a bank of knowledge. From this data, Man can satisfy a basic need for an awareness, a criteria for truth.<sup>5</sup> He does not simply see, touch, smell, hear, or taste, but asks how, when, where, who, and why? He seeks a closure,<sup>6</sup> an understanding of his understanding.<sup>7</sup> Until he obtains closure, Man searches for meaning by virtue of an incredible human invention that gives him the power to observe rela-

tionships that do not exist until they are conceived in his thought. This, combined with his innate desire to share,<sup>8</sup> and we discover a Mankind bubbling with ideas.<sup>9</sup>

Man's invention is synthetic: a symbolic language. He has learned to communicate by reaching out and touching other elements of life, then look inside into his own being to understand himself. He has, in fact, attempted to connect himself with life.<sup>10</sup>

A sensitivity more purposeful than an animal reaction became a necessity. Perceptual information required much more attention than ephemeral trivialities in everyday living. Percepts<sup>11</sup> needed to be 'held' for recall, comparison, and closer scrutiny. The knowledge bank needed a

conversion currency, a language that could operate in the conscious mind. Perceptual information was 'shunted' to the 'Jungian' unconscious mind as a random association of percepts, unreliable for recall.<sup>12</sup> Man invented the symbol,<sup>13</sup> a designated meaning for "things" and "events". He gave them a fixed identification in his own mind. This process provided him with a communicative power that gave him the advanced ability of projecting ideas and feelings.<sup>14</sup> He could create symbolic form; create forms that served to embody and reflect, and even modify those ideas and feelings.<sup>15</sup> To quote Hausman, ". . . (symbolic forms) serve as the means by which people communicate with themselves and others, and serve as mechanisms for establishing and transcending knowledge and tradition."

Man slipped into his inventive act of symbolic representation with a profusion of pictorial images, sounds, and gestures, and possibly even the more complex taste, smell, and touch. An emotional grunt became a communicative grunt.<sup>16</sup> But it was the fusion of sight with sound and auditory symbolism that led Man from the concrete world of objects perceptually identified to an abstract world of relationships and functions.

Communication of co-existence had left the savage state of icon imagery, wall painting, and totem poles,



ritualistic dances and chants (impressions to emotional understanding through repetition and constancies), and took the form of intellectual conversations; phonic messages,<sup>17</sup> word names<sup>18</sup> of meanings of things that combined to transmit impression and intent. In this way, Man could embrace the earth without necessarily physically handling it. He had developed a referent, a currency for his memory. As Kaplan indicated, "The knowing of objects is conceived as a more or less direct translocation of something 'outside the mind' to a place 'inside the mind' without this movement in any way affecting the nature of these objects."<sup>19</sup>

Man was beginning to develop the ability to react with and not simply respond to his environment. After an initial process of perceptual differentiation, the identified reality would be symbolically transformed into meaning and slotted into memory. If it had a 'basic' meaning, it would be conceptualized, given a representative identity. In fact, groups of similar single concepts could also be brought under a single identity.

In their book entitled Symbol Formation,<sup>20</sup> Werner and Kaplan discuss the relationship between the abstract concept and the percept. They emphasize that the image or percept of a 'tree' does not indicate the conceptual meaning of 'tree' (the tree concept), whereas the word 'tree' does.

They suggest that instead of using the term 'represent' to indicate the relationship between the image (percept) and the verbal concept, it should be considered a 'reification'.<sup>21</sup>

Man carefully examined relations. His symbols allowed him to handle reflective thought,<sup>22</sup> the ability to single out from the whole indiscriminated mass of the stream of floating sensuous phenomena certain fixed elements in order to isolate them and concentrate attention upon them.<sup>23</sup>

An unusual quirk of beauty for the human mind is the relationship between direct sensory image to meaning evaluation (the percept), and the symbolic holding of the object in verbal Man (the verbal concept) is that they can 'trigger' unusual associations in the human mind: illogical associations<sup>24</sup> thrown together in the inner unconscious psyche by concept relationships activated in the conscious mind. Deliberate exploitation of this imagery, i.e. conscious use of metaphor, has been a most powerful tool of the creative artist ... the painter, poet, the musician and the writer as ably explained by the philosopher of aesthetics, Suzanne Langer. In this statement, she alludes to the achievement of Man's acquisition of verbal language.

... once the spark was struck, the light of reason was lit; an epoch of phenomenal novelty, mutation, perhaps cerebral evolution, was initiated, as Man succeeded to the futile simian that had been himself.<sup>25</sup>

Language and Man, then, evolved together. Language was adapted and changed to meet ~~the~~ requirements of Man as required by Man. However Man was soon to become the disciple of language. Word concepts gradually abandoned their sense image parallel and became understood to actually be the 'thing' they symbolized, the object. Communication became a symbolic exercise between referents that had become realities. Intuitive understanding, instant knowing, gave way to logic, for logic could prove that logic could be proven. It satisfied Man's closure. Perceptual sensory intake became essentially subservient to conceptual thought and handled the physical trivia of human existence.<sup>26</sup> Gradually, with the predominance of conceptual thought Man found difficulty in relating back to perceptual sensory experience,<sup>27</sup> the source of his knowledge.<sup>28</sup> When sensory experience could not be categorized within verbal boundaries, it escaped inventory and was ignored, or even worse, termed as unacceptable and therefore rejected. Efforts made to retrace from the logic-conscious world of thinking to the unconscious mind of floating sensory phenomena was like trying to track down a dream: unrelated illogical sequences that were simply not logical.

A defense attitude was developed. If not logical, then not true, not existing, not possible. Logic became

the proof positive. An analogy became indicative of a truth. Man was in the strange position of being intuitive and able to logically denounce it. This 'instant knowing', an understanding of the 'all encompassing' whole by instantaneous recognition of all of its parts (a principle of Gestalt Psychology),<sup>29</sup> became the adversary of logical thought, the product of linear and temporal deductive reasoning.<sup>30</sup>

Man's increasing verbal thinking processes both as interpersonal and personal communication gradually conditioned a process of thought from which he could not escape. It conditioned his culture to such an extent that the culture represented the true reality. All not conceivable to this thought process of the culture was rejected. To quote, Aldous Huxley:

Every individual is at once the beneficiary and the victim of the linguistic tradition into which he or she has been born - the beneficiary in as much as language gives access to the accumulated records of other people's experience, the victim in so far as it confirms him in the belief that the reduced awareness is the only awareness and as it bedevils his sense of reality, so that he is all too apt to take his concepts for data, his words for actual things.<sup>31</sup>

Man was becoming less aware of his world . . . making less contact with his environment. He was beginning to live an existence of unknown reality.

### In Search of Sense

The world of human knowing or awareness has been discussed and analysed under the terms of two philosophies. Werner and Kaplan<sup>32</sup> describe these as a) those, who like Bertrand Russell believe 'there is a known world independent of language' (to which language has been attached by means of symbols), and b) those who, like Ernst Cassirer believe that 'knowing and language are inseparable'. To support the latter philosophy, Werner and Kaplan indicate that a young child's early vocal gestures simply indicate a biological need, but when there is a definite attempt to name objects and events, then the child is on the path to the process of 'knowing'.

This latter philosophy suggests that all our sensory operations are geared to providing for meaning through verbal information. One must wonder what the senses are doing when not processing for verbal dissemination! Is it possible that the child has no 'knowing' contact with the world prior to his ability to use words?<sup>33</sup> As Borden reminds us:

. . . the child has learned a great deal about human behaviour by the time he develops much language, behaviour. . . His ability to communicate anger, pleasure, desire or dislike are all developed prior to overt linguistic competence.<sup>34</sup>

The very young child lives in a primordial sharing situation,<sup>35</sup> a oneness with mother and the environment. At

a later stage the child 'shares' by means of pointing (purely referential), and later still transmitted by the process of symbolic transformation<sup>36</sup> to a communicative channel.<sup>37</sup>

According to Werner and Kaplan, it is Russell's belief<sup>38</sup> that the child does have a knowing state before language development. Sight need not simply be a physical process of looking at, but of 'seeing'.

Seeing, defined as the search for insight into what is seen, is a 'reaching out' to the perceived 'object' and bringing it back 'within'. To this end all the senses can be activated at one time. In his book The Tacit Dimension, Polanyi<sup>39</sup> discussed the internalizing of perceived objects - the weighing of size and shape, the touching and feeling, smelling and 'seeing' that one does within one's own body to rightfully experience the perceptual event. The young child's limited bank of experience weighs against an accurate perception, but his ability to 'taste' a visible bottle of milk or 'smell' the warmth of his mother's breast must account for a start to awareness.

As the early child develops he becomes more perceptually aware of his environment.<sup>40</sup> He begins to 'see' texture - his eye taking over from his basic biological sense of touch.<sup>41</sup> His eye spans space and cuts through time whilst compensating for impractical perception activity. Eventually,

the process of language learning imposed on him by his very existence in society, begins to dominate his whole process of perception. It demands that all thought evaluation be accomplished under its terminology, its own language. Some wise teachers have attempted to circumvent this problem.

In the book 'Pestalozzi' the author Herman Krusi<sup>42</sup> discusses at length the great Swiss educator's criticism of symbolism. He shows that in the early stages of development the child employs all the senses to physically embrace the environment, (in this case pertinent subject matter). The adult can do this from afar (re. Tacit Dimension). He says, "The sight of an object does not satisfy a child, he must handle it, weigh it, smell it, taste it and examine it in all of its parts in order to gain a complete idea of it."<sup>43</sup> An advantage provided by the senses is that they can be employed instantaneously and simultaneously. Perhaps it is possible to refer to their simultaneous checking as their processing towards 'closure', the equivalence of logical analysis of language.

It is quite difficult to mirror instantaneous perception in verbal language, its visual, oral and aural processes all required to be temporal. Simultaneity is a possibility, but often difficult to identify in its parts. The temporal sequence of a child's verbal exclamation<sup>44</sup> in

the early stages of his speech can be misinterpreted as a temporal sequence of events, but he is still thinking in terms of 'all-oneness-nowness'. At this stage the verbal communication process simply cannot suit his needs. "The Normal Human Being First Experiences Things in Masses", wrote the journalist Pitkin.<sup>45</sup> He stated that children spoke sentences first and only later are they analysed into their parts. "This is indicative of Man's natural ability to see wholes, to want to see aspects in their entirety."<sup>46</sup> However, language conformity eventually demands that the child follow its syntax and grammar, and its culture of the past. Winetroun has described the process thus: "Like a huge glacier this anonymous creation of dead generations moves over our earnest efforts."<sup>47</sup> Language is a temporal communication when verbal; simultaneity and instantaneity can only be implied or described, and even then only in the whole context of the rendition.

### Silent Knowing

The decrease in sensitivity to perceptions has been investigated by the general semanticist, Alvin Korzybski.<sup>48</sup> He recognized the influence verbal language held over the senses. Language analysed experience into categories and so became a moulder of thought. It was no longer an elementary communication vehicle.<sup>49</sup> Korzybski stated:



If we think verbally, we act as biased observers, and project onto the silent levels of the structure of the language we use, and so remain in our rut of old orientations, making keen unbiased observations and creative work well-nigh impossible. 50

In her article "Non Verbal Communication", Barbara Dominick discussed how it was possible to obtain sensory evaluation without verbal interference by avoiding internal conversations. "To arrive at a level of awareness and realistic objectivity, we must of necessity handle, look, listen, remain silent, reflect and, in a sense, feel our way through." Only then could this sensation, if possible or desired, be communicated by verbal discourse after a process of reification. 51

Quite a different approach has become the vogue in recent years in North America and Europe. Members of the 'drug cult' are often in search of a heightened sensory capacity. 52 Man has used mechanical means to extend his senses for many years - the eye has been extended with binoculars and microscopes to such an extent that they are considered commonplace. However, chemical means are relatively new to Western society. Increased (and decreased) sense perception through chemical reaction within the body transforms a person's whole chemical balance temporarily (and sometimes permanently): Aldous Huxley described the experience of one such event: 53

Visual impressions are greatly intensified and the eye recovers some of the perceptual innocence of childhood<sup>54</sup>, when the sensum was not immediately and automatically subordinated to the concept. Interest in space is diminished and interest in time falls almost to zero.<sup>55</sup>

Huxley would not contend that we all use drugs to achieve a heightened awareness of our being, a more sensitive reaching out through our perceptions. He does admit, however, that a 'trip' would be an invaluable experience, a knock at the confidence displayed by a book knowledge society that finds it "all but impossible to pay serious attention to anything but words or notions".<sup>56</sup> But why this need for hallucination? Cannot Man simply by-pass language and its concepts and concentrate more on perceptual experience?

According to Chaytor,<sup>57</sup> this is a very difficult process. Verbal man operates by means of an inner speech - an instantaneous acoustic image obtained when reading print, or obtained directly by audition. This process Chaytor called ". . . inner speaking and inner hearing",<sup>58</sup> an instant recognition process for when Man used the verbal language communication system. This system became so refined and 'natural' that communication sensory capacities other than verbal, especially those not needed in everyday communication, became redundant. Their eventual demise was sealed by Man's increasing inability to think without reference to verbal form.<sup>59</sup>

Pitifully, the Language for understanding the visual elements and providing for a visual literacy gradually faded from those not having a formal<sup>60</sup> contact with the visual world. Sensory illiteracy set in and inadequate imagery began to become commonplace. Those more perceptually sensitive than others were vested with 'Vision', whether they could communicate by tongue or 'picture'. These 'advantaged ones' noted that if they observed the pulse of society they could evoke emotions, titillate the senses, and set on record observations on their culture.

Visually, these visionaries could enter deep into a man's psyche: orally consume him with an awe or fear, vibrate him with meter or excite him amongst metaphorical flames. They did not provide realism but twisted and distorted it in their creative domain. They took Man back to the preliterate<sup>61</sup> days of iconic imagery and sound, of magic in vision and swooning in ritualistic chants. Even today, Man's roots are still there deep within, waiting, willing to respond to an expressionistic source.

#### Commission to Speculation

Language is already an established fact in the environment of those born today. The young child assimilates this heritage with stringent learning, constant exposure,

and cultural demands. Early man developed his language due to cultural demands too, but it took a long time to accumulate, create, communicate, and assimilate communal meanings for symbols. As already noted, the whole process was facilitated by memory stimulators - rituals and rites, repetitious chanting, ceremonial signs and visual events.

To begin with a visual image and its corresponding sound were not identified necessarily as the same 'object' but as in the same context of meaning. With the creation of abstract symbols with a specific meaning there developed a corresponding phonic and visual rendering with quite specific meaning. The early paintings and hieroglyphic inscriptions had evolved to picture writing, calligraphy and script.<sup>62</sup> The English Language evolved from a symbolic picture imagery representing objects or events to an analytically artificial conglomerate of signs representing particular sounds (more or less). Though far from a perfect system, it was relatively simple to understand: twenty-six symbols having forty-five phonic variations.<sup>63</sup> This provided for ingenious combinations.

The Eastern Languages developed in a similar manner, but continued at the picture writing stage to develop sounds and pictures that became synonymous in meaning. This hieroglyphic word stage (lexigraphy) certainly hindered their

development of communication.<sup>64</sup> Each meaning had to have its own hieroglyphic counterpart, consequently, their lexicography grew to an enormous size. In the 6,000 years since the appearance of script little progress was made in terms of the manufacture of writing until the invention of the printing press in the early fifteenth century. This invention freed the written word from a hand-bound shackle. Fortunately the Western civilization could benefit from mechanization. Its evolution of an abstract symbolic alphabet was ideal in comparison to the picture writing of the East.

The sheer delight of recording events as a stimulus to pleasant memory, and the pure innate desire for 'expressing' and 'sharing', resulted in Man creating and accumulating a physical record of his existence. The spoken word had developed mystical overtones in preliterate society when, because of its rapid fading, people had to rely on the stimulus recall situations of death, night, birth, union, fertility, etc. (all events having mystical overtones) for the word's implantation in their memory.<sup>65</sup> In later times the power of the 'aged' word added a mystical touch to the village storyteller of local folklore.<sup>66</sup> Visual symbols were also quite mystical but served in more permanent situations as masks and totems for ceremonial display, and wall painting for religious or specific symbolic purposes.<sup>67</sup> If

hidden from sight for a while or between events, it provided a more powerful visual imagery as a referent on its next exposure.

When the spoken word took on the permanency of the written word, its function in society became closer to that of the artistic visual symbol, a referent - something that could be used as a stimulus and check for information. At first in the form of hieroglyphics, it progressed to script but was then very slow to develop with the obvious hazards of mass illiteracy and extremely slow production. Print changed all that.<sup>68</sup> Mechanization brought on a separation between the spoken and the written word. Medieval literature comprised of a visual script of phonic utterances - relatively slow to read, and never fully understood since the word itself could not indicate vocal inflection nor which of the multiple meanings it preserved.<sup>69</sup> This was partly corrected by writing the sonnet, in rhyme, or even in play form to be spoken.

But mass production gave a new value to the written word. The revolution of the industrialized press and its resulting mass literacy demanded and made possible . . . uniform texts, grammar and lexicons . . .<sup>70</sup> more like the language we know today. Man's literacy and industrialized printing took him from his localized shell to the "Global

Village".<sup>71</sup> The original commonplace and personal immediacy of verbal communication was, within this group society, augmented by the written word. No longer could inflection, gesture, context, and situation be an aid to understanding. Man could exist simultaneously with his neighbour and a world environment, but needed to employ a new value judgment - his own.

The printed page had freed Man from group localized thought,<sup>72</sup> but the cost soon became manifest. Print physically demanded the book over the scroll; specifically segmented linearity. Each section had its place and purpose. Letter, word, phrase, sentence, paragraph, (page), chapter, book, volume, anthology, set, library, - all these were subservient to that bound segment of visually verbalized information, the book. It had the honour of being the first mass produced object in the society it was to serve.

Soon, the lyrical qualities of speech gave way to the grammatical quality demanded by an efficient conformity and speedy understanding of the printed page. A new synthetic language evolved - a grammatical language with a tight and well-defined structure.<sup>73</sup> Man was about to become the victim of his creation<sup>74</sup>: Man's perceptions were to become governed by the quality and regularity of the printed word. Creativity was not dead however. Mass production had

promoted speculation over patronage and commission<sup>75</sup> and in so doing, provided a volume releasing factor for both the verbal and visual oriented creative mind.

During the long ages of the mass preliterate society, the visual elements had proven extremely valuable tools. The implications for functional design (it looks what is is!) were perfunctory, but as a teaching instrument it was exploited to the full. Religious and political bodies used powerful visual form to influence their basically preliterate following with powerful visual truths. Man's ability to easily comprehend symbolic pictorial imagery was also used by educational personnel and, of course, for social status.

The oft believed dictum of 'strive for realism' in the visual arts simply has not been true even though the classical periods of Greece (and the Renaissance might have superficially indicated such.<sup>76</sup> The very reason that Man's art had been able to 'influence' prior to the Renaissance was because it was not realistic but very expressive - the produce of extreme emotion. It therefore often revealed a mystical potential, often very highly charged.

The return to the Greek classical ideals during the Renaissance reduced emotion in favour of analytical function in design and technique, introduced the financial security of patronage, and edged artistic elements into other disqi-



plines (i.e. decoration and architecture)<sup>77</sup>. Art itself 'adopted' analytical science. The Renaissance artist gained a new stature in society - the complete universal man with his technical skill combined with scientific insight. The artist had formerly inspired awe from his fervour in expression and his ability to operate as a mystical 'seer'. Today's artist is seen as a combination of both emotional and rational man, and those religious affiliations still promote a murmur of magic in the layman.<sup>78</sup> He and his work are an integral part of society,<sup>79</sup> yet he is set on the outside, partly by choice, partly by demand. Schreivogel sums up the position of the artist thus:

The communication of artists is still relatively unnoticed in society. Public panderers such as sports heroes and glib TV personalities are more observed and admired than the artist and his image. Perhaps this is good; it may allow the artist to be the quiet conscience of society.<sup>80</sup>

The role selected by the visual artist has assisted in the formation of this mutual-misunderstanding. His desire to reveal to society his perceptual insights into the purposes of its existence are generally misunderstood to be physical artifacts for subjective appreciation and decoration. Neither artist nor his public<sup>81</sup> seem to acknowledge one very basic fact: their communicative languages no longer relate. The visual mode causes bias to verbal understanding just as

verbal hinders communication with visual. The painter cannot speak to the poet unless the poet speak 'pictures' or the painter speak poetry. Presentational and Discursive communication are no longer the bedfellows they once were - they can only suggest a relation through the ambiguous beauty of metaphor, or complement each other as in a well designed unit of information.

### Today and Tomorrow

Man's communication processes evolved over a very lengthy period of time. Until the Industrial Revolution, the progress was gradual and even the printed book became assimilated into the society of its era, compensations and modifications being carried out through the progress in time. However, the Industrial Revolution exploded time. It mechanized Man's body, and put wheels under his communications. The twentieth century saw the dawning of an instantaneous and simultaneous society. The mechanical age advanced to the electronic, the electronic showing the way to the atomic.

The rate at which life is now operated has accelerated alarmingly. Speech, once a melody, has given way to grammatical electronic monstrosity, so much so, in fact, that the youth of today reveal a difficulty in detecting sarcasm;<sup>82</sup> insensitive to inflection, they communicate with the concep-

tual text. Man's sight has become the victim of psychic experiences demanding his attention and money, conscious or not. The creative works of the idealists are isolated in storehouses called museums and libraries. Corruption in creativity has promoted the subtleties of commercial exploitation. Education, a concept with Life, prays on the written word, its Bible, the book. People have become numbers, names, and statistics; children have become fodder for the conceptual machine.

Bruner<sup>83</sup> found that concept oriented educational systems tended to direct children's cognitive style towards more conceptual than perceptual analyses as they progressed through the grades. An example cited was that of a child who was asked to identify the colour closest to the colour of the paper (orange) from which he actually saw the shapes of banana, carrot, and tomato being cut. He chose banana as close to the yellow hue, carrot close to the orange hue, and tomato close to the red. This revealed that when his prior learning conflicted with even his observation of reality, the stronger habitual learning tended to prevail.

Perceptual acuity is on the decline. An increased rate of efficiency in mechanized communication has created an entirely different dimension to that of even sixty years ago when the 'revolutionary' cubist insight broke through

conventional form and revealed multiple aspects simultaneously.<sup>84</sup> Today's simultaneity provided by advanced technology has resulted in eyes that can scour the universe at the speed of light and retrieve multiple images and multiple facets of the ever changing environment. And, as was the problem revealed by the encoding cubists, once again, the decoding viewer of this information is basically visually illiterate. Even though symbolic images are easily identified by the human eye, there must be efficient comprehension of the visual relationships. For this task, each person is on his own! School curricula in general do not recognize the need to teach the visual language.

Schreivogel claims that present day schools insist on reading and writing instead of talking, on grammar, not perception, and that the ideal medium of television is used solely as a didactic aid to conformity.<sup>85</sup> The world outside of education has begun to abandon the literate culture and provides less motivation for the teaching of reading and the ultimate achievement of the literate society.<sup>86</sup> But do we have the time to consider our dilemma? "Telstar" and "Manic" bring live wars into our living room. Television ignores the limits of time and space. Our visual world has been condensed, tampered with, packaged, and put in front of us in our own room and into our own possession.

Promotion of a Middle Class Morality

The immediacy on TV News has become a truth: the content a truth even if an untruth or aged, yet the filmed version of the assassination of President Kennedy was rerun to the extent that it became as unreal as an overplayed soap commercial. The immediacy of a single projection of a fictitious production like "Bonanza" or "F.B.I." has become not an acting reality but reality itself; in this case, a morality for mankind. It is a presentation at its safest projection, the true support for the anti-change middle class value systems.<sup>87</sup> TV advertising sets 'societies' values, and supermarket shelves reinforce them.<sup>88</sup> Today's communication has caused yesterday to be the past and TV to be the present no matter how aged the produce.<sup>89</sup>

What can we do? How do we effect control? This physically condensed package of mobile information speaks directly at us, to us, hypnotizing our very gaze whilst feeding subtle persuasive verbalization, yet still Education keeps its proverbial head in the sand! What type of shock will take effect, make its mark? Such billing as "History's First TV War"<sup>90</sup> (Viet Nam - you are here), and Sam Gibbon's (Sesame Street producer) contention that the 1972 Munich Olympic disaster was probably wholly due to the desired world market TV publicity, and an immediate information

source for the bandits.<sup>91</sup> The First TV Bandits?

We, the consumers, have become the participant players by being passive objectors. Yet Gibbon maintains that we do worry, we are involved. TV requires us to concern ourselves with too much that is not our personal problem. The adult generation simply cannot cope with the 'reality' of TV, the new visual and immediate world. As Hausman says, ". . . we are made symbolically aware of the drama of the world in turmoil"<sup>92</sup>.

The general acceptance of this situation by the viewing public can perhaps be explained by the philosopher Cassirer when, with words admittedly taken out of context, he illustrates the dependability and stability of the 'known' situation<sup>93</sup> (i.e. middle class value systems and their promotion of linear thinking):

For the primitive mind there is no more sacred thing than . . . age . . . Age gives dignity . . . respectability and moral and religious worth . . . In order to maintain this dignity it becomes imperative to continue and to preserve the human order in the same unalterable shape . . . From the point of view of primitive thought the slightest alteration in the established scheme of things would be disastrous.<sup>94</sup>

#### Technology and Understanding

The concentration of visual elements on a TV screen clearly reveals our presence in a visual culture. Clothing fashions, contemporary furniture, nature parks and green

spaces, slum clearance, dark glass (non existent) high-rise buildings all indicate a concern for the visual. But we are hemmed in by what Gattegno calls ". . . our habits of thought, our very use of words . . ." <sup>95</sup> TV screens display word reinforcements whilst art galleries offer known-names and titles. In general, the population appears to mistrust its pictorial world, the world of visual elements. There's a constant demand for verbal explication. <sup>96</sup> To quote semanticist

Hayakawa:

The habit of trusting one's definitions, or, to put it another way, the habit of trusting implicitly the verbal associations, "the clang associations", and the effective disturbances inside one's skin as the result of one's linguistic conditioning (given us constantly by schools, newspapers, radio, preachers, and friends), is one of the most stubborn remnants of primitivism that remains to afflict us . . . words . . . are not the things they stand for, and education that fails to emphasize this fact is more than likely to leave students imprisoned and victimized by their linguistic conditioning rather than enlightened and liberated by it. <sup>97</sup>

Hayakawa's referral to educational objectives within the realm of language must be a welcomed aid to the Art Educator who quite possibly sees his role as that of a promoter of visual literacy contrary to the defensive complacency of present value systems. As McFee states:

We have the obligation to try to offer students more alternatives. This requires that we be aware of what they are receiving; that we analyze the art forms being used so that we may help them to develop and use aesthetic criticism in their evaluations. <sup>98</sup>

Perhaps then, McFee continues, the students will recognize that the mass media is ". . . at present making shallow use of the arts to present a picture of the good life which centers around the use of its products."<sup>99</sup> The role of art in the school curricula must have a value change. It must become more tuned to the meaning of Man and his existence. Can we rely on what Donis calls "intuition and happenstance" to make our value judgements:

One of the tragedies of the overwhelming potential of visual literacy at all levels of education is the mindless, custodial playtime function the visual arts serve in the curriculum, and the similar state that exists in the use of media, cameras,<sup>100</sup> film, television. Why in the visual arts, all of them, have we fallen heir to an unspoken devotion to non-intellectualism?<sup>101</sup>

But as Maynard has so eloquently said, ". . . to state the problem properly is not the solution."<sup>102</sup> A change is required - a concentration on a deliberate teaching to aid perception so that Man can more efficiently sort and organize his sense impressions.<sup>103</sup> Our visual world could once illustrate an 'order' for human usage, but as Kepes has observed, the natural guidelines have gone, nature has been cheated by technology:

. . . we are surrounded by the "second nature" of our man-made environment; an environment that has not grown according to nature but has been shaped by one-sided and short-sighted interests . . . (the) appearance of thing . . . no longer reveal their character: images imitate forms; forms



cheat functions: functions are robbed of their natural sources emanating from human needs . . . Men living in this environment, injured emotionally and intellectually by the terrific odds of their compassless society, cannot avoid injury to their sensibilities, the basis of their creative faculties.<sup>104</sup>

### Subjectivity, and the Parent Stock

In The Meaning of Art, Herbert Read has indicated that man requires two receptive levels of information to obtain meaning, these based on sympathy and empathy with the subject matter under contemplation.<sup>105</sup> Our subjectivity resulting from perceptual analysis causes an immediate 'like' or 'dislike' response (not unlike the animal 'exploit' and 'avoid'), and that this, even when not accompanied by an intellectual analysis, flavours its case. But as already indicated in this chapter, when the analysis utilizes verbal language as its communicative vehicle, it leaves the domain of the visual elements and imposes a linear thought process. It would appear then, that both the bias of subjectivity and the control of the discursive hamper the eventual analysis.

It is apparent then, that it is necessary to improve the value judgement at the initial instantaneous subjective level, as well as in the realm of discursive thought. An increase in perceptual acuity could be obtained by instituting either or both experiential situations of the visual

elements through a structured "doing" program deliberately employing the visual criteria,<sup>106</sup> or through the academic teaching of aesthetics.<sup>107</sup> As Langer has indicated, "The parent stock of both conceptual types, of verbal and non-verbal formulation, is the basic human art of symbolic transformation. The root is the same, only the flavour is different."<sup>108</sup>

The logical structures underlying all semantic functions suggest a principle of division, ". . . discursive and presentational patterns show a formal difference".<sup>109</sup> Meaning is obtained with the actual analysis of the function of these symbols according to their nature, their relationship to each other, and their integration in human mentality.

If education can responsibly provide for these criteria for value judgement, today's children (in his future society) will be less likely to a) raise another generation unable to effectively respond to their environment,<sup>110</sup> and b) fail to provide them with the means to experience today's reality to the full.

What will give him this consciousness and make him into a man of the new culture is his awareness that understanding reality simultaneously involves the perception of the self in time and of what the mind is capable of noticing in the universe of which one is a part. No abrupt separation exists between individual and the world around him, each gives reality to the other.<sup>111</sup>

Both dramatic and rapid change have created the need for new truths to emerge; there are no fixed truths. "Change and the anticipation of change have themselves become the fixed ideas for dealing with the world."<sup>112</sup> Today's educator must be vitally conscious of his role, as aware as specified in the ideals for his pupils. He must never allow himself to become divorced from the processes of change or he will fall hopelessly out of step with his pupils.<sup>113</sup> It is necessary too that he maintain contact with his environment through his senses, and imperative that he secures meaning from this encounter.<sup>114</sup>

If we accept, as we must that the communication of the future must be universally acceptable to all Mankind, then we must acknowledge that there is a basic communication process more acceptable than any of the 3,000 different verbal languages; The Language of Vision. Recognizing that there is a common language, we must strive for a visual intelligence that will give us the techniques to efficiently encode and decode visual statements.<sup>115</sup> This will certainly require an increase in perceptual efficiency.

Art classes as part of an educational program<sup>116</sup> should deal directly with the senses of vision and touch, and should also be the instigator and promoter of an education aimed at the development of perceptual efficiency.<sup>117</sup>

By its very nature, Art is more responsive to change than Language,<sup>118</sup> but even though verbal language will survive for the present, visual language will be the essence of our future, our Education, our Communication, our Life.

Gattegno sums up well with:

Even if for some time speech will remain the most common way of letting others know what we know, we can foresee the coming of an era when the processing of visual material will be as easy as our comprehension of talk but swifter because of the former's lack of inertia, and through its spatialization by electrons, we shall be able to share vast conscious experiences at once.<sup>119</sup>

## CHAPTER III

### THE SEMANTICS OF COMMUNICATION

#### The Basic Concept

The act of communication can be said to have occurred when there has been response to any form of stimulus. "It is a process of information handling whether manufactured or natural, direct or indirect, intentional or accidental. The source of the information and the recipient of that information are in communication by means of a channel, the transmitting and receiving processes. It is possible for this communication channel to be a one-sided arousal as in a decoding process, or multi-sided as in deliberate encoding and transmission to elicit a decoded response. It is through this process of communication that Man, a system composed of receiver, processor and a transmitter,<sup>1</sup> is able to relate to himself and his environment, and so fulfil the necessary terms for Life.

Cassirer has indicated how Man has managed to achieve the terms for human life:

Every organism survives through the relationship to its environment by means of a receptor system and

an effector system. It receives outside stimuli, and reacts to them. Yet in the human world we find a new characteristic which appears to be the distinctive mark of human life . . . man has discovered a new method of adapting himself to his environment . . . between the receptor system and the effector system . . . we find the symbolic system.<sup>2</sup>

The major contrast, then, between human life and the other forms is in their response to stimuli. Organic matter other than Man immediately responds, but Man delays his with the process of thought. As Cassirer indicates "No longer can man confront reality immediately."<sup>3</sup> He is bound by his invention, his achievement. He ". . . uses his symbolic language to mediate between his input of information and his response to it."<sup>4</sup> This act of symbolization, an act essential to thought and prior to it,<sup>5</sup> catalogues experiential data — in fact, conceptualizes it.

Man has attempted a controlled relationship with himself and the environment, but the process is not as basic as a conceptualized language might suggest. "For side by side with conceptual language is emotional language; side by side with logical and scientific language there is a language of poetic imagination."<sup>6</sup> Not only does Man experience the 'things', but his opinions and fancies about them too. It is here that Man is in danger of subjective distortion, a bias that makes him a unique entity even amongst Humans.<sup>7</sup>

Both his encoding and decoding systems are subjected to a personal slant; opinions and assumptions accumulated from his wealth of perceptual intake, or the lack of it!

Man actually effects a communication process<sup>8</sup> by means of neurological signals received by the brain<sup>9</sup> from the sensory faculties - sight, touch, smell, taste, and audition. These neuron impulses are possibly channeled direct to the brain as received by the sense organs (each a particular specialist) or perhaps<sup>10</sup> modified first by these organs. What is known, however, is that they are acknowledged and selectively sorted from the chaos of information by "stop-go"<sup>11</sup> neuron circuits, a sub-group of brain cells, and are then 'funneled' into the conscious brain. This sub-group sorts the data according to its agree-disagree qualities. Already known data stays in the 'unconscious' section whilst the relevant new information passes on to the conscious and the attempt at 'closure'.<sup>12</sup> Any reaction to the information decided as appropriate by the brain is then returned to communication channels by neurological signals of the nervous system.

#### Effecting Control in Practice

There is a tendency for the Human Race to attempt to eradicate subjective bias from communal communication. Verbal language is an attempt to give communication order to specific

thoughts, but its inadequate syntax construction and complex lexicography<sup>13</sup> culminates in ambiguity and incongruity.

Verbal Language's asset, however, is that it is cheap: words are naturally available as symbols, so it is very economical.<sup>14</sup>

Also, the ceaseless information seeking communication channels within the human, the senses, are united by the brain in the attempt for closure, the mental equilibrium that will produce a satisfactory harmony between incoming information and that already stored. "A certain degree of cognitive dissonance is tolerated",<sup>15</sup> but the brain,<sup>16</sup> the receiver, transformer and transmitter of the sensory information, the power that disseminates the pertinent signals, sets its own limit, and when this is exceeded, attempts to reduce it. "Rationalizing, finding more information, or refusing to accept the dissonance - arousing information are some of the ways this is done."<sup>17</sup>

What Ruesch and Kees have labelled a 'meta-communicative message'<sup>18</sup> is also a part of the process for efficient and balanced communication. This is communication on the communication, i.e. how to read the information. In single channel communication this would be implied by its structure and presentation, but in multi-channel it can be evidenced by other perceptual sources. One person listening and talking to another in person to person contact receives not



only the meaning from the verbal means, but also voice inflection, visual gestures<sup>19</sup> and expressions, and any other relevant sense material.<sup>20</sup> They also have another perfect check: feedback. This is the observed reaction by the encoder and transmitter of the decoder's attitude and value judgement of the correspondence.

It is the process of feedback that illustrates how Man is so vulnerable to the systems of mass communication. The process is indirect. To communicate with a large number of receivers (the same content output simultaneously in radio and television, yet irregularly in print), the processor of the information codes and transmits through the appropriate technical devices. The communicator and receiver are not simultaneously present in time nor space, and because it is aimed at a large group of individuals, the communications are impersonal. There is an absence of immediate feedback which implies that the process is one-way, at least temporally. Consequently the "communicator can never adjust his behaviour immediately in accordance with the receiver's reactions",<sup>21</sup> and the receiver is not able to immediately satisfy cognitive discrepancies.

The mode of transmission places its limitations on the structure and content of the message, and so does the code system used, verbal or non-verbal (digital or iconic).

The verbal and non-verbal meaning is obtained from context and situation, but whereas the verbally designated symbol can be quite specific in its presentation (i.e. as in print), non-verbal codification usually requires more than the ability to 'name' the visual elements employed. In the case of sign language of the deaf and insignia signs like a swastika with already agreed upon definition, this non-verbal 'mystery' does not apply.

Ruesch and Kees (have categorized non-verbal forms of codification into three distinct categories:<sup>22</sup>

1. Sign Language: The information transmitted by gesture i.e., by prior agreement or common acceptance.
2. Action Language: this includes all movement not used exclusively as signals (as in walking and drinking), and that constitute statements to those who perceive them.
3. Object Language: intentional and non-intentional display of material things (clothes, architectural structures, sculpture).

When any of these categories are used to transmit information without the understanding that "communication is possible only when similar experiences, assumptions, and purposes are at its base . . .",<sup>23</sup> then it is apparent that aside from the designated symbol sign languages, there is much room for subjective misinterpretation. It is absolutely

necessary to observe the total visual situation within these languages to best attempt an accurate meaning.

This visual situation can be likened to an 'artificially created' pictorial field (painting, drawing, photo, etc.) in the manner that the human being perceives compositional design of the elements; line, colour, texture, shape, with the same faculties of sense imagery as used in everyday vision. But unlike the more stable verbal language which has a defined digital coding,<sup>24</sup> the relationship between the elements in visual form are 'implied' relationships and therefore offer implied meaning. We have to create the order from this visual scene ourselves; we have to provide the information.

### The Visual Analyses

The process of making projections into our 'minds-eye' of sense imagery of quality, depends on our ability to both create these images, and create order from them.<sup>25</sup> This task is of vital importance, the mind being almost totally dependent on visual sense-imagery to operate.<sup>26</sup> "It is through the process of visualization we learn . . ." <sup>27</sup> Kepes concurs with Murgio when he states:

Without the perceptual ordering of his sense responses into images of things in space, man cannot orient himself. Without shaping his physical environment in accordance with these images, he cannot survive.<sup>28</sup>

Creating these sense images (percepts) in our unconscious mind from our sensory perceptions provides us with the faculty of creating ideas (concepts) in our conscious mind. This process is not unlike the act of seeing, or of creating pictorial form. Since the mass media has moved towards visual imagery over verbal language as its source for conveying ideas,<sup>29</sup> it is imperative that the viewer has the knowledge to handle not only his external visual experiences, but his internal aesthetic creations and evaluations. The internal process is not a simple one, as summed up by Langer,<sup>30</sup>

Just as verbal symbolism has a natural evolution from the mere suggestive word or 'word-sentence' of babyhood<sup>31</sup> to the grammatical edifice we call language, so presentational symbolism has its own characteristic development. It grows from the momentary, single, static image presenting a simple concept, to greater and greater units of successive images having reference to each other; changing scenes, even visions of things in motion, by which we conceive the passage of events.

From this process we appreciate and store the new information that permits us to create more efficient evaluations. As the perceptual abilities are primarily organizational<sup>32</sup> (i.e., seeing similarities/differences; figure/ground, proximities and spatial differences; degrees of light, distance, and viewpoint etc., and we handle all these simultaneously<sup>33</sup>), we are in a constant process of experiencing alternate options, not simply visualizing but post-

visualizing (memory), and previsualizing.<sup>34</sup> This is the homeground of creative thought.

The experiences of constructing or encoding visual information should certainly be of benefit to analysing the encoded product of others; decoding visual information.<sup>35</sup> The benefits derived from this act as extolled by Gattegno are, for the sake of efficient communication, very impressive. He says:

Sight is swift, comprehensive, simultaneously analytic and synthetic. It requires so little energy to function, as it does, at the speed of light, that it permits our minds to receive and hold an infinite number of items of information in a fraction of a second. With sight infinities are given at once, wealth is its description.<sup>36</sup>

Later in his book, Gattegno discusses the speed advantage in learning as being a knowing (experienced) process as compared to verbal language's item by item retention, repetition and drills which are time consumers par excellence. He continues:

No one can deny that much of man's experience is his own and has never been formulated in any medium by consciousness. Following the methods of such acquisitions, we are learning to offer a new education, that is of consciousness, of awareness, and particularly of awareness of the self objectifying itself in worlds and ways of being.<sup>37</sup>

With the internalization of our visual observations, and our sensory capacities being supplemented by the knowledge of the eye,<sup>38</sup> it is interesting to note Murgio's<sup>39</sup>

percentages for perceptual intake by the sense organs: 1% taste, 2% touch, 4% smell, 10% hearing, and 83% sight. It would seem necessary that the education of sight, the act of 'seeing' and not 'looking at', should be of prime importance to the human communicator both in his capacity as encoder, decoder and transmitter of information. To depend on the discursive languages alone is just not enough!

It is not a surprise then when Hayakawa indicates<sup>40</sup> that there is little evidence to show a general improvement in our information awareness and processing ability, but that by comparison, the output of information (i.e., in the mass media) is becoming more efficient all the time.

Schreivogel suggests<sup>41</sup> that by becoming involved in the domain of art (fine or applied), we can become . . . involved with communication, for art is essentially a way of seeing, or at least a willingness to see. It is the difference between knowing and labelling . . ."

Commenting on the limitations of the discursive language, Suzanne Langer adds fuel to the fire with:

But the symbolic presentation of subjective reality for contemplation is not only tentatively beyond the reach of language - that is, not merely beyond the words we have; it is impossible in the essential frame of language. This is why those semanticists who recognize only discourse as a symbolic form, must regard the whole life of feeling as formless, chaotic capable of only syntamatic expression typified in exclamations like "Ah!"; "Ouch"; "My Sainted Aunt!".<sup>42</sup>

It is perhaps fitting that this chapter end with a statement made by the celebrated Canadian artist Alex Coleville<sup>43</sup> who genuinely combined earnest conviction with extreme modesty when he declared, "Painting is seeing, and seeing is knowing." One can only anticipate and suspect that by 'seeing', Coleville implied the accumulation and synthesis of all the sensory capacities.

PART III

THE NATURE OF LANGUAGES.



## CHAPTER IV

### VERBAL LANGUAGE

#### Developing Conceptual Contact

To meaningfully respond to his environment Man communicates within himself<sup>1</sup> with symbolic interpretations of his sense perceptions. With a persistent aim at simplification, he classifies the information under general notions and rules. For primitive man, early expressive sounds gradually became related to simple concepts. At first he attributed individual signs and sounds to supernatural and mystical events,<sup>2</sup> but eventually began to see a relationship between his phonic language and reality. The magic function of the simple word was eclipsed and replaced by a semantic function.<sup>3</sup> His subvocal speech could denote a concept to himself, and allow him to articulate it to others. Soon he could describe thoughts and experiences as sequential events.<sup>4</sup>

So Man's language helped him to rise from the unconscious mind of perceptual sense imagery to the conscious mind of assertions; the delaying process of reflective thought and its subsequent meanings and feelings.<sup>5</sup> The

greater the stock of images<sup>6</sup> below the level of speech available for conceptual recall, the greater the opportunity for a rich vocabulary of verbal denotation. He was gradually encouraging himself to become aware. A profusion of percepts also allowed the concepts to be modified and changed,<sup>7</sup> for change ". . . phonetic, analogic, semantic . . . is an essential element of language."<sup>8</sup>

The physical ability of Man to form countless<sup>6</sup> phonetic combinations, (and later their written counterpart), allowed him to establish countless names, but this abstract identification of objects was not a language as we know it today. Just like a young child, Man was reaching outside himself with an audible identification for a perceived object or event. Lee<sup>9</sup> has indicated that a child between twelve and eighteen months of age also demonstrates this desire to 'name' things,<sup>10</sup> but combinations of names at this stage do not indicate the formation of simple sentences. The child is, in fact, identifying objects all-at-a-time, and even then rather global in meaning.<sup>11</sup> The successive order of these utterances does not indicate any form of syntax or inter-lexicon meaning.

Great advances are made however by the time the child has reached the eighteen to twenty-four months stage. The relationship between two vocables rises to the importance

of words as they indicate their relationships to each other. The pivot-noun, noun-noun, adjective-noun, verb-noun, and verb-adverb relationships signify a considerable step towards a language illustrating comprehension. The child is developing a syntactical structure to indicate meaning. When he assumed control over this faculty, the child rises above subjective observation and "... come(s) to terms with the objective world".<sup>12</sup>

The very nature of verbal language demands that its elements be given in succession, meaning gathered from the total process of discourse. The development of the human intellect recognised the increased demand for symbols, and since words were naturally available and economical symbols requiring little muscular effort to produce infinite variations, they were adopted for the role. Yet although easy to produce, they were also easy to forget. The development of script in 4,000 B C.<sup>13</sup> gave man the retention tool he needed to start climbing the ladder that we now call civilization.

At first, the advantages of script for knowledge retention and analysis far outweighed the difficulties encountered in codification. These symbols suffered a profusion of systems of phonic representation in script,<sup>14</sup> the graphic attempt to represent verbal language. According to Hutchens, the object of the whole exercise was to create a

suitable system that could be decoded to the exact value of the meaning at encoding. For this purpose, a set of rules must be common to the encoder and decoder. These rules would then " . . . facilitate the coming together of reader and writer into harmonious understanding." <sup>15</sup>

Today's scripts are basically alphabetic writing symbols representing, rather imperfectly in English, the phonemes of the language; syllabic writing representing the syllables; and symbols representing morphemes and words. There is also the tactile language of the blind, braille. Because of its linear presentation and quite tight syntactical and grammatic rules, language tends to function as a conservative and stabilizing agent in its society, and therefore, Arnheim claims, it tends to make cognition " . . . static and immobile". <sup>16</sup>

#### Semantic Variations

Modern technology has extended the power of the word with mechanical retention, amplification, and transmission both in script and phonic form. However not all systems lend themselves to a mass production. Logographic languages (i.e., Chinese) have far too many characters to make printing a really viable communication system. A written language needs to be economical and precise to be mechanically reproduced efficiently.

The efficiency of the encoding systems is tested when the decoding processes go into operation. Phonic alphabet languages like English do not always have rules or signs to indicate particular emphasis or inflection, so decoding requires a great skill and content analysis to determine the phonic properties and their intended meaning. Many alphabetical forms have phonic variation;<sup>17</sup> some words have the same sounds but are represented by different spelling;<sup>18</sup> others have one spelling and more than one pronunciation,<sup>19</sup> and yet others have the same sound and spelling, but different meanings.<sup>20</sup>

To obtain accurate meaning from a word in an English sentence usually requires that we look at the whole context that it is in.<sup>21</sup> Eventually ". . . a pattern emerges when we look at the given term in its total relation to the other terms about it."<sup>22</sup> Fortunately this need for whole context looking, discourse, does have compensations in that incorrectly spelled words can be correctly interpreted when taken in the context of the whole. Miller has shown, too, that a word can be recognized (by itself) without all the letters being present.<sup>23</sup>

However, it is not simply the visual or verbal rendering of the word that can cause confusion. As Lewis has indicated:

. . . as everyone knows, words constantly take on new meaning.<sup>24</sup> Since these do not necessarily, nor even usually, obliterate the old ones, we should picture this process not on the analogy of an insect undergoing metamorphosis, but rather on that of a tree throwing out new branches, which themselves throw out subordinate branches . . .<sup>25</sup>

We are in a world of word explosion;<sup>26</sup> new meanings attributed to old words, and new words with new meanings. A child learning to function with words today must ". . . establish a many meaning background".<sup>27</sup> Meagher continues,

because it is possible for a writer to establish one meaning from the one intended, the effect of semantic confusion is manifested."<sup>28</sup>

Perhaps Ruesch would be quick to indicate that if words are not constantly checked against the things they purport to stand for ". . . distortions of signification may develop that non-verbal languages seldom bring about".<sup>29</sup> He suggests that we once again learn to use words scrupulously and with a sense of integrity.<sup>30</sup> Ruesch's warning is given further credibility by Schreivogel's<sup>31</sup> revelation that studies have indicated that the average college graduate has a vocabulary of forty thousand words, and a further forty thousand of rarely used words; eighty thousand words out of a dictionary of approximately two hundred and sixty thousand entries. He continues, "Though the average person may use only three thousand words in daily conversation, five hundred of these

words frequently have more than fourteen thousand definitions." With these figures we are better able to understand Pitkin's concern when he says, "It is much more useful to know the important meanings of fifteen thousand words, than to know only one of each of fifty thousand words."<sup>32</sup>

### Temporal Tribulations

The discursive manner of verbal language demands that it be strung out in linear fashion. To obtain meaning one must read the time-consuming temporal sequence. Pitkin maintains that, ". . . the normal adult takes in four to five words at a glance. The finest eye in the world cannot take in more than seven, and the worst eye takes in only one."<sup>33</sup> Many factors influence the speed of reading and comprehension including the colour of the paper, hunger, sitting position, length of sentences, type face and of course, verbal literacy.

Pitkin advises that we do not have to read every single word on a page. "The competent reader takes in masses of words and perceives their significance in exactly the same way as you will take in the objects in a room into which you glance."<sup>34</sup> This he calls the "Law of Relative Importance".<sup>35</sup> The broad 'picture' is gathered first by scanning and isolating across the important points.<sup>36</sup> Pitkin further advises against the learning of single units at a time,<sup>37</sup> and to

substantiate this he suggests that it is contrary to the natural impulse to learn parts completely separately.

" . . . (when) children learn to talk . . . they seldom learn words first. They talk sentences, even though the latter may not conform to adult grammar and style."<sup>38</sup>

An advertisement<sup>39</sup> frequently displayed in public newspapers and concerned with reading improvement has suggested that the average reader 'talks to himself'<sup>40</sup> and so reduces his reading capacity to about three hundred words a minute. Pitkin would agree when he says that the average person can handle light reading at five words per second.<sup>41</sup> But the advertisement<sup>42</sup> claims that this can be increased fourfold; to between one thousand and one thousand five hundred words a minute. The claim, ". . . read a page of Time magazine in about thirty seconds."<sup>43</sup> This significant improvement is promoted by deliberately training to read groups of words even in vertical sequence. The mind sorts out the meaning from the intense barrage of words in parallel sequences. Quite an achievement, and quite a different process to the linear contemplation.

#### Structural Inconsistencies

As already indicated, 'meaning' in verbal language is obtained from contextual referents by identifying the appropriate symbol correctly. Langer has indicated<sup>44</sup> that



study of vocabulary alone will not allow the foreigner to make the simplest statement correctly unless he can follow certain principles of grammar. These principles are relatively strict rules quite complicated in structure, and riddled with exceptions to the rule. Lack of conformity can create lack of comprehension with nonsense statements, or ambiguity, or downright incorrect information.

Clymer's investigation into English grammar made a check on the phonic generalizations taught in Elementary school English text books.<sup>45</sup> He found a 75% accuracy in their 'exceptions to the rule' in the four books that he tested, and in some books actually 0% accuracy. One commonly known rule tested was: 'when there are two vowels side by side, the long sound of the first one is heard and the second usually silent'.

Results:	Number of conforming words	309 i.e., head
	Number of exceptions	377 i.e., chief
	Utility	45%

Homer Hendrickson<sup>46</sup> indicates that English is not a phonetic language at all but is so irregular that it has to be regarded as Visual Language. An example cited illustrates how the English phonic generalizations allow an assemblage like "ghoti" to be pronounced as the word 'fish'.

gh, as in enough  
 o, as in women  
 ti, as in notion

It is clear that English is a difficult language to control, yet it is used with alarming regularity in the communications of today. What certainly has to be remembered is that ". . . something cannot exist as something else. The symbol is not the thing symbolized; neither is the object a word."<sup>47</sup> Dominick continues, "In the process of evaluating ourselves and relationships to the world about us, we are unconsciously tend to project onto words rather than facts . . ."<sup>48</sup> and the structure governing these words tends to govern the way we evaluate these facts in our pattern of thought.<sup>49</sup> In fact, we may believe that we can justify what we purport by a logical analogy<sup>50</sup> even to the extent of an analogy for what should be conceived through some symbolic schema other than discursive language.

We cannot verbalize on all the events we perceive, yet too often we believe that the power of the word is our total cognition. We should constantly remember that ". . . a symbol has no existence as part of the physical world: it has "meaning"."<sup>51</sup> We must distinguish between the actual and the ideal. As Cassirer points out, "In primitive thought it is still very difficult to differentiate between the two spheres of being and meaning."<sup>52</sup> One group of people, however, skillfully utilize this yet we would hardly call it primitive, simply 'expressing' a way of coping with Life.

Why then, he was asked, does Sadat devote so many speeches to threatening military action against Israel without following up his threats with deeds?

"The link between talk and thought, and thought and action is not close in Arab philosophy", Falkhry replied. "A word can become a substitute for the thing it represents - for action. Thus Arabs can shout insults at one another - as in the street confrontation in Beirut - and feel a sense of deeds carried out.<sup>53</sup>

## CHAPTER V

### SEMANTICS IN VISION AND ART

#### The Art of Seeing

Sight is a natural sensory experience,<sup>1</sup> and the fundamental contact with our outside world. Visual information perceived from the environment is transformed into meaningful experiences. This act implies a visual literacy, but the act of looking does not necessarily result in the act of seeing for seeing is a comprehensive vision, the searching beyond the obvious surface of elements into the realm of meaning. It is an educated counterpart to the process of 'looking at'.

Since the sense of sight is the major contributor to the sensory capacities of Man,<sup>2</sup> it would be reasonable to suggest that optical malfunction or loss would result in a catastrophic decrease in perception. The congenitally blind are not able to see sense images in the visual form that sighted people do. "Eyes that did not see forms could never furnish it (mind) with images . . .",<sup>3</sup> so those who lose sight would have to rely on an efficient memory. The above

quotation from Langer suggests that visual imagery must be the most readily available and efficient vehicle for analyzing sense data in the ongoing process of categorizing, memorizing, previsualizing, and ultimately, symbol formation. Their import was recognised by Kepes when he wrote, "Without the perceptual ordering of his sense responses into images of things in space, (Man) cannot orient himself. Without shaping his physical environment in accordance with these images, he cannot survive."<sup>4</sup>

To the man with sight, the world is vitally visual, yet he perceives what he considers reality on the basis of everyday living experiences, the ephemeral trivialities of communication with his surrounding. Rarely does he have to consciously acknowledge these qualities unless there is a change, a contrast with that considered usual and expected. At specific events like holidays or a violent thunderstorm he anticipates visual condition to be different, to be better, to stimulate him into an aesthetic awareness that rates over and above his normal experiences. He is, in fact, creating a value scale for his eyes, levels of communication acknowledgement. In this respect he expects an art object, as a deliberate isolate from the general nature of necessary perception, to provide an 'extra' aesthetic value.

A 'work of art'<sup>5</sup> is perceived with the eye, but whether it is comprehended for its intent is once again dependent not only on the level of visual literacy in the observer, but also the expectations, and the visual qualities of the product. What is certain is that the elements<sup>6</sup> of the visual world, whether the perceived reality or the 'artificial reality' of an artwork, have the same substance in the mind all being the illusionary reality of sense perception. It is the structure of the visual elements as perceived through visual perception,<sup>7</sup> the qualities as seen in their visual relationships and not their physical substance, that can give the artwork an enriched content, and the viewer the opportunity to experience pure form. Cassirer states:

. . . The awareness of pure forms of things is by no means an instinctive gift, a gift of nature. We may have met with an object of our ordinary sense experience a thousand times without ever having "seen" its form. We are still at a loss if asked to describe not its physical qualities or effects but its pure visual shape and structure. It is art that fills this gap.<sup>8</sup>

### A New Reality

Art then, is not an initiator of reality, but what Cassirer defines as a true and genuine discoverer.<sup>9</sup> It is a symbolic form that intensifies reality with the effective use of sensuous form. For it to be understood, the viewer is required to become activated by its qualities and then to

decode it with an ability other than discursive language. We need to repeat its construction, follow through the creative processes by which it came into being. "By this action the passions are turned into actions";<sup>10</sup> the viewer led through the artist's conversation with the dynamic processes of Life itself.

The processes of visual thinking are immediate and simultaneous. Visual understanding is natural and does not have to be learned but rather, through visual literacy refined.<sup>11</sup> Visual confusion detracts from the pure form to 'pull apart' rather than intensify the whole. Pulling apart is a temporal process and subjected to successive concept analysis and logical formulation. Our 'real vision' is considered our natural environment, our pictorial vision a profusion of symbols bogged down with meaning and functions instead of elemental form. But "... percepts need no language, they are direct sensory experience."<sup>12</sup> Seeing is effortless, a natural fact: perception is its process. To be able to reach an art work we must know how to see it; to be sensitive to direct sensory experiences. Claims Langer, "An artistically sensitive mind sees significant form where such form presents itself."<sup>13</sup>

However, Langer continues with the warning that natural models tend to encourage model-bound visual arts.

Instead of merely providing artistic ideas, a model may dictate to the artist . . ."; the integrity of the artist is tested. It is the artist's purpose to see below the surface to the structure of the model and reveal the mozaic of forces charged with meaning unique to visual literacy.<sup>14</sup> These can then be intensified according to the artist's desired structure of form.

#### Elemental Symbolism as Language

Every artwork is a statement about something; a proposition about the nature of human existence. "By no means need such a declaration be conscious. Few artists would be so able to tell in words what they intend to say . . ."<sup>15</sup> Their work is a language, a revelation on the forces of nature. They are, as Wendt has emphasized, ". . . not merely limited representations of reality operating within narrow limits of expression".<sup>16</sup> They reveal nature through their purposeful accent, an intentional metamorphosis.

The viewer of an art work is obliged to attempt to activate a meaningful encounter<sup>17</sup> as ideally required by his everyday vision. Allowing elemental relationships to reveal themselves requires both intelligent and emotional response. Such emotive sensation can be obtained directly without analysis, i.e., the human response to colour is basically emotional. Donis states, "Colour is, in fact, loaded with



information and one of the most pervasive visual experiences we all have in common."<sup>18</sup> She continues, "... yellow is closest to light and warmth; red emotional and active; blue passive and soft. Yellow and red tend to expand; blue to contract."<sup>19</sup> The more saturated the colour (the more pure), the more simple, basic and emotive.

The effectiveness of these emotional possibilities, however, is governed by their juxtaposition with all the visual elements. There are no fixed rules as such for this grammar and syntax, so there are no sure guidelines for their construction. The concept oriented rationale will not work in either the construction nor the dissemination of the presentational mode. The artist displays an empathy towards the visual, and so too must the viewer.

The best way to achieve this relationship with the visual mode of expression is to become familiar with its language. The elements themselves are used to create visual symbols; the imagery that Man uses to relate to the world around him. These express a symbolized meaning whether representational, imaginative, emotional or aesthetic.<sup>20</sup> The symbols react together 'all-at-a-time'; instantaneously and simultaneously. All their parts are relative according to the influence of all other parts within the structure. It is a non-linear mode of expression; it is presentational.

The artist encodes his symbolic message from within his experience in an attempt to evoke or convey a similar experience within the viewer. For this purpose he is obliged to produce a tangible situation with some form of medium, yet it is imperative that the work transcend the physical qualities. The media are used as the physical tool to "... convey the idea, image or feeling, and give it a public form",<sup>21</sup> and it is the artist's purpose to transform these qualities into a direct sensory experience. Awareness of the extensive capacity of the visual senses<sup>22</sup> must be an acute prerequisite for sensitive encoding.

It is also imperative that the artist concern himself with elemental symbolism, or what Bean describes as "a considerable degree of generalization if not outright idealization".<sup>23</sup> He contends, "... the connection between symbolism and generalization for the sake of universal meaning is basic." Symbolism has too the advantage of speed; it is a form of universal shorthand permitting a relatively effortless direct interpretation even in the 'global' situation of multiple interaction. Eisner has indicated that there are four basic types of symbols: the conventional, the representational, the connotative, and the qualitative.<sup>24</sup> The conventional symbol tends to be a stereotype and recognized in specific cultures, and sometime across cultures.

They have meanings just like discursive terms. They are essentially arbitrary forms given their standing through cultural patterns, i.e., the "Swastika", and the "Star of David".

The representational symbol is a form which is designed to represent or imitate, almost literally, the empirical aspects of reality.<sup>25</sup> They tend to be viewed as the 'realism'<sup>26</sup> style in art, yet the artist fuses his message with the empirical data for his own purposes. Wyeth has displayed a formidable use of organizational dynamism in his tragic, emotional painting, "Christina's World".

The connotative symbol is the product of the deliberate distortion of the representational symbol. The artist exaggerates the empirical qualities of these symbols for his particular mode of expression. He attempts to isolate the essence and mould it to his idiosyncratic desire, i.e., the elongated sinewy rendition of the human form in a Giacometti sculpture.

The qualitative symbol requires an idea image or feeling yet has no empirical referent to 'lean upon'. The works of Kandinsky illustrate the attempt at total abstraction, those non-objective forms whose "... formal or expressive properties alone evoke experience related to those properties".<sup>27</sup> Eisner continues:

...The treatment of form, line, colour, shape and other visual elements can evoke in the viewer qualities of life that are affect-laden in character. Describing line as fluid or mechanical, colour as raw or serene, shapes as taught or organic are indicative in two senses: of the way in which discursive metaphors are used to capture the expressive character of visual form. . . .<sup>28</sup>

Quoting Langer,<sup>29</sup> Eisner indicates that it is with the non-objective symbol, 'forms of feeling and their creation', that offers the evidence of the presentational knowledge the artist has formulated and the means by which he creates meaning. It would be wise, therefore, for a person decoding the statement to be familiar with the symbolic referents of the culture in which the art was produced, and knowledge of the general character of syntactical interaction in the compositional structure, i.e., familiar with balance, stress, attraction, positive-negative, etc. He will not have referents nor previous examples of exact similarity since the character of art demands originality, a new interaction, that presentational characteristic that promotes new 'styles' and secures its welfare.<sup>30</sup> The way in which the syntax operates within a composition defines its group or style. Often it is the required prerequisite to even being noticed!

Man's relationship to his world through these visual capacities is reflected in the art of his day. By making

things visible that were not even existent prior to the creative act, he is invariably producing a striking insight into the culture of his day. Even the media he uses pertains to the degree of technological skill and achievement in his society. As Valéry has indicated:<sup>31</sup>

. . . for the last twenty years neither matter nor space nor time has been what it was from time immemorial. We must expect great innovations to transform the entire technique of the arts, thereby affecting artistic invention itself and perhaps even bringing about an amazing change in our very notion of art.<sup>32</sup>

Apart from acting as the conscience of visual awareness in society, the artist's role as the instigator of new imagery illustrates its value when we consider that thinking requires imagery, and efficient imagery must provide for more effective thought. It would be reasonable, then, to assert that the visual arts should be regarded as one of the prime functional materials for the development of Man.<sup>33</sup>

## CHAPTER VI

### MODALITIES FOR MEANING

#### Effecting Understanding

Man's natural information receiver, the eye, responds to its world with a global vision, an all-encompassing sight. Its very nature provides for an elliptical, cinematic, horizontal referent to Man's conscious verticality; that constant desire to avoid a gravitational catastrophe.<sup>1</sup>

It has been suggested that the conditioning of western print has caused his left to right directional vision with its top to bottom relation to axis, but the bottom left preference of horizontal scanning is not yet clearly understood.<sup>2</sup>

What is evident to date is that Man has an orderly way in which he scans a visual field. Utilizing this knowledge, an artist can offer a more dynamic organization of the elements. The writer of words, however, is restricted much more by the limitations of his medium. He is obliged to transcribe in linear fashion and rely on the decoder's ability to obtain meaning from his successive slots of information in the usual left to right, top to bottom sequence.<sup>3</sup>

The decoder is required to comprehend the referential syntax and grammar to define the order from these individual meanings. The difference in semantic made for obtaining and expressing meaning are quite distinct.<sup>4</sup> The artist's presentational meaning is obtained by 'pulling' the parts together to a whole, whereas in the writer's discursive presentation, meaning is obtained by isolating all the parts,<sup>5</sup> a pulling apart of the whole structure and calculating the respective relations.<sup>6</sup> This considerable difference is what Langer refers to as the simultaneous and the successive semantic modes of encoding and decoding.<sup>7</sup>

Gunter has synthesized Langer's "Semantic View of the Non-verbal Arts"<sup>8</sup> and has compiled a list of the parallel sets of four opposing distinctions between the discursive and presentational semantic communication processes. They are:

Discursive - Verbal Language	Non-discursive - Visual Art
1. Vocabulary and Syntax	1. Visual Elements and Principles
2. Successive	2. Simultaneous
3. General	3. Particular
4. Fixed Equivalences	4. Relational

Each semantic mode is unique.<sup>9</sup>

As has already been indicated in this thesis, the discursive is successive and the presentational simultaneous. It would appear that there is an equal impression of all the parts to make the whole meaning in both cases, but whereas the

successive is time consuming, the simultaneous is not.<sup>10</sup>

In fact, the presentational is regarded as instantaneous,<sup>11</sup>

since 'isolation' of the parts would be the dissemination of the whole calculation of the elements, so be quite discursive in nature.

Arnheim<sup>12</sup> has categorized these two types of cognition as intuitive (presentational), and intellectual (discursive). Whereas the intellectual cognition simply traces through the individual relations of the strung-out concepts, and then often only in part,<sup>13</sup> the instinctive cognition scans an enclosed area of total meaning, observes the component's perceptual effects upon each other, and receives a total image. The particular character of the individual elements is determined by their place in the whole.

It is appropriate to note that not all languages depend on successive verbal positioning and the context to define their meaning. Arnheim indicates that English, being a relatively simple language, requires an interaction between all the elements to provide accurate meaning, but in German and Latin the role of the word in context is often explained by transitions in the word itself.<sup>14</sup> Even the terms used to define these changes in state - 'inflexions' and 'declensions' are derived etymologically from 'bending'. However, it should be noted that these are learned and



agreed upon definitions of word, positioning and meaning. Contrary to Eisner's interpretation<sup>15</sup> that Langer maintained words had (single) fixed meanings, she expresses the versatility of language to use a fixed meaning (as defined by the rules of syntax) to construct new symbols, and ultimately be able to define the meanings of single words, i.e., to construct a dictionary.<sup>16</sup>

This is quite a different situation in presentational modes for expressing meaning. The element of line, for example, as a 'curve' has no meaning other than its immediate situation. In another context it serves as an entirely different definition in meaning not dependent, as Langer says, on past experiences or a pool of knowledge. "Non-discursive (presentational) elements cannot be defined in terms of others."<sup>17</sup> Their elements reveal their meaning each time as an original and new set of combinations that cannot be learned or structured into a finite definition. They exist for the intent of their creator. However, Barley insists that both the context and the culture define the meaning from the range of meanings.<sup>18</sup> He relates this to pictorial information where, he claims, what is seen depends to a great extent on what the viewer brings with him. Duncan<sup>19</sup> would add that the meaning lies within the artwork, whereas a verbal concept has interpretations to

to equivalences or analogies already established before one looks at the context.

### The Intellectual Exercise

Thinking originates in the perceptual sphere, and there is reason to believe that much of the truly creative exertion of the mind in any field and at any level is a perceptual operation. The young child, for instance, finds difficulty in rationalizing the coming together of separate entities. In 'real life' he can accept such relationships, but his drawings reveal his caution, his desire for the different items to maintain their independent identity, the identity that he knows to exist. Eventually, as Arnheim indicates, he 'matures' to the level of accepting an interaction between the entities, the temporary coming together of concrete separate concepts.<sup>20</sup>

To illustrate this point, Arnheim discusses the development of interaction between the representations of a horse and its rider as drawn by young children. The immature interaction revealed the horse and rider as touching, but as definite separate entities. A transition stage was reached when the separate entities overlapped each other, but did not concede to a modification in shape. In the final stage, the rider lost one leg (on the side view) as a

mutual influence led to modification in their visual representation. As Arnheim observed, "Integrity had to make concessions; the partners are left unimpaired by they interpenetrate. Each entity revealed an awareness of co-involvement in the pictorial field. Conceptual and perceptual knowledge reveal a willingness to both concede and reinforce each other.

To create a genuine<sup>21</sup> work of art requires an organization through most, if not all of the cognitive operations.<sup>22</sup>

A genuine work, as Kepes has indicated:

... has meaning in depth, and, at each level, there is a corresponding level of human response to the world. In this way, an artistic form is a symbolic form grasped directly by the senses by reaching beyond them and connecting all the strata of our inner world of sense, feeling, and thought.<sup>23</sup>

In continuing, Kepes rejects the idea that the sincere act of expression is enough to provide a genuine artistic image.<sup>24</sup> He maintains that true art, (just like well constructed language<sup>25</sup>), has to be moulded into a "coherent, complete, living form".<sup>26</sup> To reach this end, the elements must be formed into "a balance, a harmony, or rhythm" that is an analogous correspondence with feelings; and these feelings are in turn analogues of thoughts and ideas." He concludes that a true art is a "graph of emotions".<sup>27</sup> Eisner concurs with Kepes:

For too long the arts have been viewed in educational circles and by the general public as a consequence of the unfettered discharge of emotion. To 'express' yourself in art was to let yourself go, to give vent to your feelings, to have catharsis. While the last thing I wish to deny is the feelingful character of artistic achievement, I do wish to deny that these achievements are the result of emotional discharge. Artists, like scientists, must work long and hard to gain this type of disciplined control that art demands.<sup>28</sup>

Eisner insists that the creative act of art requires an encounter with intelligence just as a scientist would need with a scientific venture. This intelligence, he claims, can be "cultivated through experience."<sup>29</sup>

It could be argued, then, that non-objective art, not being based on empirical data, simply is not art. This would deny, however, a great quantity of work both for individual consumption and for use in the mass media their rightful standing. But lack of empirical referents is what non-objective art is about; no referents except inside the work itself. The viewer has to explore the formal relationships that the work displays in order to derive the expressive content of the form.<sup>30</sup>

### Dependency

The value of language and art as separate entities and in combination can be looked at from the point of view of their relevance to society. Hayakawa says that vision

(art) and language are the two most important measures we have of approaching reality.<sup>31</sup> "How we talk and how we see determine more than anything else, how successful we are in coping with our environment." Our culture is revealed to us through our communications verbal and non-verbal; we are told how successful we have been in the past, and are faring at present. As Bohannon says, language and art are the methods we use to symbolize the world of things and sensations ". . . that create the image behind communication, social life and all culture".<sup>32</sup> Communications well understood offer self insight. Without this insight into our existence it is doubtful we could call ourselves Homo Sapiens.<sup>33</sup>

However, the predominance of the media on our existence suggests that the values transferred by our art and language (i.e., our culture), are becoming more universal. In previous times cultural values were handed down to children by their parents, their family, or their local environment. Today we are experiencing a 'sameness' about culture,<sup>34</sup> a culture prepared and presented by the mass media. Today's children no longer have much to compare with, the village has become 'global'. It is they and they alone that have to evaluate their communication; they who are required to comprehend and control their vision and language.

It must help that vision and language are so closely

intertwined in the processes of thought. Imagery, assisted by the able conceptualizer language, permits thought to occur,<sup>35</sup> but to depend on the verbal alone for the processes of thought could provide for disaster. By its very nature it is incapable of recording some of the sense imagery of the perceptions,<sup>36</sup> but this does not deny thought the ability to perform: Language is the aid and must be treated so. It must not be allowed to become more than its purpose: a referent.

#### Cross Disciplinary Inference

Experimentation attempting to reveal cross channel inferences in language and art have met with interesting results. de Vito and Civikly's experiments into the relationship between sounds and meaning found that in the English speaking people that they tested, repetition of sounds was reliably associated with visual representation of homogeneity or completeness.<sup>37</sup> Werner and Kaplan (Symbol Formation) discuss the relationships between sentences and the drawing of lines. It was discovered that the lines themselves were not as revealing as their indications concerning the relation between thoughts. They state:

The sentimentally formulated relations were organically grasped and represented in terms of 'vectorial-dynamic action patterns', such inner gestures as "moving toward", "intersecting with", "making contact with", "flowing into", "balancing", "sup-

porting", and so on. Only because the relation between thoughts were formulated in these terms was it possible for the subjects to exploit the linear medium to express the relations.<sup>38</sup>

They continue by asserting that we organize thoughts in our minds on vectorial-dynamic patterns and that although these patterns are very rarely experienced in the conscious mind, they must provide for the 'juggling' for the understanding of the asserting relations between thoughts.<sup>39</sup>

The roles of metaphor and cross disciplinary analogies have tended to suggest that language and art can be substituted for, or directly represented by each other. The emotion rage communicated presentationally and rage written may provide the same human response as to meaning, but primarily the presentational 'work' will tend to evoke the emotion in the beholder, whereas the written variety simply indicates the meaning of the emotion. In a similar manner, a poem is not a picture in words, nor a picture a poem in colour and line. Langer, quoting Parker states:

Just as any poem, when you abstract from its meaning,<sup>40</sup> may be regarded as a pattern of words, so every painting, when you abstract from representation may be considered as a pattern of colour and lines.<sup>41</sup>

Artists are readily able to talk across disciplinary fashions, but this is because they see other arts in terms of their own. As Langer says, you " . . . can paint when listening to music as long as you have no preconceived plan,

or improvise music whilst watching a dance. . . .",<sup>42</sup> but the translations under this method reveal a personal interpretation of the 'mood' - the emotional response, and not the deliberately designed interaction of the fundamental elements of the discipline being used. . . . the artist conceives the work technically in only one of the two arts he compares."<sup>43</sup> Langer insists that there are no parallel elements that correspond in any regular fashion. Cassirer would agree:

The idioms of various arts may be interconnected, as, for instance, when a lyric is set to music, or a poem is illustrated; but they are not translatable into each other.<sup>44</sup>

A relatively simple example of the perceptual difficulties encountered in cross disciplinary activities is that although an increase in the size of a dot is almost imperceptible, the slightest change in pitch of a sound is easily noted.

One difficult decision to make is whether a poem can be presentational, or has to be discursive. Concrete poetry possibly aims to give a visual image on a printed page, but unless this image is inherent in the verbal discourse (whichever way it is meant to be read), then the verbal and visual simply complement each other enhancing the meaning of the poem. But the page is not a picture, nor the picture a poem.



Schreivogel would disagree. He states:

Concrete Poetry . . . is a process by which words, phrases, and syllables are isolated and placed in situations which allow them to be explored anew in combination with visual and graphic forms. . . . an art form born of the visual and print cultures.<sup>45</sup>

According to Schreivogel, the visual semantic of concrete poetry joins with the phonetic aspects of the language to afford a new experience in communication. However, this writer believes Schreivogel to be incorrect in interpreting the use of print, under these conditions, as verbal in meaning.

Comic strips have long exploited the relationship of the visual to the verbal relationship. The dynamic qualities of the front page of the boxed sequential variety of the past have been maintained by enlarge over several generations of readers. Faust<sup>46</sup> indicates that their appeal is discovered in the relationship of the word to the pictures. Even though not proportionally equal,<sup>47</sup> the words and pictures work together to produce their intent:

The significance of the title page then lies not in the drawing alone, but in the interplay of pictorial and linguistic elements. Accordingly, the communication is the effect of neither the linguistic nor the pictorial field, but of the hybrid.<sup>48</sup>

According to Faust, their driving force lies not in the comprehension of the verbal commentary, nor the understanding of the visual, nor the fact that they complement

each other, but in that extra meaning that they give over and above the 'sum of the parts' - the discovery of their "... relations and meaning, secret references, (and) concealed significances."<sup>49</sup>

Before passing on to the parallel role for which the educational media should possibly strive, it seems pertinent to consult the 'meaning' of the photograph, for it is the technological advances in the realm of photography and language that have placed the mass media in the statured role it holds today. Both these communication systems have advanced in their ability to cut through space and time. Their immediacy is now permeating our very existence but as Benjamin points out, they lack the presence of authenticity; neither are 'the real'. He states quite emphatically when talking about imitation; "... even the most perfect reproduction ... is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be." He continues, "... the presence of the original is the prerequisite to the concept of authenticity."<sup>50</sup>

Photography has certainly made reality a difficult proposition to digest. First, it does not, as Langer indicates, represent the elements in the same way as language does. The photographic elements are a thousand times more numerous, giving a far greater correspondence advantage over

the word-picture to object relationship. An intelligent eye does not have to stop to consume verbal meanings. The elements are numerous, the wealth of detail so great and its physical make-up so basic in light and dark, that it is impossible to find an independent symbol that is similarly represented in other contexts. "Photography, therefore, has no vocabulary."<sup>51</sup>

Collier calls the photograph ". . . just more realism. They contain everything."<sup>52</sup> As an anthropologist he would search for everything available, an ideal post facto medium. Wendt would agree too, and with his statement that they are "surrogates for experience", suggest that they are so elementary to comprehend that, being unlike word symbols, even "Aunt Minnie's nephew, aged four, can recognize her snapshot though he cannot read."<sup>53</sup> They are far more important than the analogy of words. Their semantic domain of the object or event has actually reached the power of symbols (as already mentioned, i.e., doctor, and marine photographs, etc., in 'Life' magazine). It is an acknowledgement of their power that they do not operate within the limited representation of reality, but they can be both very real and very symbolic.<sup>54</sup> This may be due to their incredible perversion for detail and information, and all this captured in a fraction of a second.

The time element of photography has been explored by Lacher with her investigation into recall potential from frozen and implied movement in photographs.<sup>55</sup> She discovered that there was a higher incidence of recall for static objects in photographs than for action details.<sup>56</sup> She concluded that this was due to the fact that static objects elicited verbal rather than non-verbal processes, it being much easier to name objects than activities.

The development of photography into the realm of motion pictures added an entirely new dimension to the medium. A series of pictures presented in sequence displayed an advantage over the 'right-now' time slice, then immediately not open for change.<sup>57</sup> Essentially this was picture language using pictures rather than words. Langer claims that this presentation is "a discursive symbolism".<sup>58</sup> With the acknowledgement of persistence of vision at 1/40th of a second, the motion picture was born and the syntax of photography invented.

Wendt maintains that the motion picture presents "... a flowing discourse in picture surrogate".<sup>59</sup> He likened this sequence to a highly structured time-space analysis and synthesis of reality. Short scenes could be like blunt statements; long scenes with elaborate composition similar to compound sentences. The camera itself would be

engineered to offer angled and reverse shots, dissolves, fade outs, close ups, and time compressors; all aspects of 'reality' not understood by native media-unoriented viewers.<sup>60</sup> This artificial reality could evoke such powerful persuasion to the intelligent eye that even "Hitler's films of the bombing of Warsaw were such terribly realistic records that they could be used as a tool of conquest."<sup>61</sup> He concluded that at times the motion picture could appear even more realistic than the real experience.

Dr. Norman Paul, a psychologist, proclaimed with extreme conviction that the consequence of movie film, the playback videotape, could, within ten years, help people resolve problems within their own reality.<sup>62</sup> The discussions between family members that resulted in a verbal interchange would become subservient to the visual relations of such discourse provided by TV replay. His own practice had proven this to be fact.

#### Indications from Research

The apprehension resulting from human preoccupation with verbal discourse has caused media developers in the field of audio-visual media to become more concerned with the possibility that more information can be communicated when two sense modalities are utilized rather than one.<sup>63</sup>

"... the notion that the sense organs are the bottleneck that limits the amount of information... that can be received."<sup>64</sup> However, Gattegno would not agree. He claims that any video information would be countered by the interference from verbal information and result in "... the poverty of the remembered statement and (reduction) in the wealth of the deep awareness that silence would bring about."<sup>65</sup>

Much experimentation has been conducted in this particular area during the past decade. Educational media researchers are committed to resolve the problem of simultaneous verbal and visual projections. Severin states that problems in levels of both verbal and visual literacy must be taken into account before any combination of the two (eye and ear) sense modalities are used. "If any interference is accidentally introduced between two channels, then much effort, time, and money is wasted, for one channel could then communicate more effectively."<sup>66</sup>

This interference could result from what Severin describes as information in the first channel not being relevant to that in the second channel. To overcome this possibility, Severin claims that media production aims at using a multiplicity of information in both channels to help counteract any single channel loss, but too often, this leads to an incidence of irrelevant cues.<sup>67</sup>

Nelson noted, in 1953,<sup>68</sup> that experiments had revealed that pictorial presentations of educational filmstrips were often simply a backdrop to the verbal commentary, and sometimes even served to inhibit learning.<sup>69</sup> Conway, however considered it necessary to examine research that defined more exactly the sensory modalities and the channels used:

It is said, for example, that information may be presented through the print channel and the audio channel. No attempt is made to distinguish between the two in that the former involves the visual modality, and the latter, the auditory modality while it is verbal coding in information that is common to both.<sup>70</sup>

Conway continues with the necessary concern that should be considered when presenting simultaneous coding systems, i.e., a pictorial cow presented with the printed word 'cow' represents a combination of coding systems, but one sense modality. However, a pictorial cow presented with a phonic 'cow' utilized two coding systems and two sense modalities. These coding systems could be classified as digital and iconic, and this added a further dimension since under the iconic was not only the pictorial cow, but the "moo" sound too. The digital codes however remain at the spoken word 'cow' and the printed word 'cow'.

Conway further indicates that the cross-combinations of digital and iconic provide for either "related" information

(and therefore an educational value), and "redundant" information.<sup>71</sup> The examples he provides are:

related : digital-auditory cow and iconic-visual cow.

redundant: digital-auditory cow and digital-visual cow.

In the cases of discovering an unknown set of parallel codes, i.e. speaking and reading/writing, (language learning), the redundant combination is used extensively. But it is quite clear that once the parallel mode has been assimilated then it is no longer reinforcement, but redundant and possibly harmful.

In his comparison of the effectiveness of auditory as compared to visual presentation, Aaron<sup>72</sup> describes the results of Peterson's<sup>73</sup> research. He concluded that an auditory presentation makes less of an impression on the memory so that spontaneous forgetting occurs more readily. On the other hand, visual presentation in motion greatly facilitates simultaneous perception.<sup>74</sup>

Allen et al.<sup>75</sup> have made an extensive study into the effectiveness of presentation of different combinations of stimulus material in the auditory and visual modalities.<sup>76</sup> They examined the effective relationships between single-channel and multi-channel, motion and still, and pictorial and verbal presentation. Their subjects were Californian children from grades V and VI of low, middle, and high intel-



ligence. They were tested as to the effects of the presentation as to the following learning tasks, (immediately after exposure, and fourteen days later).

- Identification : The physical characteristics of names, things, and events
- Comparison : of things and events
- Classification : the ability to categorize and conceptualize
- Generalize : to form concepts, principles, rules and laws
- Application : its uses with new problems

They discovered in general that visual information in their two to three minute presentations provided for better learning conditions than auditory, even to the extent of visual-digital over auditory-digital. However, in the opinion of this writer, the most alarming and disconcerting of the results was that although motion picture with sound, and still picture with sound, and motion picture without sound, appeared to be the most efficient elicitors of information respectively, the still picture without sound was a decisive last, dropping behind sound-print, print alone, and audio alone.

The better two modes of information transfer both, had a parallel of sound with visual in their presentations,

and the third efficient mode was motion picture silent, basically a discursive mode of presentation with its successive single acts of vision. It would be reasonable to suggest that the verbal/auditory mode acted as the crutch to the visual, and when the visual was discursive in presentation, they complemented each other to an even superior degree. Yet when the visual presentation was quite alone, representative of a fractional moment in time, visual illiteracy became a predominant factor.<sup>77</sup>

As a child's performance is an outgrowth of his past transactional experience,<sup>78</sup> it would appear that the still picture, although belonging to the mode of transmission accredited with a great learning potential for information retrieval, must have been subjected to some adverse exposure in the child's education. Perhaps it is more significant that with the visual iconic presentations in the experiments being photographs, any further abstraction from reality in the medium used could cause a totally misunderstood encounter. These implications are horrendous for the artist and his public.


It would not appear unreasonable to suggest on the basis of this information that Man is being tailored towards an inhibited level of knowledge by his systems of formal education. At stake is the perceptual 'knowing' of the

mind, the organizational and spatial presentational activities so necessary in the promotion of conceptual acuity and the balanced harmonious relationship of Man to his experience.

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PART IV

CONCLUSION



## CHAPTER VII

### COMMENTARY

#### A Personal View

The information examined in the preceding six chapters has gradually guided this writer towards the opinion that there are four basic objectives for the art teacher when employed at his primary task of making contact with his pupils. However, it would be both improbable and impractical to discuss this role without commenting on those factors both directly related to, and on the periphery of the subject matter under examination; i.e. social attitudes, the role of administration, the problem colleague, the cognitive capacity, availability of A.V. equipment, and of course the experience of fulfilment in the child and teacher. The four primary objectives are:

- an increased perceptual acuity;
- the promotion of independent exploration;
- an ideal learning environment;
- recognising a culture: one's own role in society.

These four objectives will be discussed briefly in the order as displayed above, i.e. in a top to bottom linearity. It is anticipated that if these four criteria are met satisfactorily, the child will be able to apprehend the world with a less prejudiced eye.

As a deliberate attempt towards simplicity, the writer will direct his discussion towards the early stage of visual analysis displayed by the child at approximately eleven years of age; an age when he tends to leave the world of subjective expression to unite with the meaning implied by objective contemplation. ~~To indicate possible activity,~~ the writer will briefly discuss the instructional value of cameras and TV screens.

#### Increased Perceptual Acuity

Formal schooling today is the linear oriented product of a previously secure and condoned print literacy era. Its modes of communication are not conducive to the development of a direct perceptual sensory experience that provides the child with a greater and more informative conceptual and perceptual vocabulary. The linearity of the verbal restricts the role of visual perception outside its immediate direction, and so reduces any exposure to facilitate more dynamic image creation through comparative analyses and organizational

necessities. This promoted imbalance of conceptual over perceptual factors denies the freedom to explore inter-related contrasts of our environmental imagery, the source of all our knowledge.

With an increased perceptual activity promoted by the learning environment, the child would become better able to form image concepts reduced to their vital characteristics. Hopefully, increased perceptual experience would develop the conceptual character towards a more complete understanding of its own nature and purpose. With an eye 'trained' to discriminate, sight's efficiency would provide a more simplified and basic dynamic form for each perceptual image, and under uninhibited conditions, formulate the ordering of visual information to be used for better value internally, and hopefully of more complete external communicative value:

However, it must be emphasized that the child should not be oppressively obliged to produce visual statements. Such pressures could lead to both frustration and belief of inadequacy. It is for the teacher to discover how to determine the increased acuity in his pupil's perceptual awareness by offering printing, photographs, discussion, acting, general arrangement, the aesthetic judgement of the works of others, making, observing, social communication, in fact any

manner providing an indication of an increased organizational ability when dealing with the effect on the 'whole' of all individual relationships.

Since the present age is one of video technology, it would be wise to utilize the mechanical apparatus available. A 'simple' picture such as a photograph could be effectively used to indicate the infinite variety of information that it implies; used to discover those visual elements of the environment not 'there' before. With the promotion of visual sequences, the gestalt of the linear presentation would assist not only in awareness of compositional transition, but in the total meaning implied. This group encounter could provide the child with the experience of information encounter in a time transition, and so better equip him with the tools to acknowledge his visual world of immediate reality, and the often predetermined world thrown at him with his constant associate, television. It would be hoped and expected that his experiential transaction in visual information in the art class would be both guided and exploited by the art teacher.

#### Promotion of Independent Exploration

At approximately eleven years of age, the child begins to specifically seek out the reality of his world.



His eyes search for the answers to his countless questions relating to all the sensory perceptions. He moves much, but his eye races ahead searching through the depth of space for new and more exciting revelations of his environment. Frogs, toads, snakes have as much importance as 747's, Alpha Romeo's, perpetual motion, and Mars. He leaves the age of personal expression and his emotional behaviour develops on social context. His abstractions allow him to communicate with the unknown; provide him with the ability to previsualize his exploratory escapades, most of which, one could anticipate, takes place outside of school both in space and time!

The book tends to be a 'closed' concept in education, allowing only occasional lateral escapades, but always defining its vertical lineal limit. The print in the book that provides the information is usually declarative and factually stated. Pictures accompanying the words (averaging one per 1.58 pages in senior elementary books) are nearly always accompanied by a decisive declarative statement. Interpretation is out, dream imagery obliterated by the voice concentration of the text. His interest is quashed by the expectations required after the knowledge has been 'discovered'. The teacher, having predetermined lesson plans, strives to arrive at his objective for all the charges under his command.

Remove the linearity, and the system does not collapse, simply rejuvenates its ideals. Open-ended projects remove emphasis from product to the process of exploration. The teacher's plans are starting points, perhaps only warnings on how to conduct himself. The linearity of the physically structured environment is broken down by moving through the walls and across space. All children are encouraged to exploit new challenges. The motoric child is encouraged to previsualize his processes and product; the conceptual child encouraged to exploit metaphor and its invigorating visual inconsistencies. Books, and teacher's verbal descriptions, give way to sensory experiences and sensations. Discipline, the evil eye of control, relaxes as interest and discovery occupies the mischievous mind. The use of words is minimized, perceptual activity operating at limitless degrees.

Learning takes on the guise of play, and even play is then recognized for its role as a learning experience. The exposure to more and more situations provides chance encounter, the problem of handling alternatives, and even the need to create them. Previsualizing situations and experiences becomes commonplace. Organization of perceptual information into meaning becomes a pleasant desire. A buffalo is discovered to be a buffalo rather than a geographical statistic or a spelling chore. The child, in fact,

is provided with more direct sensory experience, greater organizational challenges, and considerably more comparative information for image intensification. Ultimately, he can explore visual meaning directly.

Ideally, the closed environment could house the facilities of both conceptual knowledge and perceptual experience. Information carried in informative books could certainly be stored within four walls, and so could the visual "aids". Ideally, cameras and TV would expose the child to his technological culture. Familiarity from exposure to both would prepare him to read the doubtful messages included in the mass media, and like the book, provide him with the exposure to distant information. However, unlike the book, the child manipulates the camera himself to intensify meaning with close-up and oblique observations. It also provides opportunity for simultaneous projections and transparencies, an instant playback for reinforcement of an impression. Relationships considered valid yet accidentally encountered can be stored and analysed by pupil, peer group, and teacher. Our visual environment would receive an unbelievable intensity of analysis whilst providing a tremendous wealth of exploratory perceptual experience. The child, being a natural seeker, simply needs the opportunity to search.

### Ideal Learning Environment

Closely related to his Independent Exploration is the environmental condition that permits such a venture. As already acknowledged, verbal discourse should be removed from its structural hold and used simply for interpersonal communication. The perceptual sensory capacities can then explore the environment without having to meet previously stated required conditions, and be recorded in the linear mode. It would be hoped that there would be the environment, the ability to leave the classroom physically and wander in the experience of 3.D. space, and also by substitution in film, tape, and TV.

It would appear evident that the curriculum demands carefree evaluation; the objectives removed from predetermined level of acquired knowledge and skills to an ongoing evaluation procedure, to determining social awareness and acceptability. Quality art must certainly be replaced by visual communication objectives. Other subjects and their teachers must be evaluated too for their discursive nature so as to indicate their cautious juxtaposition with presentational activity. The uses of visual materials must be carefully controlled so as to supplement information only when absolutely required, stand on its own or be complemented with verbal information. Films and TV should receive

an extra screening to check on redundancy and mode/channel interference. Children should be allowed to explore the visual media, and so determine an insight into its capabilities for truth.

Recognizing a Culture: One's Own Role in Society

Everyone in society is a consumer, so everyone being prepared for adult society should have the opportunity of an efficient education to permit them to evaluate any concept engineered directly at them by any visual persuasion concealed in commercial art. Conceptual education has produced in abundance a society of conceptual thinkers, unaware and unable to protect themselves from the visual dynamism of hidden persuasion. Only recently has Man shown indication of recognizing aesthetic disfigurement in the visual environment in general (i.e. pollution can be visual!). At the age of eleven the child is on the verge of conceptual take-over, and unless he is able to maintain his perceptual faculties and recognize their value, he will also become a part of the great conceptual machine. But perhaps the value can be introduced to him through play activities, or that considered play yet in fact extremely beneficial to creative analysis and organizational activity. Play has unfortunately gathered the similar unfavourable connotation as day-dreaming (in

education), yet both are highly creative, and in the case of day-dreaming, organizational imagery and self-reflective thoughts abound.

Unfortunately, the art teacher must evaluate himself as the only provider in education of the child's 'becoming', his entering into his own awareness of self and society. The art teacher's role is not that of amounting masses of information in the child, but in guiding him towards perceptual efficiency, to sensitize his thinking. By assisting him in the task of selecting relevant from irrelevant information, he guides him in the search for true meaning from within his own experience. The added element of not having this meaning necessarily located by verbal discourse could provide him with the ability to acknowledge the power (and efficiency) of non-verbal communication. He could then, of course, knowing its nature, strive for an even more ideal system.

When the whole process of present day education recognizes that ability 'A' is not necessarily the same as ability 'B', then visual literacy will be acknowledged as another form of communication offering an added efficiency perhaps even over and above the verbal systems already in use. As every visual encounter is a statement with a set of proposals that require organizational comprehension it is of vital importance that visual education move into the curri-

cula of the school. But, just as vital as this role would be, it is perhaps of greater significance under these present conditions that extreme care be taken when using verbal discourse for presentational evaluation. By the very nature of the visual semantic, the verbal responses of the child must be allowed to be as flexible and liberal as possible. Close definition of the word 'meaning' would provide for 'tight' conceptualization of verbal communication concerning visual experiences. The child will then have the security of communicating in his own verbal language, and such security would enhance his own value of his aesthetic judgement.

The camera and TV will reveal the world to him. As he reads the elements he begins to understand the nature of his environment, the way it has been conditioned by Man, and Man by it. He acknowledges the differences of the environment elsewhere in the world by means of visual differences both high and low contrast to his expectations. He begins to recognize and identify more closely with his own culture, and appreciate that of others quite distant. He sees from his own culture its development from the past, and possibly attempts to identify with the one of his future. When he turns the camera on himself he discovers his own reality, his own inhibitions glaring back at him with such obvious character. The TV screen helps him to evaluate himself and

his society, and in so doing, justifies the purpose of any visual awareness programme.



## REFERENCES

### CHAPTER I

1. For the purposes of this thesis, Verbal Language shall be considered as the vehicle of communication, phonic or visual, that utilizes as its syntax for expression a defined linear structure of digital symbols. Art, on the other hand, shall be defined as that mode of communication or expression in Man that, whilst utilizing visual form and function, attempts to enhance the quality or essence of experience. Education shall be considered as that formal process of enculturation as normally experienced in School Systems.

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2. Commander Jeremiah Denton, the first U.S. prisoner of war to return to the United States following the treaty to end U.S. involvement in the Vietnam war.
3. C.T.V. News, February 23, 1973: an interview conducted on his return to U.S. soil.
4. With this study, the writer proposes to investigate the implications of rapid change being experienced in the electronic communication media.
5. Caleb Gattegno, Towards a Visual Culture - Educating through Television Discuss Books (New York: Outerbridge and Dienstfrey, 1971).
6. Ibid., p.16
7. Ibid.
8. Ibid., p.18. A brief definition of man's sight is given on page 19, when he maintains that it is the "receptive apparatus" which allows us to "receive and hold an infinite number of items of information in a fraction of a second".
9. Ibid., p.20. By "complex situations" he means the world becoming more easily accessible to people in one situation. i.e. in the case of television.

10. Ibid., p.10
11. Kenneth Winetrout, "Art and Language: The New Sensorium", Journal of Educational Thought V. #2 (August, 1971): 96-109. (Hereinafter referred to as "New Sensorium".)
12. This term, used by Winetrout, to be explained in this paragraph.
13. Ibid., 106.
14. An example given by Winetrout is "that TV has come on faster and more universally than virtually any innovation to hit mankind." (105.)
15. Ibid., 105.
16. George A. Borden, "Relevant Areas of Research in Human Communication", in Communication: General Semantics Perspectives, ed. Lee Thayer (New York: Spartan Books, 1970), p.235. (Hereinafter referred to as "Relevant Areas".)
17. Borden states that, ". . . our mental processes search for equilibrium-mental balance". A certain amount of cognitive dissonance is tolerated, but beyond the limit of our experience, the percept is susceptible to prejudice.
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21. Harry E. Maynard, "General Semantics and Today's World", in Communication, ed. Lee Thayer (1970), p. 131. (Hereinafter referred to as "Today's World".)

22. Ibid., p.131.
23. D.J. Davis and E. Paul Torrance, "How Favorable are the Values of Art Educators to the Creative Person", Studies in Art Education 6 #2 (1965): 42-53. (Hereinafter referred to as "Values".)
24. Ibid., 42.
25. Marshal McLuhan, Verbi, Vocal Visual Explorations (New York: Something Else Press, 1967), no page numbers.
26. Rapid rate of information output will not allow the time.
27. Raymond V. Wiman, "A Historical View of Communication in the Classroom", in Educational Media, ed. Wiman and Meierhenry (1969), pp.5-26. (Hereinafter referred to as "Historical View".)
28. Ibid., p.26.
29. Harold Taylor, "The Teacher in the World", in Concepts in Art and Education, ed. George Pappas (Toronto: The Macmillan Co., 1970), p.194. (Hereinafter referred to as "Teacher in the World".)
30. June King McFee, "Visual Communication", in Educational Media, ed. Wiman and Meierhenry (1969), pp.195-216.
31. Taylor, "Teacher in the World", p.194.
32. Walden Ends, "Proficient Teaching", p.194. He states: "traditionally . . . learning a verbal experience . . ."
33. McFee, "Visual Communication", p.196.
34. The writer of this proposal will deal with these variables in reasonable depth in the Thesis proper, primarily Chapter 6.
35. Walden Ends, "Proficient Teaching", p.194.
36. Barbara Dominick, "Nonverbal Communication", Journal of Communication 13 (1963), 166-173.
37. Ibid., 172.

38. Winetrout, "New Sensorium", 106.
39. A leading company concerned with many aspects of photography, operating from Rochester, New York State.
40. Private school in New York State. Headmaster S.B. Ross.
41. Stephen Barley, "Why Visual Sequences Come First", (paper by Eastman Kodak Co., N.Y. (1969) (microfilmed by U.S. Department of Health, Education and Welfare: Office of Education 4.7.72), (E.R.I.C. 057 584). (Hereinafter referred to as "Visual Sequences".) For the purposes of this Thesis, all E.R.I.C. article titles will be underlined, and in italics.
42. Ibid., p.4.
43. Suzanne K. Langer, Philosophy in a New Key (Cambridge Mass.: Harvard University Press, 1942).
44. Maynard Gunter, "Langer's Semantic View of the Non-verbal Arts - It's meaning for Art Education", Studies in Art Education 12 #2 (Winter 1971), 34-41. (Hereinafter referred to as "Semantic View".)
45. The transfer between modes to obtain meaning, as already stated by Langer.
46. Ibid., 39.
47. Opinion formulated by this writer from a survey of the literature.
48. Gunter refers to the term presentational as "nondiscursive". (Other terms in common use by writers include nonlinear, pictorial, nonverbal, iconic.)
49. P. Wendt, "The Language of Pictures" The Use and Misuse of Language, ed. S.I. Hayakawa. Fawcett Books (Connecticut: Fawcett Publications Inc., 1964), p.175.
50. Quebec Department of Education, Handbook for Teachers in the Protestant Schools in the Province of Quebec (1965). (Hereinafter referred to as Handbook.)
51. My emphasis on the words 'require', 'stimulates', and 'verbal explanation'.

52. Handbook, p.19.
53. Ibid., p.195.
54. Gattegno, Visual Culture, p.18.
55. Maynard, "Today's World", p. 135.
56. It is the opinion of this writer that this is the area of thought where 'change' can be dealt with most capably.
57. The Quebec Teachers' "Handbook" concurs with this statement.
58. R.B. Fransecky, "Visual Literacy", Audiovisual Instruction, May, 1972, p. 7.
59. Fransecky, "Visual Literacy", p.7.
60. J.R. Cameron and Emma E. Platter, "The Literate Adolescent in an Age of Mass Media", (paper presented at the International Reading Association Conference, Kansas City. April, 1969), (E.R.I.C. 032208.), p. 2. (Hereinafter referred to as "Literate Adolescent")
61. The traditional definition of 'literacy' is not really inefficient, it simply has a verbal stigma attached to it. Demands are for oral, aural, and pictorial literacy (Cameron and Platter, "Literate Adolescent", p. 2) even though a traditional definition (Barley, "Visual Literacy", E.R.I.C. 057583) indicates that this is already so . . . "the perception, comprehension, and manipulation of symbols . . . sound or markings . . . concrete or abstract." pp. 25-26.
62. Patrick Meredith, "The Structure of Communication", in Communication, ed. Lee Thayer (1970), pp.297-304, p.301. (Hereinafter referred to as "Structure".)
63. McFee, "Society, Art, and Education", Concepts, ed. Pappas (1970), pp.71-90, p.84 (Reprinted from Seminar in Art Ed., Project 4-002, Penn. State, 1966.)
64. Ibid.

65. Neil Hickey, "From Broadcasting to Narrowcasting", TV Guide, December, 1972, pp.34-40.
66. Ibid., p.35. A reference to experimental projects.
67. Elliot Eisner, "Media, Expression and the Arts", Studies in Art Education 13 (Fall 1971), 4-12. (Hereinafter referred to as "Media".)
68. Ibid., 11.
69. Ernst Cassirer, An Essay on Man, Bantam Matrix (Connecticut: Yale University Press, 1944), p.158. "We must clarify our sense perceptions and bring them under general notions and general rules in order to give them objective meaning."
70. Langèr, Philosophy, p.266.
71. Cassirer, Essay on Man, p.27.
72. Opinion based on writer's nine years as a teacher at the elementary school level.
73. Eisner, "Media", 11.
74. Winetrout, "New Sensorium", 109.

## CHAPTER II

1. In this instance, as in all future references, 'Life' with a capital 'L' signifies the meaning: Human Life; Homo Sapiens; Mankind; and Man.
2. Susan N. Cummings, Communication for Education, ed. by John J. Carney Jr., (Scranton: Intext Educational Publ., 1971), p.5 She states: ". . . the very nature of our civilization requires constant interaction and continual group activity. Man is constantly called upon to enter into the communication process in order to understand and co-exist with his fellow (M)an . . ."
3. 'Animal Symbolicum', a term coined by Ernst Cassirer to define the specific difference between Man and other forms of animal life. (Essay, p.28.)

4. Langer, Philosophy, p.26.
5. Gattegno, Visual Culture, p.22.
6. Donis A. Donis, A Primer of Visual Literacy (Cambridge, Mass.: The MIT Press, 1973), p.89. According to Donis, the search for closure is an Ideal of Man - the path towards equilibrium between the environment and himself: the quality of knowing.
7. The Greek civilization's desire for ultimate harmony is revealed in an example of their manufactured 'closure'. Aware of the optical distortion perceived in parallel pillars, they built pillars with 'entasis', a slight convexity of the column to correct the visual illusion of concavity.
8. "Sharing" will be dealt with in more detail later in this chapter.
9. Langer, Philosophy, p. 43. ". . . it is only natural that a typically human function should require a typically human form of overt activity; and that is just what we find in the sheer expression of ideas."
10. Paul A. Schreivogel, Communications in Crisis, (Don Mills, Ontario: Thomas Nelson and Sons (Canada), 1972), p.10.
11. June King McFee, Preparation for Art (Belmont, California: Wadsworth Publ. Co., Inc., 1970 (2nd edit.)), p. 48. McFee defines a percept as ". . . an impression of an object obtained by use of the senses . . . our percepts (come) from our ongoing scanning of things." In visual humans it is usually a visual image remembered through visual memory, symbols and icon.
12. Carl G. Jung, ed., Man and His Symbols, Dell (New York: Dell Publ. Co., Inc., 1964). In Jungian philosophy it is this unconscious that can be triggered by the conscious and give (p.27), ". . . coloured undertones of meaning".
13. McFee, Preparation for Art, p.398. She defines Symbol as, "A sign, a mark, a 'drawing, a form, or a style which has cognitive meaning to a group of people." It gives meaning directly to the perceived 'thing' and is not a signal (as in smoke - indicating flames).

14. Wiman, "Historical View", p.8.
15. Jerome J. Hausman, "The Plastic Arts, History of Art and Design - Three Currents Toward Identifying Content for Art Education", in Concepts, ed. Pappas (1970), pp.26-45, p.28. (Reprinted from 'Seminar in Art Ed.', Product V-002, Penn. State, 1966.)
16. Langer, Philosophy, p. 105. ". . . true language begins only when a sound keeps its reference beyond the situation of its instinctive utterance." An example of this advance can be illustrated by the difference between "my love, my love", and "He loves me, he loves me not." Also, on p.248 she states, "Words were probably ritualistic sounds before they were communicative devices."
17. Fortunately, sound faded quite quickly making clarity possible, yet demanded astute perception by the listener.
18. Langer, Philosophy, p.142. ". . . the notion of giving something a name is the vastest generative idea that was ever conceived. . ."
19. Bernard Kaplan, "An Approach to the Problem of Symbolic Representation: Nonverbal and Verbal:", Journal of Communication XI #2 (June, 1961), 53.
20. Heinz Werner and Bernard Kaplan, Symbol Formation (New York: John Wiley and Sons Inc., 1963).
21. Ibid., p.15.
22. Ibid.
23. Cassirer, Essay on Man, p. 43. This whole process to be explained in more detail in Chapter III this thesis.
24. For example, the application of a name or descriptive term to an object to which it is not literally applicable, i.e. as in the case of metaphor.
25. Langer, Philosophy, p. 142.



26. Gyorgy Kepes, ed., Education of Vision (New York: George Braziller Inc., 1965). In the Introduction p. v Kepes discusses the point that the senses are not simply auxiliaries to the intellect. He indicates that visual thinking is an operation in itself, ". . . a powerful and basic means of knowing and reasoning . . ."
27. Barley, "Visual Sequences", p.4.
28. Aldous Huxley, The Doors of Perception and Heaven and Hell, Pelican (Middlesex: Penguin Books Ltd., 1959). pp.21-22. Huxley discusses the mind as being a processing system that eliminates all the trivia unnecessary for immediate survival. He uses the description (p.21) ". . . funnelled through the reducing valve of the brain and nervous system". He continues, (p.22) ". . . most people, most of the time, know only what comes through the reducing valve and is consecrated as genuinely real by the local language."
29. Donis, Primer of Visual Literacy, p.14.
30. Kepes, ed. Education of Vision, p.v. Kepes discusses Anton Ehrensweig's chapter, "Conscious Planning and Unconscious Scanning" pp.27-49. He maintains that for Man to originate creative thought requires a balance between conscious level of formal disciplined thinking and the unconscious level of imaginative thinking that produces "hitherto undreamed of form combinations of seeing and feeling. Artistic achievement requires both."
31. Huxley, Doors of Perception, p.22.
32. Werner and Kaplan, Symbol Formation, p.14.
33. Rudolf Arnheim, Visual Thinking (Berkeley: University of California Press, Ltd., 1969) p. 256. Arnheim discusses a child's drawing (6 yrs.) dominated by valentine heart shape. "The device, although somewhat conventional, displays all the traits and functions of a concept. . . It serves to make understandable a number of different objects which resemble it sufficiently to be subsumed under it. . . It establishes a bit of order in a world of complexity."

34. Borden, "Relevant Areas", p. 237.
35. Werner and Kaplan, Symbol Formation, p. 42.
36. Ibid., p.43.
37. Channel, in this 'early case', being one of the sense modalities of seeing, hearing, touching, smelling, or tasting, or even combinations of these.
38. Werner and Kaplan, Symbol Formation, p. 14.
39. Michael Polanyi, The Tacit Dimension (New York: Doubleday and Co. Inc., 1966). p.13.
40. Langer, Philosophy, p. 108.
41. Meredith, "Structure", p. 301.
42. Herman Krusi, Pestalozzi (New York: Wilson Hinkle and Co., 1875).
43. Ibid., p. 161.
44. John A. Starkweather, "Vocal Communication of Personality and Human Feelings", Journal of Communication XI #2 (1961), 63. This reference does not indicate any relation to emotional utterances used for exclamation or child-mother communication, but the deliberate attempt to use word names.
45. Walker B. Pitkin, The Art of Rapid Reading (New York: McGraw Hill Book Co., Inc., 1929).
46. Ibid., p.15. Pitkin mentions the 'Law of Relative Importance', ". . . get the larger picture first . . . then go into details".
47. Winetrout, "New Sensorium", 98.
48. Alvin Korzybski, Manhood and Humanity (pamphlet publ. Institute of General Semantics, 1950.)
49. Theodosius Dobzhansky, Mankind Evolving, Bantam Matrix (New York: Bantam Books, 1962). p. 75.

50. Korzybski, Manhood and Humanity, pamphlet. (quoted by James M. Broadus "Structure and Circularity as Neglected Formation", in Communication ed. Thayer, pp.3-10., p. 6.
51. Dominick, "Nonverbal Communication", 169.
52. Donald R. Gordon, The New Literacy (Toronto: University of Toronto Press, 1971). p. 65.
53. This was a controlled experiment where Huxley 'indulged in' mesculin, a drug that inhibits the production of enzymes that control the glucose flow to the brain. The brain needs a constant supply of sugar!
54. This writer's emphasis. (pre-linguistic understanding just as in early childhood).
55. Huxley, Doors of Perception, p. 23.
56. Ibid., p. 62.
57. H.J. Chaytor, "Reading and Writing", in Explorations in Communications, ed. Edmund Carpenter and Marshall McLuhan (Boston: Beacon Press, 1960), pp.117-24.
58. Ibid., p.119.
59. Ibid.
60. 'No formal contact' is meant to imply the absence of a purposeful and direct involvement with the visual elements.
61. 'Pre-literate' here to be defined as Homo Sapiens with verbal language, but no script.
62. Wiman, "Historic View", p. 8.
63. Don Rasmussen and L. Goldberg, Cracking the Code - Key to Independent Reading (Teacher's Guide) (Chicago, Illinois: Science Research Association Inc., 1968), p. i.
64. Wiman, "Historic View", p. 8. The Chinese invented type in 450 A.D., and in approx. 900 A.D. moveable type as well, but with several thousand characters to contend with, the printing process was quite impractical.

65. Ibid., pp. 7-11.
66. David Reisman, "Oral and Written Traditions", in Explorations in Communications, ed. Carpenter and McLuhan (1960). pp.109-16. p.110.
67. Handbook of Western Painting, transl. by Margaret Shenefield and Richard Waterhouse (London: Thames and Hudson, 1961), p. 1.
68. Marshall McLuhan, "The Effect of the Printed Book on Language in the 16th Century", in Explorations in Communications, ed. Carpenter and McLuhan (1960) pp. 125-35.
69. Ibid., p.129.
70. Ibid.
71. McLuhan and Carpenter, Explorations in Communications, intro. p.xi.
72. Reisman, "Oral and Written Traditions", p.112.
73. Proficiency in knowledge and use of their processes becomes a 'favoured' quality.
74. Besides verbal language becoming an autonomous impersonal medium, Man was even charmed from using direct personal hand-to-word contact by the mechanized alphabet, the typewriter.
75. Donis, Primer of Visual Literacy, p.160.
76. The invention of the camera has reduced this alleged ideal to a more favourable level!
77. Donis, Primer of Visual Literacy, p.159.
78. Ibid., pp.158-9.
79. Paul Bohannon, Social Anthropology (New York: Holt, Reinhard, and Winston, 1963), pp.33-34. "Art is one of the modes of creating cultural images to improve subtle appreciation and increase communication." Bohannon adds that part of the process of human maturation is learning to communicate what one perceives.

"Symbolizing from our own experience with sensory reactions and things we develop the images for social interaction, communication, and patterns of culture."

80. Schreivogel, Communications in Crisis, p.79.
81. Both these terms, artist and public, are meant as a very general reference.
82. Opinion based on this writer's observation in schools.
83. J.S. Bruner, L.J. Postman, and J. Rodrigues, "Expectations and the Perception of Colour", American Journal of Psychology 64 (1951): 216-227 (quoted in McFee, Preparation for Art, p. 102).
84. Katharine Kuhn, Break-up: The Core of Modern Art (New York: New York Graphic Society Ltd., 1965). p.12.
85. Schreivogel, Communications in Crisis, p.90.
86. Carpenter and McLuhan, Explorations in Communications, intro. p.x.
87. Schreivogel, Communications in Crisis, p.150. It would be wise to note at this point that this writer considers that there are some TV programmes that utilize the immediacy with outlandish affrontary. Their success is enhanced by their indignant opposition. 'Monty Python's Flying Circus' is one such programme. Playing on possible unacceptable distortions in time, 'surrealistic' imagery incorporating animation and the actor-creators, and a script riddled into a vocabulary aimed to incite middle class inhibitions to war, the programme exploits religion, sex, Royalty, politics, and the working man, on its way to success. An example was: 'The Royal Dummy', C.B.C. TV August 24th, 1973.
88. McFee, Preparation for Art, p.41. McFee also suggests that the commercial artist has 'sold out' on his public by ". . . enhancing the quality of experience by suggestion."
89. Schreivogel, Communications in Crisis, p.142.
90. C.T.V. "News", January 27th, 1973. Michael MacLear reporting.

91. C.B.C. "As It Happens", A.M. Radio, February 8th, 1973. Interview with Sam Gibben.
92. Hausman, "The Plastic Arts", p.36.
93. Schreivogel, Communications in Crisis, p.150. Schreivogel's preoccupation with the middle class is not a prejudice on his part, but simply his recognition that TV has a mass audience and programming has to be aimed between high and low culture. The middle class gets the theme, and at that level promoted absorbing general entertainment over creative thinking.
94. Gassirer, Essay on Man, p.248.
95. Gattegno, Visual Culture, p.20.
96. Perhaps this is how the common newspaper exists . . . simply giving opinions on the news to supplement its function in advertising. This is certainly true of 'Time' magazine with its weekly American 'slant' on news appraisal.
97. S.I. Hayakawa, Symbol, Status, and Personality (New York: Harcourt, Brace and World Inc., 1950) p.22.
98. McFee, "Society, Art, and Education", p.84.
99. Ibid., p.87.
100. A camera is a common object in many households, but how many of those households could boast a photographer? The process is similar in writing. A Milton, a Blake, an Addison, or a Wordsworth are not common place.
101. Donis, Primer of Visual Literacy, pp.10-11.
102. Maynard, "Today's World", p.136.
103. Stephen Barley, "A New Look at the Loom of Visual Literacy" (paper by Eastman Kodak Co., N.Y. (1971), (microfilmed by U.S. Dept. of Health, Education, and Welfare: Office of Education 1971)), (E.R.I.C. 057585). (p.8) "What we perceive is largely a function of what we have formerly experienced, what we assume, and what our needs and purposes might be."

104. Kepes, Education of Vision, intro. p.i.
105. Herbert Read, The Meaning of Art, Pelican (Middlesex: Penguin Books Ltd., 1931). p.30.
106. R.A. Salome and D. Reeves, "Two Pilot Investigations of Perceptual Training of Four and Five Year Old Kindergarten Children", Studies in Art Education 13 #2 (Winter 1972), 3-10. The 'doing' process, as indicated by the authors, is part of visual perceptions even though not what it should possibly be, 'an act of direct perceptual training'.
107. Ronald MacGregor, "The Development and Validation of a Perceptual Index for Utilization in the Teaching of Art", Studies in Art Education 13 #2 (Winter 1972), 11-18. "The idea that one might teach an art program without once lifting a paint brush seems to the writer not only possible, but, for many students and teachers, less frustrating than pursuing a programme bound together only by the tension thread of manipulative activity." (17).  
It would seem appropriate to employ Arnheim's terms of Motoric (learns by doing) and Conceptual (learns by intellectualizing), to define the two approaches to art learning. (Arnheim, Visual Thinking, p.204.)
108. Langer, Philosophy, p.143.
109. Ibid., p.102.
110. McFee, Preparation for Art, p.149.
111. Gattegno, Visual Culture, p.168.
112. Hausman, "The Plastic Arts", p.26.
113. W.O. Lester-Smith, Education, Pelican (Middlesex: Penguin Books Ltd., 1957). p.207.
114. Guy Hubbard, "A Revision of Purposes for Art Education", in Concepts ed. Pappas (1970), p.247. (Reprinted from 'Art Education Journal' of Nat. Art Ed. Assoc., Vol.19, #2 February, 1966).
115. Donis, Primer of Visual Literacy, pp.9-16.

116. Kenneth R. Beittel "Sketches Toward a Psychology of Learning in Art", in Concepts, ed. Pappas (1970), (No. V-002), p.119. Beittel outlines some of the conditions present when art student and his drawing are having dialogue; i.e. there are rules that are free to change in process. It would appear difficult to say the least; for this attitude to prevail in the discursive subjects!
117. Hubbard, "Revision of Purposes", 250.
118. Winetrout, "New Sensorium", 107.
119. Gattegno, Visual Culture, p.19.

## CHAPTER III

1. Borden, "Relevant Areas", p.234.
2. Cassirer, Essay on Man, p.26.
3. Ibid., p.27.
4. McFee, Preparation for Art, p.73.
5. Langer, Philosophy, p.41.
6. Cassirer, Essay on Man, p.28.
7. Kenneth Clark, Civilization (London: B.B.C., 1969). Foreword p.xv. "I cannot distinguish between thought and feeling . . ." Clark acknowledges his own subjective bias in his thought processes.
8. Borden, "Relevant Areas", p.234-37. The process as described by Borden is the one used by this writer.
9. The brain co-ordinates the reactions of the whole body.
10. Borden, "Relevant Areas", p.235. This fact, either way, has not yet been substantiated by research.
11. "Human Journey", C.T.V. March 4th, 1973. A Documentary.
12. In the discipline of teaching, it is in this area that the teacher must create interest and capture attention; i.e., be stimulating in presentation.



13. The Language of Science is the attempt by Man to seek order and simplicity by definite principles of classification. It is impersonal and uneffected by subjective interference. Visual information, on the other hand, consists of elements that 'thrive' on individual interpretations and associations.
14. Langer, Philosophy, p.75.
15. Borden, "Relevant Areas", p.237.
16. Langer, Philosophy, p.90. She describes the brain in this context: "The nervous system is the organ of the mind; its centre is the brain, its extremities the sense organs, and any characteristic function it may possess must govern the work of all the parts."
17. Borden, "Relevant Areas", p.237.
18. Dominick, "Nonverbal Communication", 7.
19. Schreivogel, Communications in Crisis, p.102. He states: "Nonverbal communication may radically effect verbal connections. Facial expressions or gesture may support or deny the meaning of the spoken word; it is difficult to change a flush of anger or a glaring eye with soothing or phony words."
20. All too sadly, the 'relevant' material in a museum or art gallery painting is relied upon by some 'customers' to give meaning to the work.
21. Karl-Eric Warneryd and Kjell Nowak, Mass Communication and Advertising (Stockholm: Economic Research Institute, Stockholm School of Economics, 1967). p.14.
22. Dominick, Nonverbal Communication, 189.
23. Barley, "Loom of Visual Literacy", p.14.
24. Wendt, "Language of Pictures", p.181. Professor Wendt calls the process of word ordering, ". . . just a series of hen tracks which we are told authoritatively stands for a certain concept."
25. Langer, Philosophy, pp.144-5.

26. This is not surprising since two thirds of our perceptual intake is visual - as later discussed in this chapter.
27. M.P. Murgio, Communication Graphics (New York: Van Nostrand Reinhold, 1969). p.16.
28. Kepes, Education of Vision, p.i. (also quoted in Hausman, "The Plastic Arts", p.28.)
29. Ibid.
30. Langer, Philosophy, p.145.
31. This explained in more detail in Chapter II.
32. McFee, Preparation for Art, p.251.
33. Langer, Philosophy, p.97.
34. Donis, Primer for Visual Literacy, p.107.
35. Ibid., p.37. Donis indicates that knowing 'how-to-do' is just as valid as practice in presentational activity.
36. Gattegno, Visual Culture, p.19.
37. Ibid., p.75.
38. As referred to in Chapter II (Polanyi, Tacit Dimension).
39. Murgio, Communication Graphics, p.15.
40. Hayakawa, Symbol, Status, and Personality, p.32.
41. Schreivogel, Communications in Crisis, p.185.
42. Susanne K. Langer, "Expressiveness" in Concepts, ed. Pappas (1970) p.174. (Reprinted from Langer's Problems of Art (London: Schribner's Sons, and Routledge and Kegan Paul Ltd., 1957). pp.13-26.)
43. C.B.C. TV "Telescope", February 18th, 1973. Profile of Alex Coleville.

## CHAPTER IV

1. S.I. Hayakawa, ed., Use and Misuse of Language, Fawcett Books (Connecticut: Fawcett Publications Inc., 1964). p.viii. Hayakawa states that meanings are semantic reactions that take place in people.
2. Cassirer, Essay on Man, p.121.
3. Ibid.
4. Arnheim, Visual Thinking, p.251.
5. Jung, Man and His Symbols, p.49.
6. Meredith, "Structure", p.298. It is often assumed that the images have to be visual, but it is the predominance of vision in our perception that creates this falsehood. Most use visual imagery because it is readily available, but the image in the 'void' of the congenitally blind must have some representation other than visual.
7. Dale B. Harris, Children's Drawings as a Means of Intellectual Maturity (New York: Harcourt, Brace and World, Inc., 1963). p.231. Harris defines this as, ". . . dividing old concepts into more discrete concepts."
8. Cassirer, Essay on Man, p.131.
9. Laura L. Lee, "The Relevance of General Semantics to the Development of Sentence Structure in Children's Language" in Communication, ed. Thayer (1970). pp.117-22. p.118.
10. Cassirer, Essay on Man, indicates that by the twenty-third month the child responds to a biological need and runs around madly 'naming' things; forming concepts. p.147.
11. Werner and Kaplan, Symbol Formation, pp.138-40.
12. Cassirer, Essay on Man, p.146. Cassirer explains that once the child has learned the structure of his language he need not be taught, he can learn.
13. Jung, Man and His Symbols, p.6.

14. Robert Lado, Language Teaching (New York: McGraw Hill Inc., 1964). p.18.
15. E.N. Hutchens, Writing to be Read (New Jersey: Prentice-Hall Inc., 1969). p.73.
16. Arnheim, Visual Thinking, p.244.
17. Rasmussen and Goldberg, Cracking the Code, p.i. Examples given are: "a: mad, wad, bar, ball, and made."
18. Ibid. Examples: made and maid.
19. Ibid. Example: read.
20. Murgio, Communication Graphics, Intro. p.9. An example given in the verb 'strike' with over one hundred different meanings.
21. Humour, irony, or euphemisms can hardly be detected in one word, but certainly more possible in the meaning between several.
22. Langer, Philosophy, p.55. When applying literal meaning to combinations of particular words, the unconscious mind excites the human consciousness with wild metaphorical images - The surrealistic land of 'dream' imagery.
23. G.A. Miller, and E.A. Friedman, "The Recognition of Mutilated English Texts", Information and Control, 1 (1957), 38-55.
24. Polysomatic words.
25. C.S. Lewis, Studies in Words (2nd ed.; Cambridge: Cambridge University Press, 1967). p.8.
26. Mario Pei, Words in Sheeps Clothing (New York: Hawthorne Books Inc., 1969) p.2. Pei states that, ". . . semantic change is as old as language itself. . .", but most of it used to be accidental, now it is deliberate.
27. Judith A. Meagher, "Multiple Meanings of Words - Intermediate: A Comparison of Three Teaching Techniques" (paper at International Reading Association Conference,

Kansas, April 20th - May 3rd (1969), microfilmed by U.S. Department of Health, Education and Welfare: Office of Education) ). (E.R.I.C. ED. 032 210). p.2.

28. Ibid.
29. Jurgen Ruesch and Weldon Kees, Nonverbal Communication: Notes on the Visual Perception of Human Relations. (Berkeley: University of California Press, 1956). p.193.
30. Ibid.
31. Schreivogel, Communication in Crisis, p.127.
32. Pitkin, Rapid Reading, p.39.
33. Ibid. p.41.
34. Ibid. p.52.
35. Ibid. p.15.
36. Newspaper Headlines function for the same purpose.
37. Steven Barley (Eastman Kodak Co.) uses photo sequences in the teaching of reading, to offer unit sense. (I.e. E.R.I.C. ED. 057 583 .../4/5/8 and 91).
38. Pitkin, Rapid Reading p.15.
39. Advertisement, Montreal Star, July 10th, 1973, p.A.7. 'Evelyn Wood Reading Dynamics Course'.
40. Throat surgery patients are often forbidden to read by their doctors after the operation. Although we read 'silently', we tend to physically 'talk to ourselves'; to go through the motions in the vocal areas.
41. Pitkin, Rapid Reading. p.9.  
Pitkin's figures read: Average Reading 4 words per sec.  
Solid Reading 3 words per sec.  
Heavy (technical) Reading 1 word per sec.
42. Interesting in that it promotes the elimination of the mode of transmission it uses to communicate!

43. Evelyn Wood, Montreal Star, p.A.7.
44. Langer, Philosophy, p.67.
45. Theodore Clymer, "The Utility of Phonetic Generalization in the Primary Grades", in Reading Instruction ed. William K. Durr (Boston: Houghton Mifflin Co., 1967) pp.105-11.
46. Homer Hendrickson, "Spelling: A Visual Skill" (San. Raphael, Calif.: Academic Therapy Publication, no date); (E.R.I.C. ED 055 070).
47. Dominick, Nonverbal Communication, 172.
48. Ibid.
49. Hayakawa; Use and Misuse, p.viii.
50. The existence of a dictionary indicates this to be possible.
51. Cassirer, Essay on Man, p.62.
52. Ibid.
53. "Up the Down Elevator", Montreal Star, February 21st, 1973. p.H.10. (c) 1973 Los Angeles Times. A William Coughlin interview with Majid Fakhry.

CHAPTER V

1. Hubbard, "Revision of Purposes", p.248.
2. For the purposes of providing comparative percentages, the writer intends to use Maynard's ("Today's World") p.135, figures-two-thirds to 85%.
3. Langer, Philosophy, p.90.
4. Kepes, Education of Vision, p.i.
5. In this particular context a 'work of art' is meant to signify anything that has been created specifically as an art form; a visual statement regardless of medium, quality, content, or intent, etc. . . .

6. Line, colour, texture, shape, and composition.
7. Kepes, Education of Vision, p.i.
8. Cassirer, Essay on Man, p.159.
9. Ibid.
10. Ibid., p.165.
11. Donis, Primer of Visual Literacy, p.148.
12. McFee, Preparation for Art, p.74.
13. Langer, Philosophy, p.249.
14. Arnheim, Visual Thinking, p.315., refers to this revelation as, ". . . images of the patterns of the forces that underlie our existence."
15. Ibid. p.296.
16. Wendt, "Language of Pictures", p.176. In this particular case, Wendt was discussing the photograph.
17. James J. Gibson, The Senses Considered as Perceptual Systems (Boston: Houghton, Mifflin Co., 1966) p.250. He states, ". . . the human individual can visually scan a picture for its design, but what he is generally in search of is meaning."
18. Donis, Primer of Visual Literacy, p.50.
19. Ibid., p.51.
20. Gunter, "Semantic View", 34.
21. Eisner, "Media", 5.
22. These referred to in more detail in Chapter 3 this thesis. Most of our sensory textural experiences are largely optical and not tactile, (I.e. Tacit Dimension). It is, perhaps, in this realm of 3.D. understanding that 2.D. reproductions as slides and prints of original works reveal their ineffectual potency.

23. Philip Beam, The Language of Art (New York: The Ronald Press Co., 1958), p.548.
24. Eisner, "Media", 6.
25. Ibid.
26. Wendt, "Language of Pictures", p.179-discussing photographs (which can range from a 'true realism' to an extremely 'abstract' recording of reality), mentions the quality of 'Life' magazine's famous 'What's in a Picture' series; an interne, a trial, a marine, and a boy and dog. He says, "It is a paradox that these most graphic pictures are symbolic. They are at the same time very real, and very symbolic."
27. Eisner, "Media", 7.
28. Ibid.
29. Ibid. The reference is from S. Langer, Problems of Art, (New York: Scribner's Sons, 1957) pp.vi-184., no page numbers provided for reference.
30. Cassirer, Essay on Man, p.250, states that rejuvenation is a stronger principle than conservation in Art.
31. Paul Valéry, Aesthetics, "The Conquest of Ubiquity". trans. Ralph Manheim (New York: Pantheon Books, 1964) p.225.
32. This is my underlining.
33. M.L. Lasser, "More than Photography, Less than Panacea", Audiovisual Instruction, May, 1972, p.9. Lasser says, ". . . we have learned in the past few years that visual literacy includes any form in which the eye must be open and the mind's eye alert if the communication is to be emotionally and intellectually complete. The visual imagination must be awakened and informed."

#### CHAPTER VI

1. Donis, Primer of Visual Literacy, p.23.
2. Ibid., p.29. However, in this case, she refers only to occidentals.



3. Forms of poetry that do not follow this pattern will be dealt with later in this chapter.
4. McFee, Preparation for Art, p.47, indicates that because education is concerned with concepts and linearity, we are inadequately prepared for reading pictorial visual qualities.
5. Ruesch and Kees, Nonverbal Communication: Human Relations, p.193.
6. Langer, Philosophy, p.96-7.
7. Ibid., p.97.
8. Gunter, "Semantic View", 34-41.
9. Ibid., 34.
10. An additional advantage of presentational over discursive is that the former represents shapes in 2.D. and 3.D., whereas the latter only one dimensional.
11. Kuh, Break up, p.14, indicates that speed is a forcible part of our daily life. "In modern life one is simultaneously subjected to countless experiences that becomes fragmented, super-imposed, and finally rebuilt into new experiences." Even a line drawing represents properties, scale, and perspective simultaneously.
12. Arnheim, Visual Thinking, p.234.
13. An example being that the page of a book is one fraction of a story and therefore has no meaning by itself. The whole nature of the book is to present its meaning discursively.
14. Arnheim, Visual Thinking, p.265.
15. Eisner, "Media", 245.
16. Langer, Philosophy, p.94. There is of course the possibility of alternative words with the same meaning, and not in the same language but quite probably another. However, it would be fair to warn that learning the equivalent words would not be enough. The syntax would also be vital, and for complete comprehension, an indication of the cultural background.

17. Ibid., p.95.
18. Barley, "Elephants of Visual Literacy", p.3.
19. Duncan, "Social Order", p.433.
20. Arnheim, Visual Thinking, p.264.
21. I understand 'genuine' as Kepes' definition upcoming.
22. Arnheim, Visual Thinking, p.263.
23. Kepes, Education of Vision, p.ii.
24. I understand Kepes to be referring to the act of painting the work as being the dominant factor.
25. This writer's addition.
26. Kepes, Education of Vision, p.ii.
27. Ibid.
28. Eisner, "Media", 5.
29. Ibid.
30. Ibid., 8.
31. Hayakawa, Symbol, Status, and Personality, p.135.
32. Bohannon, Social Anthropology, p.48.
33. Ibid.
34. McFee, Preparation for Art, p.50.
35. Arnheim, Visual Thinking, pp.231-32.
36. . . . be it emotional, expressive, or classificational, as in the situation of the numerous terms used by the Eskimo for 'white', i.e., a cultural necessity.
37. Joseph A. de Vito and Carol M. Civickly, "Some Semantics of Repetition: An Experiment in Phonetic Symbolism", Journal of Communication XXII (1972), 39-47.

38. Werner and Kaplan, Symbol Formation, p.441.
39. Ibid., p.442.
40. As in the case of, Marjory Pratt, Formal Designs from Ten Shakespearean Sonnets (privately published, 1940), who rendered the sonnets as lengths of black rectangle positioned on a white ground.
41. Suzanne K. Langer, Mind: An Essay on Human Feeling Vol. I, (Baltimore: The Johns Hopkins Press, 1967), pp.182-3; quoting from De Witt H. Parker, The Analysis of Art (New Haven: Yale University Press, 1926.) pp.65-66.
42. Langer, Mind: Human Feeling, p.186.
43. Ibid.
44. Cassirer, Essay on Man, p.171.
45. Schreivogel, Communications in Crisis, p.171.
46. W.M. Faust, "Comics and How to Read Them", Journal of Popular Culture V #1 (Summer 1971), 195-202.
47. Ibid., 197. According to Faust, at least one quarter of the title page is devoted to linguistic titles.
48. Ibid.
49. Ibid.
50. Walter Benjamin, Illuminations ed. by Hannah Arendt, trans. by Harry Zohn (New York: Shoken Books, 1969), p.220.
51. Langer, Philosophy, p.95. Langer continues, "The same is obviously true of painting and drawing . . . ."
52. John Collier, Visual Anthropology: Photographs as a Research Method (New York: Holt, Reinhart, and Winston, 1967), p.6. i.e. one photo, even in a fractional time-span.
53. Wendt, "Language of Pictures", p.175.

54. Ibid., p.178.
55. Miriam A. Lacher, "The Relation of Verbal and Nonverbal Encoding to Serial Recall Performance in Middle and Lower Class Children", (paper presented at American Psychological Assoc., September, 1971). (E.R.I.C. E.D. 057 887).
56. Ibid., p.4.
57. Collier, Visual Anthropology, p.36.
58. Langer, Philosophy, p.97.
59. Wendt, "Language of Pictures", p.177.
60. Ibid., p.178.
61. Ibid., p.176. Anyone who has witnessed a viewing of Hitler's documentary, "The Triumph of the Will", would possibly support this statement.
62. C.T.V. News, March 9th, 1973. Interview with Dr. Norman Paul.
63. Robert M.W. Travers, "Perceptual Learning", Review of Educational Research XXXVII #5 (1967), 599-617.
64. Ibid., 608.
65. Gattegno, Visual Culture, p.85.
66. Werner Severin, "The Effectiveness of Relevant Pictures in Multiple-Channel Communications", A.V. Communications Review 15 #4 (Winter 1967), 399.
67. Werner Severin, "Another Look at Cue Summation", A.V. Communications Review 15 #3 (Fall 1967), 234.
68. Harold E. Nelson, "Pictorial and Verbal Elements of Educational Films", Journal of Communication III #1 (1953), 43-47.
69. Ibid., 45.
70. Jerome Kenneth Conway, "Multi-Sensory Modality Communication and the Problem of Sign Types", A.V. Communications Review 15 #4 (Winter 1967), 377.

71. Ibid., 378
72. P.G. Aaron, "An Integrated Theory of Learning and its Implications", Contemporary Education, (School of Education, Indiana State University) XLIII #5 (April, 1972), 251-57.
73. Lloyd R. Peterson / "Short Term Memory", Scientific American, 215 #1 (July, 1966), 90-95.
74. Aaron, "Integrated Theory", 256.
75. William H. Allen, et al., "Effectiveness of Different Combinations of Visual and Verbal Presentation Modes in Teaching Different Kinds of Learning Tasks", (U.S. Office of Education: Project #6-1265, September, 1970). (E.R.I.C. E.D. 044 759), March 30th, 1971.
76. Ibid., p. 1. Both immediate and delayed.
77. The opinion of the writer of this thesis.
78. McFee, Preparation for Art, p.243.

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