

SIR GEORGE WILLIAMS UNIVERSITY

A MULTI-SENSE APPROACH TO TEACHING
ART TO ADOLESCENTS

M.A. (ART EDUCATION) THESIS

by

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SEPTEMBER, 1969

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This study develops a possible multi-sense approach to the teaching of art, discusses the problems involved, and proposes possible teaching techniques applicable to adolescents aged fifteen to twenty. Part I establishes the field of inquiry and furnishes a philosophical and historical base. The many and varied influences and components include theories of the interaction of the senses, the multi-sense precedents in the history of art, the current Human Potentialities movement with its concern for sensory awareness, and the concept of sensory training in education. Part II is an illustrated and detailed report of classes which the writer taught at Sir George Williams University in which he explored multi-sensory techniques for motivating students to art expression. The Appendix includes a film which is a visual and auditory presentation of these ideas and events.

ACKNOWLEDGEMENTS

I would like to thank the Graduate Programme and the Fine Arts Department of Sir George Williams University for allowing me the opportunity to work as Teaching Assistant and to try various experimental teaching methods in these classes. The encouragement and cooperation of Professor John Miller and Professor Peter London is gratefully appreciated. I am also thankful to Professor Judy Kelly, my thesis advisor, for her assistance.

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INTRODUCTION

This thesis is an attempt to establish the feasibility of a multi-sensory approach to the teaching of art and to relate the other senses to the visual sense. Since the area has been relatively unexamined, the approach is diversified and exploratory in an effort to define the field. Although teaching art through a variety of senses is not without precedent, most previous work has involved isolated aspects of sensory interaction and only recently has there been any trend towards the development of integrated programmes. This study suggests a possible multi-sense approach to art teaching, and tries to clarify the problems involved, and to establish some possible techniques.

Part I presents the philosophical and historical context for a multi-sensory approach to art education. This context is an amalgamation of theories of the inter-relatedness of the senses, the multi-sense precedent in art history and its influence on art education, the concern with sensory training in educational thought, and the "human potentialities" movement with its emphasis on sensory awareness. Part II deals with methods which could form the core of

2.

a multi-sensory art programme for adolescents. Classes which the author conducted for the purpose of exploring varied sensory channels for teaching art are described in detail. The appendix contains a film which presents the ideas and events of these classes in a non-literary form. While little attention has previously been given to the role that the non-visual senses play in the teaching of the visual arts, even less concern has been shown the problem as it relates to the adolescent. Most literature on the topic concerns either elementary school, art school, or university students. This investigation attempts to adapt some techniques and invent new ones for adolescents between the ages of fifteen and twenty. The concern is with the design of experiences to stimulate sensory awareness and ways in which these experiences can be channelled into a creative utilization of the senses. The aim is to bind perception to expression, to confront expression with image making.

PART I

TOWARDS A MULTI-SENSE APPROACH TO ART EDUCATION

CHAPTER I

THE UNITY OF THE SENSES

The various arts as we know them are merely the senses institutionalized. Just as the arts have been traditionally separated into compartments, so have physiology and psychology assumed that the senses are channels of sensation with the eyes, ears, nose, mouth, and skin being passive receptors. Yet there is no commonly accepted list of sense modalities and the number of senses given in textbooks varies from six to a dozen or more. Moreover, perception involves more than the reception of sensation and there is a growing tendency to regard the senses as active and interrelated systems for perception or as modes of communication.

The interrelatedness of the senses is the theme of James J. Gibson's The Senses Considered As Perceptual Systems. The perceptual systems correspond to the organs of active attention and bear some resemblance to the commonly recognized sense organs, yet are not anatomical units capable of being dissected out of the body. There is the orienting system, basic to all others, which establishes body

equilibrium, the haptic system which includes the skin, joints and muscles, the auditory system, the taste-smell system, and the visual system.

These five perceptual systems overlap one another; they are not mutually exclusive. They often focus on the same information - that is, the same information can be picked up by a combination of perceptual systems working together as well as by one perceptual system working alone. The eyes, ears, nose, mouth, and skin can orient, explore, and investigate.

Perception then, is based on detecting information. The orienting process of the organs of perception is governed by the brain so that the whole system of input and output responds to the external information. If the senses are considered as channels of sense, the data of sense are given. According to Gibson however, the perceptual systems handle the data on a multitude of interacting levels and are amenable to learning.

It would be expected that an individual, after practice, could orient more acutely, smell and taste more precisely, and look more perceptively than he could before practice.²

In The Primary World of Senses, Erwin Straus also emphasizes "the unity of the individual sense impressions"³. The unity of the senses is not limited to the exceptional case of synesthesia which involves phenomena such as hearing or smelling colours, detecting colours by touch or seeing sounds. Each sense modality gives us only a partial aspect of the world yet it can be combined into a unity with others which is more than that of simple conjunction. Just as sight, hearing, touch and taste are interrelated, so is sensing bound in an inner connection.

¹J. J. Gibson, The Senses Considered as Perceptual Systems, Boston, Houghton Mifflin Co., 1966, p. 4

²Ibid., p. 51.

³E. Straus. The Primary World of Senses, London, Collier-MacMillan Ltd., 1963, p. 204.

In each modality, I am, in the unity of my existence, in contact with the world in varying modes. The I-world relation is one; the forms of this relation are many¹

Or as John Cohen puts it:

... it is not the eye that sees, the ear that hears or the skin that responds to touch. It is we who see, hear and touch, and we always perceive meaning and values.²

I do not see my eye, hear my ears, taste my tongue or smell my nose, but in the case of touch, I do "perceive a relation between the sensitive portion of the body and the object in contact with it."³ The "organ" of tactile perception, the skin, body and muscles, is itself immediately perceived. So in a certain sense, tactile perception is perception of our bodily state. This encompassing capacity of tactility is undoubtedly related to the fact that many psychologists feel that touch experiences can lead to increased self awareness. Marshall McLuhan places great importance on the inclusive nature of tactility.

It begins to be evident that "touch" is not skin but the interplay of the senses, and "keeping in touch" or "getting in touch" is a matter of a fruitful meeting of the senses, of sight translated into sound and sound into movement, taste and smell.⁴

McLuhan's point of departure is not specifically psychological or physiological, but cultural and sociological, founded on a theory of communications. The visual, McLuhan points out, emphasizes continuity, uniformity and connectedness - the eye is cool and detached. Tactility

¹ Ibid., p. 230

² J. Cohen, Humanistic Psychology, London, George Allen and Unwin Ltd., 1958, p. 73.

³ D. M. Armstrong, Bodily Sensations, London, Routledge and Kegan Paul, 1962, p. 20.

⁴ M. McLuhan, Understanding Media, New York, McGraw-Hill, 1965, p. 60.

compels involvement, participation and simultaneity, the characteristics of preliterate and medieval culture and of electronic circuitry. McLuhan speaks of a sensory ratio involving the varying quantitative emphases among the various senses. In the period of western history from the fifteenth to early twentieth century, the printing press was the major influence on the sensory ratio of the period as there was unprecedented emphasis on the visual. The visual dominated, became separated from tactility and claimed an exclusive reality it does not possess. "The formula for hypnosis is one sense at a time"¹, quips McLuhan in The Gutenberg Galaxy. The electronic communications media do not support the extension of visual modalities to the extent that the printed word does and they demand a dynamic tactile interplay of the senses.

The importance of the inclusive nature of tactility and its relation to bodily awareness is illustrated in reports of children who suffered restricted stimulation in infancy. Spitz reported in 1955 that

... infants in a foundling nursery who received minimal care but were not exposed to fondling, cuddling, and physical and emotional contacts with their mothers, showed deleterious behavioral and developmental effects. The mortality rate was exceptionally high.²

Experiments in sensory deprivation conducted by D. O. Hebb at McGill University also show the effects of minimal sensory stimulation and indicate a relationship between the senses and the intellect. Subjects were placed in a monotonous, almost stimulus-free isolated cubicle for up to forty-eight hours. Vision was restricted by a translucent

¹M. McLuhan, Gutenberg Galaxy, Toronto, University of Toronto Press, 1966, p. 272.

²C. A. Brownfield, Isolation: Clinical and Experimental Approaches, New York, Random House, 1965, p. 76.

plastic visor, hearing by a U-shaped pillow and the drone of the air conditioner, and touch by cotton gloves and long cardboard cuffs. The effect was definitely deleterious. In each case the subject's thinking was impaired, he became more susceptible to propaganda, he showed childish emotional responses, his visual perception became disturbed, and he suffered from hallucinations.¹ Subsequent studies at Princeton and Miami indicate that lack of stimulation, rather than this minimal, diffuse, monotonous stimulation, may produce nothing but a lack of reactivity or a kind of psychological "suspended animation"².

The need then, says Rollo May, is to "recover our awareness of our bodies."³ He feels that we tend to separate the body from the self and to regard the body as a mere instrument for work or pleasure. One needs to be in tune with the responses throughout one's body.

We are proposing welcoming the body back into union with the self. This means, as already suggested, recovering an active awareness of one's body. It means experiencing one's body - the pleasure of eating or resting or the exhilaration of using toned-up muscles or the gratification of sexual impulses and passion - as aspects of the acting self. It is not the attitude of "My body feels", but "I feel."⁴

The conscious and methodical separation of the body from the self, the instinctual from the intellect, pleasure from thought, is seen by Herbert Marcuse in Freudian terms, with the dichotomy being the repressive consequence of the transformation of the pleasure principle, instinctual

¹W. Heron, "The Pathology of Boredom", (Reprinted from Scientific American, January 1957), San Francisco, W. H. Freeman and Co., 1957, p. 19.

²Browfield, op. cit., pp. 116-120.

³R. May, Man's Search For Himself, New York, Signet Books, 1967, p. 91.

⁴Ibid., p. 94.

gratification, from the reality principle, the delayed, restrained "pleasure" of civilized society. This attitude dominates much of western thought about the senses, especially the proximity senses, the "close" senses of taste, smell, and touch.

(The proximity senses) succumb to the rigidly enforced taboos on too intense bodily pleasure. The pleasure of smell and taste is much more of a bodily, physical one, hence also more akin to sexual pleasure, than is the more sublime pleasure aroused by sound and the least bodily of all pleasures, the sight of something beautiful.

In Eros and Civilization, Marcuse expands Freud's theory that Eros, the life instinct, or bodily pleasure, has been repressed by genital supremacy and procreative sexuality. Rationalism predominates and sensuousness is considered the lowest faculty. Marcuse uses Narcissus, beauty and contemplation, and Orpheus, creativity and liberty, as symbols of a possible non-repressive erotic attitude towards reality and a protest against unnecessary repression of the life instinct. He sees the "aesthetic dimension" as the medium in which the senses and the intellect meet. Aesthetic originally meant that which pertains to the senses. Aesthetic perception is accompanied by pleasure yet it is creative - it represents the order of sensuousness in the logic of gratification as against that of repression.²

Consequently, the aesthetic reconciliation implies strengthening sensuousness as against the tyranny of reason and ultimately, even calls for the liberation of sensuousness from the repressive domination of reason.³

¹ H. Marcuse, Eros and Civilization, New York, Vintage Books, 1955, p. 35.

² Ibid., p. 168.

³ Ibid., p. 164.

Marcuse believes this liberation could be possible in a society in which the body is no longer the full-time instrument of labour. In Freudian terms, he sees a transformation of libidinal energy, with a decline of genital supremacy and a resurgence of a polymorphous sexuality so that the body becomes resexualized by Eros, and becomes something to be enjoyed. The body and the self become reunited when the body and the senses become a medium for aesthetic expression.

CHAPTER II

THE MULTI-SENSE APPROACH TO ART

Contemporary art, even much of the so-called "visual arts", is concerned with multi-sensory and multi-media forms for a variety of reasons. As McLuhan indicates, television and movies cause man to see his world through numerous simultaneous experiences so he can no longer rely on the type of sequential perception based on the dominance of print. There is no linear, one channel way to cope with the barrage of sensory stimuli prevalent in our modern urban environment. The artist is trying to come to terms with the magnified interplay of the senses based on the electric circuitry model which is gradually shaking the dominance of the visual. He is exploring the environment created by technology and is attempting to integrate the visual with the other senses. There is the influence of psychedelic drugs which their users claim help to deepen and merge sensory experience and free the mind from the rational ordering of perception. Mixed media assume importance not because they usually make use of the new technology, but because the exploration of other sense modalities is necessary to deal with the increasing complexity of the resulting poetic images. We are re-discovering the non-visual say Marshall McLuhan and Harley Parker in

Through the Vanishing Point. The age of electric technology, in creating a "global village", requires a multi-sensory involvement and response analogous to that of pre-literate and medieval man who regarded his world as an integrated whole to which he was tactually and aurally oriented.

The magic of the cave image lies in its being, not in its being seen.

Pictograph writing is semantics on a sensory level. Pre-literate communication was aural and oral.

The function in Medieval art is to involve all the senses in order to convince.²

The gargoyle, the icon, the Persian manuscript use spaces and images generated by the interplay of all the senses. In medieval painting, the focus and the vanishing point are in the spectator. The means and the media are visual, but the response involves other senses.

Repetition of pattern has all the kinesthetic impact of the ³ walking human, all the tactility of the measuring hand span.

Renaissance painting marks the encounter with a new pictorial space - the visual, which fragmented the other senses. The visual is abstracted from the sensorium and achieves dominance. The visual creates the illusion of uniform, connected spaces which can be separated in time and perceived objectively. The visual stresses rationality and discourages empathy. Yet the other senses often served or augmented the visual. In its essence, sculpture is tactual and the experience of architecture is kinesthetic and aural. Dance integrates the kinesthetic, the aural

¹ M. McLuhan and H. Parker, Through the Vanishing Point: Space in Poetry and Painting, New York, Harper and Row, 1968, p. 35.

² ibid., (quoting George Poulet), p. 51.

³ ibid., p. 51.

and the visual. Although these arts usually remained separate, court masques of Italy and England, early inter-media events, sought audience involvement in a fusion of sound, light, motion and image.

To Berenson, Giotto and Pollaiuolo are great because their painting gives "tactile values to retinal impressions" by providing vicarious sensations of touch which enable us to reconstitute the three dimensional form in our minds. Berenson's aesthetic creed was formulated in terms of the theories expressed in 1893 by the neo-classical German sculptor Adolf Von Hildebrand in his book The Problem of Form in the Figurative Arts.

... if we attempt to analyze our mental images to discover their primary constituents, we will find them composed of sense data derived from vision and from memories of touch and movement. A sphere, for instance, appears to the eye as a flat disk: it is touch which informs us of the properties of space and form.

A more conscious type of sensory interaction in art is the idea of synesthesia or intersense analogy. "The supposed comparability or resemblance of qualities which are perceived by different senses"² was gaining interest towards the end of the seventeenth century. An eighteenth century Jesuit, Louis Castel, believed that light and sound were analogous and attempted to create a colour art exactly correspondent to music. He demonstrated his colour-sound analogy with his invention, the ocular harpsicord, or colour-organ and also theorized about making harsicords for taste and smell.³ In the arts, synesthesia as a conscious

¹E. H. Gombrich, Art and Illusion, New York, Pantheon Books, 1960, p. 16

²G. O'Malley, "Literary Synesthesia" The Journal of Aesthetics, Vol. 15, #4, June 1957, p. 392.

³ibid., p. 399

principle has been most prevalent in literature. Dante used synesthetic imagery as did William Blake. Blake's assumption of the dual role of painter and poet, his integration of the verbal, tactile and visual image, indicates his awareness of the need for integral sensory orientation. The writing of Baudelaire reasserted the synesthetic experience in the second half of the nineteenth century. Baudelaire believed that genuine synesthesia or intersense analogy was entirely normal and could appear during hashish intoxication and "... the transpositions of an intoxicated person would be only illusory, the result of an extremely vivid awareness of analogies".¹ Baudelaire's images and ideas, filtered through a medieval and Orientalism, influenced the symbolists and Pre-Raphaelite painters who attempted to evade the industrial present through the imagination and the senses. They evoked images and increased tactility through the simplification of shapes or sensuous elongated lines. The visual sense became less dominant. Whistler's paintings, strongly influenced by the Japanese block print's non-visual conception of space, concern the analogy of harmonies of colour and sound. He even called his paintings symphonies. Munch's Scream and Van Gogh's Starry Night are strongly kinesthetic and proprioceptive. In the mid-twentieth century, Jackson Pollock made kinesthesia the content of painting.

Cubism, the assimilation of the primitive and the logical outcome of Cezanne's transposition of the visual and the tactile, signaled the end of the supremacy of the visual and the single viewpoint. The Dadaists exploded the traditional boundaries of art. The Futurists struggled to represent movement in painting and sculpture. In 1921, F. T. Marinetti,

¹ Ibid., p. 408

the leader of the Futurists, published a manifesto on "tactilism", creation in tactile values. He passionately advocated a new kind of art to be based on tactile sensations and proposed tactile ribbons, carpets, beds, rooms, stage-settings.¹

The film became the twentieth century medium for combining sight and sound. Mondrian's Broadway Boogie-Woogie is rhythm and sound made visual in paint. Real integration of the two senses was achieved in 1940 when Norman McLaren composed and drew sounds and images side by side on the film. John Cage has demonstrated the environmental aspect of sound.

Everything we do is music.²

Music can be made of all and any sounds appearing in any order or constellation or situation.

Which is more musical, a truck passing by a factory or a truck passing by a music school?³

Jean Tinguely created sculptures which move and create sound, from a fine sigh to an enormous din, and gave impetus to the kinetic sculpture movement. Contemporary composers are writing scores which become graphic documents of musical concepts. Jazz and Rock musicians are building instruments and incorporating light and colour images in their performances. Eight London Ontario artists, calling themselves the

¹L. Moholy-Nagy, The New Vision, London, Faber and Faber, 1939, p. 27.

²M. McLuhan, (quoting John Cage), The Medium is the Message, New York, Bantam Books, 1967, p. 119.

³J. Cage, Silence, Cambridge Massachusetts, The M.I.T. Press, 1961, p. 41.

Nihilist Spasm Band, perform on self-designed and self-made instruments.

In the Happening and Environment, the sense modalities merge, the barrier between the artist and the audience is lifted as is the barrier between the traditional compartments for painting, sculpture, music, poetry, dance, theatre, and engineering. The result is something new that at the present can only be called Multi-media.

Working directly with the environment, these artists are concerned minimally, if at all with turning out objects in the sense of individual paintings or sculptures or other works of art. They are, they say, more interested in process, the creative ferment, than in product, a key reason why their work often takes the ephemeral form of happenings, events, theatre pieces, light shows.

The pieces may be permanent or semi-permanent such as the exhibition at Toronto's Royal Ontario Museum designed by Harley Parker which allows visitors to participate in an experience created by slide projections, flashing lights, sounds of gulls, thunder and textures of fossils.² In a similar fashion, more than fifty-five of the theme and national pavillions at Expo 67 used multi-media devices to communicate ideas and information. Or the events may be temporary. Otto Piene's light ballet employed hand held lamps directed through hand held stencils and were coordinated by sounds from a tape recorder.³ At the San Francisco Museum of Art, fifteen sculptors and painters presented a two and a half hour collection of edible works which were consumed by artists and guests together. Aldo Tambellini, the creator of "electric

¹G. Gluek, "Multimedia: Massaging Senses for the Message," The New York Times, Sat. Sept. 16, 1967, p. 38.

²Ibid., p. 35.

³O. Piene, "Mother, Turn off the Picture," Arts Canada, Vol. 118, 119, June 1968, p. 13

media theatre events" explains:

With multimedia you create an effect that is not based on previous experience. You saturate the audience with images. It happens now - it has a live quality. It's a total experience in itself.¹

Since much multi-media technique is based on the electric-information processes of the new technology (movies, television, computers) and requires equipment and facilities beyond the resources of individuals, artists and technologists have formed groups like USCO and EAT in New York, Inter-Systems in Toronto, and Intermedia in Vancouver.

At their best they (the inter-media arts) imaginatively and skillfully juxtapose media so that previously unperceived gaps between specialties can be perceived and probed. The reach is for conscious breakthrough - the awakening of new awareness - the "high".²

¹Gluek, op. cit., p. 35.

²M. Harris, "You Should see it when it's Working, It's Really Great," Arts Canada, Vol. 118, 119, June 1968, p. 10.

CHAPTER III

THE HUMAN POTENTIALITIES MOVEMENT

A major influence on the approach to teaching art presented in this thesis comes neither from the areas of art nor education, yet an area in its own way concerned with both. This area could best be described by Aldous Huxley's terms, "the nonverbal humanities" or the "human potentialities" movement which was given impetus by Huxley's address to a symposium at the University of California San Francisco Medical Center in 1961.

Now it seems to me that we have to think of education also on the nonverbal level: we have to think of the possibility of training directly the mind-body that has to do the learning and the living.¹

We don't do very much to train perception. We do a lot, I think, in the sphere of music to train the auditory senses, but we do very little in regard to the other senses. There is a great deal to be said for systematic training of perception and other kinds of awareness, which I would call the nonverbal humanities.²

Since Huxley's plea for the development of human potential and the training of awareness, endeavours to expand awareness and sensitivity

¹A. Huxley, "Human Potentialities", Control of the Mind. A Symposium edited by S. M. Farber and R. H. L. Wilson, University of California San Francisco Medical Center, New York, McGraw-Hill, 1961, p. 68.

²Ibid., p. 69

through various kinds of programs and systems have been rapidly increasing in the United States. Psychology is becoming more and more concerned with the better functioning of normal people. The foremost organization is the Esalen Institute in California where William Schutz, Fritz Perls, Bernard Gunther and others practice their techniques. Throughout North America there is a growing number of T-groups, sensitivity groups, and encounter groups, almost synonymous terms for types of therapeutic small-group experiences which have their roots in the work of Abraham Maslow and Carl Rogers. These groups employ a whole spectrum of techniques to break old patterns of relating and to expand the sensory and emotional range. Charlotte Selver, who learned her techniques from Elsa Gindler in Berlin, teaches sensory awareness in New York. Miss Selver seeks to cultivate the self-directive and self-healing capacities of the human organism and to develop in her students an attitude of open attentiveness, a flowing with natural rhythms, to achieve awareness with all senses simultaneously. This approach, like much of the human potentialities movement, is strongly influenced by the mind and body controlling disciplines of Yoga and Zen. The current interest in LSD and other psychedelic drugs is also related to self and sense awareness techniques. The aims are similar - to make the experience of life more vital - to be turned on.

These procedures are by no means completely original. In Centering by Paul Reps, a transcription of certain ancient Sanskrit texts about four thousand years old, Shiva gives his spouse Bharvati over one hundred exercises in awareness which are extraordinarily searching and elaborate and cover a wide range of human experience. Shiva's words', no less applicable today, are in answer to Bharvati's question, "What is the

secret of your divine mode of consciousness?"

10. Eyes closed, see your inner being in detail. Thus see your true nature.
14. Bathe in the center of sound, as in the continuous sound of a waterfall. Or, by putting fingers in ears, hear the sound of sounds.
15. Intone a sound, as a-u-m slowly. As sound enters soundfulness, so do you.
37. Look lovingly on some object. Do not go on to another object. Here, in the middle of the object - the blessing.
47. When eating or drinking, become the taste of the food or drink, and be filled.
55. See as if for the first time a beautiful person or an ordinary object.
58. In a moving vehicle, by rhythmically swaying, experience. Or in a still vehicle, by letting yourself swing in slowly invisible circles.
97. Feel an object before you. Feel the absence of all other objects but this one. Then leaving aside the object - feeling and the absence - feeling, realize.

This text is the spiritual ancestor of Laura Archera Huxley's book You Are Not the Target. The purpose of her book is to provide what she calls recipes "to quicken people towards realizing their creative potentialities in their own way,"² through the transformation of energy. To Laura Huxley, the root of most of our personal and societal problems is the result of the release of negative energy through our physical and psychological points of least resistance. This negative energy in the form of physical pain and mental distress absorbs our awareness as a

¹P. Reps "Centering", Zen Flesh, Zen Bones: A Collection of Zen and Pre-Zen Writings, Garden City, New York, Doubleday, 1968.

²L. A. Huxley, You Are Not the Target, Greenwich, Conn., Fawcett, 1965, p. 17.

sponge absorbs water. One of her recipes, "The Art of Converting Energy" is an attempt to convert energy from a neutral or badly used power to a beneficent power, directed by good will.

Experience pure energy:

Think of the pure energy of the sun, of the oceans, of air, water, of the earth itself.¹

Experience personal creative energy:

It could be the moment when you first bite into a succulent piece of fresh fruit - or that moment when you are ready for, and know you are going to have a fulfilling experience in love. It may be when you are doing absolutely nothing, and nothing is happening, nothing except that you are aware of the ongoing miracle of energy flowing within you.²

Experience personal destructive energy:

... a time when something precious to you was destroyed, a time when destructive energy was flung at you or others in words or actions, a time when destructive energy was silently communicated through ugly thoughts and emotions. Relive it. Feel it. Do not just remember it?³

Experience in rapid alternation: personal creative energy, then personal destructive energy.

Now quickly, by a conscious direction of your whole being, extract the good feelings from the creative experience and the bad feelings from the destructive experience - and float into the experience of pure impersonal energy as you did in the first step.⁴

Through conscious and diligent practice of these exercises, the author claims one can become more the intelligent director of his own energy and be able to use it for creative purposes. Laura Huxley's

¹ Ibid., p. 103.

² Ibid., p. 103

³ Loc. cit.

⁴ Ibid., p. 106.

approach is based on the fundamental unity of the body and the mind:

"For were it not for our animal essence we would not be able to perceive the fragrance of a flower - were it not for our spiritual essence we would be incapable of the joy and gratitude that the fragrance of a flower often awakens."¹

The Gestaltist approach towards awareness of Fritz Perls is also based on a sense of wholeness. As Perls states in the book Gestalt Therapy, a compilation of his techniques and philosophy, co-edited with Ralph Hefferline and Paul Goodman, "awareness is characterized by contact, by sensing, by excitement and by Gestalt formation."² Contact provides the vehicle for awareness, sensing determines the nature of awareness, and gestalt formation (e.g. seeing a triangle rather than three isolated points) always accompanies awareness. Contact takes place through the senses, the "close" senses of touching, smelling, tasting, or the "distant" senses of seeing or hearing. Contact reinforces the inter-reacting, inter-functioning nature of you and your environment. If attention and excitement are present, the object of attention becomes more and more a unified, bright, sharp figure against a less distinguished ground to form a "good gestalt" and awareness occurs. It is also essential that you realize that it is you who are seeing, hearing, moving, and that it is you who are focused on these objects. The environment is not something given but something you help to create. Perls, whose Gestalt therapy involves an encounter with one person at a time in the context of a group, emphasizes that one feels he is a continuous flow of processes and that he be concerned with the present, with right now.

¹ Ibid., p. 77.

² F. Perls, R. Hefferline, P. Goodman, Gestalt Therapy, New York, Delta Books, 1951, p. viii.

Try for a few minutes to make up sentences stating what you are at this moment aware of. Begin each sentence with the words "now" or "at this moment" or "here and now."

Another of Perls' experiments for developing awareness involves sharpening the body sense.

Concentrate on your "body" sensation as a whole. Let your attention wander through every part of your body. How much of yourself can you feel? To what degree and with what accuracy and clarity does your body - and thus you - exist? Notice pains, aches and twinges ordinarily ignored. What muscular tensions can you feel? Attending to them, permit them to continue and do not attempt prematurely to relax them. Try to shape their precise limits. Notice your skin sensations. Can you feel your body as a whole?²

Others have evolved different methods for enhancing awareness of bodily sensations. Sensory awareness is the aim of Bernard Gunther, a student of Charlotte Selver, who concentrates on touch, sight, sound, taste and the attainment of greater discrimination. In his well illustrated guide book, Sense Relaxation: Below Your Mind, he demonstrates his techniques for individuals, couples, or groups. He describes "sensory awakening" exercises such as self or other tapping, slapping, and touching; foot slapping; arm, shoulder and hip lifting; breathing, and shaking. There are "instant sense" experiences like "orange-a-peeling," "hand washing", "blind shower", "rock experience", "sense walk".

Sensory awakening
is a method
which can help
bring you back to your senses:
to quiet excessive thought,
to release chronic tension,
to enhance direct sensory-reality
in the here and now.
This process
can show you how to allow
greater sensitivity,

¹ ibid., p. 31

² ibid., p. 86

feeling and awareness:
 in letting yourself
 be more -
 your entire organism - open
 to the potentialities
 and possibilities¹
 with out/in you.

Intrinsically bound to the movement for the achievement of human potential, and indeed its aim, is the concept of joy. Joy, to William Schutz who uses the word as the title of his book, finds its chief source in the realization of one's resources. This notion is similar to that of creativity, which implies not only the full use of one's capacities, but includes going beyond them into previously unexplored areas. Like the creative process, developing one's capacities for joy involves being open to experience and able to perceive one's environment and aware of one's own internal feeling. It involves relating experiential elements to each other to form associations in terms of information, sensations, or feelings and the expression and communication of that association. Joy is the feeling that comes when one realizes his potential for feeling, for inner freedom and openness, for full expression of himself, for being able to do whatever he is capable of and for having satisfying relations with others.

Schutz's techniques, like those of Perls and Gunther, are designed for use in a small group situation. These groups are called "encounter groups" or "T-groups" or "sensitivity training" groups and are usually comprised of six to twelve people. In general, these terms are synonymous, although the T-group, ("T" for training) the original term used by the National Training Laboratories of the National Education Association in

¹B. Gunther, Sense Relaxation, New York, Collier Books, 1968, p. 22.

Bethel Maine in 1947, usually includes those oriented towards organizational dynamics. Encounter group usually refers to groups oriented towards individual growth and development. Sensitivity training is used in both cases. The encounter group, the term favoured by Schutz, is the setting for his joy techniques. According to Schutz, joy is developed through three levels: body and physical structure, personal functioning, and interpersonal and organizational relationships. As well as using sense awareness exercises like those of Perls and Gunther, Schutz uses a method based on the transformation of emotional feeling into a physical experience: for example, a person who feels immobilized by others is put in a tight circle of people and is challenged to break out physically. He is allowed the opportunity to try to break what he feels are unbreakable bonds.

Schutz often begins a session by filing the group into an empty room and having them relate to each other without words. It is an attempt to encourage the use of communication other than verbal and can enhance the cohesive ties within the group when combined with closed eye experiences to bring attention to the senses other than sight. Schutz describes other techniques which integrate body awareness with developing interpersonal relations.

All members of the group are asked to gather close together, either sitting on the floor (which is preferable) or sitting in chairs. Then they are asked to close their eyes and stretching out their hands, "feel their space" - all the space in front of them, over their heads, behind their backs, below them - and then be aware of their contact with others as they overlap and begin to touch each other. This procedure is allowed to continue for about five minutes.¹

¹W. Schutz, Joy, New York, Grove Press, 1967, p. 123.

Discussion following this activity can be valuable in opening up the whole area of feelings about aloneness and contact. Schutz notes that the type of verbalizing that follows a non-verbal experience usually helps to clarify and work out present feelings.

The encounter mode with its emphasis on sensory and interpersonal awareness has great implications for education. Studies have indicated that a sensitivity training based learning format tends to mobilize student potential.¹ In such a situation, the student's level of involvement, contribution and commitment is an issue. The student must take an active responsibility for his learning, a very different situation from the non-involvement of the lecture format. While transferability is not automatic within the educational framework, students learn that both support and confrontation are necessary components of a process which produces meaningful learning.

In Education and Ecstasy, George Leonard considers the encounter group experience as an integral part of the school of the future when education will be the main purpose of life and learning will be recognized as the achievement of moments of ecstasy. Children will learn to develop their empathy and awareness of others to a high degree through techniques like sensory awareness, expressive physical movement, and intensified inner imagery. Programs are presently being developed by the University of California and the Esalem Institute to explore these methods with public school teachers.²

¹S. A. and J. Culbert, "Sensitivity Training within the Educational Framework", The Journal of Creative Behavior, Vol. 2, #1, Winter 67, p. 23.

²G. Leonard, Education and Ecstasy, New York, Delecorte Press, 1968, p. 220.

CHAPTER IV

EDUCATION AND THE SENSES

The beginnings of a growing concern for the development of the senses in western education took root in the late eighteenth and nineteenth centuries. Rousseau, Pestolozzi and Froebel were convinced that children learn through experience, through viewing and feeling real objects. Froebel advocated that children have freedom of movement to explore the world and manipulate objects. He planted the notion that given materials that were appropriate to the child's stage of development, he would learn because of his own interest in seeing and doing. At the dawn of the twentieth century, Maria Montessori more clearly developed and demonstrated this idea.

Madame Montessori was the first modern educator to develop a programme specifically designed to train the senses. The "Montessori Method" was originally designed for use with mentally defective children and sensorially deprived slum children in Italy in the early 1900's. It is still practiced today in Europe and North America, in its pure form or somewhat modified, as a method of pre-school education for the young child and is an especially effective aid in teaching physically handi-

capped children.¹ Montessori utilized the child's sensory-motor impulses as aids to learning. What he sees, hears, touches, tastes and smells are important stimulants to learning. She believed that "the development of the senses actually precedes that of the higher intellectual faculties and in a child between the ages of three and six it constitutes his formative period".²

In order to assist the development of the senses during this period, Montessori developed what she called "didactic materials" consisting of various graded stimuli proceeding from a few stimuli strongly contrasted to many stimuli gradually and imperceptibly differentiated. For instance, one set of materials consists of three blocks of holes in which cylinders with knobs for handles are set. One set of cylinders varies only in height, the second in diameter and the third in both height and diameter. The exercise consists in taking out all the cylinders, mixing them and putting them back in the right place. Dr. Montessori believed that the child thus learns to manipulate objects, to observe, to make comparisons between objects, to reason and to form judgements. She developed further exercises to coordinate muscular and tactile perception with intellectual concepts and made extensive use of sandpaper letters which the child could feel. She describes similar activities for sensing colour, temperature, taste, smell and sound which isolate sensory stimuli from a particular sense organ.³ The child later learns

¹ E. Beyen, "Lets Look at Montessori", Montessori in Perspective, Edited by the Publications Committee of the National Association For the Education of Young Children, Washington, 1966, p. 58.

² M. Montessori, The Discovery of the Child, Notre Dame, Indiana, Fides, 1967, p. 157.

³ Ibid., pp. 107, 128, 129.

to put words to his perceptions.

The major criticism of Montessori's method is that it is too narrowly confined to the learning of specific concepts of size, texture, shape and that the materials may be used in only one way to fulfill the "correct" lesson they were designed to teach. Any imaginative approach to the materials is limited and there is no opportunity for the child to delight in the joy of discovering and creating different uses for the materials. His senses are thus developed to the defined limits of the exercise material but are not nurtured as channels for individual expression. Also, there is the assumption that the mastery of these exercises is the only way of preparing for the academic skills to follow. Nevertheless, Montessori was aware of the aesthetic implications.

Aesthetic and moral education are also closely connected with the training of the senses. By multiplying sense experiences and developing the ability to evaluate the smallest differences in various stimuli, one's sensibilities are refined and one's pleasures increased.

Yet Montessori stresses her belief in the necessity of prior training and aesthetic perfection before the child may safely be allowed to express himself freely.

While Montessori's methods of nursery school education were being developed in Europe, in America John Dewey's concept that the child's world of sound, shape and feeling was a valid ingredient in educational experience in the elementary and secondary school classroom was gaining momentum with the progressive movement. Sensory involvement - seeing, touching, speaking was recognized as a vital element in learning. Yet, unlike Montessori, who was primarily concerned with the training of the young child's senses as a base for intellectual and aesthetic development but not necessarily

¹ Ibid., p. 162.

as channels of creative expression, the progressives placed great emphasis on the nurturing of the creative spirit. The progressive movement, with its almost didactic emphasis on creative expression, developed programs in art, music, literature and drama, yet each of the arts representing the sense modalities were considered separately. An exception, however, is something called "rhythmics" which seems to be a primitive forerunner of present multi-media courses. The book, Creative Expression: The Development of Children in Art, Music, Literature and Dramatics, describes an exercise in rhythmics which combines movement, music, drama, and transfers these expressions into sculpture. It is significant though, that the approach to art is a predominantly visual one.

The first work to deal with art education in terms other than the purely visual was that carried out by Viktor Lowenfeld in his investigation of what he called visual and haptic types which appeared in 1939 in his book The Nature of Creative Activity. His theory evolved from many years of observation of children's art in Austria and later in America in his work with partially and completely blind as well as normally sighted children and adults. The two perceptual types are distinguishable by both the art product and the attitude towards experience. It is during the years of what Lowenfeld calls the "Pseudo-Realistic Stage," eleven to thirteen years, that the diverging tendencies become apparent.

The visual type starts from his environment and experiences mainly through his eyes. His sense of space is largely photographic. He first sees the whole without awareness of details and then analyzes the total impression into details and finally synthesizes these details into a new whole. He tries to imagine in visual terms what is perceived through

other senses. A blind person may be visually oriented. The haptic type is primarily concerned with his own body sensations and the subjective experiences in which he feels emotionally involved. The extreme normal sighted haptic uses his eyes only when compelled to do so. Otherwise, he reacts as would a blind person who is entirely dependent upon touch and kinesthesia. His pictorial representations are highly subjective. His proportions are proportions of value. Forced "seeing" could become an inhibiting factor to the haptic in the same way that the extreme visual would be disturbed and inhibited if stimulated only by means of haptic impressions - touch, bodily feelings, muscular sensations and kinesthetic fusions.¹

Most people tend to fall between these two extreme types but Lowenfeld estimated that approximately three quarters of the population have an appreciable tendency towards one or the other. His tests for visual and haptic aptitudes, based on a wide sampling of children's and adult's work showed 23% to be haptic, 47% visual, and 30% not clearly identifiable. The implication is that one quarter of our students cannot benefit from visual stimuli, the dominant motivation provided in the art classroom. One quarter are either not reached or become frustrated. Lowenfeld emphasized that each child be identified as to his creative type and be stimulated in the direction of his experiences and thinking. He warned against the dangers of forcing the non-visual type to "remove its visual inhibition" or "force a visualizer to pay special attention to tactile impressions."² However, Lowenfeld contradicts his hypothesis that

¹V. Lowenfeld and L. Brittain, Creative and Mental Growth, New York, MacMillan, 1964, p. 258.

²V. Lowenfeld, The Nature of Creative Activity, London, Routledge and Kegan Paul, 1952, p. 11.

these dichotomies are inherent individual traits when he states that there are haptic and visual epochs of art, implying that haptic and visual tendencies are culturally determined.

A variety of tests designed to identify visual or haptic aptitude have sprung up in the decades following the publication of Lowenfeld's theory¹, and his classification, in spite of its inconsistencies, remains a useful guide to art educators. However, the permanent and inflexible nature of the haptic or visual orientation has been questioned by recent research. A study by Mary J. Rouse with sixth and eighth grade children "... revealed a substantial number of subjects whose expressive styles were judged to be extremely different on different days, painting on one occasion as an extreme haptic and on the other as an extreme visual."²

Kenneth M. Lansing's article on the implication of Jean Piaget's research for art education also suggests that the haptic-visual dichotomy is not a fixed phenomena.

The non-visual, in Lowenfeld's opinion, is a person who cannot coordinate his partial impressions to form a mental image. The tendency was apparently an inherited one. Now Piaget says that a coordinated concept of the world depends upon perceptual action in relation to a point of reference. This would suggest that Lowenfeld's haptic or non-visual person could have his spatial concepts developed.³

¹P. B. Flick, "Ten Tests of the Visual Haptic Aptitude", Studies in Art Education, Vol. 4, #2, Spring 1963, pp. 24-34.

²M. J. Rouse, "A New Look at an Old Theory", Studies in Art Education, Vol. 7, #1, Autumn, 1965, p. 51.

³K. M. Lansing, "The Research of Jean Piaget and its Implications for Art Education in the Elementary School", Studies in Art Education, Vol. 7, #1, Autumn 1965, p. 42.

One can appreciate Lowenfeld's plea that neither the haptic nor the visual be "forced" to express himself in an unfamiliar way, yet does he mean that each be kept unaware of other types of experience? The point is surely, that a predisposition towards either a haptic or visual orientation can exist (even in the same person at different times) and that this orientation be recognized and respected. The present study holds that both the haptic and visual type can benefit from a fuller sensory experience. An unusual or novel sensory experience may broaden his awareness, yet he need feel no compulsion to continue to react in this new way. He can experiment, accept, or reject and in turn may discover more fully his own unique characteristics.

The belief that sensory skill could be educated was one of the tenets of the Bauhaus, founded in Germany in 1919. Until that time art schools were still based on the structure of the classical academy, but Gropius, the first Bauhaus director and his teachers felt the need for a school in which many art forms could be taught and each art activity could influence the other. The basic program was designed in part to encourage sensory interaction and to direct it towards the manipulation of tools and materials. Tactile exercises began the elementary instruction.

The student gathers a great variety of materials together so that he may register as many different sensations as possible with them. He puts them together into tactile tables, which contain some related and some contrasting tactual sensations.

The tactile tables or charts catalogue specific tactile values, which in turn are interpreted graphically. Graphic interpretation of rhythmic movement as well as tactility, was part of Johannes Itten's basic course. He believed that "the training of the body as an

¹ L. Moholy-Nagy, The New Vision, p. 24

instrument of the mind is of the greatest importance for creative man".¹

Our young people experience rhythm in jazz and dance. This reasoning determined my way of introducing the students to monoform-rhythmic design. First I had the students walk in march rhythm, beating time with their hands. The rigidity of this simplest rhythm was to take hold of the whole body. Then I counted off a triple rhythm, so that the stress fell first on the right foot, then on the left. Various changes followed and sometimes two students would dance to the syncopated rhythms of a record.

Then these rhythms were drawn; the march rhythm was represented by stressed² and unstressed strokes, the triple rhythm by circular elements.

Even more unorthodox were Itten's relaxing, breathing, and concentration exercises, designed to bring the students to mental and physical readiness, which his classes practised each morning. His studies of Oriental philosophy influenced his yoga-like exercises which emphasized breathing control, arm leg and spine movements, sequential relaxation of muscles, and tone vibration.

How can the hand express a characteristic emotion through a line when hand and arm are cramped? The fingers, the hand, the arm, the whole body can be³ awakened through relaxing, strengthening, and sensitizing exercises.

Although many aspects of the Bauhaus programme have been imitated and adopted by art schools and universities throughout the world, Itten's technique of using sensitizing exercises gained few followers and is rarely mentioned in Bauhaus literature. Indeed, he left the Bauhaus in 1923 after Gropius remarked that he could no longer be responsible to the government for Itten's teaching methods.

Kimon Nicolades taught in art schools in the United States during and after World War I but it was with the posthumous publication of

¹J. Ittens, Design and Form, New York, Reinhold, 1964, p. 11.

²Ibid., p. 129

³Ibid., p. 11

The Natural Way to Draw in 1941 that he became a national influence. He advocated an integrated sense approach to drawing.

Actually, we see through the eyes rather than with them. It is necessary to test everything you see with what you can discover through the other senses - hearing, taste, smell and touch - and their accumulated experience. If you attempt to rely on the eyes alone, they can sometimes actually mislead you.

Merely to see, therefore, is not enough. It is necessary to have a fresh, vivid, physical contact with the object you draw through as many of the senses as possible - and especially through the sense of touch.²

Through Nicolade's method of contour drawing, the hand and the eye become one in a synthesis of touch and sight. The eye "feels" the object as the pencil slowly describes it. The experience is a tactile and kinesthetic as well as a visual one. The result is a line drawing with a three dimensional quality. Significantly, Nicolades emphasizes that a contour drawing cannot be "finished". The contour drawing is the process, the having of a particular type of experience.

Other art educators have sought methods of expressing bodily experience. The delightful book, Rosegarden and Labyrinth: A Study in Art Education, by Seonaid Robertson tells of her attempts to stimulate adolescents to art expression through kinesthetic and tactile sensations. She was invited to teach clay modelling to fourteen and fifteen year olds in a British mining community. Miss Robertson and the students proceeded to build a winding tunnel of furniture and coats to create a mock mine in the classroom.

... as soon as we started off through our constructed tunnel we all became so absorbed in our physical sensations that these at least were intensely real. One became acutely aware of angles, of the angles of one's elbows and one's wrists and one's knees in the effort

¹ K. Nicolaidis, The Natural Way to Draw, p. 5.

² Ibid., p. 6

to avoid knocking them against the legs of the tables and chairs. One's forehead became like that of a caterpillar, the forehead - pushing part of oneself which must take all the bumps and knocks.¹

When the tortuous journey was through, they all stood up and stretched and enjoyed the open space.

At this point I said nothing to them except, "Now let us model what it felt like to crawl through the tunnel. Do you remember where it hurt? How cramped we were? Think yourself back into the experience and from that imagine the closeness and darkness of a real miner at work."²

The resulting figures were clay representations of the experience as they recalled the constricted movements, the overpowering awareness of hands, feet, shoulders, and muscles which became large and prominent.

If I were asked to justify the device of the mine in the classroom, I would say first that the basis of all art lies in sensation, but that the kinaesthetic and tactile sensations which are the foundations for making and enjoying sculpture, pottery and many other crafts, is sadly neglected in a predominantly visual, aural, and intellectual education.³

Miss Robertson also tells of a kinesthetic approach to painting, explaining that it is often not possible to provide fresh visual stimulus for a picture when children's memories have been overlaid by commercial posters and other visual stereotypes. After talking about the qualities of waves and waterfalls, (heaving, rushing, sucking, spiralling she encouraged the students to feel the movement of the water in their arms and bodies.

With the candle held in their hands, they first swing themselves into making the movement in the air, then when they felt they had captured some water rhythm, without a break they transferred it to the

¹S. Robertson, Rosegarden and Labyrinth, New York, Barnes and Noble Inc., 1963, p. 11.

²Loc. cit.

³Ibid., p. 14.

paper with the candle wax which left (at this stage) no obvious trace.

Occasionally Miss Robertson blindfolds her students to stress the tactile nature of the modelling experience. M. C. Richards, in her book Centering, also talks about the blindfold approach to modelling in clay. She describes how she taught pottery to a tense, over-critical novice adult.

Finally I asked her to work with her eyes closed so that her hands could be liberated from the censure of her critically trained eyes. To let the pleasure and search and sinew for making grow a little bit before chastizing their immaturity. To do all the things that hands can do: tear and swat and push and pinch and squeeze and caress and scratch and model and beat.²

Contemporary art education publications are slowly showing an increasing interest in a varied sensory approach towards teaching art. It is not uncommon to read of lessons in which listening to music was the stimulus for picture-making. Yet works which consider curriculum planning in terms of the senses are rare and seem to deal exclusively with the elementary school. George Conrad in The Process of Art Education in the Elementary School lists the "education of the senses" as a major goal in art education. He feels that "visual experience becomes most useful when it is supplemented by the activity of the other sensory receptors"³ and when the expression of this interaction of the senses is represented through art materials. The examples he gives involve tactility and kinesthetic sensations; very strong in primary school children, and their

¹ Ibid., p. 49.

² M. C. Richards, Centering, Middletown, Connecticut, Wesleyan University Press, 1964, p. 26.

³ G. Conrad, The Process of Art Education in the Elementary School, Englewood Cliffs, N. J., Prentice-Hall, 1964, p. 171.

expression through painting.

A recent book, also designed for use by elementary school teachers, Art for Teachers of Children: Foundations of Aesthetic Experience by Chandler Montgomery explores multi-sensory ideas to a greater depth than any earlier text. This book could be influential in giving this approach wider recognition and breaking down the conventional boundaries between art, music, and dance. Montgomery's thesis is crystalized in the statement:

Aesthetic experience begins with and depends on the senses; as it continues it results in more acute sensory perception. However, our primary purpose in encouraging response to finer differences is not to produce such specialists as the tea taster or the colour matcher, valuable though they are, but to increase the individual's contact with the possibilities for his own enjoyment to use and share through creative construction.

Sensory experience then, is vital to aesthetic experience. Sensory experience involves not only discrimination, but enjoyment, wonder, and the dedication of all levels of one's consciousness to an action. It is the creative direction of this activity that concerns Montgomery. He describes experiments designed to encourage individual response to perceptual materials. Things most likely to become materials for aesthetic expression need to be accessible to sensory exploration.

For example, can you see it, hear it, pick it up, touch it, handle it, smell it, move it, or move yourself in relation to it.²

To encourage the exploration of sensory possibilities, Montgomery makes extensive use of "found" (not waste or scrap) materials. Tactile qualities of found items can be discovered and enjoyed in rubbings, collages

¹C. Montgomery, Art for Teachers of Children, Columbus Ohio, Charles E. Merrill Co., 1968, p. 10

²Ibid., p. 18

and prints. Rubbings can be simply a record of discovery or raw material for composition. An experience in many ways similar to working with found materials is the one of working with found sounds. Not only does this add another dimension to sensory experience, but analogous situations or ideas often lead to insightful discoveries.

Children are encouraged to hunt for sound producing objects in their environment, to include a range of different kinds of sound; fading and non-fading percussive sounds, continuing regular sounds (such as from chains, bubbling water, stroked corrugated surfaces) continuing irregular sounds (crumpling paper, a rolling rock). The sounds can be played along with and against others, in composed combinations and sequences. Some kind of graphic notes or diagrams of sequences and combinations can be created.

...Composers experimenting with colored chalks, papers, and other media on large sheets or strips of paper will find many ways to indicate their intentions to their fellow performers without attempting complete notation.

Montgomery describes in detail experiments to relate to body experience response to line quality, three dimensional form, and three dimensional space. He suggests ways of expressing these experiences in various media. Line is the result of movement - observed movement, recorded movement. Our experiences in moving are a storehouse of linear differences - plodding or soaring, timid or aggressive, monotonous or varied, broken or continuous. In varying degrees and complexity, the observer participates in the linear aspects of the "time arts" (dance, music, literature, drama, cinema) and the "non-time" arts (drawing, painting, sculpture, architecture, industrial design). Body experience relates easily to the three dimensional form and properties

¹ ibid., p. 62

of clay - stretching, reaching, blobbing, straining. Clues to three dimensional space are often visual or auditory, but the most direct involve movement - actual movement or muscle tension. Montgomery suggests a "space walk" as a means of responding to spatial differences. In a space walk one explores his environment in terms of the series of spatial changes through which he walks and tests the possible positional relationships of himself to the space. How does one's body really feel, what happens to him, what are his impressions when he walks into, out of, toward, away from, along, through, up, down, under, over, across, against, around, between?

There is a growing trend among North American Universities to institute programmes called perhaps "Intermedia Studies" or "Environmental Studies" with the purpose of providing a synthesis of the arts. Such a programme is the one directed by Boyd Compton of the School of the Visual Arts of New York University which he describes in an article "An Emerging Course of Developing Perceptual Awareness." It is a basic course in sensory perception for entering freshmen in theatre, film and television, "a simple, pre-aesthetic, pre-critical effort."¹

I tell them it deals with their own development of a personal style as artists, as actors, as humanists, as scholars, as entire people during their college career and afterward, that it's a preliminary encouragement to help them get more with their sensory perceptions in a cleaner, more direct manner, to find ways of making decisions arising directly from their perceptions, in utilizing environmental materials for whatever they are doing. I immediately go into two sessions of sensory exercises. The simple exercises have to do with learning, seeing, smelling, touching, moving with sensory attention and concentration, with attempting not to associate and so forth.²

¹B. Compton, "An Emerging Course For Developing Perceptual Awareness", Report of the Third General Memberships Conference, Institute for the Study of Art in Education, Washington, 1968, p. 44.

²Ibid., p. 39

These exercises are followed by a blindfold tour. The students have the choice of being blindfolded in a closed environment (a church) with assigned exercises, or being blindfolded with a partner on a self-designed tour of the city. There is a steady development from perception to image production. Parts of the course are taken by a kinetic sculptor, an electronic music composer, and a light sculptor who present an exploration of the parameters of movement, sound and light. Compton takes the "environmental section" which deals with using everyday objects as materials. For example, one student created a "multi-media playground environment" which will draw the involvement of people in the neighborhood.

The aim of the course is not answers, but clearer, more relevant questions.

The asking of more relevant questions is also one of the functions of Simon Fraser University's Center for Communication and the Arts' attempt to integrate the visual arts and music.

Why was the sensorium shattered? Why do we not have simply one multitudinous art form in which the details of perception corroborate or counterpoint one another in fields of simultaneous interaction?²

Formed around and by composer Murray Schafer and artist Iain Baxter, the Simon Fraser experiment is an attempt to restructure the "creative primal unity of the senses"³ by developing new content and teaching techniques. The teaching methods, many non-verbal, involve such things as Baxter pouring water to stimulate student response or

¹ Ibid., p. 39

² M. Schafer, "Cleaning the Lenses of Perception", Arts Canada, Vol. xxv, #4, Oct./Nov. 1968, p. 10.

³ Loc. cit.

Schafer illustrating the musical concept of the canon by having students make sound with their voices and translate these into drawings, dances, and percussive sounds. Schafer feels that education which separates the senses and fragments experience into separate conceptual containers is undesirable. He would abolish the study of all the arts in the first years of school and in their place have one comprehensive subject, perhaps called "studies in sensitivity and expression". Included would be "all and none of the traditional activities in a field at once congenial and bristling with counterpoint".¹ At a later stage, and gradually, individual arts could be separated in the interests of acquiring specific sensorial acuities. At all times the kaleidoscopic fluidity and interrelatedness of sensory experience must still remain predominant.

¹ Ibid., p. 12.

PART II

AN ILLUSTRATED REPORT ON THE APPLICATION OF A MULTI-SENSE
APPROACH TO TEACHING ART TO TWO GROUPS OF ADOLESCENTS

CHAPTER V

GROUP A

Group A was composed of eighteen students between the ages seventeen and twenty, most of whom were freshmen enrolled in Art 231 (Basic Principles of Art) at Sir George Williams University. As Teaching Assistant, I was asked to take the class (or part of the class) for two or four hours, usually every Wednesday afternoon of the 1968/69 University term. Except for the times when I was asked to help supervise or discuss with the class work initiated by Professor Miller, my teaching was based on a multi-sensory approach, the philosophy and influences of which were described in Part I. The context of course, is the visual arts, and the results are usually visible, yet the aim is to achieve an integration of the visual with the other senses. From the outset, the students were made aware that the approach to the course would be somewhat experimental in nature and were encouraged to participate openly and expect the unusual.

TOUCH EXPERIENCES IN A CREATED ENVIRONMENT

My first meeting with the class occurred in the third week of the term. I felt it important that these first experiences take place in the

most favourable environment possible and that the students begin to regard their perceptions in terms of a total environment. The average classroom or studio is not usually a relaxed, intimate environment, conducive to friendliness and communication, allowing unrestricted movement, so I asked the students to reconstruct the room to meet these criteria. Their media were chairs, tables, large sheets of black plastic, blackout curtains, two overhead projectors, a slide projector, a record player and records. In ten minutes they had built a fascinating but friendly structure of solid forms, light and sound surrounding an open area. They had created their own environment and felt at ease in it and ready to proceed. The following exercise, learned from Vancouver dancer, Helen Goodwin, formed the basis for later sensory awareness exercises.

Form a circle in the open area. Stand loose and relaxed and begin to feel the space allotted to you. Move in it freely. Move around the entire open area still keeping your own space. Don't touch anyone or anything (drum music sets the speed and rhythm). As you move, make occasional eye contacts with people. Then, lightly touch people as you move past and sensitively pick up some hint of texture. Keep moving. Bump!

Stop.

Relax. (The sound is delicate Japanese Koto music.) Pair off and sit on the floor and just look into the other person's eyes. Don't talk. Can anything be communicated non-verbally? Touch hands while still looking.

After a minute or so, get up, move freely, change partners and repeat the looking and touching exercises.

After this experience, we all sat in and around our environment to discuss what had happened and what we thought or felt about it. The formality and strangeness inherent to any new group had begun to dissipate. They realized how individuals claim the space around them and how they can make contact with others through their senses. As expected, the reaction to touching was mixed. Many responded openly and freely, but some could

only slowly shed their inhibitions against touch and a few obviously felt uneasy. The latter, while still participating for the sake of the group and the experiment, claimed they felt they were asked to do something "unnatural".

"It is significant that we denote the social sense par excellence by the word tact, originally meaning a delicate touch of the hand."¹

All agreed however, that the experience moved them greatly and for the first time brought them close to other members of the class. Some felt that the situation was isolated and artificial and would be more effective if it had been spontaneous. Yet no one questioned the relevance of such exercises in an art class and all expressed the desire to continue with the exploration.

THE HAND AND THE EYE

The second session was based on a more intense involvement with the sense of touch expressed through contour line drawing. Contour drawing seemed an appropriate technique for tactile expression as it involved the united effort of the hand and eye as they follow the contours of a form to create a linear expression of three dimensions. The line indicates the thickness as well as the length and width of the form it surrounds. The class stood in a circle in the center of the room. I find the circle arrangement effective. It brings all members of the group face to face, allows for movement and endows the proceedings with a sense of cohesiveness and ritual. The implications for seating arrangements in a classroom are interesting. Bernard Gunther's Sense Relaxation formed the basis for the following exercises:

¹ J. Cohen, Humanistic Psychology, London, George Allen and Unwin Ltd., 1958, p. 82.

Close your eyes for one minute and concentrate on the sensations in your head. Open your eyes and begin to tap the top of your head, allowing fifteen to twenty seconds in each area - the top, side, forehead, back. Re-do any area that seems to need it, then gradually stop. Close your eyes and experience the after-effects.

Open your eyes.

Now begin to slap (vigorously but gently) the top, back, side of your head, the neck, the forehead. Repeat.

Stop. Close your eyes and experience the results.

Keep your eyes closed and begin to concentrate on the feeling in your face.

Slap your forehead with your fingers.

Slap your jaw with your palms.

Slap your cheeks with your fingers.

Slap your eyelids with your fingertips.

Repeat - Experience the results.

At this point the class was broken into two groups.

Move freely in your group. Interweave, shaking your right hand with each person you meet. Stop - hold right hands. Close your eyes and touch and explore this right hand for about two minutes. Then open your eyes and look at your partner. Repeat this exercise using left hands. Get to know this person's hand. Test its strength and tenderness.

Again move freely within the group. For about one minute each, alternately shake:

elbows
shoulders
legs
heads
backs

Stop. Close eyes and experience how you now feel.

Sit in a tight circle with all hands in the centre, touching.

At this point, the female model who was entirely covered in a sheet, was brought in, first into one group, then the other.

With your eyes still closed, tactily explore the area of the model near you, first by gently slapping, then by tapping. Finally, run your hand over the contours of the whole body, as if you were drawing it.

The groups then dispersed to set up easels and begin contour drawings from the undraped model.

Begin to draw what you felt. Imagine your hand and pencil as still touching the contours.

"Without taking your eyes off the model wait until you are convinced that the pencil is touching that point on the model upon which your eyes are fastened.

Then move your eye slowly along the contour of the model and move the pencil slowly along the paper. As you do this, keep the conviction that the pencil point is actually touching the contour. Be guided more by the sense of touch than by sight."¹

The exercises before the actual drawing began were designed to activate the sense of touch - to make the individual responsive to tactile stimuli. At the same time it was hoped that the individuals in the group would tend to be drawn closer together. Indeed, a kind of sensory awakening did seem to occur and the approach to the contour drawings was remarkably sensitive although this was the first attempt at the technique by most of the students. Some reported feeling highly stimulated and "turned on". However, this high degree of sensitivity seemed to decline after a coffee break and could not be regained. There was a definite feeling of literally getting "out of touch".

A sense of a group identity began to emerge with the result that some members reported feeling uneasy because the model who was introduced at a late stage of the exercises seemed like an intruder. They felt her to be unresponsive and a mere object, difficult to relate to.

A SENSE WALK

The following experiences were conducted on two consecutive Wednesday afternoons, with half the class the first session and the rest on the second. The experiences each group went through were basically the same, although the results were often dissimilar. Each session began with myself and the students in a circle to perform the previously described head tapping exercises, followed by an exercise which I had learned from Dan Daniels, a Montreal dramatist. The exercise is similar to the one

¹K. Nicolaidis, The Natural Way to Draw, p. 10.

described by William Schutz in Joy.¹ One person at a time is taken from the circle and placed in front of the person on his left.

Close your eyes as this person holds you close and slowly turns you and hands you to the person to his left. At all times keep your eyes closed and your body relaxed. The others will hold you firmly and close. I will stand behind to provide additional support.

The result tended to be a blissful feeling and a temporary loss of the sense of self. The sensation is of movement and support, or if members of the circle are weak or ungiving, of non-support. Another technique for developing trust, described by Schutz as "falling back,"² was also tried.

Form pairs, one with his back facing the other. This person is to fall back freely into the arms of the other. Now change, so that the catcher can fall and be caught.

Feelings of trust or distrust are usually revealed in this situation. Two girls found it impossible to be trustful or confident enough to fall back freely even though strong support was offered. When the circle was reformed, I went around to each person, greeting him in a non-verbal way which seemed appropriate - a handshake, tap, hug. The others followed by ones or twos around the circle and greeted each person in some spontaneous manner, ending in one massive hug.

Re-form the circle.

Close eyes and slowly move towards the centre, pressing against the others.

Stop and wait.

Move slowly back.

Open your eyes. Sit in a circle and relax. Look at a nearby object. Look at it very closely. Shut out everything else. Look at this object with your whole body. (one or two minutes of silence)

Listen to the sounds around you. Focus on one sound. Listen to that sound with your whole body.

Pick out one particular smell. Concentrate on that smell.

Let your entire consciousness be that smell.

¹W. Schutz, Joy, p. 183.

²Ibid., p. 182.

Taste your mouth. Allow everything to become that taste.
Touch something with your palm. Feel that thing totally.

We are going on a "sense walk". Try not to talk. As we leave the building and for the first block, see everything as if for the first time.

In the second block concentrate only on sounds. In the third block be aware of the smells around you. The fourth block - touch everything you can; collect textural experiences.

Now that we are in the park, sit down, occasionally close your eyes, and taste. (The first week we had oranges, the second pomegranates). Look at, feel, smell, as well as taste this fruit. Savour it slowly.

Form pairs and tie a rope around each other's waist. One member of the pair will blindfold the other and lead him around the park, introducing him to the environment so he can understand it with his remaining senses. Now let the other person be blindfolded. Then try it with both being blindfolded.

On the way back, without a blindfold, but still with your partner, try to be aware of whatever sensory experience presents itself. Try to communicate to your partner non-verbally some of these sensations. Let sensations fuse and blend into a total experience.

Back in the room, one group suggested lying on the floor with their heads in the centre of a circle and to just listen. We listened, first to silence, then to the music of a harmonica which one boy began to play. All felt very relaxed and reluctant to leave. At the end of this session, the students were given this home assignment:

Interpret or communicate, some aspect of what you have experienced that seemed significant to you, in some symbolic form - visual, oral, tactile, olfactory.

Slides 1, 2, 3, 4, 5 show some of the work produced and indicate the variety of media and approaches. The photograph (slide 1) taken by a boy in the class, is a sensitive statement of a girl's complete sensory involvement in eating an orange. The imagery in the collage, slide 2 is rather obvious - the stylized eye and silhouetted hands, overlapping and joined by a string. Yet there is the attempt to express the overpowering degree of dominance these sense organs achieved during the experience. The interacting colours almost generate some of the electricity and

excitement of the afternoon. Slide 3, also concerned with eyes and hands is a statement of far greater intensity. The eyes, extracted, though still in their sockets, are externalized, brightened beings. The hand, made of innumerable insect-like joints, reaches towards the eye in the head. The head is filled with compartments of sensations and nerve endings - an x-ray view of visualized internal happenings. The sensations are powerful and not always pleasant. The terror of sustained sense experience and contact with others is expressed in slide 4. Not only is the powerful, ugly ape itself a fearful image, so are the jagged menacing lines of its face, fur, and arms. The girls who drew these two pictures, had reported being uneasy during the touch experiences so far. Still, it is significant that they felt free enough to express these negative sensations.

Another reaction to the awakening of tactile expression is a girl's poem.

My blind hands have known the firmness
of marble walls and the power of pushing a swing.
They have travelled far and have, unknowingly
left evidence of their passing on glass and knobs.

They have explored the coarseness of splintering
telephone poles
and the downhill smoothness of bannisters, but
marvel at the life in one rough tree.

Skin has been under their glancing touch and
nimble fingers have found their way through
hair and dewy grass and mud. They have
entwined themselves in slimy pleasant
spaghetti, letting it slip all over.

Sand and silk and salt and string have been
within their realms and passed.
Life for them is a never ending stream of touch
and feel surprises.

Pain and pleasure, smooth, soft, cloth, harsh
and scratching stones, hard tasks, jobs
unknown beneath their surface blood and bones.
Life within, life without, moving, rushing, passing
over and under, grasp, grasp, experience,
experience.....experience.

Slide 5 suggests the landscape interpreted with a multitude of senses expressed through shape and colour. There is a sense of bombardment of emotions and sense impressions settling into a unified whole. This boy has tried to encapsule the entire afternoon's experiences in one format, as did the girl who wrote this poem:

OCTOBER WEDNESDAY

Hands feeling
 reaching
 holding a friend
 a life.
 Bodies intent
 eager to learn the secrets of life

sounds
 smells
 touches of existence
 experienced for the first time
 on a brilliant
 autumn
 day.

HAND, EYE AND STRING LINE

Another life drawing session was devoted to the further exploration of the relationship between the sense of touch and line drawing. This session also began with a series of sensory awareness exercises, this time with the model (draped) taking part as a member of the group. The exercises included passing each other around the circle, pressing towards the centre, and the group greeting. When the class was stimulated and cohesive, we prepared for life drawing. To illustrate that they were to draw the contours using a continuous line, I asked two students to wrap the model's leg in coloured string.

As you draw, imagine that the pencil line corresponds to the string. Feel that the lines of the drawing are also defining the contours of the model's body. Feel that your hand and pencil are actually touching these contours.

The tactile and emotional were combined to strengthen group cohesiveness. The student could relate to the others in the group and could relate to the model. Likewise, the tactile and visual were co-ordinated in a growing awareness of form. (slide 6)).

LIVING SCULPTURE

The multi-sense experiences were continued early in the second term after a break of almost two months. Much of the intervening time had been devoted to studying three dimensional form and constructing maquettes. The following session is an attempt to relate sculpture to the kinesthetic sense - to make the movement and the sculpture one entity. The class began with some of the sensory awareness experiences described earlier. The class has become quite closely knit and very responsive and now regard these exercises as a very natural preliminary to creative experience.

Each person has a four foot square piece of corrugated cardboard. We are composing with two modules, the cardboard square and the human body, to create a "living sculpture". One of the students and I will be the sculptors and can arrange the components. We can also allow some of the components to arrange themselves. Try open, free forms, closed tight forms, linear forms.

We tried some variations in the studio and the students were beginning to work as a group. (figure 1) We then moved into the hallway and formed a sculpture relating to the space of the walls. (figure 2) As the students and the cardboard moved, they continued to be a linear, snake-like sculpture. Static formations were tried, as were dynamic ones - cardboard could be the moving components, or parts of the bodies could move. (figure 3) This living sculpture was able to relate to the particular environment it found itself in.

PAPER SOUNDS

How can paper make sounds? By tearing, crumpling, beating, blowing; with wet paper, dry paper, folded paper, corrugated paper. To make drums, plates, horns and new instruments without names. How can sound be made visual?

Try creating various sounds in various ways with paper and then draw symbols or notations to represent the sounds. (slides 7, 8)

The paper orchestra was assembled, the scores set in place, and the conductor proceeded to direct the sound makers. (figures 4 and 5) An interesting event occurred when the students decided to "play" the drawings and collages they had created as the previous week's home assignment. The works were displayed in preparation for a critique which was to follow, but the class first responded to them in a non-literal way with sounds, not words. On earlier occasions they had tended to talk about works of art in terms of their personal preferences but for the first time they were able to involve themselves in someone else's work in terms of what the work is in itself. In their attempt to interpret lines, movement, colours, repetition in sound, they had to accept the work and I think came to some valid insights. This non-verbal "critique" was tape recorded to produce an art work of sorts in a new medium.

The final experiment with this group was extended over a period of several weeks and involved a series of drawings and paintings from non-visual stimuli - touch, smell, taste, sound and movement. Usually the information we extract from the external world to interpret in art is perceived visually and then interpreted visually. What would happen if the stimuli or information were perceived directly through the sense of touch, or smell, or taste, or kinesthesia and interpreted visually?

TOUCH DRAWING

Draw your own ear without looking at it. Feel the shape, hollows, ridges, and contours of your ear with one hand while you draw with the other. (figure 6)

Take one of these small natural objects (shells, rocks, pieces of wood, dried plants, etc.) and feel it with one hand held out of sight and draw it with the other. (figure 7)

These simple exercises proved to be an effective way to short-circuit the visual influence in drawing and emphasize the tactile, although of course, it was not possible to erase the influence of visual memory. (slides 9, 10) Here the discovery of form was immediate - the perception of the object as a total three dimensional pattern. Again there was the discovery that a line drawing can be much more than an outline.

TACTILE PAINTING

Perhaps the most effective description of another session exploring tactile sensation is the poem I wrote following the experience.

Everyone in a circle
 turn off
 the lights and
 pass around
 a lot of stuff
 scratch prickle
 stroke soft
 squish
 slippery plastic
 straw
 bumpy cavernous
 rock
 and
 a wet rag and
 a dry flag and
 even a marble
 i won't say
 anything
 if you
 paint me
 a picture.

Slides 11, 12, 13 suggest the variety of responses to the tactile

sensations. In each case the textures are treated non-literally with no attempt to reproduce actual textures. Rather, the aim seems to be to emphasize that the textures were different - were smooth, or rough, or slippery, rather than being a marble, a rock, or a piece of plastic. In the paintings there is a definite sense of textures flowing and interacting, probably because the textures were continually moving as the students handled them. This movement may also have influenced the students to continue the activity by painting similar but new textures rather than trying to reproduce textures.

SMELL AND TASTE PAINTINGS

What does a smell or a taste look like? What forms does it suggest? What lines? What colours?

Slides 14, 15 and 16 are student's images of taste and smell sensations, created after sampling a variety of spices and liquids from unmarked bottles. Slide 14 is a sharp, bright taste of pepper, simply stated. Slide 15 is a more subtle melange of delicate, feathery spices while slide 16 suggests a wide range of taste and smell sensations.

SOUND PAINTINGS

Much art is involved with pricking out, interpreting, and ordering the various undifferentiated visual stimuli which constantly bombard us. In our environment much is chaotic, but often beautiful juxtapositions and combinations happen naturally and things synchronize. But what about sounds - can the same thing happen? And if it does, can it be interpreted visually?

A sound environment was set up with two tape recorders, a record player, transistor radio, guitar and harmonica - each playing randomly but with someone controlling the volume and on/off switch. Some interesting sounds occurred - some beautiful, some funny, some ugly, some chaotic. Slide 17 expresses much of the total nature of the sound

experience - areas of detailed, congested lines, areas of transition, loud areas, quiet areas, and some silence. The other reproductions, because of their more orderly composition, are crystallizations of particular passages of the sound experience. Slide 18 has the dancing dots like a melody line or a voice bouncing over the bands of colour and the sonorous purple. Slide 19 suggests rushing waves of increasing volume while slide 20 captures a momentary flash of staccato rhythm.

KINETIC PAINTINGS

Two models are moving to music in an area of about ten square feet which was covered with cardboard.

On a sheet of paper, make a linear notation of the models' movements - draw the movement. When the paper is beginning to get covered, drop the pencil and continue drawing with your finger.

Then with your whole hand.

Then onto the sheet of cardboard covering the table.

Draw with your whole arm.

Draw with your upper body.

Move onto the floor, drawing with your whole body interpreting the movements initiated by the models.

At this point, the models and the students decided to put paint on the models' feet, bringing the movement back into a graphic image. The students contributed to the movement image on the cardboard on the floor by applying the paint with hands and brushes. The students later worked on easel paintings, using only black paint, combining their visual interpretations of the models' movements, sensations they felt while participating, and still poses. These paintings (figures 9, 10) show movement captured in one image, and are strong expressions of the kinesthetic made visual.

In these paintings, as in most others presented in this study, the mode is expressionistic and the space shallow.

The narrower, the more restricted three dimensional space or the space of our psychological experiences is, the more importance is assigned

to the self. Haptic space is of necessity restricted. In it, therefore, the significance and the importance of the self are very much emphasized.

The result is similar to art of epochs when expressive qualities are greater than visual ones, like Egyptian murals, Byzantine paintings, and Expressionist paintings. The student is using his body sense and its perception of the world as expressive content.

¹V. Lowenfeld, Creative and Mental Growth, p. 267.

CHAPTER VI

GROUP B

Group B consisted of fifteen to seventeen year old boys and girls in Sir George Williams University's Saturday Morning Childrens' art classes. The number of students varied, but there were usually ten to eighteen for the classes described. The teaching arrangement for the class was somewhat unusual in that there were three teachers; Professor Peter London, Naomi Lipsky, a graduate student, and myself. Since each had equal authority and responsibility for teaching and planning, it is impossible to describe any one of us as an "assistant". Whereas the activities described with group A were of my own planning, the experiences devised for this group, except the film, were planned in cooperation with the other two teachers. This group too, was soon aware of the experimental nature of the course and that we would be exploring non-visual approaches to art. The experiences presented to this group were different or in a more modified form than those of group A in order to achieve as many diverse situations as possible, but also because of the younger age of this group. The touching situations are less overt than those created with the older group as it was felt that less mature adolescents

would have more sexual doubts and anxieties and be more easily embarrassed and distracted.

BLIND WALK

At the first class session after a brief introduction to the concept that the artist seeks to explore the senses and searches for new ways to communicate, the students were confronted with a pile of ropes and cloth.

Take a person near you and tie yourself to that person with the rope around each other's waist. Then blindfold each other. From now on, concentrate with all your available senses.

The teachers then helped to form the tied and blindfolded students into a line by having each place a hand on the shoulder of the person in front of the line, another near the middle and the other following, the students were led out of the room, down a hallway, down a stairwell, out onto the sidewalk, through an alley and into a parking lot. Slowly cooperation developed. They noticed the change of sound in the stairwell. Once outside they could feel a light rain beginning to fall.

In the parking lot they were left free to roam in pairs and explore the area by touch. They felt the textures of trees, chains, motor cycles, cars - usually by bumping into them. Some pairs used the rope as an anchor for one person to actively explore a small area. Others held hands for greater security and wandered about almost as one sensing unit. There was a strong feeling of inter-dependence.

Blake's phrase the 'blind hand' tells us that the most dreadful blindness is tactile blindness.

When the blindfolds and ropes were removed, the students came back

¹J. Cohen, Humanistic Psychology, p. 82.

into the building where painting materials were waiting. A boy clearly expressed the problem when he asked: "How can you paint what it's like to bump into something blindfolded?"

There were a wide range of solutions to this problem of expressing a tactile and kinesthetic experience in visual terms. There is the highly literal painting of the lone groping figure, in burning yellows and reds, pained in his helplessness. (figure 11) Figure 12 is also literal to the extent that we recognize the objects as a tree trunk, a chain, a wire mesh fence. Yet the textures are exaggerated and assume great importance. The space is very shallow and non-literal with no attempt at perspective. The fence texture is inserted arbitrarily at the right. The space, as well as the identity of the curved form on the left is ambiguous. The objects are as one would feel them rather than see them.

A visual interpretation of the experience of bumping is attempted in figure 13 by means of bursts of colour emanating from posts and walls. These objects are seen as roughly textured surfaces. In the next painting (figure 14) the shapes become less discernible as objects and become massive textured red and orange volumes surrounded by or leading into dark unknown spaces. The shapes completely lose any sense of volumous solidity in figure 15 yet assume a mystical, Rothko-like presence. It is interesting to note the extension of tactile involvement achieved by tearing the edge of the painting. The deep level of intensity of student involvement in both the motivational experience and the painting activity was notable.

BLIND PORTRAITS

The second session with this group was concerned with portrait modelling in clay, with emphasis on the sense of touch. We began by darkening the room and having the class stand in a circle. With Koto music playing, we began the head and face tapping exercises described on page 47. To these exercises was added the following:

Slowly and carefully touch your head and face as if you were drawing them. Feel the contours.

Now imagine that you are sculpting your face - feel the hollows, the bumps, the smooth areas, the hair.

Still in the circle, form pairs. Slowly and gently begin tapping the other person's head, then his face.

Slowly feel the contours of this face as if you were modelling it.

With the same partners, the students returned to their tables and clay. As two of the teachers participated, they discovered how a portrait of each other could be created with clay by touch alone. The students worked in near darkness the entire period, touching parts of each other's heads and translating this tactile information into the clay. One girl worked in a manner similar to that of the sixteen year old blind boy described by Lowenfeld.¹ The head was built from the neck up with the chin, jaws, mouth, cheeks, nose, and eye sockets being added in order. Each feature was considered as an isolated unit. The majority of the students used their sense of touch in a visual way, that is, by using the hand to scan the features and build up a total impression. The modelling of the heads or faces sensed in this manner (figures 16, 17) seemed to have a feeling of wholeness, although there is a tendency towards exaggeration of some features that probably wouldn't be as marked if the stimulation were only visual.

¹V. Lowenfeld, Creative and Mental Growth, p. 274.

The sensitivity and seriousness of the students were remarkable. Only two boys seemed embarrassed at touching and reacted, quite normally, by acting roughly. Visitors to the room remarked on the "electric" atmosphere and reported feeling like being an intruder on some secret rite. At the end of the period it was felt that some transition to the visual world was needed, so as the light was being let in, we put the clay portraits in a circle and looked at them - and touched them.

TASTING

Part of another morning was devoted to a taste experience. A large sheet of black polyethelene was spread on the floor and we all sat on it in a circle. Quiet, soft music set a mood. We talked about how we had been concentrating on certain senses but had not yet tried taste or smell. So we passed around a loaf of bread as the lights were turned off.

Take off a small piece of bread and slowly, sensitively, feel, smell, and taste it. Savour the after-taste.

Lights on.

Here are some pomegranates. Pass them around, feel them, peel them, take the seeds out, eat them. Enjoy the stickiness.

The lights were turned out to emphasize the taste and touch. Any talking was low and intimate. The feeling was warm, relaxed, and communal with a strong sense of ritual. There was no attempt to channel the experience into a conventional art form. The ritual can be the art form. The art form can be a ritual.

SOUND SCULPTURES

Three sessions were concerned with sound. We introduced the sense of hearing by illustrating that communication can occur without sound, or at least non-verbal sound. We tried a series of non-verbal conversations.

The students were paired off to explore non-verbal communication. One way was through a kind of pushing and shoving dialogue starting from a greeting and moving to a disagreement, to a reconciliation. The boys enjoyed this, but a milder version of slapping arms and shoulders seemed to come more naturally to the girls. Another means of non-verbal interaction was the paper tearing conversation. A piece of paper torn off and handed to the partner required an appropriate response. The nature of the paper, the way of tearing, facial expressions, body gestures, are all relevant data.

The painting conversation consisted of two people painting on one large sheet of paper with black and white paint. They conversed only by means of the images they painted, the way the paint was applied, etc. (slides 21, 22) One could see where there was harmony, where there was conflict, where one person dominated.

The active exploration of sounds began by hearing how simple devices and actions can make interesting sounds. When these sounds are recorded on a sensitive tape recorder at high amplification and played back, the sound is stunning and is moved into another dimension.

In small groups, look for and listen to various objects around the room that make interesting sounds. Combine some of these sounds and present a short performance, which will be recorded and played back.

Following this preparation, the class was asked to build sound making structures. Assorted materials (wood, tin, cardboard, cans, bottles, etc.) and tools were provided along with an audio environment of electronic and music concrete recordings. The group worked enthusiastically but most students lacked skill with the tools and the results were very rough and make-shift with little aesthetic merit. This may have been due to the "scrap" nature of the materials and the fact that technical problems overshadowed aesthetic problems. One of the more successful

pieces is shown in figure 18. Some of the sounds produced were interesting although quite conventional. A concert was given with the completed (and partly completed) sculptures. The instructors and some students drew notations and symbols on the blackboard to serve as a score. In this project, it seemed necessary to emphasize the sculptural nature of the instruments and that what is needed is a pleasing synthesis of the visual and the auditory - a very difficult thing to achieve.

SCULPTURE THAT MOVES

The next problem was to create sculpture that moves.

How can sculpture be made to move?
 How can anything be made to move?
 What does it feel like to move?

In order to answer the last question we tried to make kinetic sculpture out of the students. We arranged their bodies, legs, arms, hair, to make interesting looking (and feeling) shapes, then tried to move the parts, and the whole structure. Movement could be achieved by moving, or having moved an arm, a leg, etc. The illusion of movement was created with a strobe light which broke up the image into a series of images. Actual movement was chopped into its components.

The idea, and the feeling of movement were undoubtedly experienced by the students. The main problem was to transcribe this experience into sculptural form, to bridge the gap between experience and communication. Some kinetic sculptures were created (figures 19, 20) but were rather poorly constructed and unsubstantial. Again, the problems seemed to be largely technical ones of inadequate skills and materials which inhibited confident expression.

FILM SENSATION

During the second term the class broke up into sections and I took a group of five students to work on 8 mm. films involving the senses. After much discussion, it was decided that each student would take one sense - hearing, touch, smell, taste, sight, and make a film and sound track based on this sense. The five short films would then be spliced together to make one long film to be called Sensation. The equipment used was very simple and the technical skill and knowledge needed was quite elementary. The cameras were Kodak Super 8 Instamatics with an automatic light indicator so no adjustment or lens changes were necessary. The film is easily loaded and the student need only be concerned as to whether the light was sufficient. Then he could concentrate entirely on the image.

The problem was to explore various ways of making sounds, taste, smell and touch visible and in the process become more aware, and make the viewer more aware of these senses. They decided the solution would be to show what makes the sound, the taste, the smell, the touch, what some reactions to it are, or in some way capture its essence. Approximately half of the shooting occurred when the group went walking in the downtown Montreal area along the streets and in the stores to look at, listen to, taste, touch, or smell things that could be filmed and to film them. Before we left the classroom each student spent a few minutes concentrating intensely on the sense he was to film. Each student also had the opportunity to take a camera home for a week to film any special sequences he might think appropriate.

Before the group was too far into the film-making, I conducted some sensory awareness experiences most of which were described in detail

earlier so will only be summarized.

Form a circle. Find and sense your own space.
 Move in the group - don't touch.
 Touch with eyes.
 Bump.
 Touch lightly.
 Shake hands, legs, shoulders, feet, elbows.
 Re-form the circle, standing with your back to the centre.
 Close your eyes. Flow with the Koto music.
 Move slowly into the centre, pressing your back against the others.
 Stop.
 Move forward. Open your eyes.
 Face the centre, then closing your eyes again, slowly move towards
 the centre, pressing against the others.
 Stop. Move back. Concentrate on your sensations now. Open
 your eyes.
 Now paint:
 What the experience felt like
 What touch looks like
 What you feel like now.

There was no noticeable embarrassment or uneasiness about touching during this exercise, perhaps because by this time the group felt comfortable together and trusted the experimental attitude or because the touching was not intimate or in pairs.

Slides 23 and 24 illustrate two extreme reactions. In the former the internalized sensations explode through the senses. A hand-like form pours from a gigantic eye, a tongue gapes - all existing in a dark space. The second painting is of the group. Faceless dark figures are lost as individuals, all part of the group, all interdependent, groping in the centre of a green void.

It was during the editing process that the students began to realize the limitations and possibilities of the film medium. They realized that by editing, images can be juxtaposed and arranged in quite a flexible manner. A description of some of the images and accompanying sound track may illustrate some of the effects achieved. In terms of showing an awareness of the evocative powers of the senses, the film

has some successful sequences, yet as a whole, tends to emphasize the visual. In the film, as in the other projects, the results are new experiences rather than duplication of previous experiences.

The section on sound begins with a dancing gorilla (the student in costume) and cuts to a montage of musical instruments in shops, in windows, being played, T.V. images of musicians, spinning tape reels, walking feet. All this to rock and roll music in similar rhythm. A particularly effective scene is a kaleidoscopic series of posters and record covers culminating in the fast pan of the interior of a record shop, ending in an explosion (figure 21). Both the image and the sound rise to a crescendo and end with an explosion. Parts of the film are scratched and painted with coloured inks so that lines play with the photographic image and create the illusion of sound waves.

Taste is introduced by a breaking egg followed by an orange being eaten, (figure 22) honey being poured, a cigar being smoked. An interior of a busy coffee shop is humorously counterpointed with fast-paced banjo music. There are some effective close-ups of hands and mouths. The sequence on seeing is less powerful since the subject is more complex and less obvious. Still, there are some fine shots of flames, a street, a chandelier (figure 23), a decorated car. The scratching and inking technique is effective here. Smell contrasts flowers in snow (figure 24), garbage, running water, mouth wash and exhaust smoke. Touch has some very effective images, beginning with an egg being squished and fondled and moving to the soft luxury of barefeet and hands on a carpet and on a cat (figure 25) and on to clapping hands, people in a store, cracks on a road. The sections on smell, sight and touch are

accompanied by rock music which provides an appropriate rhythm.

The parts on sound and touch are the most effective in terms of sense integration while the other sections tend to rely rather heavily on the visual sense. This film emphasizes the dilemma which can occur when one introduces multi-sensory concepts into the context to the visual arts. He must consider whether the visual is to remain dominant and the other senses merely thematic, or whether the visual is to become the vehicle to express the other senses, or whether the visual is to be considered at all. Nevertheless, there must exist an awareness of the senses involved and the degree of their integration.

CONCLUSION

It is hoped that the experiences described in this thesis could form the possible basis for a multi-sense art programme in the secondary school. No attempt has been made to develop a comprehensive curriculum or to formulate a sequence of activities, although it is felt that the philosophical and methodological approach for a multi-sense art programme has been established. Our era demands a multi-sensory approach to art and is in need of the empathy which multi-sensory contact can bring. There is a need to overcome the social taboos on touching and the confusion between sensuality and sexuality.

With a little modification, the multi-sense approach described here could be applied to the secondary school classroom. At the present time, the programme would probably be most valuable as a culminating course in high school or an introductory course to university or art school. The techniques described by Seonaid Robertson and Chandler Montgomery were applied to the classroom situation. The main requirement seems to be flexibility. Flexibility on the part of the teacher in providing optimal conditions, flexibility of the school administration to allow freedom to move outdoors at will and to use an open space like a gymnasium and to allow a flexible block of time and a flexible working area. Also, art

educators need to realize that experience itself can be art and that the concept of achieving joy and self and sense awareness is intrinsically bound to that of creativity. The main problem would be that this approach requires a different kind of training and orientation for the teacher who no doubt was educated in a compartmentalized, single sense fashion. With this approach, the teacher becomes more (and less) than a teacher. He becomes a designer and a catalyst for the creation of environments and experiences, he becomes a guide who shares experiences, he becomes a group leader in a face to face encounter. The implications for art education are vast and call for research. The classes described were successful in varying degrees in terms of student involvement and the creative transference of sense experience into an image. Whether this approach achieves more "creative" or "expressive" results than a conventional approach, if these qualities can be measured, if a non-visual approach could be harmful to "visualizers" as Lowenfeld suggests, would be subjects for further study.

APPENDIX

Accompanying this thesis and supplemental to it is a film titled Multi-Sense which was filmed by the author and his students. This 8 mm. film is intended as a non-written presentation of the essence of the thesis and a visual and auditory report of the multi-sensory activities. The film was produced with the same simple equipment described on page 66. The effects possible are rather limited and the writer inexperienced with movie cameras. However, the intention was to work with equipment which was simple and relatively inexpensive and which could feasibly be readily available as expressive media in secondary schools.



Figure 1 Living Sculpture (in the studio)



Figure 2 Living Sculpture (relating to the environment)

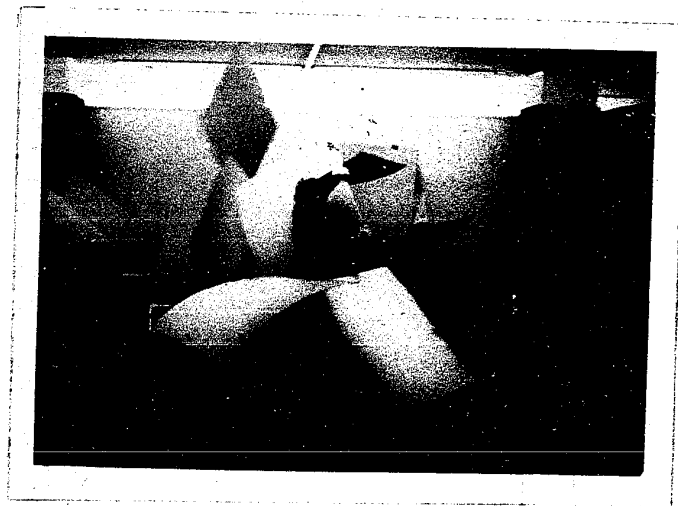


Figure 3 Living Sculpture (with moving parts)



Figure 4 Paper Sounds (The "orchestra")



Figure 5 Paper Sounds (Conducting from the score)



Figure 6 Drawing the ear by touch

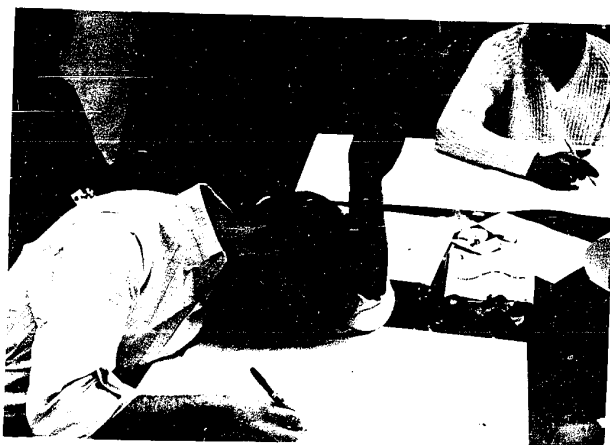


Figure 7 Drawing a small object by touch



Figure 8 Painting and movement (Models and students)

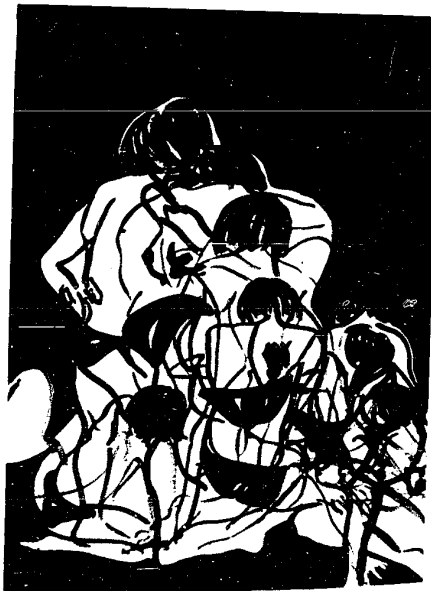


Figure 9 Painting from movement



Figure 10 Painting from movement



Figure 11 Blind walk painting

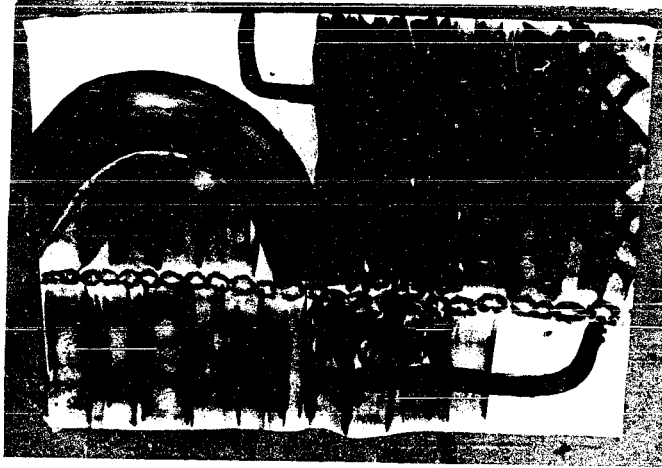


Figure 12 Blind walk painting



Figure 13 Blind walk painting



Figure 14 Blind walk painting

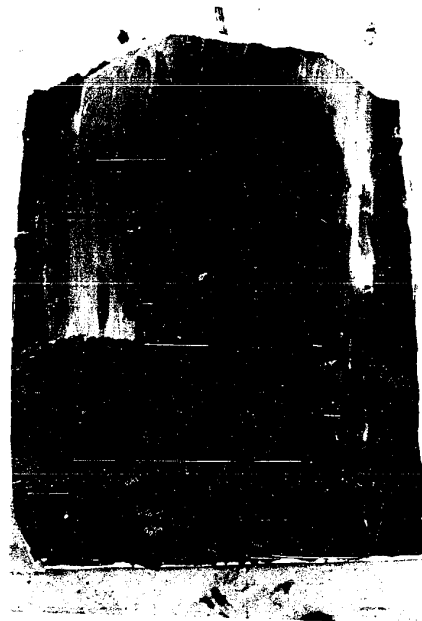


Figure 15 Blind walk painting



Figure 16 Touch portrait in clay

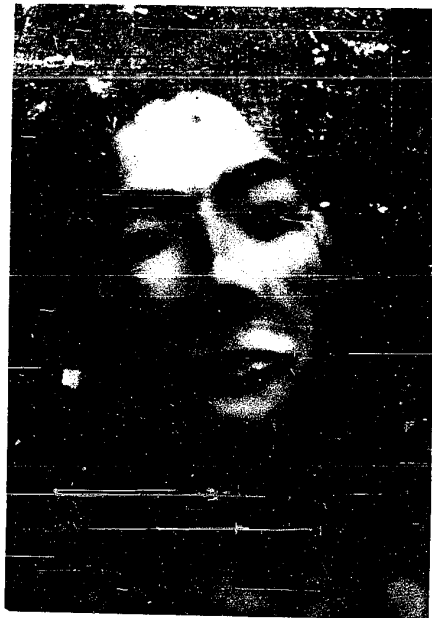


Figure 17 Touch portrait in clay



Figure 18 Sound sculpture

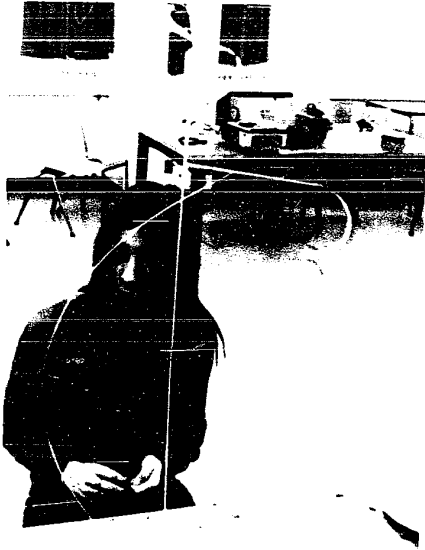


Figure 19 Sculpture that moves

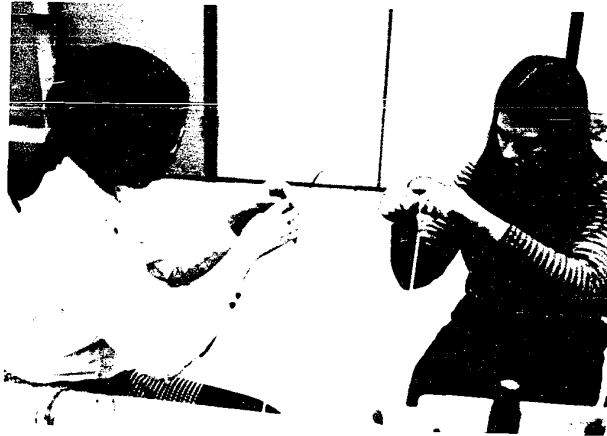


Figure 20 Sculpture that moves

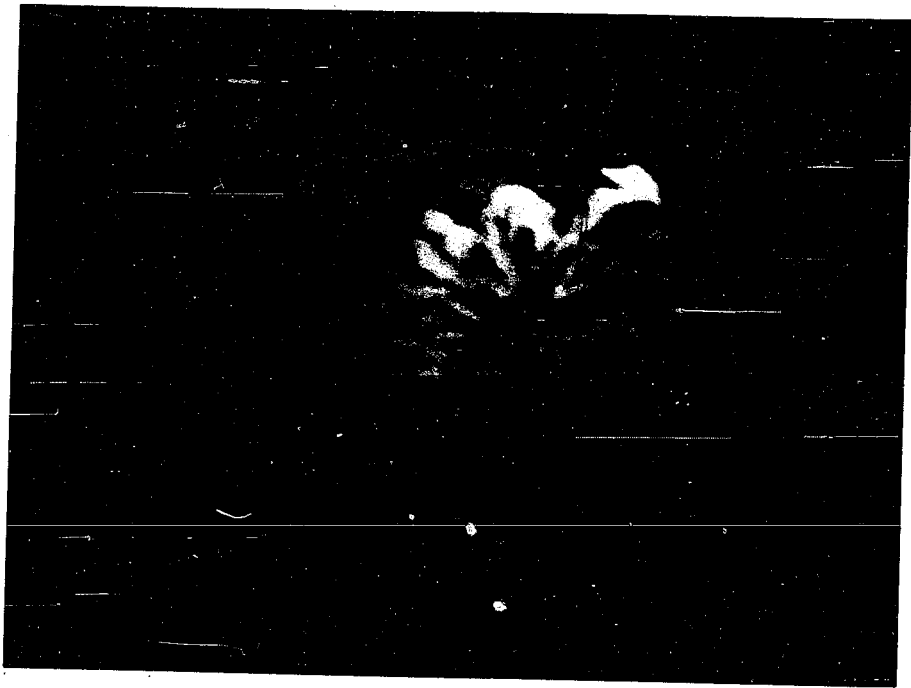
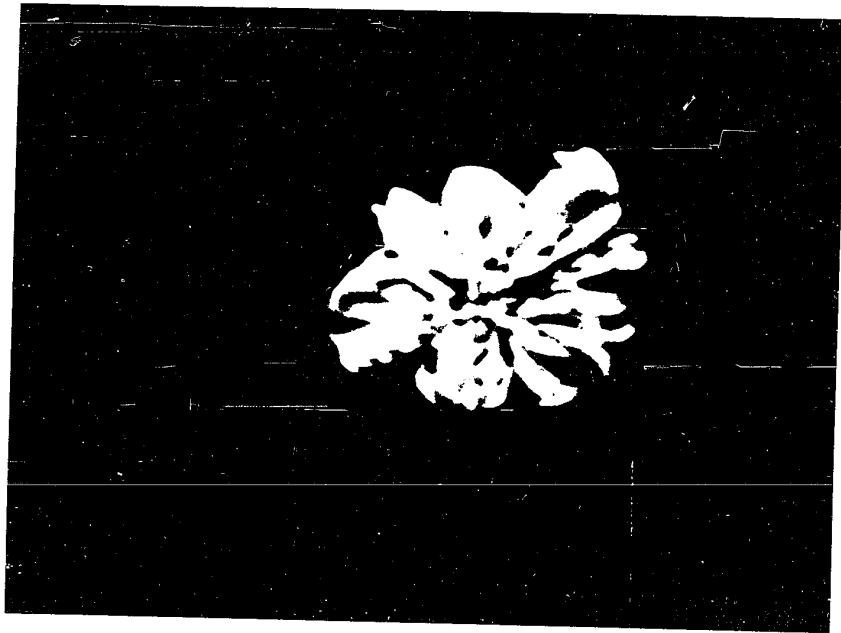


Figure 21 Sound (Frame from super 8 mm. film)



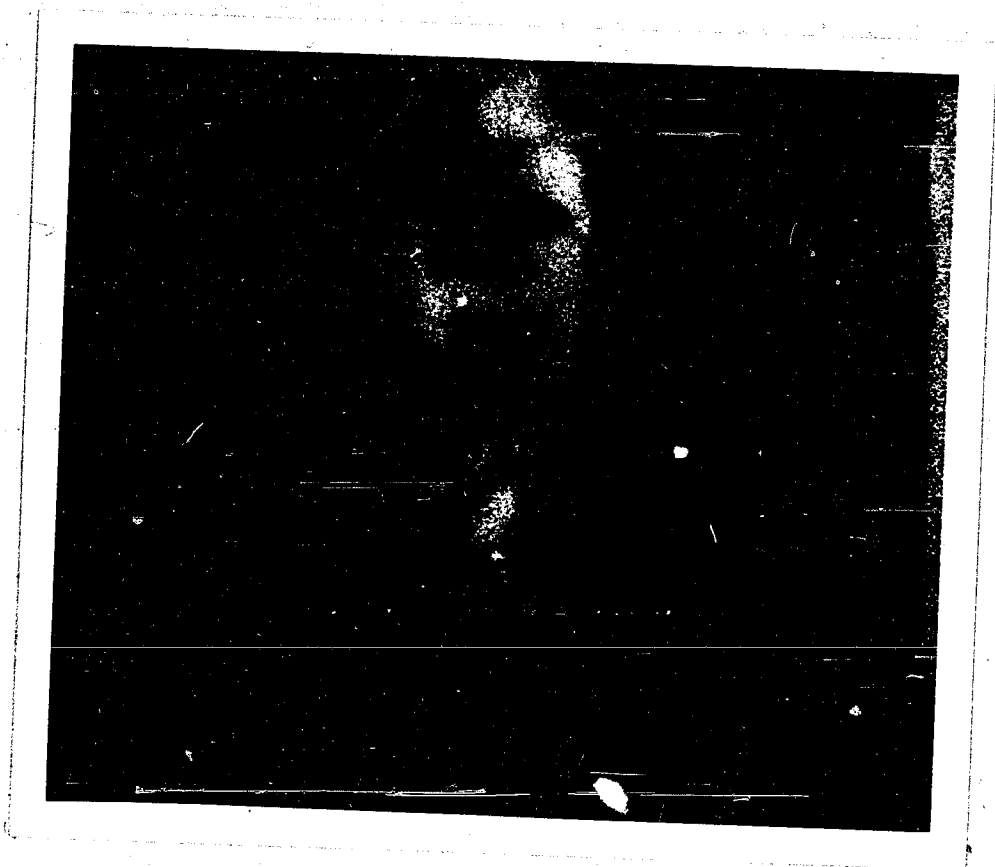


Figure 22. Taste (Frame from super 8 mm. film)



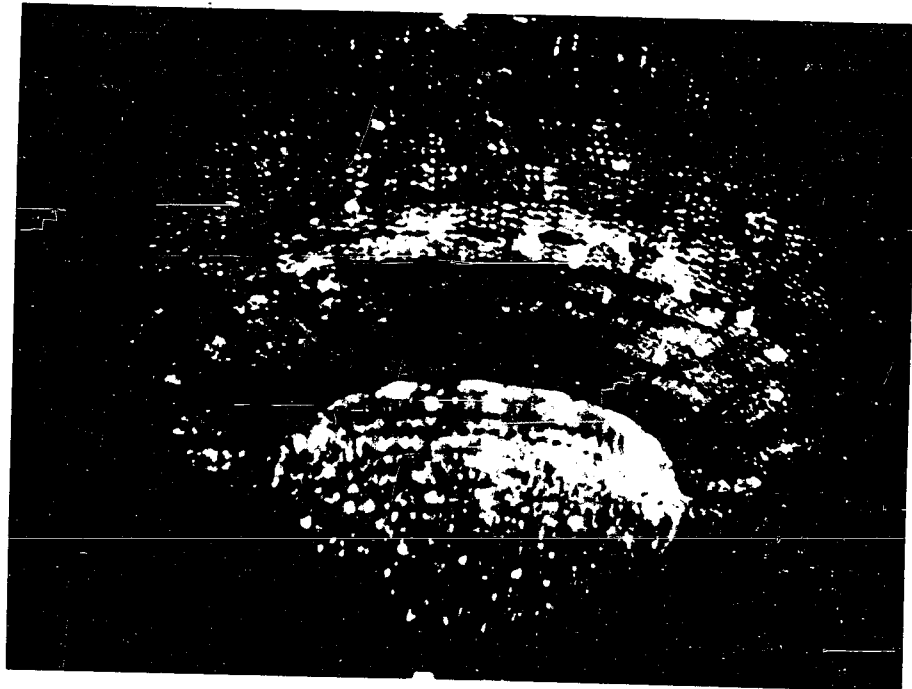


Figure 23. Sight (Frame from super 8 mm. film)

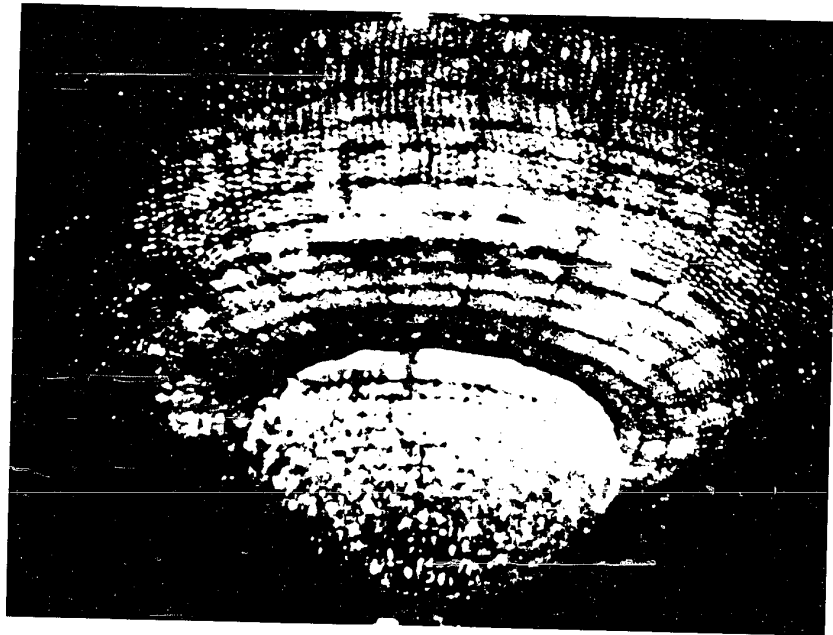


Figure 1. Cross-section of a biological specimen (micrograph, file)



Figure 25. Tezut (Frame from Japan 5 ans. film)

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