THE WRITINGS OF ARTISTS IN THE TWENTIETH CENTURY AND THEIR SIGNIFICANCE FOR ART EDUCATION
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This thesis is concerned with the contribution, both real and potential of twentieth century artists to art education. A study has been made of the writings of artists published in English, and of any contribution they have made to the teaching of art. This has involved a detailed look at certain aspects of art education in English, American and Australian schools where inspiration appears to have come particularly from the ideas of artists.

Chapter I looks at the varied approaches to the nature of vision explored by twentieth century artists, and shows how relevant it is for an observer to have some understanding of expression an artist is attempting.

Chapter II looks at statements by artists about the

An abstract of a thesis submitted to the University of Sydney in partial fulfilment of the requirements for the honours degree of Master of Education. 1968.

Chapters III, IV, and V are historical, in that they

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Chapter II looks at statements by artists about the nature of their own creative experience, and a synthesis of these ideas is attempted in terms of the writings of Ben Shahn.

Chapters III, IV, and V are historical, in that they look at the most creative centres of art education during
this century in England, America and Australia (New South Wales and Victoria).

Chapter VI states the implications of the thesis for art education. Comment centres about the following points:—

1. wider involvement with creativity
2. relationship of artist, work of art, and observer
3. communication
4. terminology
5. relationship between practical and theoretical
6. social implications of art education
7. the child as artist — suggested extension of classroom procedures
8. the importance of decision making in the creative process
9. an attempted analysis and synthesis of the thought of the century.
THE WRITINGS OF ARTISTS IN THE TWENTIETH CENTURY
AND THEIR SIGNIFICANCE FOR
ART EDUCATION

Vol. I

ELLEN M. WAUGH, B.A., A.T.D.

A thesis submitted to the University of Sydney in partial fulfilment of the requirements for the honours degree of Master of Education. 1968.
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CHAPTER I

THE NATURE OF THE VISION OF TWENTIETH CENTURY ARTISTS

Introduction

Experiencing a work of art makes creative demands of the viewer. In late century, more than any other, artists have explored such a great variety of approaches to reality that there is a definite need to recognize particular sensitivities as being more relevant than others. If, for example, an artist has been interested in the fusion of many points of view, there is little significance in being critical of a work for its lack of realism. Again, if a contemporary artist makes a comment on today's commercialized society, then criticism of the work because it resembles a billboard reveals a lack of understanding of the aims of the work.

The work of the artist has become through the thinking of architects, writers, philosophers and psychologists an integrated aspect of twentieth century society and all share an interest in the creative aspect of man's thought.

In the first chapter of this thesis it is proposed to look at the written evidence available on the nature of the twentieth century artist's vision of the world about him and to analyze his concepts of reality in art. In the following chapter the artist's assessment of his own creative processes will be explored.

This will be followed by three chapters on aspects of art education in America, England, and Australia (represented by New South Wales and
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This will be followed by three chapters on aspects of art education in America, England, and Australia (represented by New South Wales and
Victoria) in which the influence of artists will be considered.

The final chapter will attempt to assess the relevance of the first two chapters for art education in the light of the other three.
In the early years of the twentieth century (1904-5), Paul Cezanne, then about seventy years of age, wrote a number of letters to the artist and critic, Emile Bernard. Bernard was one of the few people at that time to admire Cezanne's work and be sufficiently interested in his technique to correspond with him. The correspondence revealed two important factors. The first was Cezanne's adherence to nature as an ideal, which had played such an important part in nineteenth century thinking. The second was the analytical nature of his vision, which was to affect so profoundly the artists of the first half of this century.

...treat nature by the cylinder, the sphere, the cone, everything in proper perspective so that each side of an object or a plane is directed towards a central point. Lines parallel to the horizon give breadth, that is a section of nature or, if you prefer, of the spectacle that the Pater Omnipotens Aeternus Deus spreads out before our eyes. Lines perpendicular to this horizon give depth. But nature for us men is more depth than surface whence the need of introducing into our light vibrations, represented by reds and yellows, a sufficient amount of blue to give the impression of air. (15th April 1904) (1)

To achieve progress nature alone counts, and the eye is trained through contact with her. It becomes concentric by looking and working. I mean to say that in an orange, an apple, a bowl, a head, there is a culminating point; and this point is always - in spite of the tremendous effect of light and shade and colourful sensations - the closest to our horizon. (25th July 1904) (2)

The point to be made clear is that, whatever may be our temperament, or our power in the presence of nature, we have to render what we actually see, forgetting everything that appeared before our own time. (23rd October 1905) (3)

2 ibid., p. 239.
3 ibid., p. 261.
As the last quotation implied, Cézanne was able to break the accepted vision of nature held by Realists, Romantics and Impressionists of the nineteenth Century, and perceive a fresh structural reality. For the three groups of painters named, surface qualities were of considerable importance. For example, Gustave Courbet, a Realist, recorded detail precisely. Eugene Delacroix, a Romantic, delighted in heightening the colour and dramatising the composition of his works, while Claude Monet, an Impressionist, tried to record light as reflected by objects at the exact moment of their impact on the eye.

Seeing, for Cézanne, involved an analysis that depended on the most intense observation, but this was followed by selection of the elements that emphasised structural qualities. His colour, though influenced by the Impressionists, was equally selective with the same structural qualities in mind. His earlier concern with the dramatic aspects of Romanticism was replaced by a concern for the precise placement of forms in space.

This change in the nature of vision introduced by Cézanne was further developed by Pablo Picasso and Georges Braque. Their approach earned the name of Cubism because of its emphasis on geometric structure. One of the most important literary spokesmen for the artists who followed this trend was the poet and writer Guillaume Apollinaire, who had associated with the Bateau-Lavoir group formed in 1909. The following statements gave the feeling of the movement as seen by him.
While the goal of painting is today as always, the pleasure of the eye, the art lover is henceforth asked to expect delights other than those which looking at natural objects can provide. (1)

They (the artists) discard more and more the old optical illusion and local proportion, in order to express the grandeur of metaphysical forms. (2)

Scientific cubism is one of the pure tendencies. It is the art of painting new structures out of elements borrowed not from the reality of sight, but from the reality of insight. All men have a sense of this interior reality. (3)

They showed his awareness, as a sensitive observer, of a new reality that demanded from his feelings an aesthetic pleasure quite different from that involved in the appreciation of naturalism in art.

This break with the accepted conventions of observations was further explained by the artists Albert Gleizes and Jean Metzinger, who had followed the lead given by Picasso and Braque, as the introduction of a more mobile point of view. Where Cézanne had looked with such fixity that even the impression of air became a factor, the Cubist changed his point of view and composed by fusing successive images and reconstructing the subject. Observation of a subject was no longer a point of view but an impression over a period of time.

We are certain that even the least wise will quickly recognise that the claim of configurating the weight of bodies and the time spent in enumerating their different points of view, is as legitimate as that of imitating daylight by the clash of orange and blue. Then the fact of moving around an object to seize from it several successive appearances, which, fused into a single image reconstitute it in time, will no longer make reasoning people indignant. (4)

2 ibid., p. 14.
3 ibid., p. 17.
Apollinaire once said of Metzinger, "He will delight those who want to know the reasons for things; his reasons are such as to satisfy the mind". (1) Gleizes and Metzinger's view of Cubism has become the one most widely understood today, particularly since Picasso has refused to make written comment on his ideas and Braque has also been reticent.

I therefore thought that one could obtain a basic dynamic element by breaking down this unity of material into a certain number of different substances, each of which could, by its very diversity, characterize a difference of weight and expansion of the molecular volumes. The problem of dynamics in sculpture does not depend only on the diversity of materials, but above all upon the interpenetration of the form. (1)

Boccioni considered the stopping of action in the midst of movement, as was done in traditional sculpture was tantamount to killing it. He aimed to combine "form in movement (relative movement) and movement of form (absolute movement)."

All these convictions impulse me to search in sculpture not pure form, but pure plastic rhythm, not the construction of bodies, but the construction of the action of bodies. Thus, I have as my ideal not a pyramidal architecture (static state), but a spiral architecture (dynamism). This is why a body in movement is not for me a body studied when immobile and afterwards modeled as though it were in motion. It is, on the contrary, a body in movement, a living reality absolutely new and original. (Boccioni's underlining) (2)

1 G. Apollinaire, *op. cit.* p. 35.
Umberto Boccioni

Developing from the ideas of Cubism, the Italian Futurists, of whom the most vocal practitioner was Umberto Boccioni, saw painting and sculpture in the wider context of architecture and environment. Encouraged by the interest in dynamic art forms of the poet, Filippo Marinetti, Boccioni explored the sculptural uses of a combination of different materials from metal to transparent celluloid, and the ways and means of rendering the interpenetration of forms in space. In the preface to his first exhibition of Futurist sculpture in Paris he wrote:

I therefore thought that one could obtain a basic dynamic element by breaking down this unity of material into a certain number of different substances, each of which could, by its very diversity, characterize a difference of weight and expansion of the molecular volumes. The problem of dynamism in sculpture does not depend only on the diversity of materials, but above all upon the interpenetration of the form. (1)

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2 ibid., p. 48.
This instance of "plastic life", unique in form for which Boccioni was seeking, was something which the artist felt in the presence of the problem he was trying to solve. It could not be explained in terms of a trajectory.

In order to present a body in movement, I take care not to give its trajectory, that is its passage from one state of repose to another; instead I force myself to determine the unique form that expresses its continuity in space. (1)

Later, however, when discussing technique, he wrote of (letting live)... the sinuosities, the discontinuities, the burst of straight and curved lines, according to the direction which the movement of the body impressed on them. (2)

This meant that the artist reacted to movement but he was careful not to substitute one form of static movement for another capable of being treated just as rigidly as the older method. He reserved for himself the freedom to manipulate forms according to his own feelings.

In his "Technical Manifesto of Futurist Sculpture", Boccioni referred to this continuity in space as a physical transcendentalism and explained it as follows:

One must start with the central nucleus of the object one wants to create, in order to discover the new forms which connect it invisibly and mathematically to the visible plastic infinite and to the interior plastic infinite. The new plasticity will thus be the translation in plaster, bronze, glass, wood or any other material of atmospheric planes that link and intersect things. What I have called physical transcendentalism can render plastically the sympathies and mysterious affinities which produce the reciprocal and formal influences of the objects' planes. (3)

The scientific approach which was suggested by the use of terms such as "central nucleus" and "molecular structure" was thus counterbalanced by

1 ibid., p. 48.
2 ibid., p. 49.
3 ibid., p. 51.
an element of mystery which the artist retained as a part of his final judgement.

Writing in 1956, Gino Severini, who was one of the signatories of the manifesto of Futurist painters, claimed for Futurism wider perspectives than Cubism for this very reason, as the following quotation revealed:

In the early days, the Cubists' method of grasping an object was to go round and round it; the Futurists declared that one had to get inside it. In my opinion the two views can be reconciled in a poetic cognition of the world. But through the very fact that they appealed to the creative depths in the painter by awakening in him hidden forces which were intuitive and vitalizing, the Futurist theories did more than the Cubist principles to open up unexplored and boundless horizons. (1)

With traditional sculpture it was necessary for the spectator to move around the work to fully understand it. With the work of Boccioni it was possible for the viewer to gain a deeper understanding of the relationship of forms as each profile was suggestive of the others. It was explorations of this kind that involved Boccioni in the fusion of object and environment and a new relationship of void and solid.

One must completely forget the figure enclosed in its traditional line and, on the contrary, present it as the centre of plastic directions in space. (2)

Technically, however, he was still faced with the problem of how to treat the contours of his materials. He attempted to solve this by the use of painting techniques and accentuated certain areas with colour. He also used colour to soften the edges of his shapes. The interrelationship of painting and sculpture as an art form in the twentieth century could be traced to this period of time. In advocating that modern sculptors should not shrink from innovations but rather see them as challenges to creative

2 R. L. Herbert (ed). op. cit., p. 49
power, he reinforced the century's interest in originality. The stirring nature of the challenge he flung at conventional vision was revealed in the following quotation.

Why, then, should sculpture remain shackled by laws which have no justification? Let us break them courageously and proclaim the complete abolition of the finished line and the closed statue. Let us open up the figure like a window and enclose within it the environment in which it lives. Let us proclaim that the environment must form part of the plastic block as a special world regulated by its own laws. Let us proclaim that the sidewalk can climb up your table, that your head can cross the street, and that at the same time your household lamp can suspend between one house and another the immense spider-web of its dusty rays. (1)

Sculptural reality became so comprehensive a term that he was able to anticipate the development of kinetic sculpture.

Finally, we can affirm that the sculptor must not shrink from any means in order to obtain reality. Nothing is more stupid than to fear to deviate from the art we practice. There is neither painting, nor sculpture, nor music, nor poetry. The only truth is creation. Consequently, if a sculptural composition needs a special rhythm of movement to augment or contrast the fixed rhythm of the sculptural ensemble (necessity of the work of art), then one could use a little motor which would provide a rhythmic movement adapted to a given plane and a given line. (2)

The subject matter of art was expanding in another way also. To the Futurist, the piston and cylinder, the valve opening and closing created a rhythm as beautiful, but infinitely newer, than the human eyelid.

1 ibid., p. 54
2 ibid., p. 55
The approach of the Cubists and Futurists to reality was explicable in fairly rational terms, but the approach of the painters like Piet Mondrian, who named his art Neo-plasticism, and Wassily Kandinsky, who called his art Non-objective, placed greater stress on the intuitive approaches to art. Both these artists, through their writings, strove to express the idea that, though their art was so very different from what had preceded it, it represented a rational development from what had gone before and was in fact the way ahead to even more exciting developments for future generations of artists.

Both these men made contact with the Theosophical Society. Kandinsky's contact was slight but Mondrian belonged to the society from 1909 to 1917 and there exists an interesting correlation between the thinking of Mondrian about reality and ideas current in the society.

At the twenty-ninth Anniversary and Convention of the Theosophical Society in 1904, its aims were stated as being the forming of a nucleus of universal brotherhood without distinction of race, creed, sex, caste or colour; the study of comparative religion, philosophy and science; and the investigation of the unexplained laws of Nature and the powers latent in man. (1) The society attracted thinkers and eccentrics alike interested in the more intuitive and symbolic aspects of thought. At the time, Piet Mondrian was beginning to read their literature, a congress of the federations of the society at Amsterdam (1904) gave special mention to the

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exhibition of artwork and a program of music and singing by members of the society. In the same year, a Florence W. Richardson, under the heading "Some Thoughts on Genius", described what she considered the nature and scope of a work of art. Her articles drew attention to the power of the laws of nature and the part played by destruction in the creation of a work of art.

In every work of Art inheres a Law, a tremendous, Universal Law, which is struggling with ceaseless, intense energy to reveal itself, to objectify itself, to get from the inside to the outside. Now this Law is the purpose in Art, whether the artist shares that purpose or not, and whether the observer perceives it or not.

Art is a mutual effort of the creature and the Creator to become one.

It is only when a work gives us a whole, then breaks that whole into fragments, and then welds these fragments together again into a whole, that it represents Art - the universal. (1)

Having stated the existence of a Universal Law still struggling to reveal itself from the work of art, she went on to formulate a trinity of universal fundamentals, termed either Conception, Destruction, Reconstruction or Unity, Multiplicity, Reunity. The processes involved were described as follows:--

In evolving a Universe, the Great Mind first forms a concept of an external Cosmos, which concept is a unit, a solidarity, as yet unmanifested. This is the fundamental called Conception. It then destroys this unity by breaking it up into myriads and myriads of forms which play their part in the external or manifested world. This is the fundamental called Destruction (or Disintegration). Finally, the Great Mind recalls these forms which have been separated in manifestations and reunites them in the original concept - draws them back from the external into the unmanifested. This is the fundamental called Reconstruction. In miniature a work of art shows the same process.

Art to the Theosophists seemed to express a particularly vital but not fully understood process and, as such, came within the sphere of their explorations. In 1914, there occurred reference to Art being "life at its most intense... like a dome of many coloured crystals, reflecting but broken gleams of the white radiance of eternity". (1)

There exists a danger, with hind sight, of reading too much into the influence of these articles. The words of F.W. Richardson appeared to champion a new approach to art in keeping with what Mondrian was trying to develop with his studies of trees in 1908-12. The Theosophist Journal when it used modern illustrations, however, chose the work of people painting in the style of Art Nouveau.

In his writings of 1937, Mondrian did emphasise both "the great hidden laws of nature" and the "destructive-constructive" nature of the dynamic equilibrium he was seeking.

The laws which in the culture of art have become more and more determinate are the great hidden laws of nature which are established in their own fashion. (underlining by Mondrian). (2)

It is of great importance to note the destructive-constructive quality of dynamic equilibrium. Then we shall understand that the equilibrium of which we speak in non-figurative art is not without movement of action but is on the contrary a continual movement. We then understand also the significance of the name "constructive art". (3)

Piet Mondrian believed in the existence of two realities, one objective, the other subjective. Objective reality to him was aimed at the direct creation of universal beauty; subjective reality was an aesthetic expression of oneself (one's own thoughts and experiences).

3 ibid., p. 122
Both of these opposing elements (universal and individual) were indispensible if a work was to arouse emotion, but for the average spectator the individual form of expression predominated. It was the task of the artist to seek a correct balance between the two.

It is illogical that the two principal tendencies in art, figurative and non-figurative (objective and subjective) should be so hostile. Since art is in essence universal, its expression cannot rest on a subjective view. Our human capacities do not allow of a perfectly objective view, but that does not imply that the plastic expression of art is based on subjective conception. Our subjectivity realizes but does not create the work. (1)

This approach required of the spectator an awareness of both aims and a willingness to accept this elusive universal. A more obvious difference between the two was that the objective was non-figurative and the subjective figurative. The non-figurative was not, however, just a pattern of neutral forms. It had to possess a particular quality, which was present in significant art.

Non-figurative art is created by establishing a dynamic rhythm of determinate mutual relations, which excludes the formation of any particular form. We note thus, that to destroy particular form is only to do consistently what all art has done. The dynamic rhythm which is essential in all art is also the essential element of non-figurative work. In figurative work this rhythm is veiled. (Underlining by Mondrian). (2)

Mondrian believed, as did Kandinsky, that the artists of his day were on the threshold of a new era. One in which it was not sufficient any longer for the artist to say "this is how I see it" or "this is my idea". The culture of "determined relations" had begun and one could assess how far along the scale of the evolution of plastic painting a work had progressed. (3)

1 ibid., p. 117
2 ibid., p. 124
3 ibid., p. 121
Primitive instincts had to be replaced by a sensitivity to an equilibrium of forces not static but in continual movement. The destruction of a particular form needed to be replaced by an appreciation of the rhythm of mutual relations.

The important task then of all art is to destroy the static equilibrium by establishing a dynamic one. Non-figurative art demands an attempt of what is a consequence of this task, the destruction of particular form and the construction of a rhythm of mutual relations, of mutual forms of free lines. We must bear in mind, however, a distinction between these two forms of equilibrium in order to avoid confusion; for when we speak of equilibrium pure and simple we may be for, and at the same time against, a balance in the work of art. It is of the greatest importance to note the destructive-constructive quality of dynamic equilibrium. Then we shall understand that the equilibrium of which we speak in non-figurative art is not without movement of action but is on the contrary in continual movement. We then understand also the significance of the name "constructive art". (1)

Abstract art as propounded by Mondrian was opposed to the natural representation of things but it was not opposed to nature for it represented a greater sensitivity to its hidden laws.

The most important of these laws was that of "dynamic equilibrium", which was opposed to the static equilibrium of particular forms and involved the destruction of these particular forms and the construction of a rhythm of mutual relations. Other laws related to these constructive element were concerned with position and dimension. Stability of position depended on rectangular relationship which was inherent in all space as a vertical and horizontal movement. All variations from this Mondrian considered unstable. Dimension was the most difficult problem because it required the gauging of tensions. To Mondrian, tension was greatest in the straight line and, for this reason, he abandoned the use of curved
lines to concentrate on the more difficult task of manipulating straight lines.

In pure plastic art the significance of different forms and lines is very important; it is precisely this fact which makes it pure. (1)

Mondrian felt people were hindered in their appreciation of abstract reality by the descriptive and literary orientation of our civilization, but to the creative artist this situation only represented a challenge that increased determination. Provided one was correctly orientated, love for the things of this world could extend rather than limit one's imagination.

To love things in reality is to love them profoundly; it is to see them as a microcosm in the macrocosmos. Only in this way can one achieve a universal expression of reality. Precisely on account of its profound love for things, non-figurative art does not aim at rendering them in their particular appearance.

For pure art then, the subject can never be an additional value; it is the line, the colour and their relations which must "bring into play the whole sensual and intellectual register of the inner life....", not the subject. (2)

Mondrian's writing was important because it presented succinctly the approach to subject matter of a non-figurative artist. His first major essay entitled "Le Neo-Plastisme" was published in Paris in 1920. The one quoted here was a development from it in the English publication Circle published in 1937 and entitled "Plastic and Pure Plastic Art".

It represented a complete break with the Romantic concepts of the artist. The artist had become an instrument for the interpretation of reality in the name of ART. The following paragraph elaborates this point of view:

1 ibid., p. 123
2 ibid., p. 127
It is a mistake to think that he (the artist) retires completely into his system. That which is regarded as a system is nothing but constant obedience to the laws of pure plastics, to necessity which art demands from him. It is thus clear that he has not become a mechanic, but that the progress of science, of technique, of machinery, of life as a whole, has only made him into a living machine, capable of realizing in a pure manner the essence of art. In this way, he is in his creation sufficiently neutral, that nothing of himself or outside of him can prevent him from establishing that which is universal. Certainly his art is for art's sake ... for the sake of the art which is form and content at one and the same time. (1)

Mondrian was also aware of the fact that once industrial processes were sufficiently flexible, it was possible that works of art be produced in this way with the full cooperation of the artists. He was confident that a new unification of the arts was coming. Civilization would combine the utilitarian and rational design of its surroundings, with a sensitivity to their beauty and, in so doing, create an ideal environment. (2)
Mondrian's contribution of his article on "Plastic and Pure Art" to the British publication Circle, was matched by an article of Naum Gabo, the Russian sculptor, who wrote on carving and construction in space. He claimed a new renaissance in sculpture centered on three significant attributes which he described as follows:

i. It consists of concrete material bounded by forms.
ii. It is intentionally built up by mankind in three-dimensional space.
iii. It is created for this purpose only, to make visible the emotions which the artist wishes to communicate to others. (1)

In discussing the first attribute, he considered new media and new approaches enriched the scale of sculptural expression rather than ruined it as contemporary critics were implying.

Materials establish the emotional foundations of a sculpture, give it basic accent and determine the limits of its aesthetic action. The source of this fact lies hidden deep in the heart of human psychology. It has a utilitarian and aesthetic nature. (2)

Carved or cast moulded or constructed, a sculpture does not cease to be a sculpture as long as the aesthetical qualities remain in accord with the substantial properties of the material. (3)

To the second attribute, modern sculpture had added a greater interest in the perception of space and movement. Space and movement had always been a part of sculpture but the modern sculptor was looking for it in a new way. The volume of mass and the volume of space were two different materials, and it was possible for sculpture to incorporate an element of time into concepts of movement by the use of mechanical means.

2 ibid., p. 105.
3 ibid., p. 106.
(By), adding space perception to the perception of Masses, emphasizing it and forming it, we enrich the expression of Mass making it more essential through the contrast between them whereby Mass retains its solidity and Space its extension. (1)

Of the difficult problem of incorporating mechanical movement into sculpture, he said:-

Mechanics has not yet reached that stage of absolute perfection where it can produce real motion in a sculptural work without killing, through the mechanical parts, the pure sculptural content; because the motion is of importance and not the mechanism which produces it. Thus the solution of this problem becomes a task for future generations. (2)

In the case of the third attribute, Gabo claimed a uniqueness for the emotional content of "absolute shapes". Gabo quarrelled with the use of the word "abstract" and preferred to describe shapes as "absolute" as had Boccioni (p. 7) when talking of movement. They might be derived from nature but their content lay in themselves. (3)

The shapes we are creating are not abstract, they are absolute. They are released from any already existent thing in nature and their content lies in themselves. We do not know which Bible imposes on the art of sculpture only a certain number of permissible forms. Form is not an edict from heaven, form is a product of Mankind, a means of expression... Our perception of shapes is tied up with our perception of existence itself. The emotional content of an absolute shape is unique and not replaceable by any other means at the command of our spiritual faculties. The emotional force of an absolute shape is immediate, irresistible and universal. It is impossible to comprehend the content of an absolute shape by reason alone. Our emotions are the real manifestation of this content. (4)

In the first sentence, Gabo crossed from the reasoned to the intuitive, leaving the sculptor with a growing edge of forms that could move in any direction his imagination might suggest.

1 ibid., p. 108  
2 ibid., p. 109  
3 ibid., p. 109  
4 ibid., p. 109
In an article published in Studio International, as late as 1966, Naum Gabo was still talking of the forces an artist felt existed within an object but now he was elaborating his concept of the universal more specifically.

The art of the future must be very different from what we have known. The idea of the object d'art had disappeared with the society that needed it. And the folk art which preceded it is also finished. Art, sculpture must be on the scale of the great epochs. To achieve this they must reflect great myths... the artists of the future must be universal, they must know the spirit of their times, as Michelangelo and other Renaissance men knew their times. (1)

Kandinsky had been a very successful lecturer in law before leaving Moscow in 1897 to join the art world of Munich where, in 1900, he attended the classes of Franz von Stuck at Munich Academy at the same time as Paul Klee. Kandinsky was more cosmopolitan in outlook than Mondrian, as that he moved more freely about Europe and Russia until he took up his teaching post at the Bauhaus in 1922.

Kandinsky's approach to reality needs to be seen against the idea current in Munich at the time of his stay there. It was a particularly lively centre for the German Expressionist and Art Nouveau movements.

Gabriele Hinter, artist and collector, and a one time pupil of Kandinsky, recalled, "It was a great time of artistic renewal when I came to Munich to study in 1901, Jugendstil began in its own way to destroy the old naturalism and to devote itself to pure line." (2) One of the more popular weeklies, Jugend, founded in 1886, had encouraged men such as

Another significant writer about abstract, non-figurative art was Wassily Kandinsky. He had begun to formulate his ideas much earlier than Mondrian and he was less influenced by the approach of Cubist painting, which he regarded as one of the transitory stages in setting aside naturalistic form.

Cubism as one of the transitory stages, has often demonstrated how natural forms are dissolved for constructive purposes and what unessential obstacles these realistic forms are in presenting themselves. (1)

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1 W. Kandinsky, On the Spiritual in Art, N.Y.: Guggenheim Foundation, 1946, p. 89.
Ernst Barlach and Ernst Ludwig Kirchner in their expressionist approach and men like Behrens in their two dimensional, decorative and strongly rhythmical compositions. (1)

In the nineties, the philosopher, Theodor Lipps, had advocated his theory of empathy. He held lectures at the university on the evocative meaning of line and performed experiments on the effect of linear movements on the human psyche. Rudolf Steiner was also giving lectures in which he claimed Goethe as the founder of a new science of aesthetics.

In 1889 he had been instrumental in the republishing of Goethe's Farbenlehre - a major work on the psychological effects of colour which had been first published in 1810. (2)

Rudolf Steiner, also belonged, for a time to the Theosophical Society, and was particularly interested in education, believing that a more acute training of the senses had a greater effect upon the attitude, manner of life, and even the health of man, than a superficial assessment would admit. (3) His interest in the occult and more mystic aspects of human experience would have fitted in well with Kandinsky's interests at the time. One of Kandinsky's pupils, a Mrs. Strakosch-Giesler, herself a Theosophist, and later an Anthroposophist, has claimed that she acquainted Kandinsky with Steiner's ideas and that Kandinsky attended some of his lectures.

Kandinsky's painting called Aerial Scene of 1908, was painted after a lecture by Steiner. (4) Kandinsky's interest in the mystical fringes of experience appears to have subsided as he became clearer in his own mind about the role of rational elements in art.

1 ibid., p. 83-5.
From June 1906 to June 1907, Kandinsky was in Sevres near Paris, at a time when the uses of colour by the pointillists were under discussion and the work of Paul Gauguin and Henri Matisse was being exhibited. He did not appear to have made contact with Robert Delaunay, the other important colourist of the period, but in 1913, Delaunay was invited to exhibit in Berlin with the Blaue Reiter Group—a group of artists, Kandinsky had been instrumental in bringing together. (1)

Thus, when Kandinsky first began to publish his theories about the artist's approach to his art, he was drawing on a very wide range of experiences. His first important work On the Spiritual in Art, which was published in 1912, has been carefully analysed by L.D. Ettlinger in his Charlton Lectures on Kandinsky delivered in 1960.

Kandinsky believed that the literal and external appearance of the art forms of his day needed replacing with a form of art that made a direct impact on the spectator. The spectator of the twentieth century was too often limited to the "reading" of a picture or an admiration for its technical skill. He did not attempt to assess the "inner life" of a picture or allow this to exercise any effect on his "spiritual eye". It was in trying to explain this contact between the "inner life" of a picture and the "spiritual eye" of the observer that Kandinsky, understandably, found difficult. (2) He believed there was much important experimental work to be done in exploring spiritual experience, for its contribution had only just begun to be given serious thought, and ideas would take some time to develop. He considered his writings a part of the beginning of this exploration.

1 ibid., p. 48-5
2 W. Kandinsky, On the Spiritual in Art, N.Y.: Wittenborn, 1947, p. 84-5
Kandinsky immediately ran into difficulties with terminology. L.D. Ettlinger criticizes him for being "one of the most orthodox followers of Humpty-Dumpty: words for him always meant what he made them mean". (1) Kandinsky was, however, trying to bring a scientific language to the analysis of art and he was careful to point out the differences in his meaning. The geometric point was invisible but for the artist the point was "the result of the initial collision of the tool with the material plane". He gave the term in its new context a precise visual meaning. (2)

In discussing the language of form, Kandinsky gave it two aspects: one was the representation of material objects, the other was abstraction which existed in the world of the non-objective. The decisions of the artist were guided by a "principle of inner necessity" which he claimed consisted of three mystical elements brought about in three mystical ways. First was the element of personality (which every artist as a creator had to express). Second, was style (which was part of the spirit of the age). Third, was the element of pure eternal art. He felt the first two were more readily acceptable to his contemporaries, but the third, by its nature, might not be realized for a long time. (3)

The process of development in art consists... of the separation of the pure and eternal art from the element of personality as well as from the element of an epoch. (4)

He introduced the terminology, subsequently used by Mondrian in which the eternal element in art was called the [objective element](#) (eternal

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3 ibid., p. 55-6.
4 ibid., p. 56.
objective), and that which reflected the shapes of its epoch, the subjective element (temporary Subjectivity).

Gradually, the style of the epoch shapes and takes on a certain exterior, subjective form. The pure and eternal art, on the other hand, is the objective element, which uses the subjective to become understood. (1)

Kandinsky's text could, however, cause confusion because he does use the term "objective" with two meanings. For example, the following quotation, which described the approach of artists of the period known as Art Nouveau, used the work "objective" not as something intuitive but as something material. Likeness to a visible object would be the more exact definition.

A departure from the objective, and one of the first steps into the realm of abstraction was, (to use a technical, artistic term), the rejection of the third dimension, the attempt to keep a "picture" on a single plane as a painting. Modelling was abandoned and the material object, for the first time, became abstract, representing an advancement. With the immediate result of condensing the possibilities of a painting to one definite piece of canvas, and with this to the material part of the painting, it has curtailed its possibilities. (2)

Kandinsky considered his next important work was Point and Line to Plane, published first in 1923. He claimed it took shape at the beginning of World War I (1914). He thought of it as a continuation of On the Spiritual in Art and he was still exploring a balance of analytic methods and synthetic values. To Ettlinger, this work revealed a familiarity with the approach to Gestalt psychologists to the laws of perception and ground-figure relationships. The fact that Kandinsky's findings predate the publications of the Gestaltists, Ettlinger puts down to a probable knowledge of the forerunners of the movement. The Bauhaus, particularly,

1 W. Kandinsky, On the Spiritual in Art, op. cit., p. 56.
2 ibid., p. 77.
would have been alert to all contemporary ideas. (1) Be this as it may, the theories of the Gestaltists which claimed that a figure could be more than the sum of its parts was very congenial to Kandinsky's thinking. This was scientific corroboration for his intuitive approach.

In his search for non-material art forms, Kandinsky found inspiration in music. There appeared to him to be a relationship between musical sound and the colours, shapes and lines he was composing.

A painter who finds no satisfaction in the mere representation of natural phenomena, however artistic, who strives to create his inner life, enviously observes the simplicity and ease with which such an aim is already achieved in the non-material art of music. It is easily understandable that he will turn to his art and will attempt to reciprocate it with his own medium. From this derives some of the modern search in painting for rhythm, mathematical abstract construction, colour repetition, and manner of setting colour in motion. (2)

This relationship was of particular significance to Kandinsky. In his youth, when trying to paint his impression of the last hours of sunlight over Moscow, he failed again and again to get the power and drama he wanted to suggest, but when he heard Wagner's Lohengrin at the Hof Theatre in 1898, he saw his picture painted for him. The experience challenged him to do for art what Wagner had done for music. The drama of the experience was reflected in the language of his memoirs.

Lohengrin... appeared to me a full realization of this Moscow. The violins, the deep notes of the contrabass, and particularly the wind instruments, to me embodied the full power of the hour of dusk. In spirit I saw all my colours - they stood in front of my mind's eye. Wild, almost mad lines, appeared before me. I did not dare use the expression that Wagner had musically drawn "my hour". It became quite clear to me, however, that art in general is much more powerful than appeared to me and that, on the other hand, painting could develop the same powers that music possessed. (3)

1. L.D. Ettlinger, op. cit., p. 16-17.
2. W. Kandinsky, On the Spiritual in Art, op. cit., p. 35.
This interest in the relations between music and art was reinforced by the thinking of Paul Klee who taught with Kandinsky at the Bauhaus. Paul Klee was particularly gifted musically, and at one time had considered music as a career. He married a musician and the musical evenings at his home were part of the social life of Bauhaus teachers.

In Klee's lectures on rhythm, art was immediately linked with music. Rhythm had triple significance in that it could be seen, heard and felt in the muscles. He even produced a pictorial representation of a passage from the music of Johann Sebastian Bach. This work is not dated but his lecture is also illustrated with a painting called "Rhythmic Landscape with Trees", executed in 1920, in which he draws attention to the structural beat articulating the rhythm of the landscape. (1)

Kandinsky in Point and Line to Plane, published in 1923, also showed how Beethoven's Fifth Symphony could be translated into a sequence of tonal points. (2)

This interest in a relationship between the world of sound and appearance had been underlined for both men by the writings of Goethe, who was also interested in a possible relationship. Philip Otto Runge, an artist contemporary of Goethe had composed a mural for a temple in which special and appropriate music was to be played. He had also written in a letter dated 1809. (3)

The analogy between vision ... and hearing gives great promise of a future union between music and painting and between tones and colours. (4)

2. W. Kandinsky, Point and Line to Plane, op. cit., p. 43.
Rudolf Steiner's elaboration of Goethe's ideas would have been known to both artists because of his lectures in Munich at the time they were also working in the city.

It is interesting to note that in 1912, the Theosophical Society in Russia, recorded the beginning of an art circle under the presidency of the violinist Mme. Ourskovsky. This group studied the relationship of music to religion and painting, and found what they considered a relationship between sounds, colours, and numbers. It would not be likely that Klee or Kandinsky would have heard of these explorations, but Rudolf Steiner, through the international contacts of the society may have known of them.

The relationships between art, music and number, have perhaps always interested a certain number of people, but once the interest becomes predominant, the artist himself protests. In the Sturm Catalogue of 1912, Kandinsky felt it necessary to deny preoccupation with interpreting music in art. One art may inspire and challenge another but transferrence of one art form into another denies the uniqueness of the art forms themselves.

For my part I have not tried to paint music, for I consider such painting basically impossible and unattainable.

In 1920, however, when planning an outline of studies for the Institute of Art Culture in Moscow, he included reference to the work of the Russian composer and pianist, Alexander Scriabin (1871-1915), who had tried to tie art and music with the metaphysical and the cosmic along the lines of the Theosophists.

1 Anna Kamensky, "New Art in Russia", The Theosophist, XXXVIII, No. 8, May 1917, p. 148-56.
3 Rebay, In Memory of Wassily Kandinsky, N.Y.: Guggenheim Foundation, 1945, p. 84.
The plan of studies for the Institute of Culture as prepared by Kandinsky, aimed to analyze the basic elements of the individual arts of painting, sculpture, architecture, music, dance and poetry, and then attempt a synthesis of these findings. The studies were to be grouped around three main areas:

1. Theory of the separate types of art.
2. Theory of relationships between these types.
3. Theory of "monumental art" or art as a whole. (1)

For the separate type of art, painting, the proposed studies were divided into drawing and colour. Drawing had two principal elements, the line and the point from which the line starts, and surfaces formed by the lines. These could be further divided into the following groups:

1) lines and surfaces of a mathematical or geometric nature, and
2) free lines and surfaces. (2)

Group 1 should be analyzed first and the physical and psychological influence of these simple forms should be the subject of inquiry. People's feelings and reactions would be noted and added clarity would be sought by comparison between art forms. A Dictionary of Abstract Movement would record the results of this exploration and this could serve as a reference and revelation for all the arts. Similar studies would be attempted for free lines and surfaces. (3)

The study of colour and its action on the observer was to begin with the three primary colours, then the secondary colours, and finally combinations of these. The discoveries of the sciences and the claims of those interested in the occult would also be incorporated. A special study should be made of sensory associations. For example, those between sound and colour.

1 ibid., p. 75.
2 ibid., p. 76.
3 ibid., p. 76.
This could then be followed by a study of the relation of colour to line, and shape, and surface. A procedure similar to this was to be followed for all the individual arts. (1)

By the term "monumental art", Kandinsky meant a union of all the arts of painting, sculpture, and architecture. This, he felt, had once existed but the nineteenth century had destroyed it by eclectic abuse of Greek ornamentation. In the future, the function of the building would now meet the challenge of the forms revealed in non-objective research. A large scale edifice dedicated to the Great Utopia might result. On second thoughts, Kandinsky felt it might be best to leave this building to the future as the realization of an ideal in this way could kill the creative spirit. (2)

In his "Outline of Studies on Monumental Art or Art as a Comprehensive Whole", Kandinsky suggested the theatre as a good starting point for the collaboration of the various arts, with perhaps painting and music leading the way. The following schematic approach, he felt, would help loosen the stranglehold of tradition and lead to an exploration of the implications of the psychological in the arts.

1. Determine to what art form, and to what art form only, belongs to a given means of expression.
2. Analyse this medium in accordance to the principle followed in the study of painting and sculpture.

Group one can be best explained thus:

<table>
<thead>
<tr>
<th>FIELD OF ART</th>
<th>MEANS OF EXPRESSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painting</td>
<td>Colour. Surface. Space in a visionary sense.</td>
</tr>
<tr>
<td>Sculpture</td>
<td>Volume. Mass. (Space in a both positive and negative sense.)</td>
</tr>
<tr>
<td>Music</td>
<td>Sound. Time. (Positive and negative.)</td>
</tr>
<tr>
<td>Dance</td>
<td>Motion of the body and of parts of the body.</td>
</tr>
</tbody>
</table>

1. ibid., p. 77.
2. ibid., p. 78-9.
Going on to group two, the following elements should be submitted to analysis.

1. Colour ) Surface colour
2. Surface)

3. Volume ) Illusion of space
4. Space )

5. Sound ) Sound in time. Time without sound.
6. Time )

7. Movement ) Concrete and abstract.
8. Speech )

These elements must be approached from various angles. But every approach should be subordinated to one guiding principle - that of psychological effect. Here it becomes necessary to conduct a great number of experiments, beginning by the single, separate elements and going on to combinations of two or more. (1)

Kandinsky hoped that by bringing the intuitive and theoretical aspects of creation into closer relationship, both artists and observers would benefit from an increased sensitivity. The revolutionary fervour behind what he was trying to do was reflected in the following statement:

... it is far better to hurl your palette against the canvas, to smash at the clay or marble with your fist or a hatchet, or sit yourself resoundingly upon the piano keyboard, than to peck and fuss at the soulless elaborations of a long dead, traditional art form. For, in the former case there exists a slight chance of hitting a live pulsing note. After all, a live butterfly is preferable to a dead lion. (2)

It was not intended that the scientific approach to the arts become constrictive. No matter how much was learnt about the forms of the arts, there was still the interplay of those forms and human feeling and final solutions were not possible.

Kandinsky's views of an expanding sensitivity to new forms were opposed by those who considered "a material and concrete 'object' as the true substance of art creation". Having unsuccessfully contested the

1 ibid., p. 80-1.
2 ibid., p. 81.
issue, he resigned from the management of the Institute. His approach however, did represent an early attempt to make the vision of the twentieth
century artist more readily understood through an educational institution.

The interrelationship of different sensory experiences remains a
field for more objective study and attention has been recently drawn to
it by the effects of certain drugs and the publication of studies of
certain mystic Indian sects.

Certain people who have subjected themselves to L.S.D. 25, while
listening to music, not only hear it but claim they see it emerging from
the speaker "like dancing particles". "You actually see the sounds, in
multicoloured patterns while you are hearing it." Tantric Art, stimulated
by a religion that had its origins in the fifth century, makes claims for
the specific correspondence of sounds and colours as aids to meditation.
The mystical symbols that are painted have a striking resemblance to
certain forms of contemporary abstract painting. (1)

At the Bauhaus, the enthusiasms of Kandinsky and Klee stimulated
further interest in colour, sound, and shape relationships and some
experiments were attempted. L. Hirschfeld-Mack has mentioned that
during the early years of the Bauhaus, Klee and Kandinsky sought to
discover the reactions of individuals to certain proportions, and linear,
and colour compositions. Groups of students and masters gave their
opinions on prepared charts, and at one time a thousand postcards were
circulated to a cross section of the community, to ask them to fill in
three elementary shapes, the triangle, the square, and the circle, with
the three primary colours, red, yellow and blue. The result was an
overwhelming majority for yellow in the triangle, red in the square, and

1 F.N. Souza, "Tantric Art", Studio International, Vol. 172, No. 884,
blue in the circle. In this particular instance, a relationship between colour and shape seemed to have been established.

Hirschfeld-Mack also wrote of reflected light compositions in which the movement of light shapes in rhythmic succession on a screen was accompanied by music specially composed for the purpose.

A special and complicated apparatus was invented for this purpose and hand manipulated by four students who played their parts from a specially written manuscript. The music was written to form a unity with the rhythmic movements. Yellow, red and blue in glowing intensity, blended with light silvery grey colours, moved about in varying tempi on the dark background of transparent screen. They appeared at one moment as angular forms, triangles, squares, polygons; they joined and created over-lappings and colour blendings as a result. (1)

These Reflected Light Compositions were shown in German theatres in Berlin and Hamburg and at a Music Festival in Vienna in 1923. Hirschfeld-Mack's book on the Bauhaus has one illustration of what he calls "colour light shapes in movement" dated 1922/4. Four geometric figures are represented moving in space.

Hirschfeld-Mack does not separate the significance of his own contribution to the idea, but in 1964 when it was known he was returning to Germany, he was invited by the Bauhaus Archiv to demonstrate his reflected light plays. Five students were trained to help him and a film was made of it. (2) Moholy-Nagy in Vision in Motion, mentioned Hirschfeld-Mack as one of many constructors of colour organs since the eighteenth century. He also adds in a footnote that part of Disney's "Fantasia" was attempted in colour alone but it was later cut out because the producers felt that the public would not appreciate it. (3)

3 L. Moholy-Nagy, Vision in Motion, Paul Theobald & Co., Chicago, 1961, p.186
In Sydney, in September 1966, Stanislaw Ostoja-Kotkowski, held an exhibition of paintings and electronic images at Gallery A. Recorded electronic sounds were played while "pictures" resembling television screens presented a continuously changing but programmed visual stimulus. He had previously been responsible for "sound and image" productions at the Adelaide Festival and has since completed a year's study of the subject abroad with the help of a Churchill Fellowship. (1)

Light and sound relationships would thus appear to be developing as an art form in its own right, independent of, but at the same time partaking of, both the visual and auditory arts.

In looking at the reality of the world of Paul Klee, we are studying the work of a man whose observations, dreams, and fantasies have become as much a part of the vision of the twentieth century as those of Picasso. Klee belonged to no group, and yet his influence has affected men such as Jean Dubuffet of France and the modern printmakers of Japan. The different nature of the reality of his world was revealed in his comparison of the art of the Impressionists with his own -

Our antipodes of yesterday, the impressionists, were perfectly right to live with the trailing vines and underbrush of everyday appearances. But our pounding heart drives us down, deep to the primordial underground. What springs from this journey downward, whether it be called dream, idea, fancy, shall be taken seriously only if it ties in with the appropriate means to form a work of art. Then curiosities become realities, the realities of art, which make life a little wider than it ordinarily seems to be. For they not only put a certain amount of spirit into reproducing things seen, but make secret vision visible. (1)

The Impressionist world was a naturalistic one. The world of Paul Klee was more sophisticated in the sciences, in the subconscious, and in the mystical.

Art did not reproduce the visible. It depended on a multiplicity of collected impressions, selected and related to meet formal requirements. "In the beginning is the act; ... but above it is the idea." The work of art was never experienced purely as a result. It was first of all a genesis. It was built up piece by piece as a house was built. The observer needed to take time also to appreciate its implications. It was not a static process but a continuously evolving one.

1 J. Spillar (ed), op. cit., p. 93.
The Biblical story of Creation is a good parable for motion. The work of art, too, is first of all genesis; it is never experienced purely as a result.

A certain fire flares up; it is conducted through the hand, flows to the picture and there bursts into a spark, closing the circle whence it came; back into the eye and farther (back to one of the origins of movement, of volition, of idea). What the beholder does is temporal too. The eye is so organised that it conveys the parts successively into the crucible of vision, and in order to adjust itself to a new fragment has to leave the old one. After a while the beholder, like the artist, stops and goes away. If it strikes him as worth while - again like the artist - he returns.

In a work of art, paths are laid out for the beholder's eye, which gropes like a grazing beast. (1)

Appreciation of a work of art required of the viewer a response similar in character to that of the listener to music's response to polyphony. One could study one by one the dimensions of a work of art, but these were so many, and one could easily become confused in relating them. This, however, was what a picture asked of the viewer, that he become aware of many dimensions at once, yet at the same time not lose sight of the detail as part of a larger whole. (2)

In a testimonial for Kandinsky's sixtieth birthday (1926), he wrote that he considered himself a pupil of Kandinsky, although he was never technically in this capacity. Klee had known Munich at its liveliest, and he had taught at the Bauhaus from 1920-30. He considered his contact with Kandinsky as in some way a meeting of east and west. (3)

Klee regarded the artist's knowledge of other arts and sciences as a necessity if his own mind was to be kept mobile and developing.

1 ibid., p. 78.
2 ibid., p. 86.
3 ibid., p. 521-2.
Does the artist concern himself with microscopy? History? Palaeontology? Only for purposes of comparison, only with a view to mobility. He is not interested in a scientific check on fidelity to nature. But only in freedom. A freedom that does not lead to set phases of development, exactly as they once occurred or some day will occur in nature, or as they might (one day demonstrably perhaps) occur on other planets, but rather a freedom that demands to be mobile in the same way that great nature itself is mobile. From prototype to archetype. (1)

Klee thus expected that the world of the artist, owe much to other fields, but it also had to keep its own uniqueness.

For this reason, Klee was critical of the significance for the artist of Wilhelm Ostwald's theory of colours. While these theories might be of significance for theorists, they did not touch on the most important field of interest for the artist - namely, the relativity of colour values and the effects of transparent mixtures or glazes of colour on one another. (2) As he once said to his students, laws are not to be taken literally. They existed underneath "in order that flowers may grow from them". (3)

Paul Klee likened the formal values of art to its biology. In lessons to students, he stressed the importance of what he termed pictorial anatomy. An artist needed to have a knowledge of laws governing the elements of his craft so that he could solve the complex problems of expression with greater awareness. He stressed the expressive and exploratory qualities of line before its descriptive qualities. The detail in which this was done can be seen in the following statements on the function of form, and the spatial character of the plane.

1 ibid., p. 93.
2 ibid., p. 822.
3 ibid., p. 499.
Second example:

Formal statement:

Overall design: firm

Functions: design vertical

Structure: firm

Development: progressive increase

Direction of increase: from bottom to top

Ideal statement:

Overcoming material gravity.

Receptively modified function:

The viewer's eye heads for the part of the pasture where the grass grows thickest, No. 1, compares No. 2, and then No. 3, No. 4, and No. 5. Baae on top [3, 4].
The spatial character of the plane is imaginary. (p.49)

These two principles of the positive-negative treatment of relief applied to linear figures containing intersections.

Rule: in handling boundary contrast, always stay on one side of the line.

Square endotopic treatment

Square exotopic treatment

Corner endotopic treatment

Corner exotopic treatment

Square treated as a body without reference to inside or outside
A truly artistic work was only achieved when one stepped knowingly beyond the laws and beyond the visible in order to reveal what was not visible.

Nature was a source of stimulation for the artist, not something to be reproduced, but something to be studied and interpreted. He saw the work of art as having three dimensions: firstly - the elemental ingredients, line tone value, and colour; secondly - constructive combinations that created figures or objects; and thirdly - modes of expression reflecting the subtleties of the artist's mind and feeling.

In a changing and infinitely expanding world should not the artist have the freedom to explore conscious and subconscious alike. One had only to look through a microscope to see a world which, if one stumbled across it by accident, would seem farfetched. (1)

This being so, the artist must be forgiven if he regards the present state of outward appearances in his own particular world as accidentally fixed in time and space. And as altogether inadequate compared with his penetrating vision and intense depth of feeling. (2)

1 H. Read (intro), Paul Klee on Modern Art, Lond: Faber & Faber, 1949, p. 84-7.
2 ibid., p. 88.
The Surrealist artists tried to make of reality something that welled uncontrollably from the subconscious. Salvador Dali, the least inhibited of them all, has written in his Secret Life a vivid account of how this process worked for him. He was describing work he had done in 1928. Prior to this time he had completed a six year baccalaureate, spent three years studying art in Madrid and had made a trip to Paris where he found himself accepted as an important Surrealist.

I finally decided to undertake a picture in which I would limit myself exclusively to reproducing each of these images (what he termed recrudescences of his childhood period) as scrupulously as it was possible for me to do according to the order and intensity of their impact, and following as a criterion and norm of their arrangement only the most automatic feelings that their sentimental proximity and linking would dictate. And, it goes without saying, there would be no intervention of my own personal taste, I would follow only my pleasure, my most uncontrollably biological desire. This work was one of the most authentic and fundamental to which surrealism could rightly lay claim.

I would arise at sunrise, and without washing or dressing, sit down before the easel which stood right beside my bed. Thus, the first image I saw on awakening was the painting I had begun, as it was the last I saw in the evening when I retired. And I tried to go to sleep while looking at it fixedly, as though by endeavouring to link it to my sleep I could succeed in not separating myself from it. Sometimes I would awake in the middle of the night and turn on the light to see my painting again for a moment. At times against between slumbers I would observe it in the solitary gay light of the waxing moon. Thus, I spent the whole day seated before my easel, my eyes staring fixedly trying to "see", like a medium (very much so indeed), the images that would spring up in my imagination. Often I saw these images exactly situated in the painting. Then, at the point commanded by them, I would paint, paint with the hot taste in my mouth that panting hunting dogs must have at the moment when they fasten their teeth into the game killed that very instant by a well aimed shot. (1)

The lengths Dali went to to ensure the authenticity of his vision was an important part of the surrealist approach to image making. Dali claimed his break with other Surrealists was due to their placing a taboo on certain subject matter (his own preoccupation with anal fantasy for example) while he would accept no limitations whatsoever. (1) Dali's subconscious, in 1922, produced ideas for the film Le Chien Andalou. The film began with a girl's eye being cut by a razor blade, and included, amongst other images, four rotting donkeys on grand pianos, a severed hand and three ants nests. After this medley, Dali claimed there was no longer room in Europe for "the little maniacal lozenges of Monsieur Mondrian". (2)

It is interesting that Mondrian saw the Surrealists as not touching true reality at all since their dreamlike approach only produced a rearrangement of the events of life at a purely personal level. (3)

Marc Chagall

Marc Chagall is sometimes termed a Surrealist because of the dreamlike nature of his painting. His approach to his subject matter, however, was far gentler than that of Salvador Dali. Where Dali talked of his "uncontrollably biological desire", Chagall talked poetically of the soul. The "isms" of art meant nothing to him, his own world of fantasy was sufficient.

Personally I do not think a scientific bent is a good thing for art. Impressionism and Cubism are foreign to me. Art seems to be above all a state of soul. All souls are sacred. (1)

The following poem, written by Chagall and translated by Charles Higham, revealed the same fantasy and whimsy that can be seen in his paintings, inspired by his own village of Vitebsk in Russia.

MY LAND

It is mine alone,
this land of my most secret soul,
I enter it without a passport,
as though I were going home.
It knows my sorrow and my loneliness,
it gives me rest, and hides me under a scented stone.

Gardens bloom there, in my land,
their flowers are dreamed by me.
The streets there are my own,
but no houses stand there,
they have been brought to ruins since my childhood days;
and the inhabitants go wandering in the air,
seeking a place to stay;
they also live in my land,
the land of my most secret soul.

See why then, it is that I smile,
when my sun's blaze scarcely shows,
or why I weep
like the lightest of showers in my night.

There was a time when I had two heads, 
there was a time when these two faces that were mine
were bathed in passionate dew,
and drowned there like the perfume of a rose.

Now it seems to me
that even when returning
I journey forwards
towards a towering gateway
behind which walls stretch far away
and a pale lightening glimmers.
It is mine alone,
the land of my most secret soul. (1)
The work of Ernst Barlach represented a complete contrast to the work of the artists so far considered. Barlach challenged particularly Kandinsky's suggestion of the existence of a language of abstract forms and colour.

One can easily say "blue signifies this, yellow that", but it is doubtful whether he has the divine power to set up his intentions as a standard. But when colour and line are created from human figures - or vice versa - they have power for they derive it from the human soul. (1)

Barlach felt he could only acknowledge the integrity of Kandinsky but he could not share his viewpoint. Transmission of ideas depended on agreement about a language and he could not understand the language of Kandinsky. However, Barlach felt he had to name a source for the power of his own realistic forms and he referred to this as the "human soul". Thus, although disagreeing with Kandinsky's "spiritual" interpretation of abstract forms, he gave to his own human figures an equivalent power which he could not define beyond saying it was derived from the "human soul".

Where the Italian Futurists had used the discoveries of Cubism to make their social protest against the apathy of Italian politics, Ernst Barlach's social protest against conditions in Germany took a more human form. His approach to subject matter was shared by his fellow countryman, Kathe Kollwitz, and could be related to the murals of Diego Rivera and Jose Clemente Orozco in Mexico. In the case of Barlach and Rivera physical violence was perpetrated against their works. Rivera's mural

in the Rockefeller Building, New York, was removed from the wall before its completion because the figure of an agitator resembled Lenin, while Adolf Hitler had Barlach's work removed from churches and exhibitions and he was branded a degenerate artist.\+

The issues involved were not aesthetic but political. It is interesting to speculate on the possibility of German reaction to Picasso's painting "Guernica", if it had been executed in a more realistic, rather than abstract style.

Although Communist Russia began by encouraging the abstract and constructivist artists, it soon settled down to a sponsorship of "social realism", and her more adventurous artists left the country. Not until this decade has Russia again begun to join the main stream of modern art, with its sponsorship of "kinetic artists". This group called "Movement", under the leadership of Lev Nusberg, has been commissioned to complete a kinetic wall structure and ceiling for a stadium in Leningrad. (1)

Communist China has also encouraged "social realism" in art.

In the light of Barlach's experience in Germany and the example of art in Russia and China, it would seem that, alongside the exploration of reality by artists seeking new imaginative limits, there can exist a form of realism that comes as the result of political pressure. The way this realism can perpetuate itself was revealed by Professor Chiang Feng, Director of the Central Institute of Fine Art, Peking, when he described how Chinese art students went into the factories and drew and painted the workers. Their finished compositions were then shown to the workers for comment, after which the students made the necessary adjustments.

\* Klee and Kandinsky also shared this honour.
Jean Dubuffet

The French artist, Jean Dubuffet, has written, since 1951, about the idea of reality he has been attempting to convey in his paintings. These writings do not represent theories of art so much as a talking about ideas, materials and situations that have been a part of the evolution of his work. For this reason, they are perhaps more intimate than previous writings. They follow closely on periods of particular interest in an idea, or technique, and really represent current comment on the works by the artist himself. In this way the reader can become involved, in something the same way as the artist, with his interpretation of reality.

Dubuffet's writings of 1950-1, reveal his excitement with new combinations of media. Pastes, oils, and glazes, often incompatible, seemed to have a life of their own as they interacted before his eyes. Out of the character of these movements he built an art form.

My connection with the materials I use is like the bond of the dancer with his partner, the rider with his horse, the fortune teller with her cards. One can now understand how I feel in coming upon a new kind of coating, and with what eagerness I try it out. (1)

The textured surface of the painting was thus very important. It almost seemed that in creating a picture, Dubuffet was creating matter itself - matter that had come into existence as the rocks and earth had been created by geological occurrences.

His works were not abstract in the sense that Mondrian and Kandinsky were abstract. They were frankly descriptive of visual experiences as the titles suggested. For example, "Door with Couch Grass",

1 P. Selz, The work of Jean Dubuffet, N.Y.: Museum of Modern Art, (with text by the artist) p. 63.
"I live in a happy country", and "Rocks with underbrush". Even when showing the "material world which dwells in the mind of man", his titles still referred to the exterior world, as for instance, in "Landscape with troubled sky flown over by a swan". (1)

Dubuffet was particularly interested in things considered strange and was extremely critical of the meaning of the term "beauty". He felt strongly that no convention had a prior claim to it. He protested against both the Greek culture and the magazine cover.

The idea that there are beautiful objects and ugly objects, people endowed with beauty and others who cannot claim it, has surely no other foundation than convention - old poppycock - and I declare that convention unhealthy. I enjoy, at any rate, dissociating, to begin with, this pretense of beauty from any object I undertake to paint, starting again from this naught. Very often this cleaning suffices for the object to emerge suddenly wonderful - as it is in fact, as any object can be. The beauty of an object depends on how we look at it and not at all on its proper proportions...
The beauty for which I aim needs little to appear - unbelievably little. Any place - the most destitute - is good enough for it.

I would like people to look at my work as an enterprise for the rehabilitation of scorned values, and, in any case, make no mistake, a work of ardent celebration. (2)

Further, the concept of simultaneity of image, explored by the Analytical Cubists at the beginning of the century, now became a simultaneity of idea. The "Landscape with the geologist" was of such a form that it could represent the arid surface of some wild terrain, or equally well a cross section of the subsoil.

This concern with the representation of objects Dubuffet considered, in 1954, as "the mainspring and the constant motive of all my work". (3)

In his writings there was a recurring reference to the imprecise nature of man's natural vision. He felt pictorial tradition had emphasized a

1 ibid., p. 71.
2 ibid., p. 64.
3 ibid., p. 102.
clarity of vision which was unreal. In order to validate his theories he studied the works of people uninhibited and untrained in the arts, particularly the works of children, people in mental institutions, and artists who had no formal training in their craft. (1) He became sufficiently convinced of the existence of a nebulous vision, to allow it to influence his painting of images. He did admit, however, that the effects he was aware of, could be entirely personal and function only for him.

Psychologists and doctors, who have concerned themselves with the drawings of people committed to mental institutions have found that lack of definition of outline is a characteristic of the person diagnosed as schizophrenic. There thus exists the possibility that this imprecision of vision is not abnormal but in fact normal for that percentage of the population with schizophrenic tendencies. His conclusions may thus indicate a definite characteristic of vision for a certain section of the community and not an entirely personal one as he has suggested.

His fascination with ambiguous forms was stimulated by the media he was using - mortar applied with large putty knives. From this tension between the suggestibility of the media and its strangeness, and the images already in the mind of the artist, the "real nature of things" might be revealed.

I enjoyed the idea that a single medium should have this double (ambiguous) power: to accentuate the actual and familiar character of certain elements (notably in figurations of ground and skies), and yet to precipitate other elements into a world of fantasmagoric irreality, endowing them with an unknown life, borrowed from other worlds than ours - or the same kind of life, but captured on some of its other levels. I am pleased when life itself is questionable in every part of the painting. I am pleased to see life in trouble,
going insane - hesitating between certain forms that we recognize as belonging to our familiar surroundings, and others that we do not, and whose voices astonish - giving rise to ambiguous forms, coming at the same time from both poles. Ambiguous facts have always a great fascination for me, for they seem to me to be located at just those intersections where the real nature of things may be revealed. (1)

One did not often know the measurement of the things one cared most about. The following statement attempted to describe the state of mind necessary in the artist in order to achieve imprecise but at the same time stimulating images.

What to me seems interesting is to recover in the representation of an object the whole complex set of impressions we receive as we see it normally in everyday life, the manner in which it has touched our sensibility, and the forms it assumes in our memory... I think that too conscientious a scrutiny of an object distorts the normal mechanism of looking, and I believe that a painter should be very careful to keep himself from over-conscientiousness, should (a very difficult kind of gymnastic) stock to examining and representing things without ever doing violence to that distracted, confused state of mind, that kind of hazy consciousness perpetually in motion, which is man's normal condition when things around him strike his attention. (2)

In 1956 Dubuffet mentioned his exploration of ways of making his colours shimmer and scintillate, so that it was impossible for the observer to discern the colours involved. His approach to form and line was now being carried over into colour. Objects and their surroundings would become "a kind of universal soup", with colour quickening every part of it with "lustrous quivering" life. (3)

In 1957 in Venice, he painted a series of related pictures called "Cursive places". They represented landscapes with fields, paths, houses and people. The people and other elements in the pictures were drawn with precipitate and uncontrolled strokes, stripped of all

1 ibid., p. 66-9.
2 ibid., p. 97.
3 ibid., p. 125.
"affectations and mannerisms". Dubuffet was still aiming for the reality of dynamic power and shock value, that he felt was conveyed by this negligent manner. (1)

The personages and other elements suggested in them are drawn with very hasty strokes, even precipitate and uncontrolled, corresponding to the vague idea, which has haunted me for a great many years, that such an excessively rapid way of drawing, brutal even, and without the least care, eliminating as it does all affectations and mannerisms, might bring into being a sort of innocent and primordial figuration that would be most efficacious. For a very long time I have been attracted by the idea of composing large finished pictures using only the most inadequate means, the way people draw who have had no training at all, like the careless scribblings on barrack walls - seeking an equivalent way of painting, just as rude, just as free from the methods of professional artists. I feel that the elements thus depicted acquire, or at least might acquire, because of being drawn in this negligent manner, a much greater dynamic power. I feel that this hasty and very sketchy character of their delineation gives them an effective and tragic and shock value - at least as it affects me. In these paintings I have experimented with this mechanism in various ways: sometimes by means of lines carved into the paste with the round end of a spatula, sometimes using rather unattractive heavy black lines painted with a large brush, sometimes, on the contrary, by lines so lightly traced that one can hardly make out the object delineated. Often I took pleasure in maintaining a doubt as to whether the designs were the results of accidents occurring in the paste, due to the impetuous and rather inattentive way of painting, or of my deliberately traced lines. The latter were, in fact, dependent on the accidents, that is to say, they followed the same movement by means of which, it seemed to me, I could get the effect of the whole painting throbbing with the same pulse-beat, lending it great vivacity and endowing it strongly with life. (2)

In his drawings of 1951-2, which he originally termed "Mental landscapes" because of their psychic character, he used the ordinary media of pen and ink to evoke similar tensions. The effects were caused by filigree like lines giving a nervous impression of outline and at the same time filling the page with pattern, writing, and images intricately interwoven. The images within the drawings were only decipherable after

1 ibid., p. 125.
2 ibid., p. 125-6.
considerable observation. (1)

In 1953 he wrote of the pleasure he derived from the hasty uncontrolled character of the lines he traced into the white paste he was using to cover his paintings. The accidents of the application of the paste and the rough and rudimentary character of the lines complimented one another, and forced the spectator's imagination to function more vigorously.

It would seem that my obsession for representing things only in a rudimentary and uncertain manner, forces the imagination of the person looking at the painting to function more vigorously than it would if the objects were more precisely represented, to such a degree that everything appears to his imagination, thus violently stimulated, with unaccustomed intensity. (2)

By placing obstacles in the way of recognition of an object one somehow increased the shock of the object once it was revealed.

I am convinced that one gains by accumulating obstacles, that the more obstacles set up to keep the objects from appearing, the greater the shock when they do appear, just as the rebound of a spring will be all the more violent, the greater the pressure that has been exerted to compress it. (3)

In 1954, Dubuffet went so far as to write that he did not consider it normal for human being to stare at objects for the sole purpose of making an inventory of their constituent parts. Man saw things without trying to see them. While he was looking at one thing he saw another as though obliquely by way of corollary.

After making an analysis of the illustrations in Peter Selz's work on Jean Dubuffet (published in 1962), and tabulating them in terms of subject matter, the inter relationship of an artist's ideas over a period of eighteen years can be seen.

1 ibid., p. 74-5.
2 ibid., p. 80.
3 ibid., p. 83.
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FIGURE AGAINST TEXTURED BACKGROUND

FIGURE/PORTRAIT

1943
1944
1945
1946
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1956
1957
1958
1959
1960
1961
Metro
View of Paris: A Life of Pleasure
Childbirth, Grand Jazz Band
Touring Car
Arab and Palm Tree
Man with a Rose
Desert Track
The Geologist
By the Woman in Red Hat Talking
Tourist at a Beautiful Place
Mirandaliana
Blotting Out Memories
Person Attached to Sail
Then writing of his work in 1960, he claimed for himself
apparently insalubrious
Blissful Countryside+
Mirobolus Macadam & Cie
Arab on Car in the Country
Table of Undefmed Forms+
Stone of Bordsong
Rockface w Letter
Still Life w Passport
My Cart, My Garden
Have Table
Texturology X Rose
Withdrawing
The Sententious One, The Booth-
Sayer, Heights of Marriage
The Gardener

1948

1949

1950

1951

1952

1953

1954

1955

1956

1957

1958

1959

1960

1961

Grand Mr. Bardoneux
Coffee Grinder
Portrait of Jules
Corps de Dame
Butterflyman
The Fur Hat, The Gypsy,
Artful Hubbarb
The Sententious One, The Booth-
Sayer, Heights of Marriage
The Gardener

1944

1945

1946

1947

1948

1949

1950

1951

1952

1953

1954

1955

1956

1957

1958

1959

1960

1961

Lili
Superville
Joe Bousquet in Bed
Landscape to Drunkards
Landscape w Deer
The Busy LIfe
In Longer

Scapular: Business Prosper

The Walk
The Automobile
The Flow of Industry
Dubuffet’s ideas have been particularly responsive to the media used. "Ecstasy in the Sky" was derived from the patterns created by the antipathy between certain media used in combination. "Medieval Gardens" grew from experiments with the use of the coloured wings of butterflies, an interest stimulated by a friend who made pictures representing faces from such wings. The portrait of "The Gardener" grew from an interest in vegetal substances.

The grouping of illustrations reveals the tendency to work on a series of pictures. At any time, however, a chance happening made direct attention to another area of interest. After this change Dubuffet returns to the original theme, his imagination further enriched by the experience. For example, the genre studies of the sixties were enriched by his experience of colours in the landscapes and portraits of the late fifties. "Worktable with Letters" seemed to be enriched by the studies of rocks and underbrush of the same year. In longer perspective "View of Paris", 1944, seems lucidly simple and naive by comparison with "Business Prospers", a townscape of 1961. The latter is far more richly textured, with symbols so closely packed that a cauldron of images is created, that come to the surface like bubbles the longer one contemplates.

When writing of his work in 1950-51, he claimed for himself an apparently insoluble problem. This was to paint a picture which succeeded in producing strongly the presence of life without employing anything more precise than formless terrain. A life born of such dismalness, he felt, would be more marvellous and one would experience the "effect of gasping produced by the mechanism of the creation of life". (1)

1 ibid., p. 69.
Such a unique personal challenge is not difficult to grasp out of the context of Dubuffet's personal concern with media, his interest in the strange and its capacity to shock, and his theories of imprecise vision as recorded in the following statement:

I think that too conscientious a scrutiny of an object distorts the normal mechanism of looking, and I believe that a painter should be very careful to keep himself from over-conscientiousness, should stick to examining and representing things without ever doing violence to that distracted, confused state of mind, that kind of hazy conscientiousness perpetually in motion, which is man's normal condition when things around him strike his attention. (1)

Finally, in 1961, Dubuffet left his studies of terrains to return to further studies of people. He gave two major reasons for doing this. Firstly, he had painted so many earthy topics that he was now going to change to personages, and secondly, there had been so much imitation of his techniques by other artists that the images he had discovered were losing their power. A painting for Dubuffet did not work unless it had the impact of the unexpected. (2)

1 ibid., p. 69.
2 ibid., p. 97.
Victor Vasarely

Paralleling the illusion of imprecision given by Jean Dubuffet was the optical precision of the work of the Hungarian artist, Victor Vasarely. He saw artists today using contemporary media and technology, just as Renaissance artists had used the resources of their time. Today's media was no longer the brush but the aerograph and the motion picture camera. The artist today could think in terms of the proliferation of his work and the reaching of a much wider public than had been previously possible. Plastic ideas could be as accessible as those of music.

The world of art was moving away from the idea of distinct manifestations in painting and sculpture. The terms were becoming anachronistic and being replaced by a "unique plastic sensibility of different spaces". From the apparently limited concept of planes put forward by Malevich and Mondrian, had emerged a world of polychromy that was moving into the sphere of kinetic plastics and light.

Our generation has succeeded in considering the plane in a different fashion from that of the neo-plasticians. From this was born 'pure composition', which finds a dazzling prolongation in kinetic plastics. (1)

Vasarely developed the "art for art's sake has had its day" which he felt he had learnt from the Bauhaus, into the starting point for a concept of art as being as necessary for humanity as public order or hygiene.

The work of art will no longer be defined as a complex source of delectation for the privileged few, endowed with a specific sensibility, but as the omnipresence of renewal plastic stimuli, a daily necessity for the equilibrium of all. Initially objects of research in the studia, empirical creations of valid prototypes at a second stage, our plastic works before they become public, will be checked by the appropriate sciences, confirmed by statistical law and tested by various techniques, in order to finally be imposed from above, like public order or hygiene. (1)

This very antithesis of the Bohemianism of the nineteenth century, saw vision as one of man's psychic needs, but the nature of the new vision had yet to come to terms with the landscape modern man was creating for himself. When all that modern knowledge could devise was brought to bear on the plastic design of our surrounds, and man came to terms with his artificially created landscape, he saw "radiant cities of happiness" arising through the imaginative contribution of the artist.

With the ideas of Vasarely, the environmental reality of art was moving further along the path to the ideal environment suggested by Piet Mondrian.

1 ibid., p. 162.
**Environmental Art**

Environmental art is only just beginning to be defined. Mondrian, Malevich, Duchamp and Moholy-Nagy all have claims to being its pioneers. Mondrian and Malevich have both in their writings pointed out that as art became more abstract it would move from the picture plane and become a part of the environment. Duchamp used kinetic art in his bicycle wheel mobile of 1913, and Moholy-Nagy's "Light Space Modulator", of 1922-30 was used as the basis for his film, Black, White and Grey. Environmental art would appear to involve the spectator in direct physiological action and reaction. It lays claim to being more positive than the passive "Happenings" that had preceded it.

The group in Paris called Groupe Recherche D'Art Visuel (G.R.A.V.) stated "We prefer to consider the artistic phenomenon as an exclusively visual experience on the level of the physiologised rather than an emotion". (1) The Passage Accidente was an example of their work. In this a series of unstable blocks were arranged on the pavement, people walking on them had to adjust to the tilt or rock of each object - a physical, reciprocal relationship with the work was thus achieved. This was claimed by Stephen Bann, as being different from "Happenings" in which the spectator still observed and did not develop a reciprocal relationship with the work or "proposition". (2)

2 S. Bann, "Environmental Art", Studio International, ibid., p. 78.
This involvement of the spectator in the work seems almost a physical assault on the problem of communication between the artist and his public. Its appearance has been gradual but its direction is becoming more clearly marked. Men such as Agam, by their manipulation of the phenomenon of parallax with raised slats on the surface of paintings, cause the spectator to change the character of an image as he moves from one side of the painting to the other. What from one side may seem a series of horizontals could from the other become a series of verticals. Superimposed grids are used for moiré effects.

The work of the Brazilian sculptress, Lygia Clark, requires the spectator to move the objects created by the artist. The observer thus becomes a participator in the creation of the "work of art". Its structure had been predetermined by the artist, but the actual arrangement could not be foreseen. "The idea belongs to the artist, the expression to the spectator."

Lygia Clark gives her work metaphysical implications. She considers the act by which the observer cooperates with the artist in producing a work of art, as a moment of self awareness - a moment of choice and decision, when he becomes totally responsible for its form. (1) It is at this point she feels man realizes he has the power to accept responsibility for his choices and is master of his destiny. This universal concept of a simple act may be out of all proportion to its actual significance for the participant but it does reveal the significance this artist attaches to observer participation.

1 C. Barret, op. cit., p. 85-6.
This rapport with the viewer, appears to have reached in the sixties, with the above artist at least, a state in which the responsibility for the units only is retained by the artist, while the feeling or expressive nature of the work becomes a matter of physical participation by the observer. This separation of feeling and structure may not develop but it offers a further refinement of what is meant by the reality of the artist's work.
Conclusion

From the writings studied, the vision of the artists of the twentieth century seemed concerned with reality, but it was a type of reality not previously conceived and one that had many facets. Cezanne had begun by making the structure of a subject, something as significant as its natural appearance. Once the logic of structure had become established as a criteria, then the fixed viewpoint from which the artist had regarded his subject, became no longer so significant.

When the combination of several points of view in the one painting, as outlined by Metzinger, had been achieved, it too was challenged by the attempt of the Futurists to convey speed and movement. At this stage, attention began to be drawn to an inside reality, which was different from the visual, and a product of this intense analysis. Mondrian spoke of "hidden laws" and a "new abstract language", and moved towards the abandonment of subject matter altogether. The Russian, Kandinsky, moved in the same direction and produced the first "non-objective pictures." The new plastic language that emerged was conceived as having the same freedom of association, and abstract quality as musical composition, and even for a time used its terminology. At the same time, however, an attempt was made to analyse its elements in order to move towards a language that would be able to be justified scientifically and be universally valid.

Meanwhile, on the fringes of science, the psychologists were making artists more conscious of their subconscious and the nature of perception. Surrealism explored the irrational dreamworld of artists with widely
differing personality.

Paul Klee's vision, however, was perhaps the most comprehensive. He was able to develop an art form that was conscious of man's dreamworld, conscious of the precision with which the elements of design could be manipulated, and conscious of the new dimensions into both space and the object itself that the sciences had put at man's disposal.

If the approach of Paul Klee had illuminated the imagination with its almost limitless possibilities, Jean Dubuffet moved into a new sphere in which the physical reactions of material became the basis of a vision that was particularly concerned with textural qualities. The precision of vision that had been a characteristic, even of the most revolutionary movements, was abandoned for an obliqueness of observation that was at home with the imprecise. The concern with precision, however, still present in the growing acceptance of the compositions of Victor Vasarely.

It would appear that over the twentieth century the vision of the artist had shown a continued trend to enlarge the microcosmic view of the painters of the first two decades to the macroscopic view of those who would make art and the environment synonymous, and with some environmental art, to even include the spectator, in the creation.
CHAPTER II

THE CREATIVE PROCESS OF THE ARTIST

A general understanding of the artist’s approach to reality and subject matter is closely related to the nature of the creative process that brings a specific work of art into being. Many artists have attempted to analyze what they consider are the crucial factors involved, and statements range from a comprehensive analysis of the process to detailed descriptions of an actual event or series of events.

Henri Matisse

To Henri Matisse, the artist was not just a gifted being but someone who had succeeded in arranging for their appointed end, a whole complex of activities, of which the work of art was the outcome. This complex of activities was primarily associated with vision, and this faculty had to be specifically cultivated by the artist, if he was to express himself in any personal way. Vision in this sense, was just as much subject to habit and climate as the literary arts. The cinema, papers, and posters presented ready made images that only someone with the determined courage of the artist could challenge. To look at something and see it as though for the first time was the privilege of the child by nature, but it was this ability that the artist needed to cultivate. (1)

The first step towards creation is to see everything as it really is, and that demands constant effort.

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Insofar as the artist also expressed what he felt within himself, these feelings had to be nourished as well. The process was a long one, and included both direct and analogous experience. At all times the artist's mind was becoming rich with the forms he might one day "set a new rhythm".

To Matisse, this "new rhythm" was the really creative aspect of the artist's work. It was a sifting process rather than an accumulation of detail. Colours and lines were forces, and the challenge facing the artist was the play and balance of these forces, with every detail of the work contributing to the whole. To Matisse, the striving of the truth that this effort required, was only made possible by a dedication on the part of the artist, which he defined as a "great love".

Great love is needed to achieve this effect, a love capable of inspiring and sustaining that patient striving towards truth, that glowing warmth and that analytic profundity that accompany the birth of any work of art. But is not love the origin of all creation? (1)

Henri Matisse's description of his own creative processes has something of the poetic nature of Chagall's description of the world of his paintings. Matisse felt strongly that the expressiveness of a work of art depended on the projection of the feeling inspired in the artist by the model and NOT on any exact rendering of the characteristics of the subject.

The painter must tackle his subject with no preconceived notions; it is as though he were contemplating a landscape from which is borne towards him, the scent of earth, flowers, and the fruits of the countryside; he must wait for the wind of inspiration to reach him. The sum of these sensations transmutes the subject into a plastic emotion which the painter is impelled to express. (2)

1 ibid., p. 22.
2 F.H. Man, Eight European Artists, Melb.: W. Heinemann, 1953, no pagination.
Georges Braque put a similar feeling in slightly different words. "I search rather to put myself in unison with nature than to copy her."

To Matisse then, the nature of creative activity was dependent on, a trained and sensitive mind with the capacity to select and relate visual elements, combined with a sustaining love for the pursuit of chosen goals.

Marc Chagall

The importance of the gestation period for ideas and the dedicated attitude of the artist was also stressed in the writings of the Russian artist, Marc Chagall. Ideas might be conceived in a moment, but they depended on the artist's preparation, and patient dedication to their evolution. The process might be compared to the conception of a child. A painting is born into the world like a child, or like the first quickening moment of love. A child is conceived in a second; thus in a fraction of time is a painting conceived in the mind of an artist. But before and after this moment, years must pass: years of gestation, of perfecting, perhaps, as each idea grows from theory to reality. And all this has had its starting in a single second of time that is our eternity, or, rather, not our eternity alone, but that of our ancestors, and perhaps, that of generations yet to come. A work of art which has not been tested, shaped, empowered in this way, can never hope to move the heart of another human being... (1)

Ben Shahn

Ben Shahn was a Lithuanian-born artist, who came to Brooklyn, N.Y., at the age of eight. He attended university and the National Academy

1 Ibid.
of Design, and between 1925-9 travelled in Europe and Africa. On his return to the U.S.A. he concerned himself with social themes and used his art for propaganda purposes. He worked with Diego Rivera on the controversial frescoes for the Rockefeller Centre, New York.

He was a visiting teacher at several universities and art schools and from 1956-7 was Eliot Norton Professor at Harvard University. It was this particular academic experience which produced the book Shape of Content, in which his ideas of the creative process and the place of art in education was analysed.

In exploring the evolution of his own painting "Allegory", Ben Shahn outlined the creative process as follows. He saw himself in a dual role, that of the maker of images, and that of the critic. His critical capacity was sharpened not only through assessment of his own work as it progressed, but through assessment of contemporary work and art of the past. With increasing skill in his craft and the modifications of past experience, he moved towards a closer integration of what he wanted to say and what he actually achieved. Idea, image, and media were responsive to experience. The beginner did not grasp the full potential of his media, but to the practised painter, idea and media were more closely integrated.

Shahn believed that in the difficult process of formulating a work of art, there was both a creative and a responsive element at work. As the painting progressed, it could have a positive effect on the painter, to the extent that the next course of development was suggested by the work itself. (1)

In more academic vein, Shahn analysed five stages. The first, determination of supposition or theme; the second, a marshalling of materials; the third, a setting of limits; the fourth, a relating of inner shapes to outer limits, and the fifth, an abolishing of excessive content that fell outside the limits of the theme. Formal elements could be appreciated, irrespective of content, but appreciation was enhanced by a knowledge of significant content. Much cross cultural appreciation of art forms was, of necessity, subject to this sort of qualification. (1)

Paul Klee

During the period when Paul Klee was teaching at the Bauhaus, he explained to a group of people who were not artists, and therefore tended to prefer realism in art, what it was the modern painter was trying to communicate. In doing so, he explained the creative process using the simile of the tree. The roots represented the artist's exploration of his environment of image and experience. The sap flowing up through the trunk from the roots represented the artist's personal moulding of his vision into a work of art. The crown of the tree represented the visible work.

No one expected the branches of the tree to mirror the roots yet the artist was denied the departures from nature which his art demanded. If his work did not mirror reality, he was charged with incompetence and deliberate distortion. To Klee, the artist neither served nor ruled but transmitted what came to him from the depths. "His position is

1 ibid., p. 70.
humble and the beauty of the crown is not his own. He is merely a channel. Nature was not copied but reborn in the artist.

An artist’s work could be appreciated for mastery of media, mastery of formal elements, meaning, and style. The formal elements were line, tone and colour; meaning also included feeling, and style signified the approach of the artist which could be considered as ranging between the classical and the romantic. Whether the artist was able to communicate was dependent on the sympathetic understanding of the observer. If this understanding was not there, frustration on both sides was the result, as the following quote revealed.

While the artist is still exerting all his efforts to group the formal elements purely and logically so that each in its place is right and none clashes with the other, a layman, watching from behind, pronounces the devastating words, "But it isn’t a bit like uncle". The artist, if his nerve is disciplined, thinks to himself, "To hell with uncle!" I must get on with my building... This new brick is a little too heavy and to my mind puts too much weight on the left; I must add a good-sized counterweight on the right to restore the equilibrium. (1)

The understanding of art thus began with an understanding of its structure.

The simple lucidity of this statement, made at Jena in 1924, needs to be seen against the greater complexity of Klee’s lectures to students. For instance, he treated line as being active, middle or passive. Under "line active", he looked at the point in motion as expressing the dynamic quality of line, the significance of main and secondary line, rhythm as shown in line, and tensions expressed in line. Under "line middle", he considered the planar effect obtained by circumscribed lines, and the movement and tensions created by these. Under "line passive", he dealt with planes formed by lines which remained passively subservient.

1 H. Read (ed), Paul Klee on Modern Art, op. cit., p. 21-43.
to those planes until the plane itself took on a linear character. At this stage the plane took on again the more active qualities of line. (1)

This type of approach represented the explorations of a lifetime. In talking to students of the power of creativity, he stressed the elusiveness of the quality but also the necessity of being aware of it, and of its cultivation.

The power of creativity cannot be named. It remains mysterious to the end. But what does not shake us to our foundations is no mystery. We, ourselves, down to the smallest part of us, are charged with this power. We cannot state its essence but we can, in certain measure, move towards its source. In any case, we must reveal this power in its functions just as it is revealed to us. (2)

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Henry Moore

Henry Moore, the British sculptor, who was for a very brief period of his life a school teacher, has written generally about the creation of a work of art and specifically, about the evolution of certain of his commissions. The creation of a work of art, to Henry Moore, involved both conscious and unconscious elements, influenced by both intellect and imagination, and with associational and psychological factors playing their part. He claimed the shapes the artist used were often not as abstract as many observers assumed, and in looking at his sketch books, and seeing the meticulous studies he had made of aspects of nature not previously considered as part of the normal study of artists, this observation is understandable.

2 ibid., p. 17.
In considering the relation between conscious and unconscious elements in a drawing, he felt he could begin a drawing with no preconceived problems, but as his mind took in what was produced, a point arrived where some idea crystallized and a controlling and ordering began to take place.

... as my mind takes in what is produced, a point arrives where some idea becomes conscious and crystallizes, and then a control and ordering begin to take place.

(This statement shows a similarity to Ben Shahn's concept of the work itself suggesting the next stage of development.)

On the other hand, Moore might begin a work with a specific problem of ordered relationships. If the work was to be more than a sculptural exercise, the originality with which he handled the problem needed to pass beyond the expected.

But if the work is to be more than just a sculptural exercise, unexplainable jumps in the process of thought occur; and the imagination plays its part.

It was this freedom to pass beyond representational vision as it was then conceived, that was Moore's contribution to creative expression in sculpture.

My sculpture is becoming less representational, less an outward visual copy, and so what some people would call abstract, but only because I believe that in this way I can present the human psychological content of my work with the greatest directness and intensity. (1)

In listing five qualities important to him as a sculptor in the 1940's, Moore noted a series of ideas that were basic to his movement from the concrete to the abstract. They show how the creative activity of the artist has certain aspects that can be more readily explained.

than others. The last two ideas listed are more difficult to assess than the first three. The first quality was involved with the appreciation of the character of the material being worked (truth to material). The second involved appreciation of spatial relationships and dynamic tension between parts (full three-dimensional realization). The third involved observation of natural objects in order to enlarge one's knowledge of the principles of form and rhythm. The fourth aimed to combine as intensely as possible the abstract principles of sculpture with the realization of an idea (vision and expression). The fifth he called "vitality and power of expression". This was a "spiritual vitality" which went deeper than the senses and was not a reproduction of appearances but an expression of the significance of life. (1)

In describing his approach to the designing of the sculpture to be added to the Time-Life Building, London, Moore gave an example of the way an artist's imagination functioned within the limitations of a commission. The commission was for a freestanding piece of sculpture on a terrace and a sculptured screen to be erected at the end of the terrace overlooking the street.

Moore was influenced by the proportions of the terrace to choose a reclining figure. He chose a draped figure because of the fusion of two particular experiences. His increased interest in drapery as a result of his drawings done in air raid shelters in Britain in 1940, and his first visit to Greece in 1951, when he had studied particularly the Greek draped figure.

While the reclining figure could be an individual and complete work, in its own right, the screen needed to be closely integrated with the architecture of the building. From the street below the sculpture would not be seen but the screen would be an integral part of the facade. Moore said he decided to pierce the screen to give an interesting penetration of light onto the terrace, and at the same time to make it obvious from the street that it was a screen and not a solid part of the building. Working from a perspective sketch of the building, he made four maquettes to explore the spacing, rhythm, and sizes of the sculptural motives, which could harmonise with the architecture.

The first was rejected because it was too obviously a regular repetition of the fenestration of the building. The second was rejected because the rhythm had become too vertical. The third suffered the same fate because, in trying to introduce a more horizontal rhythm, the forms had become too monotonous in size. The fourth which had none of these faults was developed. While doing it, he conceived the idea of rotating the segments of the screen, perhaps monthly or seasonally, to create new interests and relationships, but building plans were not sufficiently flexible to meet this proposition. (1)

In Moore's statements, sensitive interrelationship of idea, media and form, based on past experience and highly developed skill, lead on to the solution of both practical and aesthetic problems in the most imaginative way possible.

At a U.N.E.S.C.O. Conference on The Artist in Modern Society held in Venice in 1952, he had this to say about the creative process.

1 D. Sylvester (ed), op. cit., XV.
The creative process is in some sense a secret process. The conception and experimental elaboration of a work of art is a very personal activity, and to suppose that it can be organised and collectivised like any form of industrial or agricultural production is to misunderstand the very nature of art. The artist must work in contact with society, but the contact must be an intimate one, I believe the best artists have always had their roots in a definite social group or community, or in a particular region. (1)

In seeing the creative process as a sensitive organism reading to its environment, he was reflecting his own organic response to sculptured forms. The personal significance of experience, he mentioned, was brought out strikingly in the autobiography of his contemporary, the sculptor Barbara Hepworth.

Barbara Hepworth

The writings of Barbara Hepworth, whose work has in some ways paralleled that of Henry Moore, have explored the meaning of creativity against a lifetime of experience. In her autobiography she has combined statements on her life and work with the appropriate illustrations. They reveal an artist's insight into her own creative processes. She claimed that being a woman meant daily events of home and family, as well as events at large, had to be related and resolved in her own creative work.

Married to the artist, John Skeaping, (bearing him one child), and later married to Ben Nicholson (bearing him triplets), plus the running of a nursery school in Cornwall during the war years 1940-2), she gave her personal life considerable complexity over and above her sculptural work.

She took part in the British publication *Circle* (1937), which aimed to present the most advanced ideas of the art world of her time, and made contact with the major abstract artists of this century in both England and Europe.

She traced significant influences in her work back to childhood experiences. As a child she was particularly sensitive to the contrast between the grimy and disorderly industrial scene where she lived, and the sculptured contours of the Yorkshire landscape which she travelled with her father during the school holidays. A feeling for the relationship between people and landscape, she claimed, also began at this age.

Awareness of gesture, movement, proportion and rhythm as properties of sculpture, and also as significant in human behaviour, have been measured throughout her life against the dignity and kindliness she experienced amongst the people of the West Riding of Yorkshire.

She remembered very vividly the reproductions of old masters in her local school and a talk on Egyptian art given by the headmistress when she seven years of age. She claimed this talk of sculpture and architecture, illustrated by lantern slides, had intensified her feeling for volume and space.

Her student days were fruitful and a scholarship to Italy made her much more aware of the contribution of light to sculptural form. It was here that the remark by an Italian master carver that "marble changes colour under different peoples hands" led her to the realization that dominance over material was not the sculptor's aim but rather "an understanding, almost a kind of persuasion, and above all coordination between head and hand". She was able to share with fellow student, Henry Moore,
an interest "direct carving" which was the subject of some criticism in the late twenties. (1)

In 1930, she saw the equivalent in painting of what she felt she was trying to do in sculpture in the work of Ben Nicholson and Frances Hodgkins. A European visit in 1932 added the impact of ideas from Constantin Brancusi, Hans Arp and Pablo Picasso. In Brancusi's studio she felt humbled by the quiet power of his creations.

The quiet, earth bound shapes of human heads, or elliptical fish, soaring forms of birds, or the great eternal column in wood, emphasised this complete unity of form and material. To me, bred in a northern climate, where the approach to sculpture has appeared fettered by the gravity of monuments to the dead - it was a special revelation to see this work which belonged to the living joy of spontaneous, active, and elemental forms of sculpture. (2)

Brancusi's forms shared some of the primeval forces she found in the music of Stravinsky.

Hans Arp's white plaster forms, and wood reliefs painted white with sharp accents of black turned her interest again to the relationship of figure and landscape. This was further heightened by the relationships of landscape and figures that she experienced in the environment of Avignon. Picasso's work left the vivid impression of a "blaze of energy in form and colour".

The emotional depth of this experience, which she shared with Ben Nicholson, was revealed in her contribution to Unit One, when she returned to England.

It is the relationship and the mystery that makes such loveliness and I want to project my feeling about it into sculpture... It must be stone shape and no other shape. (3)

1 Barbara Hepworth, Carvings and Drawings, London: Lund Humphries, 1952, I, ibid., II.
Of her approach to sculpture, she says,

The predisposition to carve is not enough, there must be a positive living and moving towards an ideal. The understanding of form and colour in the abstract is an essential of carving or painting; but it is not simply the desire to avoid naturalism in the carving that leads to an abstract work. I feel that the conception itself, the quality of thought that is embodied, must be abstract - an impersonal vision individualised in the particular medium.

In the contemplation of nature we are perpetually renewed, our sense of mystery and our imagination is kept alive, and rightly understood, it gives us the power to project into a plastic medium some universal or abstract vision of beauty. (1)

When she resumed her carving, after the birth of her triplets, it was more abstract and this approach was given added stimulus by the movement from Europe to England of artists, who did not feel free to express themselves under dictatorship, or who sensed the approach of war. Men such as Walter Gropius, Moholy-Nagy and Piet Mondrian, who were keenly appreciative of abstract forms in art. In 1937, she visited Dieppe with Nicholson and made the acquaintance of Alexander Calder, Georges Braque and Joan Miró. This experience resulted in her first sculptures with colour.

In the early forties, she lived in Cornwall. Subject still to the influence of Ben Nicholson, she was also stimulated by the Constructivist sculptor, Naum Gabo, whose ideas helped focus thinking on the creative process. A studio overlooking the bay of St. Ives helped develop further her ideas related to the human figure and landscape. She evolved a method of pierced forms that contained colour within the sculpture. For example, in a piece called Pendour, named after a nearby inlet, the

1 ibid., p. 20.
exterior form was natural wood, the interior forms painted white and blue. The geology of the area, the calligraphy of the tides, the wind and the circling of the birds all gave new scale and weight, new form and texture, and new colour and movement to all she did.

I used colour and strings in many of the carvings of this time. The colour in the concavities plunged me into the depth of water, caves or shadows deeper than the carved concavities themselves. The strings were the tensions I felt between myself and the sea, the wind or the hills. The barbaric and magical countryside of rocky hills, fertile valleys, and dynamic coastline of West Penwith has provided me with a background and a soil which compare in strength with those of my childhood in the West Riding. (1)

When writing of her work of the late forties, Barbara Hepworth described the difference between an intuitive and an intellectual approach to drawing, when she contrasted her approach to abstract drawing with her approach to drawing from life.

(In abstract drawing) First there is only one's mood; then the surface takes one's mood in colour and texture, then a line or curve which made with a pencil on the hard surface of many coats of oil or gouache, has a particular kind of "bite" rather like incising on slate; then one is lost in a new world of a thousand possibilities because the next line in association with the first will have a compulsion about it which will carry one forward into completely unknown territory. The conclusion will be reached only by an awareness of some special law of harmonics induced at the beginning with the second line added to the first. Suddenly before one's eyes is a new form which, from the sculptor's point of view, free as it is from the problems of solid material, can be deepened or extended, twisted or flattened, tightened or hardened according to one's will, as one imbues it with its own special life. (2)

(In life drawing) With the model before one, every known factor has to be understood, filtered and selected; then from these elements in the living object, one chooses those which seem to be structurally essential to the abstract equivalent, relevant to the composition and material in which one wishes to convey the idea. (3)

1 Barbara Hepworth, op. cit., ••• IV
2 ibid., ••• V.
3 ibid., ••• V.
At this period, her interest in the study of groups of people was heightened by an invitation to make a series of drawings of activity in the operating theatre of a hospital. In a series of studies which extended over two years, she was impressed with the "extraordinary beauty of purpose and coordination" between those concerned, and the way in which unity of idea and purpose dictated "a perfection of concentration and movement and gesture". The situation induced a spontaneous space composition which was articulated and animated in a manner very close to that which she had been trying to achieve in her sculpture.

This experience with special relations was repeated in Venice as she watched people, from above the Piazza, adapting their grouping and posture in relation to the space. Thus a lifetime of sensitivity to the relationships of people to their surroundings expressed in sculptural form was expressed in the following sentence.

The two things which interest me most are the significance of human action, gesture, and movement, in the particular circumstances of our contemporary life, and the relation of these human actions to forms which are eternal in their significance. (1)

This was not to be expressed in a form of "social realism" but in sculpture's own "silent language". For this to occur, the sculptor needed to live within the community, and through personal integration with his surroundings, develop the poetry that was to be his contribution to society.

Interviewed by a special correspondent of the Sydney Morning Herald, following the unveiling of a piece of her sculpture in London, she gave an interpretation of her feelings during the execution of the huge work.

1 ibid., ...VI.
She said she had once thought sculpture needed muscles but had since realised that skill, grace, and power, that might be compared to that of the skater were needed. "Then you let the idea do the work".

Of the actual creation of the work she said:

There comes a moment when you can't do any more. Not by yourself. Then a bigger idea takes charge. The past and the future fuse and a power comes to overwhelm and support you. And the work is like a child which is yours.

The organic quality is present in both the work and the words of Barbara Hepworth.

I continue to get further away from the painter’s tools such as easel, palette, brushes, etc. I prefer sticks, trowels, knives and dripping fluid paint or a heavy impasto with sand, broken glass and other foreign matter added. When I am in my painting, I’m not aware of what I’m doing. It is only after a sort of ‘get acquainted’ period that I see what I have been about. I have no fears about making changes destroying the image, etc., because the painting has a life of its own. I try to let it come through. It is only when I lose content with the painting that the result is a mess. Otherwise there is pure harmony, an easy give and take, and the painting comes out well. (1)

He claimed he did not work from drawings or coloured sketches but allowed the work to grow out of the needs of the moment.

I want to express my feelings rather than illustrate them. Technique is just a means of arriving at a statement. When I am painting, I have a general notion as to what I am about. I can control the flow of paint but there is no accident, just as there is no beginning and no end. (2)


2 ibid., p. 94.
Jackson Pollock

The approach of the American Abstract Expressionist painter, Jackson Pollock, revealed a willingness to let this "bigger idea" take charge. His approach recognised a force over which he apparently had no control, while he was in the process of creating a painting. He was a highly emotional person, subject to mental breakdown, and he appeared to have "consciously" used this intensity of feeling in as direct a way as possible.

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2 ibid., p. 94.
Graham Sutherland

From notes based on conversations with painters, the writer and amateur artist, Noel Barber, has given Graham Sutherland's concept of the creative process as follows. It began with an idea that welled up into the mind at the most unlikely moment - it was intensely personal. Then at this point the intellect began to take a more conscious part.

But then the mind must take a hand and the rest of the time between that first inspiration and the completing of the work is a question of putting what intelligence one has to the task of governing and controlling and refining that which has been pure inspiration in to something which works and which becomes a picture; at the same time preserving the first consciousness of the idea. Painting at this stage becomes a series of advances and retreats insofar as one must often destroy what one has discovered in order to make a further advance. (1)

Graham Sutherland felt his imagery was in some way a reflection of divine law. A convert to Catholicism since 1926, this feeling could well be in part an outcome of his religious convictions. He explained his study of concrete forms, and his subsequent recreation of them in forms that were, to him, more vivid than the original, as

It is necessary to work parallel with nature - according to our inclination. All human effort falls short of the divine law, which compels unconditional reverence. But through the closest scrutiny and observation, we may work parallel to the invisible order and perhaps catch a reflection of it. (2)

The practical aspects of this invisible order involving observation and personal recreation were revealed in the following passage from Eight European Painters:

In painting, the beginning and the end is through the eye. One may go for a walk; there is everything around one - real yet strange. We recognise forms without necessarily being able to give them a name. Certain forms seem to dominate others, as in response to some internal need of the nerves. (One day I have noticed a juxtaposition of forms at a roadside, only to find on passing the same place the next day, that they seem to be no longer there.) I make notes. However brief these may be, by their means, I can take the subject home with me, as it were. In the studio I remember (it may be an hour ago - or years). The images dissolve; objects lose their normal contiguity - sometimes even their identity. Gradually, they seem to be drawn together and redefined in the mind's eye, in a new life and a new mould. This is almost a passive and involuntary process, through the nerves, the emotions and the memory. Later, there is the selection and ordering by the brain. But there has been a substitution - a change, though the work is only valid and successful insofar as the process of digestion has preserved in the substance of the material - paint and canvas - the trace and sensation of the original presence. For me it is always a question of starting with the concrete and re-creating something more concrete. (1)

The creative process for Sutherland thus consisted of a definite system of note taking followed by work in the studio during which the mind's eye redefined and related the new discoveries. A selecting and ordering by the brain followed and then came the recreation, which, if it had been successful, should preserve a trace of "the original presence". To Sutherland, this last expression was more real than the original.

1. ibid., 82.

The following four quotations from Ben Nicholson included in Circle could be taken as basic to the understanding of the creative activity of the artist of the twentieth century.
The approach of Ben Nicholson, one of the most significant British abstract painters, to creation was also tinged with mysticism.

When asked to contribute to Unit I in 1934, he quoted the scientist, Eddington, on the nature of matter:

"...To an altogether unexpected extent the universe we live in is the creation of our minds. The nature of it is outside Scientific investigation. If we are to know anything about that nature it must be through something like religious experience." (1)

He then went on to say that he saw paintings and religious experience as the same thing.

As I see it, painting and religious experience are the same thing, and what we are all searching for is the understanding and realization of infinity - an idea which is complete with no beginning, no end, and therefore giving to all things for all time.

Certainly this idea is to be found in mind and equally certainly it can never be found in the human mind, for so-called human power is merely a fantastic affair which continues to destroy itself until it finally evaporates. (2)

This relation of painting and religious experience was repeated again in his contribution to Circle in 1937.

Painting and religious experience are the same thing. It is a question of the perpetual motion of a right idea. (3)

The following four quotations from Ben Nicholson included in Circle could be taken as basic to the understanding of the creative activity of the artist of the twentieth century.

2. ibid., p. 89.
1. It must be understood that a good idea is exactly as good as it can be universally applied, that no idea can have a universal application which is not solved in its own terms and if any extraneous elements are introduced the application ceases to be universal. 'Realism' has been abandoned in the search for reality: the 'principal objective' of abstract art is precisely this reality.

2. A different painting, a different sculpture are different experiences just as walking in a field or over a mountain are different experiences and it is only at the point at which a painting becomes an actual experience in the artist's life, more or less profound and more or less capable of universal application according to the artist's capacity to live, that it is capable of becoming a part, also, of the lives of other people and that it can take place in the structure of the world, in everyday life.

3. 'Painting' and 'religious experience' are the same thing. It is a question of the perpetual motion of a right idea.

4. You cannot ask an explorer to explain what a country is like which he is about to explore for the first time; it is more interesting to investigate the vitality of the present movement than to predict its precise future development; a living present necessarily contains its own future and two things are indisputable - that the present constructive movement is a living force and that life gives birth to life. (1)

The first quotation differentiated "reality" from "realism", leaving the artist with the same freedom to inquire into his art, as the scientist had, to pursue the explanation of matter to its limits. A point underlined by Klee in his Jena Address, and implied by Graham Sutherland when writing of the recreation of something more concrete than the original. The second statement shared something of the approach of Matisse. The subject must become an experience in the life of the artist, and according to his sensitivity, profundity, and capacity, this experience could also become a part of the lives of other people. If it was sufficiently significant, it could take its part in the structure of the world. The third statement drew attention

1 ibid., p. 75.
to the elusiveness of the ideas the artist pursued and how significant was his faith in the worthwhileness of the ideas he could not yet prove.

Hepworth's concept of living and moving towards an ideal and Klee's feeling for a continuous sense of mystery were in the same vein. The fourth statement was an answer to all who would question the meaning of the artist's work when it represented the growing tip of the field of ideas. What the artist was about to find depended on his sensitivity, his faith, his preparedness and his persistence. He could not predict.

Matisse's and Moore's statements about the point at which a creative artist moved beyond the expected, expressed similar sentiment.

Ralph Balson

The capacity to turn his back on the known and proceed into new fields of vision, which marked Nicholson in England in the thirties, had an interesting parallel in Australia in the work of Ralph Balson. In an atmosphere that was cosmopolitan, Balson moved into abstract art, with a feeling for the universal implications of what he was doing. A house painter by trade and living the greater part of his life in the Sydney suburb of Maroubra, he made very broad contact with the world of ideas. The following extract from a statement he gave to the New South Wales Art Gallery, after they had purchased one of his pictures, revealed his interest in ideas.
I have long held the beliefs that the arts of man are his expression in terms of a particular medium of his concept of the universe, and now that I am in England and seeing it spread out before me, the pattern becomes logical and convincing.

The Egyptians with their externalness and immobility, the primitives with their abject surrender to spirituality, a Divinity. The Renaissance and the emergence of man as a supreme being, God's equal. Michelangelo, Tintoretto. Thence along to the Impressionists, Turner, Seurat, Monet, their rejection of man and a groping towards an understanding of the source of life - light and its division into a spectrum.

Along with this, and also helping to set the pattern of living is the work of the astronomers and physicists, Copernicus, Newton. The primitive astronomers with their flat world and their creation of myths and Gods.

To Newton with his mechanistic concept of the absolute, absolute bodies in absolute space, moving in absolute time and created by an absolute God. (The Industrial Age.)

As I see it, it is man's comprehension and understanding that alters, his striving to bring the universe within the range of his sense perception.

The next tremendous step is the concept of Einstein, the concept of relativity, the destruction of the absolute, the static. A mathematical abstract concept, its parallel in painting Cubism, with its breaking up of form.

The concept of relativity, the vision of it I get as a painter fascinates me. A Universe without beginning, without end. A continuous creating, destroying, and expanding movement, its one constant speed of light. (The Space Age.)

Gravitation, matter, space, time. Einstein through mathematics sought to reach a unified field of interactions, an electromagnetic field.

I can realize that the energy, the atoms that reach us from the sun is the source, the rhythm of existence, and the very narrow band, the spectrum, is all we can ever hope to have to try and reach a small amount of the rhythm and relativity of the universe with the substance of paint. (1)

A previous statement printed in the catalogue of the Pacific Loan Exhibition 1956, also showed this link between creativity and a certain universal concept of the arts.

As one grows older one contemplates more and more, and maybe the ultimate goal of all the arts is the ineffable. With words James Joyce surely reached that condition in *Finnegan's Wake*, while in painting the Chinese came closest to it. I want my forms and colours to have the density and at the same time the fluidity of Joyce's words. (1)

Salvador Dali

Salvador Dali has described a moment of his intuitive inspiration in his *Secret Life*. He had just finished a meal and because he had developed a headache, he decided not to go out with his friends. Left alone, he completed the meal with a strong Camembert and meditated on the "philosophical problems" of the super soft which the cheese suggested. Looking at his pictures before retiring, he suddenly saw the solution. Within two hours the picture was finished, and became known as "The persistence of memory".

This picture represented a landscape near Fort Lligat, whose rocks were lighted by a transparent and melancholy twilight; in the foreground an olive tree with its branches cut, and without leaves. I knew that the atmosphere which I had succeeded in creating with this landscape was to serve as a setting for some idea, for some surprise image, but I did not in the least know what it was going to be. I was about to turn out the light, when instantaneously I "saw" the solution. I saw two soft watches, one of them handing lamentably on the branch of the olive tree. In spite of the fact that my headache had increased to the point of becoming painful, I avidly prepared my palette and set to work. (2)

Alberto Giacometti

This immediacy of impression after a long period of gestation has a parallel in the account Alberto Giacometti, the Swiss sculptor, gave of the creation of "Le chien". The idea had been lurking in his mind for four years or more and at times he felt he was almost becoming the dog himself. Then in a flash he visualised the dog exactly as it should be. He rushed back to his studio and executed the work in an afternoon. "So as to get rid of the hound once and for all." (1) The relationship between art and reality he saw as a quest without end. Each new expression was a revelation.

I don't create in order to achieve beautiful paintings or beautiful sculpture. Art is only a means of seeing. (2)

Briget Riley

Another slightly more involved description of the specific origins of a work of art was given in an interview with the British Op artist, Briget Riley. The painting called "Static" consisted of a white background with small black units so arranged and shaped that, as the observer continued to look, the small black shapes began to pulsate.

At one stage I thought of calling the painting "Discharge", with the idea of arrows, say being discharged in your face as you looked at it. I rejected that, but it led me to the other. Actually, I thought of the painting itself when I was going up a mountain in France which had a vast expanse of shale at the top. It was an extremely hot day. I was getting anxious because we were going in car up a steep narrow road. Visually it was total confusion; I felt there was no possibility of understanding the space of this situation. You couldn't tell whether this shimmering shale was

2 ibid., p. 25.
near or far, flat or round. One of us said it was like a desert. We found it so alarming that we got out of the car, which of course intensified the sensation. But it was much cooler at the top, and into my mind came the beginning of "Static", a mass of tiny glittering units like a rain of arrows. (1)

Pablo Picasso

Francois Gilot has given a description of Pablo Picasso at work on a painting of a skull and a cheese and his comments as the work progressed.

'When you compose a painting', he said, 'you build around lines of force that guide you in your construction. There's one area where the first graphic sketch evokes the idea of a table, for example: another one, where you create the idea of the movement of space behind the table. Those lines of force set up a resonance that leads you to where you are going, because in general you don't arbitrarily decide for yourself. But once you remove one of those elements from your composition and move it around as though it were walking at will through that two-dimensional space, you're able to achieve a far greater effect of surprise than you could ever do by leaving it in the first position.' He painted out the first skull, pinned down the paper one and marked carefully the area it occupied. Then he removed the paper and painted in the skull in its new location. When he had finished, he saw that one portion of the first skull was still partly visible beneath the surface. He studied it for a moment, then quickly painted in a piece of Gruyère cheese over the obtrusive edge of the original skull, in such a way as to make the two forms coincide. The cheese serves a dual purpose,' he pointed out. 'It eliminates the void created by the disappearance of the old skull, but since it has the same form, in part, as the new one, which was modelled after the old, it sets up a plastic rhyme between cheese and skull. And wait.' He added holes to the cheese. It was now unmistakably Gruyère. 'You see how the holes in the cheese rhyme with the eye cavities in the skull?' he said. He set down his brush. The picture was finished and Pablo was happy. In solving the problem of balance, he had created and simultaneously solved another problem in a manner that made the painting more effective than it could have been if the problem had never been caused. (2)

The fluidity of vision of the artist is made clear as he structures his space and allows one idea to suggest another. The effect of his moments of decision are not so effective in words but in the film *Mystere de Picasso*, their full impact can be realized. This film, made by the son of Auguste Renoir, the impressionist painter, is a visual record of the creative activity of Picasso over the period of time of the making of the film, and is graphic evidence of the process described by Gilot.

Picasso, in his conversations with Gilot, was also insistent that the art of painting was not concerned with aesthetics or beauty. He had been once persuaded by Derain to study some negro masks in the Trocadero Museum. They were not "beautiful" and, in those days, not considered as works of art. As he looked at them their power as symbols mediating between man and the strange and hostile world about seemed obvious. From this time he felt he realized the kind of power that could be inherent in a painting.

Men had made those masks and other objects for a sacred purpose, a magic purpose, as a kind of mediation between themselves and the unknown hostile forces that surrounded them in order to overcome their fear and horror by giving it a form and image. At that moment I realized that this was what painting was all about. Painting isn't an aesthetic operation, it's a form of magic designed as a mediator between this strange hostile world and us, a way of seizing the power by giving form to our terrors as well as our desires. When I came to that realization, I knew I had found my way. (1)

Thus, over and above the skilful manipulation of forms, lay a feeling for the power of the image maker over the minds of men, that had existed since primitive times.

1 ibid., p. 248-9.
Jean Dubuffet

The contemporary French artist, Jean Dubuffet's notes on his compositions, record the stages by which his ideas have developed. The method resembled that used by Picasso in working on "the skull and the cheese" but, where Picasso has constructed his composition, sensitive to the forces of balance in line and space, Dubuffet has concerned himself mainly with textures.

My idea was to obtain large paintings by means of assemblages. To that end the first step was collecting a considerable number of basic paintings depicting the different elements that compose the surface of the ground, and out of them later cutting pieces and juxtaposing them in various ways. What I had in mind was to portray these surfaces without using lines or forms. I meant to evoke any area of bare ground - preferably explanade or roadway - seen from above, that is, a fragment of a continuous unit, perhaps vaguely divided into zones, just as the ground of a roadway appears when looked at attentively, or when inspiration or one's own discrimination takes over and justifies the transfiguration. I did not, in fact, exclude intervention in depicting these indefinite pieces of ground (in spite of so intractable a subject - or perhaps on that very account) or the part that freedom and the painter's inventiveness might give to circumscribed and well-defined objects, which remain, however cavalierly treated, easily recognizable. What captivated me in the first place was the opportunity afforded of composing paintings by the simple method of juxtaposing textures on which there were no objects with clearly defined contours, and which gave one the same impression as looking down at a vast expanse of ground that could be endlessly prolonged. I decided to call these paintings Topographies. (1)

The way in which an image may emerge, and the appropriate technique to bring it to fruition be available, is recorded in the following passage:

Among my projects of the last three years was the painting of doors. During my walks in and around Venice, to provide myself with documents, I had made sketches of the various doors I came across, and two years before that, I had even bought a large dilapidated peasant door so that I could study it at leisure in my home. But, since I had no very idea of how this subject be used

so as to constitute a painting, I had till now done nothing with all this material. One of the paintings intended, like the others, as an element of the ground in my Topographies, seemed to lend itself, with only a few supplementary touches, to such a transformation into a door, completely filling as it did the entire rectangle of the painting. A little while later I decided to cut up this rectangle, attach it to a board and pin up around it various other elements previously taken from other paintings to represent a wall, a doorstep, and the ground. Certain of these elements, intended for my assemblages, were the result of a special technique. It consisted in shaking a brush over the painting spread out on the floor, covering it with a spray of tiny droplets. This is the technique, known as "Tyrolean," that masons use in plastering walls to obtain certain mellowing effects. But, instead of brushes, they use little branches of trees - juniper, box, etc. - and they have different ways of shaking them to get the particular effect they want. I combined this technique with others - successive layers, application of sheets of paper, scattering sand over the painting, scratching it with the tines of a fork. In this way, I produced finely worked sheets that gave the impression of teeming matter, alive and sparkling, which I could use to represent a piece of ground, but which could also evoke all kinds of indeterminate textures, and even galaxies and nebulae. But most of these paintings, about fifteen in number, which I called Textureologies, I also decided to keep intact, instead of cutting them up for my assemblages. (1)

Victor Vasarely

The Hungarian artist, Victor Vasarely, who has spent most of his life in France, has also written in detail about the evolution of certain of his composition. He has also kept all his sketches in methodical order so that the evolution or recurrence of an idea could be specifically dated or related. In describing a particular group of paintings known as the "Denfert drawings" he recalled that on his journeys on the Denfert - Rochereau branch of the Paris Metro, he studied the fine cracked lines on the white tiles. Each tile within its frame suggested

1 ibid., p. 74.
images. When the crackles were horizontal, he saw curious landscapes, when they were vertical he saw bizarre cities or phantoms.

These "great landscapes", to be sure, being still macroscopic reminiscences, were as many metamorphoses: the tiny crackle due to the break on the level of the molecular structure became identified with great geosynclinals and went even beyond, in my imagination... The incubation of the plastic theme was a lengthy one, and it was only in about 1948 that I made my first "Denfert" drawings from memory, which later served me for a certain number of large compositions. (1)

Vasarely felt that the linear and criss cross networks which he called "Births" originated with his interest as a child in the pattern of gauze dressing on an injured arm. This was later reinforced by experiences in Geography with an isobar map of the world, and in physics with isoclinal, isochronous and isochromatic lines. (2) Numerous other experiences also contributed.

Though Vasarely's ideas about the nature of art expression were more comprehensive, his concept of the creativity of the artist still had homely origins. Where, however, artists earlier in the century had worked from the study of nature, Vasarely had been particularly sensitive to an artificial landscape - that of the scientific graph.

Max Bill

The Swiss artist, architect and teacher, Max Bill, was asked in 1965 to contribute an article to a work called Structure in Art and in Science, edited by Georgy Kepes. He chose to look carefully at the relationship between novelty and order in the arts. To Bill "art - order". Newness of idea could originate in two ways, firstly, in the

2 ibid., p. 74.
intellectual or psychological makeup of the individual, or secondly, in a more general way, from experiment with the objective possibilities of form. The first could lead to neo-dadaistic combinations of materials individually interpreted, the second led towards structures that were accessible to aesthetic argument and laws of order.

... art is neither a surrogate for nature, nor for individuality, nor for spontaneity. And where it appears as such, it is art only so far as it informs the surrogate with order and form. Because order is so characteristic of art, art begins to rely for order on the tectonic laws. (1)

He then posed the question, where does structure end and art begin?

Mathematically, structure may be uniformly extended without end. The limits set could become the aesthetic factor operating. Once Mondrian had tried to dispense with all individualistic expression, the aesthetic quality in art was also reduced. In cases of the most extreme objectivity it culminated in the negation of newness and invention.

However, the inventive nature of art pre-supposes the discovery of new problems, and these are individually determined. Order born of an objectifying structure thus meets the inventiveness of the individual. This means that art can originate only when and because individual expression and personal invention subsume themselves under the principle of order of the structure and drive from it a new lawfulness and new formal possibilities. Such lawfulness and such inventions manifest themselves as rhythm in an individual case. Rhythm transforms the structure into form; i.e., the special form of a work of art grows out of the general structure by means of rhythmic order. (2)

The creativity of the artist, according to Max Bill, was born of this perpetual interaction of the individual artist and established structure in the pursuance of order. Originality and lawfulness expressed themselves as a rhythmic order, which was by implication a continuous process.

2 ibid., p. 150.
Conclusion

In considering the creativity of an artist, the nature of their studios offers revealing evidence. These, by their arrangement and content, represent a ferment of possibilities. Incomplete works, each with its challenging problems, and generally a gathering of stimulating material. In the studio of Henry Moore would be found collections of bone and stone. In the studio of Mondrian, arrangements of rectangles of pure colours on whitewashed walls were changed to suit the artist's taste. This collection of material of interest reaches extreme form in Picasso, who finds it necessary to move house when the space becomes congested. It would seem that the artist can create his own environment, selecting what he feels are significant stimuli.

To many artists it is characteristic to work on a number of projects at the same time. When the problems and stimulus of a particular work has reached its limits, the artist moves on to another, returning when the time seems appropriate and he feels he can take his idea a stage further. Picasso, Braque, and Dubuffet work in this way and from Barber's book, Conversations with Artists, it is revealed that John Piper, Phillip Sutton, and L. S. Lowry also work in this fashion.

Contact with and the challenge of other artists appears of considerable importance. Centres such as Paris, Hampstead England, and the Bauhaus seem particularly relevant. In Paris, Picasso, Braque, and the other cubists thrashed out their ideas; in England, Nicholson, Hepworth, Moore, Gabo and Mondrian visited one another's studios almost daily; and at the Bauhaus the teaching atmosphere stimulated Klee,
Kandinsky, Moholy-Nagy, and Albers to formulate their ideas more precisely.

The creative process, as described by most of the artists in this chapter, is seen as a lifetime process. At any particular moment the fruits may be gathered, but they in their turn only represent the starting point for further development. The effort to see, the development of skills, the knowledge of media, the continual search and research, are all part of a dedication or "great love" that keeps the artist committed to a way of life that makes continual demands on his imagination and his intellect.

The creative process functions equally effectively in the purely personal and more instantaneous forms of expression of, for example, the Action painter, Jackson Pollock; and when the artist works to a commission, as for example, Henry Moore.

Within the limits of a specific task, the analysis of the creative process by Ben Shahn seems inclusive of most of the ideas presented by other artists.

1. Determination of a theme
2. Marshalling of material
3. Setting of limits
4. Relating of inner shapes to outer limits
5. Abolition of excessive content.

These steps are not meant to be mutually exclusive or, for that matter, consecutive, and they may occur simultaneously. They do, however, suggest a trend of thinking that can be used as a basis for argument.

It could be extended at the beginning with a statement of the artists' preparedness for the theme in hand. This would be equivalent to the function of the roots of the tree as described by Paul Klee.
The fertile curiosity of the great artist ensures that his contacts with ideas are wide and relevant and that the second step is a fruitful one.

To many artists, the completion of the last step is something that is an expression of a power and a faith over which they feel they have not complete control, and which they find difficult to put into words. Nicholson wrote of "the perpetual motion of a right idea" and an experience in painting that could for him be equated with religious experience. Klee spoke of movement towards a source of power that remained a mystery to the end and which the artist could only reveal as it was revealed to him. Barbara Hepworth referred to a "bigger idea taking over" and compared creation to child birth, as also did Chagall.

The Abstract Expressionist, Jackson Pollock, talked of the "painting having a life of its own". Graham Sutherland felt the presence of a "divine" element. Jean Dubuffet expressed it as a feeling for the "cosmic" and Ralph Balson termed it a feeling for the "rhythm and relativity of the universe".

Shahn's elements of creation might then be extended at either end by adding at the beginning

- development of a fertile curiosity and the appropriate skills,

and at the end might be added

- the power and faith to bring the idea to completion.

The educational significance of understanding the creative processes of the artist are implied in Paul Klee's statement that the artist should, in the interests of greater effectiveness, be aware of creative processes and cultivate them.
CHAPTER III
CHAPTER III

SOME ASPECTS OF AMERICAN ART EDUCATION

THE TURN OF THE CENTURY

Walter Smith

In the history of art education of the twentieth century, the date 1908 is as significant as it was for the history of painting. It was at this period that Picasso and Braque led the art world into Cubism and a new interest in the structure of art, and Wesley Dow of Teachers' College Columbia made an analysis of what he considered to be the fundamentals of art education.

To appreciate the change of approach that Dow's ideas signified, the climate of thinking about art education that preceded it is significant. A book to assist in the teaching of drawing in public schools in America, published in Boston in 1875, showed the kind of approach to art teaching adopted by certain teachers. (1) "Pretty work" was not the aim of the teacher. "Picture making, so far as the public schools were concerned, should be regarded as a secondary matter." Children were to be led to an acquaintance with "the beauties of pure form and the principles of good design" by outline representation based on geometrical forms. Only when this was mastered would the children be ready "to take up intelligently and in a thorough manner, perspective, and model and object drawing". The drawings were to be done on a slate, the blackboard and in homework books. Four half hour lessons per week were recommended, as frequency

of practice was essential, and cards of exercises were provided for the children to copy. There were three small books for more advanced freehand drawing and a box of models and rules could be purchased from the publisher.

The author claimed that by following his instructions, one who understood the principles of teaching, could teach the subject without special artistic gifts.

The exercises are so simple, and so gradually progressive, that teachers, though they may have had no previous instruction in drawing, can master them, if they choose, without assistance, and intelligently lead any class of young pupils who happen to be under their charge. There is no better way to teach one's self than teaching others. (1)

In conclusion, the author would say that the child who draws from five years of age to fifteen ought to be able to draw any created thing, and will be able to do so when we teach well what every child ought to know. There is no royal road to drawing; and those who profess to offer such a road to us may be suspected of a desire to mislead with a regal name which represents nothing. (2)

Both quotations revealed the degree of self discipline amounting almost to a moral quality that was expected of both pupil and teacher. The method of teaching outlined required both pupil and teacher to progress step by step. For example, exercises progressed through the following sequence:

- positioning of the centre point,
- drawing horizontal and oblique lines,
- drawing parallel lines,
- dividing straight lines and judging distances,
- combining straight lines and angles,
- drawing of letters,
- combining of straight lines to make triangles,
- combining of straight lines to make rectangles and squares.

1 ibid., p. 200.
2 ibid., p. 205.
With elaboration of these basic exercises, objects and conventionalized designs were attempted. For example "Card Exercise: Toy Church" was detailed as follows:

Draw a square, and divide it into nine equal small squares. Erase the right two of the upper three. Divide the right and left sides of the remaining upper square into thirds, and the top into fourths. Through the lower points of division on the sides, and the outer points of division on the top, draw the inclining sides of the spire. The window occupies one-half the width of the squares. Draw the vertical and horizontal lines belonging to the spire and body of the church; then add the lines of the roof before the upper lines; observe that the ridge is level with the bottom of the spire. (figure 15.21) (1)

The author claimed that in this way powers of observation, accurate judgement of proportions, and geometrical definition were stressed. Intelligent copying of the drawings was insured by class analysis at the beginning of the lesson, and, to give variety, reproduction of drawings could be made from memory and drawing by dictation attempted. In the latter case, if instructions were followed accurately, a recognisable object was achieved.

The method thus relied on systematic practice, to the conscious exclusion of the "superficial attractiveness of the picture element". Artistic, practical and educational reasons were given for adopting this approach. The young child could not cope with light and shade and perspective, therefore, it was not intelligent to set him to copy pictures. He could, however, appreciate "pure form" and "the principles of good design" provided they were presented in simplified geometric form. The reader was asked to believe that intelligent mastery of the exercises so designed would lead to better performance at the next stage of drawing

1 ibid., p. 212.
which would include the study of perspective, model drawing, and object drawing.

John Dewey

However, the approach to all subjects taught in schools (art included), was being subjected to the critical writings of the educator and philosopher, John Dewey. In his small book, The School and Society, published in 1900, he made reference to the place of art in his concept of the school. He saw it not as a subject on its own but as an integrated part of school life and activity. The illustrations used, showed a forest and a cave and a woman spinning, drawn by children. Both subjects were illustrations of the child's interest in a project on life in primitive societies. For particular comparison, he showed two drawings, one representing a child's first careless interest in a subject and a second showing the same child's effort once his interest had been aroused and his observation directed.

These examples, as well as illustrating the new emphasis being given to the selection of subjects of particular reference for the child, also showed the necessity to retain a critical assessment of the skills employed. Thus, observation and accuracy which had been stressed by nineteenth century teachers of art, such as Walter Smith, were still appreciated, but relevance to the child's interests was an additional and important factor.

Wesley Dow

In the educational journal of Teachers' College, Columbia, references to art education became prominent during the period when Wesley Dow was most active. In 1903, J.D. Burke outlined the curriculum for the Speyer School, attached to Teachers' College, Columbia. Art was referred to under the headings of DRAWING, PAINTING and COLOUR WORK. It suggested the use of a variety of media such as, paint, crayon, and drawing and modelling materials. The work should be related to the personal experiences of the child, his local environment, literature and primitive life. Its correlation with social studies was recommended. (1) This was also the period when John Dewey's influence on the staff of the college was particularly strong.

In 1904, S.T. Duttan, outlined in more detail the art curriculum of the Horace Mann High School, also attached to Teachers' College, Columbia. This course was divided into three strands -

REPRESENTATION - DESIGN - PICTURE STUDY

Representation included detailed drawing from nature, figure study, and perspective. Design involved the understanding of its elements and principles and the using of these in the making of things of practical use. A study of historical design was also included. Picture study meant the study of masterpieces and the study of artists. (2)

In 1906, the curriculum of the Horace Mann High School was further detailed, and on this occasion broader general principles were stated and the anticipated outcomes were noted. The influence of Wesley Dow, Horace Mann High School, Teachers' College Record, Vol. 5, No. 2, 1904, p. 1-98.
who had been a Professor of Fine Arts at Teachers' College, Columbia, since 1904, and in charge of the Art Department since 1909, was apparent from the fact that the elements of design such as line and space, dark and light, and colour, were being considered as basic to all art. Through a study of these elements and their own original effort, it was hoped children would develop their faculties of appreciation and good taste. (1)

By designing a page, students would be more appreciative of the design of a book, and by studying composition, they would appreciate landscape more.

The whole aim of the course... is cultural rather than technical. It is the spirit rather than the letter emphasised, but neither ignored. The constant effort to give original expression, tempered by study of the thought of the past, must result in the best sort of character building. (2)

The quotation represents an attempt to see art in a broader cultural setting, while giving due recognition to technical and historical aspects. At the same time, the effect these studies would have on the development of the child as a whole was mentioned.

Wesley Dow's particular contribution was the orientation of teaching within his subject field to what he considered were its fundamental concepts. These concepts were based on a wide knowledge of the arts, for before coming to Columbia, he had had considerable experience both at home and abroad. Although American born, he had spent five years in Paris studying drawing and landscape painting. After he returned to his

2  ibid., p. 41.
homeland, he became interested in Chinese and Japanese painting, design and colour prints, and gave several years to research and critical study, in this field. He came in contact with Ernest Fenelosa, who was the most important Far Eastern scholar of the time, appreciated by both East and West. The eastern influence was strong in Dow's work. It can be seen in his suggestions that Japanese brushes, inks and papers be used for some of his exercises in design and composition, and in the fact that he used the Japanese word "notan" for relationships of light and dark instead of the Italian term "Chiaroscuro", in more general use at the time. (1) That this Eastern influence was transmitted to his students can be seen from the illustrations used in his article in the Teachers' College Record 1908. This feeling, however, was not so unnatural for the period, as Art Nouveau as a style, owed a great deal to the characteristic designs of the Japanese. It was interesting that Dow explored the source of the style more closely.

In his teaching, Dow's stated aim was to develop the critical judgement of his students, increase their appreciation of harmony of design in their environment, and give them some sense of the creative powers they could control.

The true purpose of art teaching is the education of the whole people for appreciation. (2) A training that calls for a very direct exercise of the critical powers, developing judgement and skill, is a training that will increase the individual's efficiency whatever his calling may be. The general public has not thought of art education in this way, but has acknowledged the value of "drawing" especially when it can serve some utilitarian purpose.

2 ibid., p. 1.
A better understanding of the true usefulness of art recognizes creative power as a divine gift, the natural endowment of every human soul, showing itself at first in the form that we call appreciation. This appreciation leads a certain number to produce actual works of art, greater or lesser - perhaps a temple, perhaps only a cup - but it leads the majority to desire finer form and more harmony of tone and colour in surroundings and things for daily use. It is the individual's right to have full control of these powers. (1)

Aims of this sort were adaptable at all levels of education since they stressed the development of a critical aesthetic capacity, refined by conscious experience suited to the individual.

In looking at the art education of his time, Dow concluded that it had not advanced equally with general education. He put this down to artists, who, when asked to suggest means of teaching art, turned to the type of academic training they themselves had received. Since professional art schools from the Renaissance onwards had stressed learning to draw as being accurate representation, and given design a secondary place, this pattern was still being followed. It was even usual for a considerable part of the time allotted to design courses to be given to the analysis of historical styles. He summarised the approach diagrammatically, as follows:-

The effort of the academic method is centered upon "learning to draw", and in two directions: nature forms, and historic art. The principle is - first acquire a knowledge of facts, either of nature's facts or art's facts, then use them in your own creative expression. Roughly outlined, courses in art would be based upon a scheme like this:

1 ibid., p. 1.
In contrast to this analytic method, Wesley Dow proposed a synthetic one which first explored ideas fundamental to all the fine arts and then proceeded to apply them in increasing complexity. He was indebted for his thinking about these fundamental ideas to a book The Genesis of Art Form by George Lansing Raymond. These fundamental ideas in the space arts he tabulated as follows:

- **Line** - the boundary of space.
- **Dark-and-Light** - or mass, or quantity of light.
- **Colour** - or quality of light.

The course of study could be set out in the following manner:

- **Spacing, Line structure**
- **Character of line, expression**
- **Principles of Design**
- **Composition of line**
- **Representation**

**SYNTHETIC METHOD**

- **DARK and LIGHT**
- **Massing, Values**
- **Quality of tone**
- **Composition of Dark-and-Light**
- **Light and shadow in representation**

**DRAWING AND MODELLING**

- **Hue, Value, Intensity**
- **Colour harmony**
- **Colour composition**

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The specific aims of the Department of Fine Arts of Teachers' College, Columbia, reflected this thinking:

The courses of the Department of Fine Arts of Teachers' College are planned for a progressive growth in appreciation and power of expression, developing freedom and skill in drawing, painting, modelling and construction. The work is intended to be primarily an exercise of the mind aiming for power rather than a superficially pleasing result. In fact the student's work might be far from what is ordinarily considered a successful drawing and yet the individual has made a genuine and decided advance in artistic power.

Unusual creative genius will often express itself in terms seemingly rude. Accuracy and finish in execution certainly have great value, but more important is the personal feeling, the fresh individual way of expressing ideas in art-form. (1)

Dow considered two things "essential to success in any form of work in the space arts.

1. Appreciation of harmony of line, mass and colour, whether in Architecture, Pictures, Sculpture, Design or Nature.
2. Ability to express ideas in terms of harmonious line, line mass and colour. (2)

Dow was thinking in the broadest possible terms of an all embracing "space art".

This approach represented the first major educational statement in this century concerned with the search for the basic elements of expression in the arts and antedated by a decade the analysis of the elements of design undertaken at the Bauhaus in Germany. Exercises planned for the students aimed to give the mind power over the elements of creation but, at the same time, recognized the importance of personal expression. Creative genius, Dow felt, often expressed itself in terms that contemporary people, in the first instance, found difficult to accept.

It was important that skill should be appreciated, but it was also important, that it should not prevent the appreciation of new forms of expression.

1 ibid., p. 6.
2 ibid., p. 6.
Another American who strove to educate people to a greater appreciation of art forms by selecting certain basic ideas, was Ralph Pearson. He was particularly interested in expressionist art and its emotional impact, but he combined this with a feeling for design as strong as that of Wesley Dow.

In 1924, at Valley Cottage, New York, Ralph Pearson began his Design Workshop. He claimed it as being probably the first modern school in the country to be called a Workshop and not a Studio. A year later it moved to New York City and then into the New School for Social Research, where it inaugurated the art practice in that school's programme. Six years later it moved into its own quarters in the building of the Co-operative School for Student Teachers, where for five years, all students took its courses. The work was extended in 1937 with the inclusion of correspondence courses, and by 1939, Ralph Pearson claimed that over four thousand students had passed through his school.

The Design Workshop was never a full time art school, training young art students. It gave short basic courses which aimed to lay the foundations on which future study and practice could be built. Most of its courses in class sessions were for once a week or for six weeks in the summer. For this reason the work of the school was limited as far as examples of student development were concerned. (1)

Ralph Pearson called himself an artist-educator and appears to have been particularly sensitive to the progressive educational currents of his day. He appreciated the basic approach to art teaching that had been

begun by Wesley Dow at Teachers' College, Columbia (1) as well as the work on creative expression being carried out at Black Mountain, North Carolina. (2) He also appreciated the work of Moholy-Nagy at the Institute of Design, Chicago, and included a chapter on its work in his book on New Art Education. (3) He began this book with a quotation on general education by Franklin D. Roosevelt, which drew attention to the ultimate social purpose he saw in education.

It is the obligation of education to train the minds and talents of our youth to improve, through creative citizenship, our American institutions in accord with the requirements of the future. (4)

And by the fourth page, he had made reference to John Dewey's Art as Experience, where that writer had argued that sensitive awareness to environment was the beginning of aesthetic appreciation.

Pearson felt human creativeness expressed itself in many ways and it would benefit all concerned with related subjects to meet and discuss their basic tenets and reach some agreement about terminology. (5) He revealed his own semantic awareness by including a number of pages devoted to definition of terms used. For example,

**ABSTRACTION**: Extracting from subject one or more elements or qualities and using them as a means or an end. Can be partial or complete. Can express inner realities. Can be used for purposes of design, emphasis, symbolism.

**DESIGN**: The organization of all elements of line, space, colour, texture, light-dark, planes, forms, and subject into harmonious relationships - into a visual symphony.

**PLASTIC FORM**: The organization of design into a plastic or modelled whole. Forms as opposed to content. The plastic picture is that which acknowledges and decorates or moulds the flat plane of the picture's surface into an harmonic colour and space unity at the same time it portrays subject in either two or three dimensions. (6)
He aimed to challenge the skilful copying still prevalent in art training at the time and substitute in its stead "designed creation". This would mean for certain people a new vision, purpose and value emphasis, but he was convinced that access to the creative power that he was advocating would help put people in touch with the creative development of their own culture.

If the creative powers of man have in a general way unified the art of the ages, it follows that in any one period these powers must also be a unifying force in the people of that period. That is to say, creative power can and should interweave with man's life in two directions - in the long warp of history and in the short woof of contemporary life. (1)

His approach to art education was aimed (as was that of Wesley Dow) at streamlining art education by eliminating endless exercises in skill development. He believed that in any art school, once a year had been devoted to the fundamentals he outlined, then any number of succeeding years might be given to their development and application. Skills whose ultimate purpose was understood would be much more quickly perfected. (2)

His fundamentals were the development of sensitive powers in the organization of line, space, dark-light, texture, colour, plane and form. (3) These were an elaboration of Dow's basic concepts of line, dark-light and colour. They, in fact, represented an intermediate stage between Wesley Dow and Moholy-Nagy. In The New Vision, which was published in New York in 1930, and which Pearson included in his bibliography, texture, space and form had been given considerable emphasis.

Art schools, Pearson believed, should make an attempt to integrate their work with that of the community. They could help spread improved standards of judgement by undertaking small commissions in the area.

1 ibid., Preface XIII.
2 ibid., p. 229.
3 ibid., p. 19.
Colleges and Universities needed to practice what they preached and incorporate the best in design in their surroundings. At the high school level he felt there should be less deference to adult and community standards. The standards of the child world should be recognised. The influence of isolated creative teachers should be increased, more equipment should be supplied and more time given to the subject. (1)

In the elementary grades of American schools, the child was able to express himself freely, but in later grades deadly work, based on adult standards, was prevalent since teachers lacked the sympathy and knowledge of art required to stimulate the child in the right way. (2)

Pearson's approach to creative painting revealed the nature of his teaching method. His objectives were summarised as follows:

1. A relaxed freedom and sense of power with the medium.
2. Sensitiveness to the relationships of colour-emotional design.
3. Combining both these powers with subject. (3)

To gain these objectives it was necessary that:

1. Skills and copying should be forgotten. They are craft not art.
2. The thinking mind should be temporarily discarded (as thoroughly as that difficult act of emancipation can be achieved); the senses should be alert.
3. Along with the discarding of conscious thought should go all systems of dealing with colour which are thought out or scientific.
4. A spirit of adventure and experiment, of alert sensitiveness to the quality of things, including colour, should be given free rein. (4)

The whole approach was one of using techniques and skills as they were needed to implement creative powers. The classes began with large sheets of paper, large brushes, and colour like thin cream. They experimented freely without idea of subject or design, though he did suggest the possibility of "Explosion in a paint factory". The paintings should be

1  ibid., p. 232-6.
2  ibid., p. 237.
3  Ibid., p. 71.
4  ibid., p. 71-2.
a "galaxy of accidents". Once this had been experienced then selected experiments would begin, increasing in complexity as the need arose. This would lead to a study of the effects of the brush and a growing awareness of space. (1)

From this experience would arise the need for the power to organise colour and space two dimensionally, and later, three dimensionally, and problems of dark-light relationships from a plane would become apparent. The important thing for the student was the realization that the subject matter submerging itself to the design. (2) Every part was seen as contributing to the whole. Having learnt this, the student could tackle a still life, aware of the variety of approaches that could be taken ranging from the abstract to realistic, and knowing that all were subject to the design of the picture. Exploration of the techniques of the Impressionists and Post-Impressionists in the handling of colour, would then be linked with the exploration of a wide range of subject matter, portraits, landscape, the figure and mural commissions. (3)

Although worded slightly differently, Pearson's approach to Creative Drawing and Creative Modelling were similar and could be summarised as, realization of the nature of the material and tools, sensitivity to design and its possibilities, and organization with subject/purpose in mind.

Ralph Pearson's expressive approach owed much to the approach to art of the American Art Historian, Sheldon Cheney. In the concluding chapter of his book he included this quotation from Cheney's book "Expressionism in Art", which could serve as the core of Pearson's own thinking.

1 ibid., p. 73.
2 ibid., p. 78.
3 ibid., p. 95-118.
It seems to me that Expressionism returns art livingness, to aesthetic evocation, to revealment of those values which feed the spirit. (1)

The emotional aspects of art were extremely important to Ralph Pearson but he realised that without an understanding of the powers of design, emotional expression could become "unbalanced confusion". Once, however, the feeling approach had been realised, then the conscious mind could be brought into play as a supplementary force. Design and concept are both of equal importance in a work of art. (2)

He was aware of the need to link the work of the art school with the art of community (3) but his work, perhaps of its limited nature, did not have the breadth of that of Moholy-Nagy. He did, however, outline an approach to the teaching of art that was particularly applicable to the education of the high school age group. His emotional and experimental approach, with the introduction of skills when needed, and his suggested use of group work on murals created enthusiasm. (4) His analysis and use of the old masters and modern works of art as examples of skilful designing meant a wider appreciation of art forms developed.

1 ibid., p. 222.
2 ibid., p. 45-6.
3 ibid., p. 217.
4 ibid., p. 110-17.
The calibre of thinking of men like Wesley Dow and Ralph Pearson needs to be compared with the standards of thinking about art education found in the New Education Association Journal between the years 1913-32. This publication began in 1913 as a Bulletin, but by 1921 had changed its name to the N.E.A. Journal. Its first reference to art was an article in December 1923. The article was called "Beauty in Education" and was mainly a plea for beautiful surroundings, because of their uplifting effect on the child. (1) In 1926 there were two brief articles and several references to art in similar vein. Keats' "A thing of beauty is a joy forever" was quoted, and attention was drawn to the value of art to future home makers. In 1927 there were again references to beauty in the home, landscape and industry and the cultivation of good taste.

In 1928 Joseph Wiselleir wrote more substantially on art teaching as a career. He drew attention to the fact that art schools were not catering for the training of art teachers but suitable courses were available at other institutions, namely, Columbia University, Pratt Institute, University of Chicago, Massachusetts School of Art, Syracuse University and Cleveland School of Art, to name the most significant. He suggested a four year course for art teachers, with two years given to specialised study. An art teacher needed a well balanced program of courses in education, psychology, theory and practice of teaching art, and preferably some practice in teaching general subjects.

He also appealed to ordinary teachers who found that they had a gift for teaching the subject to apply for jobs as art teachers, for some authorities paid art specialists a higher salary.

His concept of child creativity, however, was limited. His substantial article was illustrated with much derivative work. A child's design for a Humane Society poster was a reproduction of a portion of the His Master's Voice mark. (1)

Articles written in 1929, 1931, 1932, appeared to be more practical and creative. A.C.V. Kirby wrote in 1929 and 1932 on art in the rural community and showed practical ways of integrating craft and art work by exhibitions and using local materials in such a way that parents and the community at large became interested. (2 & 3)

In 1931 Carmen F. Heath wrote under the heading "Children's joy in Design". Both the title and the nature of the work undertaken suggest the ideas of Pearson, although there was no acknowledgment of the source of her ideas. She described the lively designing and execution of a group mural. Adult caution appeared to have triumphed over child spontaneity however, for she admitted to a certain frustration in effort when the children, having designed their mural, were then required to draw it up again on the selected area. (4)

In May of the same year, an article without authorship appeared, called "Trends in Art Education". It analysed art education under three headings, Esthetic, Utilitarian, and Creative. The esthetic trend had resulted in a growing sensitivity to the appreciation of art in everyday

4 Carmen F. Heath, "Children's joy in design", NEA Journal, 1931, Nov. p. 79-80
things. Work being done in the schools and growing contact with local communities, should lead to a higher standard of taste in the community generally. The utilitarian trend he related more specifically to crafts and correlation with other subjects. This quality was subject to wide variation in terms of the facilities of the district. The creative approach received its greatest stimulation from the progressive education movement. (1)

While this article subdivided the subject into three significant areas, it did not come to grips with the fundamental language of the art involved, although this had been already begun by A.W. Dow at Teachers' College, Columbia, in 1908, and Moholy-Nagy's book The New Vision had been published the previous year, 1930.

Diego Rivera

The aesthetic, utilitarian and creative aspects of art education were given a dramatic and short lived application in Mexico in 1929. In that year, Diego Rivera, one of Mexico's revolutionary artists, was appointed direction of the San Carlos Academy of Fine Arts, a school for the training of artists, from which he had been expelled in 1902. Immediately he set about fashioning his students to his own prodigious appetite for work, and giving them the wealth of experience, before specialization, which he felt had been lacking in his own training. The revolutionary nature of his ideas and his direct approach created violent clashes of opinion. He wrote the by-laws for the new self government of the art student body and in discussions with his staff and students, succeeded in turning

administrative relations and curricula upside down.

Admission of students was to be by competition and the teaching staff, its personnel, and methods, were put to the discussion and vote of the student body. Courses of study were integrated into an apprenticeship system and the school was to be regarded as a huge studio or workshop rather than an academy. The potential artist was treated as a workman in the physical and social sense. For the first three years he was to work during the day and pursue his theoretical studies in the evening. Scientific and technical knowledge was emphasised and a central role was given to the comparative study of the history of art, particularly in terms of its social role. At the end of the first three years those with aptitude would be given a further five years day and night course of study and apprenticeship. Examinations at the end of the courses would not be formal but involve the execution of practical work embodying the theoretical and technical instruction involved in the course in question. On completing their apprenticeships, students were to be given the opportunity to carry out a years work on some governmental project, utilizing the workshops of the art school for the purpose. He also suggested they form themselves into a Union of Workers of the Plastic Arts. Workers in the various trades were also to be free to attend any courses that served their crafts. (1)

Within eight months, clashes between the more conservative school of architecture and the School of Plastic Arts, resulted in Diego Rivera being ousted from the Directorship. One of the newspaper headlines at the time read:

1. ibid., p. 283-94.
"Diego Rivera wants to be the Mussolini of the artists."
The following are summaries of the courses Rivera planned. Exactly what was meant by certain of the headings has not been explained. For instance, in year five of the advanced course, "elements of construction" and "exercises in architectonic composition" were not defined. The main feature of the course was the time given to what was termed "Free workshop". The studio atmosphere during the day and the theoretical work in the evening made a very demanding day for students and would ensure that only the enthusiastic persisted.

Apart from a dipping into science and mathematics and a study of the social theories of art, it is difficult to judge the possible development of the student, in ideas of the twentieth century. The curriculum was particularly craft centred.

1 ibid., p. 283-94.
<table>
<thead>
<tr>
<th>Year</th>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>PREPARATORY CYCLE</strong></td>
<td><strong>NIGHT COURSE</strong></td>
<td></td>
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<tr>
<td><strong>YEAR I</strong></td>
<td><strong>ELEMENTARY STUDY OF FORM IN SPACE</strong></td>
<td>Creative exercises to be realised in modelling and the construction of models.</td>
</tr>
<tr>
<td></td>
<td><strong>CONSTRUCTIVE DRAWING AND THEORETIC PREPARATION</strong></td>
<td>Constructive drawing + arithmetic and elementary algebra.</td>
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| | **FREE WORKSHOP AND PLASTIC SPECIALIZATION** | 1. Drawing and painting relevant to trade of pupil.  
2. Drawing and painting for the beautifying of dwelling and clothing.  
3. Exercises to develop extreme plastic faculties. |
| **YEAR II** | **ELEMENTARY STUDY OF FORM IN SPACE** | Creative work with the living model. Studies of vegetable, animal and human form, study of anatomy. |
| | **CONSTRUCTIVE DRAWING AND THEORETIC PREPARATION** | Constructive drawing + elementary plane and spatial geometry. |
| | **FREE WORKSHOP AND PLASTIC SPECIALIZATION** | As for I plus. Elementary study of styles. |
| **YEAR III** | **ELEMENTARY STUDY OF FORM IN SPACE** | Applications of forms in space to problems of Plastic Arts. Carving in stone and wood, forging of metal, modelling in wax for casting. Compositions with abstract forms destined for architecture and related forms. |
| | **CONSTRUCTIVE DRAWING AND THEORETIC PREPARATION** | Perspective and elements of optics. |
| | **FREE WORKSHOP AND PLASTIC SPECIALIZATION** | Practical projects for life selection. Subworkshop of the Arts of the Book. (Saturday afternoon and Sunday morning lectures by Professors and capable students to aid aesthetic development of pupil.) |

*ibid., p. 284-5.*
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<tr>
<th>CENTRAL FEATURE OF ENTIRE COURSE</th>
<th>YEAR I</th>
<th>YEAR II</th>
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<tr>
<td>Free workshop of painting and engraving</td>
<td>Free workshop</td>
<td>Free workshop</td>
<td>Free workshop</td>
<td>Free workshop</td>
<td>Free workshop (6 hours daily prac. work)</td>
</tr>
<tr>
<td>Study of materials in plastic arts.</td>
<td>Study of materials in plastic arts.</td>
<td>Social theory of the arts (historic dev. of arts - its social role - Mexican Art).</td>
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<tr>
<td>YEAR III</td>
<td>YEAR IV</td>
<td>YEAR V</td>
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THE INFLUENCE OF THE BAUHAUS IN AMERICA

The nature of the German Bauhaus

Before looking further at the development of art education in America, it is necessary to look in some detail at the nature of the Bauhaus in Germany. This institution, in trying to extend the scope of art teaching on an entirely new and more scientific basis, developed an approach that was both structured and creative. It attempted to isolate the basic elements of creative work in the arts, and at the same time encourage an imaginative approach that would enable designers to think in terms of twentieth century materials and technology.

The Bauhaus was concerned at the highest level with a reconciliation between art and industry, but it also succeeded in adding a more exploratory approach to materials and a new emphasis on skills. Its ideas were to percolate to such an extent through the art education world that an art text book, referred to by teachers in Infants Schools for inspiration for handwork lessons - E. Rottger; Creative Paperwork, (1961), showed evidence of its influence.

The first practical step towards the foundation of the Bauhaus was taken when in 1915, the Grand Duke of Saxe Weimar invited Walter Gropius to take over the Academy of Arts and Crafts from the Belgian architect Henry Van de Velde. (1) This man, whom Van de Velde had recommended as

his successor, was one of the youngest of the Deutsche Werkbund leaders with a particular concern for the problems of reconciling art and industry. To understand the climate of the Bauhaus in Germany, it is necessary to look quickly at the currents of thought in Europe, England and America that fertilized it.

The Werkbund movement in Germany owed something of its development to ideas from Belgium, Austria, America and England, as well as its own protagonists. In the 90's of the last century, the Belgian, Van de Velde, in spite of an enthusiasm for Art Nouveau, had proclaimed the engineer as the true architect of our time and had recognised that the new materials developed by modern science, such as steel, reinforced concrete, aluminum and the like, called for new types of structures. (1) The Viennese architect, Adolf Loos, partly trained in the United States, had had the courage to break with the Art Nouveau style and banish all ornament from his buildings. An example of this was his shop interior in Vienna (1898) in which the value of the work depended on the high quality of the materials used and there was nothing that existed purely as ornament. (2) In England William Morris had, by 1861, established the firm of Morris, Marshall and Faulkner, Fine Art Workmen in Painting, Carving, Furniture and the Metals, and the English Arts and Crafts Movement followed. (3) Its policy, however, was backward looking, in that it aimed to restore the prestige of the craftsman in the medieval sense and regarded the machine as anti art. In the words of Morris, "as a condition of life, production by machinery is altogether evil". A much more positive approach came from North America

1 ibid., p. 10.
3 ibid., p. 24-5.
where Louis Sullivan and Frank Lloyd Wright were reacting against the
eclecticism of the nineteenth century approach to architecture in favour
of a concern for the relationship of form to function. It was Walter
Gropius who had helped make the modern industrial architecture of North
America better known in Germany through the 1913 Year Book of the
Werkbund. (1)

The Deutsche Werkbund was founded in Germany in 1907 as a result
of Herman Muthesius' efforts to bring about some real co-operation between
the best artists and craftsmen, and trade and industry. (2) From 1896
until 1903, he had been attached to the German Embassy in London for
research on English Housing and had returned with a zest for the simple
and honest, and the combination of perfection of form and utility, which
had grown from the English Arts and Crafts movement. The Werkbund's aim
was "selecting the best representatives of art, industry, crafts, and trades,
of combining all efforts towards high quality in industrial work, and of
forming a rallying-point for all those who are willing to work for high
quality. (3) Thus a theory that concerned itself with the quality of
the products of the new industrial age, had already been stated and the
more imaginative architects were seeing the necessity of a working
relationship between the machine and the designer as a necessary step in
the evolution of twentieth century culture.

It was left to Walter Gropius to take the necessary step to make the
idea a reality. It became a reality when he requested that the Academy
of Arts Weimar be amalgamated with the School of Arts and Crafts under

the one Director and the resultant institution be given the name "Staatliches Bauhaus" (State Building Institute).

Walter Gropius has stated his educational aims very clearly. The artist and artisan were to share a common training for the ultimate good of society, which would benefit from the technical skill of the craftsman and the imaginative power of the artist. The workshop was to become a place associated with creative activity.

What we preached in practice was the common citizenship of all forms of creative work and their logical dependence on one another in the modern world. (1)

As it was, the artist was too impractical and unfamiliar with technical requirements, and the business man and technician lacked the foresight to realise the combination of form, efficiency and economy that could only come from painstaking co-operation, with a responsible artist as part of the routine of production. The Bauhaus was meant to supply such designers, but not by teaching Art. Artists had been misled into believing that art could be taught but Gropius believed it was the talent of the individual that created a work of art. All that a potential artist could be taught was manual dexterity and a knowledge of his craft.

...the artist has been misled by the fatal and arrogant fallacy, fostered by the state, that art is a profession which can be mastered by study. Schooling alone can never produce art! Whether the finished product is an exercise in ingenuity or a work of art depends on the talent of the individual who creates it. This quality cannot be taught and cannot be learned. On the other hand, manual dexterity and the thorough knowledge which is a necessary foundation for all creative effort, whether the workman's or the artist's can be taught and learned. (2)

The fundamental pedagogic mistake of the art academy had been its pre-occupation with the idea of individual genius. It had discounted the

value of commendable achievement at a less exalted level. As a result it produced a high percentage of "social drones", useless by virtue of their training in the day to day productive life of the community.

This dearth of designers adequately trained for their twentieth century responsibilities, Gropius hoped to correct by establishing the following basic requirements for the future training of all gifted individuals:

A thorough practical, manual training in workshops actively engaged in production, coupled with sound theoretical instruction in the laws of design. (1)

Achievement depended on the proper co-ordination of all creative faculties in a new unity that had the qualities of organic growth.

This was stated clearly in the credo of the Bauhaus:-

The Bauhaus strives to co-ordinate all creative effort, to achieve, in a new architecture, the unification of all training in art and design. The ultimate if distant goal of the Bauhaus is the collective work of art - the Building - in which no barriers exist between the structural and the decorative arts. (2)

Contact with industry had to be consciously sought. A turning back to old crafts as envisaged by William Morris was not a reality for the twentieth century. A new productive union that would turn the old craft workshops into industrial laboratories was the way ahead.

From the beginning, Gropius showed an awareness of the balance necessary between the material and the less definable spiritual aspects of creative work, but as the ideas of the Bauhaus spread its material aspects were the ones most often stressed. That he was aware of this shift in emphasis can be seen in an article he wrote in 1951 for Atelier,

1 H. Bayer et al, op. cit., p. 22.
2 ibid., p. 23.
the journal of the Sydney Technical College. Here he reiterated the need for an intelligent balance of the two and drew attention to the dangers inherent in ignoring the second. Man with his present social and psychological skills was perhaps better equipped now to begin to define spiritual aspects more clearly.

The general indolence of people towards the Arts and the prevalent methods of education in design seem to be interdependent. Constructive evidence, through education must be offered to make people believe again in the basic importance of art for their daily lives. But as long as we consider the problems of art to be a matter of individual feelings which cannot be objectively defined as to standards of value, we cannot expect them to be recognised as basic for educational progress. The spiritual implications of art in a society are to be redefined and, with the help of the scientists and using their instruments of precision, the social and psychological components of art - not only the technical ones - are to be determined by a distinct order of values and meanings. (1)

Gropius went on to draw attention to the more social contribution that was necessary if theories were to lead to action. Man had to be made to feel things as an integral part of his life. In the field of education, the historical and analytical approach alone could not produce creative ability. Direct participation in the making of our physical surroundings was necessary. This making was not a mere auxiliary to thinking but "a basic experience indispensable for the unity of purpose within the creative act".

It is only educational means which interrelates our perceptive and inventive faculties. But today the work of imagination has become suspect and discreditable if it cannot be made subject to the scientific reasoning. The trend of spiritual development in the past, however, has always been determined finally by the vision of the thinker, the poet, the artist - not by materialistic intellect. Since education has almost neglected the disciplines which form emotional habits through practical experience, it has bred split personalities whose "head is not

more native to the heart". A disrupted world seems to be badly in need of the synthetic action of the artistic mind, of the man of vision to become an integrated whole again. (1)

These statements reflect his earlier ones in writing of the theory and organization of the Bauhaus (1923). For example, Gropius had said of true creative work.

In a work of art the laws of the physical world, the intellectual world and the world of the spirit function and are expressed simultaneously. (2)

In The New Architecture and the Bauhaus (1935) he wrote again of the two qualities that were of equal significance - the purely material side on which the practical value of the new architecture depended and the aesthetic satisfaction of the soul. These aesthetic qualities he later related to sunshine and fresh air, the lightness and poise of a building, spatial harmony, repose and proportion, and the clarity of its simplified forms. At a practical level, these two qualities became technical efficiency and imaginative design, and the quality of a man's creative work depended on their proper balance. (3) The statements of 1951 seem to show a greater awareness of the difficulty of communicating ideas and the workability of educational processes.

1 H. Bayer et al., Bauhaus 1919-1928, op. cit., p. 22.
3 ibid., p. 66.
The Curriculum of the Bauhaus

The curriculum of the Bauhaus can be stated as an idea, but the actual courses given depended very much on the individual approaches of the lecturers concerned. Its general aim was a new and powerful working correlation of all the creative processes - physical, intellectual and spiritual. To Gropius, this could be ideally achieved in architecture, where through an interweaving of the practical and formal, he hoped to awaken a feeling for the unity of all creative workers, from "the simple artisan to the supreme artist". Education with this breadth of aim in view needed to be sufficiently comprehensive to permit the development of every kind of talent. (1)

The curriculum consisted of two parallel courses of instruction, instruction in Crafts and instruction in Form Problems. He set it out himself in the following way:

I. Instruction in Crafts (Werklehre)

<table>
<thead>
<tr>
<th>Stone</th>
<th>Wood</th>
<th>Metal</th>
<th>Clay</th>
<th>Glass</th>
<th>Colour</th>
<th>Textiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sculpture workshop</td>
<td>Carpentry workshop</td>
<td>Metal workshop</td>
<td>Pottery workshop</td>
<td>Stained glass workshop</td>
<td>Wall-painting workshop</td>
<td>Weaving workshop</td>
</tr>
</tbody>
</table>

A. Instruction in materials and tools.

II. Instruction in Form Problems (Formlehre)

1. Observation
2. Representation
3. Composition

A. Study of nature
B. Analysis of materials
C. Drawing of plans and building of models for all kinds of constructions.

A. Descriptive geometry
B. Technique of construction
C. Theory of design of models for all kinds of constructions.

1 H. Bayer et al., op. cit., p. 22-8.
2 ibid., p. 23.
It was divided into three stages, a Preliminary Course lasting six months, Apprenticeship in a selected craft, and finally, instruction in Architecture. The preliminary course aimed to free students' creative powers, to give them an understanding of natural materials through observation and learning to construct inventively, to acquaint them with the basic principles underlying all creative work in the visual arts, and to lead the student towards the selection of a craft study suited to his abilities. The course reflected the individuality of three significant teachers, Joseph Itten, Joseph Albers, and Moholy-Nagy. (1)

The course was given by Itten in 1922. It was taken over by Albers, a former pupil in the spring of 1923. Later in 1923, Moholy-Nagy came to the Bauhaus to direct the preliminary course and both men taught independently. When the School moved to Dessau, Itten took charge of the first term and Moholy-Nagy took charge of the second term. When Moholy-Nagy resigned in 1928, Albers continued until 1933.

The instruction in craft was aimed at adding to a many-sided education rather than developing just a specialised tradesman. It involved a legal apprenticeship of three years, during which the student worked for the publicly certified Journeyman's Diploma of the Chamber of Crafts, and the opportunity to sit for the "Bauhaus Journeyman's" test which was a greater test of the craftsman's creative ability. Contact with industry was consciously sought and instruction in the theory of form accompanied that of manual training. The idea was to give the apprentice the mental equipment to shape his own ideas of form and to establish a basis

1 ibid., p. 24.
on which different individuals could co-operate without losing their artistic independence. (1)

...The Bauhaus is consciously seeking contacts with existing industrial enterprises, for the sake of mutual stimulation. From these contacts with industry the apprentice and later, the journeyman, learn not only to extend their technical experience, but also to consider, in carrying out their work, the unavoidable demands which industry makes on the individual to economise on time and means. In the same measure, the academic superciliousness of another day constantly dwindles, and respect for hard realities unites individuals engaged in a common work. (2)

Instruction in Architecture varied in duration depending on achievement and special circumstances. It involved participation in building projects and resulted in the Masters Diploma of the Chamber of Crafts and, under special circumstances, a Diploma of the Bauhaus. Where advanced courses, engineering and other courses were needed, students were advised to complete these courses at other appropriate institutions. The Bauhaus considered architecture as something organic, adapted to the world of machines in which forms reflected function. It was a community art and man's living and building needed to be synchronized in contemporary terms. (3)

1 ibid., p. 24-6.
2 ibid., p. 25-6.
3 ibid., p. 27-8.
A particular example of the teaching method at the Bauhaus is available in the notes which Paul Klee prepared for his classes in the years 1921-2. In November 1921, he told students the aims and understandings that would be a part of his course on "Some Contributions to a Theory of Pictorial Form". He said they would be analysing works of art not with a view to copying them but in order to "set themselves in motion". Their analyses would be a form of genesis, in that they would reveal the stages by which a work came into being. The matters of form on which they would concentrate should not, however, assume precedence over a general state of mind, which he termed philosophy. By philosophy, he meant that inner drive which was individual and would reveal itself in their work. And, particularly important, all discovery and all understanding would be useless if the student did not at the same time develop the requisite skills to use the forms with precision. (1)

The following is an outline of the course as given:

Contribution to a Theory of Pictorial Form

I. The Concept of Analysis
- motive for this examination of work of art to view the stages of its coming into being.

II. Ways to Form
- line.
- line plane and orientation in space.
- synthesis of spatio-plastic representation and movement.
- sensation of weight as formative element.
- structural formation - measuring and weighing as a pictorial procedure.

III. Basic Concepts of Development
- Different possibilities of movement, types of rhythmic structure, terrestrial and cosmic examples.
- natural organism of movement as striving for movement and execution of movement, organic combination of factors.
- movement is inherent in all change - the history of the work as genesis.
- succession, or the temporal function of a picture, movement as action and form.
- cause, effect and the figuration of dynamic forces.

IV. The Articulation of the Pictorial Whole
- not the work that is but the work in progress, development of the whole.
- the organization of differences into unity, subject and parts, general view.

V. The Order and Nature of Pure Colours
- order in the realm of colours.
- the relations between the colours.
- peripheral colour movement, the canon of colour totality.
- the law of totality on the colour surface.
- the position of the pigments on the colour circle.

1 ibid., p. 535-541.
Each of the subheadings mentioned was further analysed into a dozen or more further points for detailed examination.

This type of analysis, illustrated by Klee's own paintings and sketches, provided a course in which the teaching and the personal creative activity of the artist were completely interwoven.

In an exercise during July of the following year, Klee was still stressing the meticulous discipline which the student must cultivate.

Will and discipline are everything. Discipline in respect to the whole work, will in respect to its parts. In this connection will and ability are largely the same; without ability you can have no will. From these parts the work is made, through discipline directed towards the whole. (1)

The approach of Itten to teaching was different from that of Paul Klee. His teaching was influenced by the belief that the imaginative and creative abilities of the student must first be set free.

It is not the means of expression and representation that count in art, but the individual in his identity and humanity. First comes the cultivation and creation of the individual; then the individual can create. (2)

When this had been accomplished through much experimentation with media, the technical and practical requirements of the course selected by the student could then be undertaken with greater purpose. Itten's approach tended to be somewhat mystical. He made appeals to the physical, sensuous, spiritual, and intellectual, aspects of student thinking. They began the day with physical activities meant to relax the body and encourage concentration. His teaching then followed the pattern of Experience, Perception, Ability. He taught through the exploration of contrasts. One first experienced sensuously, then objectified rationally.

and from this emerged the realization of a synthesis.

In 1923, after watching his lessons, Gropius told him he could no longer be responsible to the government for his teaching practices, and Itten left to conduct his own school in Berlin. When this was closed by the Nazis, he moved to Zurich and continued his ideas there.

It is difficult to find the real reason for the departure of Itten from the Bauhaus, but perhaps his concern for the individual and the intuitive seemed to Gropius to be over stressed. In his address in Sydney, Gropius was careful to mention the importance of the personal and the intuitive, provided they were kept in perspective. The psychological aspects of man's response to forms was something that could be the subject of research, and it was in this field that the teacher could be most helpful. The mere passing on of personal subjective sensations was not effective education. (See page 285)
Gropius first visited America just after he, and those most closely associated with him, resigned from the Bauhaus. He stayed only briefly and returned to Berlin to work actively in the field of town planning.

With the increasing power of the National Socialists, his position in Germany became unbearable, and after a brief three years in England, he left permanently for America in 1937.

The thirties was the period in which America was to gain immeasurably from the exodus of Bauhaus teachers from Germany. The Department of Architecture at Harvard gained Walter Gropius and Marcel Breuer; Joseph Albers and Alexander Schawinsky went to Black Mountain, N.C.; Mies van der Rohe, Hilbersheimer and Peterhans went to the Department of Architecture at the Armour Institute, Chicago; and Moholy-Nagy, Breindelieck, and Kepes taught at the New Bauhaus in Chicago. Former students of the Bauhaus were teaching at the Laboratory School of Industrial Design, N.Y., and the Southern California School of Design. (1)

Walter Gropius accepted the post of Chairman of the School of Architecture at Harvard. Architectural education at the school was still largely influenced by the Ecole de Beaux Arts and had not responded to the West Coast and Chicago School of Louis Sullivan and Frank Lloyd Wright. It was left to Gropius to teach architecture in terms of the industrial revolution, design and community planning and with a sense of social purpose. (2)

1 H. Bayer et al, op. cit., p. 215.
He set out to broaden the outlook of the students from the beginning by integrating architecture, town planning and landscape architecture and keeping close contact with other disciplines. S. Giedion wrote of his collaboration with the Massachusetts Institute of Technology in 1950 in a Museum project undertaken by the lower years at Harvard.

In 1939, Gropius and Marcel Breuer collaborated on an imaginative educational project for the proposed rebuilding of Black Mountain College, North Carolina. The design made use of the waterfront of Lake Eden, whole areas of the building projecting across the waters edge.

In 1945, Gropius spread his influence by going into partnership with a group of the youngest generation of architects under the title of the firm "The Architects' Collaborative". The group built homes, schools and community projects. For example, in 1949 the Junior High School at Attleboro, and the Harvard Graduate Centre (in this work artists such as Joan Miro, Joseph Albers, and Richard Lippold collaborated with the architects from the beginning instead of being called in as decorators at the end); and in 1935 the Boston Centre.

The more permissive atmosphere of American Society had thus enabled Gropius to participate actively in community projects.

In 1956, Walter Gropius contributed an article called "Reorientation" to Georgy Kepes' book on The New Landscape in Art and Science, in which he expressed the view that he felt that science had overshadowed other components of our civilization. The fissure between the arts and sciences seemed as great as that between the political creeds of "regimented collectivism" and "rugged individualism". Society needed to balance the intuitive qualities of the arts with the mechanisation of the sciences.
He saw this coming through the co-operation of artists, scientists and businessmen, who, together could build man's physical surroundings.

Our problem is to find the right balance and co-ordination between the artist, the scientist, and the businessman, for only together can they create humanized standard products and build with them a harmonious entity of our physical surroundings. (1)

This group could be successful only insofar as they allowed the human element to be the dominant factor in decision making. "The biological principle" had to be paramount. Only insofar as man was the focus of all design could it be truly functional. (2)

Later in the same article, he made a case for the architect, whose work already made him a co-ordinator, leading the way in new techniques of collaboration. His own experience with "The Architects' Collaborative" could be called an experiment in community education. Instancing the design of schools in particular, he showed how this group had attempted to tailor the school to the needs of the children. The relaxed ground plan that spread lightly over the landscape, which resulted, actually proved to be more economical in construction and maintenance than the previous type of building. (3)

In looking at the selection of artist, scientist and businessman contributing to this book, one becomes aware of the lack of contact each has with the people whose life they are proposing to make the richer by their collaboration. There appears the need for some group whose concern is the communication and dissemination of ideas. This group could well be the educators.

2 Ibid., p. 97.
Joseph Albers

The contribution of the painter, Joseph Albers, to American art education was as significant as that of Walter Gropius. His own detailed research into the interaction of colours had led to his recognition as the artist most influential in the branches of contemporary art, most concerned with the visual and physical effects of colour. The following brief biography, gives an indication of both his academic and practical contribution to art education.

"JOSEPH ALBERS: Painter, especially on glass, photographer, typographer. Born, Westphalia, Germany, 1888."

1913-1923 Studied at Royal Art School, Berlin; Folkwangschule, Essen; Art Academy, Munich; Bauhaus, Weimar.

1923-1925 Bauhaus Weimar. Bauhaus apprentice, head of glass department; Lecturer on preliminary design; furniture design.

1925-1931 Bauhaus Dessau. Bauhausmaster. Professor of elementary course and drawing; later head of furniture workshop; wallpaper design.

1931-1933 Bauhaus Berlin. Introductory course, drawing, calligraphy.

1933-1949 Professor of Art, Black Mountain College, North Carolina. Lectures and seminars, Harvard University and other universities.

1949-1950 Courses at Cincinatti Art Academy, Yale University, University of Mexico, Pratt Institute, Brooklyn, Summer School, Harvard University.

1950 Chairman, Department of Design, Yale University.

Publications:


* A Note on the Arts in Education. American Magazine of Art, April 1936.


Present and/or Past. Design Magazine, Vol. 47, No. 8, April 1946.


* One year after John Dewey's publication of the same name.

1 H. Bayer et al, ibid., p. 218.
His first teaching post in America was Director of the Black Mountain College, North Carolina. He held this post from 1933-49. The college was different in that it was owned and operated by its teachers. Students and instructors associated on an equal basis, residing together in the same buildings and working together in the classrooms, fields and forest. There were no required courses, no fraternities or sororities and no football team. Students were responsible for their own work and conduct, and final examinations for those who required them, were given by professors from other institutions. Up until the later thirties, it was strongly influenced by John Dewey and the social ethics of education. (1) This can be seen in an article entitled "Art as Experience", published in Progressive Education two years after his appointment to Black Mountain.

John Dewey's book Art and Experience had been published the year before. This was not a book on art education as such, but rather a massive attempt to clarify the terminology used in talking about art and many of its current concepts. Dewey tackled the problems with all the pragmatic checking that was characteristic of his thinking. For example, he looked at the reaction of American critics to the Armory Show of 1913 and from all the furore deduced a simple confusion of a particular technique with aesthetic form. (2) He attempted an analysis of the difference between a man-made work of art and beauty as it occurred in nature. (3) The book is rather a source of argument about terminology and concepts which, as art education becomes more concerned with fitting its thinking more closely to that already established in the fields of philosophy, could become more significant.

Herbert Read said of this book -

I regard it as one of the curiosities of philosophy that when John Dewey, late in life, came to the subject of aesthetics... he nowhere, in the course of an imposing treatise, established a connection between aesthetics and education. (1)

But if we can judge from the article by Albers, under the same title as the book, he, at least, had been moved to look more closely at the integration of art with educational experience. The following quotations reveal this concern.

I believe it is now time... that we move from looking at art as a part of historical science to an understanding of art as a part of life... (2)

...the pupil and his growing into his world are more important than the teacher and his background. (3)

Albers also felt that schools should look into the interpenetration of all the art disciplines and the artistic purposes of school life. If this were done and the problems shared with other disciplines the art subjects would move from their "decorative side place into the centre of education". As the academic separation of subjects generally became less and less, certain periods of history, for example, might be far better understood through their arts than any other way, and this would be the way in which they were taught.

John Dewey's concern about man's awareness of his environment and his need to accept growth and change as part of the pattern of his development, as expressed in his Democracy and Education (1916) had their parallel in Joseph Albers' statement of the aims of art education.

3 ibid., p. 392.
Our aim is a general development of an open eyed and open minded youth seeking out the growing spiritual problems of our day, not closed to his environment; and forward looking, with the experience that interests and needs are changing; a youth with criticism enough to recognise that so-called "good old forms" sometimes can be over-used; that perhaps some great art important to our parents does not say anything to us; one who has reverence for earnest work and working, even though it seems at first new and strange to him and is able to withhold judgement until clearer perception comes; who knows that one's own experience and discovery and independent judgement are muchmore than repeated book knowledge...

We want a student who sees art as neither a beauty shop nor imitation of nature, as more than embellishment; but as a spiritual documentation of life; one who sees that real art is essential life and essential life is art. (1)

In 1963, Joseph Albers, with the co-operation of his students, published a book on the interaction of colour. It outlined a series of experiences that would be undertaken by the student and should lead him to a certain mastery of colour. His studio/laboratory/workshop course worked on the principle that practice should precede theory because this promoted "a more lasting teaching and learning through experience". The practice involved obligatory exercises that developed specific abilities. (2)

The role of the teacher in skilfully structuring the course would often not be obvious to the student. For example, the teacher would see that, from the exercise completed, the next step or variants of it suggested by the pupils, would appear to grow naturally. The actual experiment of selecting the next goal or the "step ahead" was part of his

1 ibid., p. 392-3.
aim to develop creativeness. The atmosphere of discovery and invention so engineered, encouraged use of the imagination and fantasy and promoted what he termed "thinking in situations". He considered this an educational concept "unfortunately little known and less cultivated".

Students were expected to continue trial and error experiments after classes and these were exhibited at the beginning of the next class. Comparison and evaluation then began.

First, every class member makes his selection and compares his preference with his own contributions. Then, we - that is the teacher or a student or students - select the best examples of "psychological engineering". This qualification we confer on a convincing presentation because it eliminates misleading reading of the study's purpose and its desired effect.

The normal procedure in presenting a new problem often is to show a sample exercise... and to point to its specific effect. The class is then asked to produce equal effects with similar and other colours - without first being told how to do it. After a while, a collection of the first trials - wrong as well as "on the way" or right - will give an opportunity to lead, to direct, to point at (or to indicate only by comparison back and forth) new ways of promising investigation. (1)

The controlled nature of this procedure made it understandable why Albers felt so strongly that "self expression" was not a suitable aim for schooling nor a way of study. There were already too many art "activities", too much non-teaching, non-learning and consequent non-seeing.

The time was ripe to advocate a basic step by step learning which promoted recognition of insight gained from experience, and evaluation from comparison. Contemporary educators had, he felt, overlooked the fact that growth of ability through conscious practice was itself an exciting experience and the strongest incentive for intensified action and continued investigation. (2)

1 ibid., p. 72.
2 ibid., p. 71.
Considering education in schools generally and not just at art school level, Albers considered art had an essential role at all levels from kindergarten to so-called higher learning. He drew attention to Gestalt psychology's discovery that three dimensionality was perceived earlier and more easily than two dimensionality, therefore, children in the lower school were more at home with constructions in space than painting and drawing. He felt there was a place for natural and easy play but the excitement of growth required directed study and work. (1)

To say this in psychological - educational terms, it means to shift from a recognition of the first, but primitive drive for being occupied, entertained - Beschäftigungstrieb - to a more advanced drive, or better, need for being productive, creative - Gestaltungstrieb. (2)

The development of any language required continuous practice and it was the teacher's role to provide this together with the challenge of new and different cases, in such a way that study became a mutual give and take. "Good teaching, after all, was more a giving of right questions than a giving of right answers."

To judge from his writings, Albers moved from his socially orientated approach of the thirties, towards a more specific concept of tutoring, with the mastery of skill as an incentive, being stimulating in its own right.

1 ibid., p. 73.
2 ibid., p. 72.
The influence of the Hungarian, Lazlo Moholy-Nagy, was particularly important because he endeavoured to reproduce in Chicago the structure of Bauhaus education and struggled to make it work within the American free enterprise society. His writings gave detailed insight into the courses he organised and provided a wealth of source material for similar experimentation at all levels of art education. Walter Gropius has said that the development of the original Bauhaus was "deeply influenced by Moholy, the fiery stimulator". (1) When Johannes Itten left the Bauhaus in 1923, it was Moholy-Nagy and Joseph Albers who further developed the Basic Course, which all who attended the school had to complete. His influence extended far beyond the Basic Course. He taught in the metal workshop, and with Gropius was joint editor of the fourteen volumes of the "Bauhausbuecher" (Bauhaus books). He was also a practising designer, photographer, film maker and typographer. Listed by Giedion as one of Gropius' closest friends, he left the Bauhaus in 1928 at the same time as Walter Gropius, Herbert Bayer and Marcel Breuer. (2)

In his letter of resignation to the Meisterrat of the Bauhaus, he revealed a philosophy of education similar to that of Gropius. The contemporary world demanded a balance between the skills of the craftsman and the development of man as a part of a larger world of ideas.

As soon as creating an object becomes a speciality and work becomes a trade, the process of education loses all vitality. There must be room for teaching the basic ideas

2  S. Giedion, Walter Gropius, Work and Teamwork, N.Y: Intro.VII.  
   1954, Reinhold, p. 31.
which keep human content alert and vital. For this we fought and for this we exhausted ourselves. I can no longer keep up with the stronger and stronger tendency toward trade specialization in the workshops. (1)

He felt the character of the Bauhaus was being forced to change and the development of the whole man was being overlooked by concentrating on the evaluation of the efficiency of final achievement. The community spirit he had felt as part of the Bauhaus was being replaced by individual competition. The situation raised for him the interesting query as to whether the existence of a creative group, only possible on the basis of opposition to the status quo!

By 1934, the political atmosphere of Germany made it impossible for Moholy-Nagy to continue his educational work in that country and for the next three years he worked in Holland, Belgium and England. In all these places he became involved in discussions of a pedagogic nature.

To a lecture audience in Amsterdam's Stedelijk Museum at the time of his one man exhibition, he tried to explain the failure of the Bauhaus in terms of a lack of pedagogic skill in trying to teach too much too soon and not taking sufficient notice of sociological factors.

We failed because we were not humble enough. We believed that all-or-nothing solutions would create a visual order expressive of a new world. You can learn from us that it is the infinitely slow adaption of the masses to new socio-visual standards that guarantees educational progress. Don't be impatient - don't be cocky, there's no task too small and no project too big to make it a manifesto of incorruptible design: a label, a photograph, or a million guilder housing project. And there is no one too pompous or too humble to be made an ally - a big industrialist or the woman who washes your shirts.

1 ibid., p. 109.
You take it for granted that it is your right to experiment with media and ideas unaccepted by the majority and challenging to the prevailing aesthetic and social views. You are proud to have convictions and to express them. Take a look across the border and you will realize that free work is a priceless privilege and that it carries with it a tremendous obligation towards honesty and effort. (1)

The first paragraph underlined the idea that an educator could not expect results too quickly for the spread of ideas was slow and dispersed. The last paragraph implied that unless one's concepts of freedom were understood in terms of responsibility, what one taught lost all value.

At this time, Moholy-Nagy visited Piet Mondrian in Paris and the two abstract artists, one from the east of Europe and one from the west, seemed to have buoyed one another's faith in the power of the abstract. They felt (as Mondrian was to say in a letter) as though they were living a "future life - more real, more pure; with needs more real, fulfilled more purely by the harmonious relations of plane, line and colour". (2)

Thus 1934, which had begun so badly for Moholy-Nagy ended with his artistic and pedagogic faith both being reaffirmed.

By 1935, Moholy-Nagy had followed Gropius to England. He worked for a German textile publication and began shocking printers with unorthodox ideas on type and layout. Imperial Airways, a men's store in Piccadilly, and the London Transport used his ideas, and he continued with his film work. His evenings were spent in his studio in Hampstead, and it was there he came in contact with the avant-garde painters, sculptors and architects of the thirties in England. Herbert Read, Henry Moore, Jack Pritchard, Jim Crowther, Julian Huxley, Barbara Hepworth and Ben Nicholson were amongst his closest friends. (3)

1 ibid., p. 109.
2 ibid., p. 116.
3 ibid., p. 135.
Herbert Read had just completed his *Art and Industry*, in which he attempted to establish standards of collaboration between designer and producer, and there was much discussion and disagreement between Read and Moholy-Nagy. However, both men shared a common belief in the educational value of art. The following extract from Sibyl Moholy-Nagy's writing suggests the nature of the contact:

(writing of collaboration between designer and producer she says). There was much on which He (Read) and Moholy disagreed, conditioned mainly by a polarity of temperament and historical orientation. But Read's genuine convictions on the educational importance of art, his willingness to listen and to absorb, and his brilliant ability to find the precise formulation for the half-coherent stammerings of the unliterary mind, created a lasting friendship. (1)

In his *Art and Industry*, Read had drawn attention to the fact that elementary education in England neglected the education of the senses (aesthetic education), and suggested Moholy-Nagy's book *The New Vision* as advocating possible new methods. He had referred to the Bauhaus as "the greatest experiment in aesthetic education yet undertaken". How far this appreciation of abstract formal values could be taught to the child in the elementary school was yet to be determined. He suggested it as a field ripe for experiment. (2)

The New Bauhaus, Design Institute, Chicago

Just at this moment when Moholy-Nagy was becoming increasingly aware of art education, he was approached by the Association of Arts and Industries, Chicago, to become the director of a design school run on

1 ibid., p. 137.
Bauhaus lines. The venture was to be sponsored by businessmen and companies, and it was Walter Gropius who had suggested Moholy-Nagy to them as a suitable director. For the remainder of his life, Moholy-Nagy was to struggle, not with the State-sponsored Bauhaus climate, but with American democratic processes.

The school opened in September 1937, and in the ballroom of the Knickerbocker Hotel in Chicago, Moholy-Nagy presented the programme of his institution. To the industrialist and businessman he explained the school as a place where their problems would be researched. The school would be concerned not with "fine art" but with what might be termed "art engineering". To Moholy-Nagy, this meant learning to use material and to understand space and see colour. The illiterate of the future would not only be the man ignorant of handling a camera, but the man without colour and space concepts. The teacher in the New Bauhaus was to be the pivot of social evolution providing the bridge between specialist and student. (1)

Moholy-Nagy adapted the German Bauhaus course to American College standards. Where German freshmen had been confined in their first year to a survey of visual means in addition to their workshop practice, which was considered the core of the curriculum, the American freshman was introduced to such academic subjects as physics, biology, philosophy, supplemented in later semesters by sociology and mathematics. This cultural broadening of the course was seen by Moholy-Nagy as a further attempt to restore a unity of human experience which he felt so strongly was missing in contemporary curricula. An extract from the circular

stating the objectives of the school show this point of view.

America has not yet built up an institution which strives for synthesis of all specialized knowledge. Since the industrial revolution, we have been overrun with scientific discoveries and technical inventions without number; but we have lost access to their entirety because we have learned to concentrate on parts alone. There is an urgent necessity to create a collaboration between the different topics, to restore the basic unity of all human experience which could restore balance to our lives. The New Bauhaus, American School of Design, tries to achieve such unity... when we design we must relate technical inventions and scientific discoveries to our psychological and physiological needs with a view to social implications that go far beyond mere innovation or increased financial return. (1)

In the school's first catalogue, Charles Morris, Professor of Philosophy and teacher for Intellectual Integration at the New Bauhaus, expressed similar views with specific mention of the semantic difficulties. A simple language was needed in which art could be talked about by both scientist and artist.

Science and philosophy orientated around science, have much to contribute to a realistically conceived art education in the contemporary world... We need desperately a simplified and purified language in which we talk about art in the same simple and direct way in which we talk about scientific terms. For the purpose of intellectual understanding, art must be talked about in the language of scientific philosophy and not in the language of art... It is difficult to envisage the full possibilities of the systematic collaboration between artist and scientist to which the new (Bauhaus) program points. (2)

To achieve this programme suitable staff was essential. The plan which did not come to full fruition showed the way this integration was to work. History of art and a socio-cultural survey of related movements in literature and poetry was to be given by James Sweeney (on this man's refusal to work with Chicago businessmen, Siegfried Giedion

1 ibid., p. 153-4.
2 ibid., p. 153.
was to be approached). Painting was to be taught by Jean Helion, typography by Herbert Bayer, and display by Xanti Schawinsky. Moholy-Nagy also began negotiating for Hans Arp, the surrealist, and Piet Mondrian, the abstract artist to assist. An international institute for co-ordinated design research was on the way to being realised. (1)

The venture failed due to lack of co-operation on the administrative side. The businesses who supplied the prestige of their names were not, when fund raising methods failed, prepared to back the school further, and the Executive Committee of the Art and Industries Group closed the institution. The men who were the trustees of the New Bauhaus had bewildered Moholy-Nagy from the beginning. For while they were sponsoring him as director, their own personal tastes were so remote from his that he doubted if they knew the full impact of the school they were backing. (2)

By January 1939, Moholy-Nagy and a group of teachers were prepared to begin a "School of Design" on the same principles as the New Bauhaus. Everyone worked without pay for the first semester and there was, in the beginning, no board of directors. In their place a few selected men were asked instead for their moral support. These men were John Dewey, Walter Gropius, Dean Joseph Hudnut of the Graduate School of Design, Harvard, Julian Huxley, W. Norton, the New York publisher of Moholy-Nagy's "The New Vision", William Bacharach, Chairman of the Committee on Education of the Chicago Association of Commerce, and Alfred Barr of the New York Museum of Modern Art. Community support and Moholy-Nagy's powers of persuasion resulted in the whole of the workshops being equipped at no cost to the school. (3)

1 ibid., p. 154.
2 ibid., p. 144.
3 ibid., p. 167.
At this time he also instituted Children's Classes on Saturday morning under the direction of Gordon Webber. Children visited Zoo and Aquaria and fruit markets, observing and making sketches. They returned to the school to make their own pictures (termed diaries), diaramas, and puppet shows. Children over ten years of age also engaged in weaving, photography and woodwork. (1)

The course of the Institute of Design, Chicago, designed by Moholy-Nagy, consisted of a one year (two semesters) Basic Course followed by three years (six semesters) in specialized workshops. The student completing the course graduated with the degree of Bachelor of Design. If he completed a further two semesters he gained a Master of Arts.

The Basic Course was considered the backbone of the educational program and its influence continued into the specialized vocational fields. It contained three major areas of information and experimental work.

I. TECHNOLOGY - basic elements of workshop training

a. Use of hand tools and machines
b. A study of the properties and structure of materials
c. Study of shapes surfaces and textures
d. Study of volume space and motion (fundamental elements of design)

II. ART - basic elements of plastic representation

a. Life drawing
b. Colour work
c. Photography
d. Mechanical drawing
e. Lettering
f. Modelling
g. Literature (group poetry)

III. SCIENCE

Enough mathematics, physics, and social sciences as well as liberal arts to provide the necessary basis for the Institute's courses.

1 ibid., p. 171-2.
After this experience, the student chose his field of specialization. This might still not be his particular vocational goal as a knowledge of a variety of fields was helpful to any industrial designer. (1)

The Specialized Workshops to which the students went after the completion of the Basic Course, differed from those at the Bauhaus where each craft had its own workshop. At the Institute, there were only three major departments with certain subchapters. These were called

- Architecture
- Product design
- Light workshop (advertising arts)

The subchapters were weaving, photography, motion pictures, painting and sculpture.

Each department included an intense study of design in theory and practice, industrial processes and materials and the mechanics of a functional and creative approach to the specialized work selected. All students studied architectural design, since it developed a broad understanding of the relationships between particular workshops and contemporary building or building of the future. Their studies in this field moved from the designing of a primitive house for a selected geographical area made from material at the site, to contemporary social planning. In addition, student work was supplemented with related studies in science, contemporary arts, form and civilization, philosophy of progressive education, economics, foreign languages, etc. Moholy-Nagy also missed no opportunity to invite stimulating speakers in all fields to address the students.

1 L. Moholy-Nagy, _Vision in Motion_, Chicago: Theobald, 1961, p. 64-5.
Although conscious of vocational goals, the Institute also stressed the growth of the individual within the group. Moholy-Nagy considered intellectual integration particularly important and the capacity to see everything in relationship as the key to twentieth century progress. He defined intellectual integration as "the correlation of subject matters on the basis of a common methodology governing our life, and not a new philosophical system compiled or 'integrated' from the numerous other philosophical systems". (1) He hoped to achieve this integration in the Basic Course by the simultaneous handling of similar problems in the various workshops, and the use of models from the other workshops in the photographic course. He also used the "intuitive research" of contemporary artist for educational exercises. For example, the work of the Cubists and Schwitters inspired texture exercises, and the stone carvings and plaster casts of Arp, Moore, and Hepworth, inspired the free shaped hand sculpture. (2)

His educational technique was quite specific. Exploration of materials, and exploration of the capacity of tools, had some affinity with kindergarten play techniques. However, after a period of relaxed exploration and the collection of data, teachers ensured that constructive activities with specific aims were chosen. The courses were planned so that complex tasks were broken into fundamental components that could be understood one after the other, and then finally brought into functional relationship. (3)

In all exercises a certain rhythm was introduced through the alternation of freedom and restriction. For example, a tactile chart

1 ibid., p. 64, footnote.
2 ibid., p. 64-5.
3 ibid., p. 66.
which was an illuminating and enriching experience for the beginner was followed by photographically precise recording of the chart. This demanded minute observation and co-ordination of eye and hand. (1)

The Institute did not use a system of credits expressed in marks. Everyone was stimulated to reach his optimum achievement. In justification for this approach, Moholy-Nagy quoted J.B.S. Haldane's *The Causes of Evolution*, in which reference was made to the probability that competition between adults of the same species rendered the species as a whole less successful in coping with its environment. He also made reference to Alfred Adler, having found that classroom competition expressed in "grading" had an inhibiting effect on pupils. John Dewey also did not approve of a credit system expressed in marks. (2)

After America's entry into the Second World War, the School of Design adapted its programme to the war effort of the community. Work was done on camouflage techniques with Gyorgy Kepes leading the workshop. Research was also done on the use of wood to replace metal parts needed for the war. An attempt was also made to put art as an occupational therapy on a professional basis. The amateur standard of teaching in this important field of education appalled Moholy-Nagy, but the implication of the battle he was waging were not realized by sufficient people to make effective progress at the time. The Carnegie Corporation and the Rockefeller Foundation helped generously with finance and equipment, and in 1945 the Rockefeller Foundation gave Moholy-Nagy five thousand dollars "to study the place of arts in liberal education". With this grant, he completed his last published work *Vision in Motion*. (3)

1 ibid., p. 67.
2 ibid., p. 71 (plus marginal and footnotes)
3 ibid., p. 213-9.
In 1944, the name of the school was changed to Institute of Design in recognition of its new status. This occurred because a new group of Chicago businessmen had come forward to form a board of directors, with manager, executive secretary and accountant, to relieve Moholy-Nagy of non educational matters. Moholy-Nagy, however, soon found himself embroiled again in friction between economic and pedagogic affairs. The businessmen seemed to him to be the dreamers and romantics while the artist was the realist. Businessmen thought in terms of fast and fabulous success, while he, the artist, was thinking more realistically in terms of intellectual influence over a period of time. The Bauhaus in Germany had had to face the political challenge of National Socialism, the New Bauhaus and the Institute of Design struggled with the American business world.

Moholy-Nagy also expressed himself strongly about education generally. For many people, formal education meant merely an abbreviated, intellectually condensed form of other peoples' experiences, the result of which could easily be utilized to earn one's living. It should mean a fundamental orientation towards all knowledge.

At the kindergarten level, Montessori began this with her concept of a miniature society sealed to the child, but she neglected the child's ability to transform accumulated experiences into creative action. That part of the child's mind that was concerned with fantasy and original solutions she discouraged.

"Progressive education" in America had encouraged independent investigation by school age students, with plenty of opportunity for experiencing the realities of life, but the end product of such under-
takings was generally verbalized. He would have liked to see a much wider range of activities such as painting, sculpture, poetry, plays and music, included more often.

In colleges and universities, there were some attempts to bridge gaps between faculties, but expression on a technological or artistic plane was not considered in the same category as the verbalized skills. (1)

There was a need for a state of equilibrium between hand and brain, intellect and emotion, so that controlled expression with an awareness of the senses could be possible. Man was in need of both insight and intellectual power to utilize the entire body of his culture.

Education must be the opportunity to make one's own discoveries and to form one's own expression, providing the purposeful fusion of social tradition with the individual's experience, practice, and conclusions. The knowledge of historical continuity is one of man's most valuable stepping-stones in his evolutionary progress. The purposeful accumulation of experiences can protect him from the repetition of mistakes, so that his creative power can gradually be saved for socially productive tasks. This productivity should be the alpha and omega of education, the translating of all the elements of learning into a creative sociobiological living. (2)

Where Walter Gropius was interested in influencing society at its upper educational limits by special education for the gifted, Moholy-Nagy ten years later drew attention to the dangers of poor teaching in the elementary schools.

1 ibid., p. 22-3.
2 ibid., p. 23-4.
When this country (America) also comes to realize the importance of competent teachers in kindergartens, elementary grades and high schools as well as in the universities, and pays them adequately to secure the calibre of teacher who will really teach, and not merely relay information, an important step towards better education will have been made. (1)

The schools must know the techniques of developing the natural equipment of the child in the most formative years of its youth.

Of the three Bauhaus artists looked at here, Gropius had provided the original organizational framework, within which the creative and practical aspects of the twentieth century could be integrated. In America, through the work of The Architects' Collaborative, he had provided the physical environment for a changed attitude to education. Albers had shown how it was possible to explore a specific aspect - colour, and push back the frontiers of knowledge in this field, until a skilled discipline was revealed, that was able to be a basis for much more creative work. Moholy-Nagy, through his concern with the organization of schools, provided practical educational models that could be used to stimulate creative thinking in design at all levels of art education.

This stressing of teacher responsibility in Moholy-Nagy, and Albers, suggested their Bauhaus backgrounds, but it was also a reaction to conditions in American education that appeared to place an inordinate value on individualism. The Bauhaus teachers coming fresh from Germany, perhaps saw the weaknesses of the system more surely. Their short experience of governmental backing for education in Germany and its collapse under totalitarian pressure, had given them insight into the way feelings could

1 ibid., p. 24.
be manipulated for disastrous ends.

The course they set for art education was to provide a calibre of student, strong in knowledge, and principles. When the number of areas in which Bauhaus teachers were at work is taken into consideration, the impact of this more disciplined approach can begin to be gauged.
Textbooks

The following textbooks on art education published in America owe their origin to Bauhaus thinking, and they form a significant sequence. The New Vision by Moholy-Nagy (1930), The Language of Vision by Gyorgy Kepes (1944), Vision in Motion by Moholy-Nagy (1947), The New Landscape in Art and Science by Gyorgy Kepes (1956), and Structure in Art and Science edited by Gyorgy Kepes (1965). Moholy-Nagy might be considered as second generation Bauhaus, in that he was regarded as young blood joining the staff when he first began teaching there. Kepes could be considered third generation, in that he was a friend of Moholy-Nagy and taught under him at the Institute of Design, Chicago. All books shared the educational aim of integrating more closely the arts, sciences and technology and all were examples of attractive and efficient book design that have set standards for educational texts.

The New Vision

The New Vision was called by Gropius the "standard grammar of modern design". The work was conceived as a result of lectures given by Moholy-Nagy at the Bauhaus when he was responsible for the preliminary course. It was first published in German in 1923, and a revised English edition came out in 1930 and 1938. A 1947 edition came out because of the demand and Moholy-Nagy added the Abstract of an Artist, which was an analysis of his own aesthetic development. The book used Bauhaus typography, which Moholy-Nagy had been instrumental in designing. It had some large plates without margins and the text was supplemented by small illustrations in the left hand margins with detailed descriptive text.
The text generally was divided into four parts, Preliminaries, The material (surface treatment and painting, Volume (sculpture), and Space (architecture). The first part stated the assumptions behind his work. These were that, the text was meant for those interested in art, research, design and education, and the processes outlined, were meant to keep alive in adults the child's sincerity of emotion, truth of observation, fantasy and creativeness.

Intensive and repeated preoccupation with the elements of creation heighten his (the students) discrimination between dilettantish and superficial design on one side, and fundamental organic design on the other. It is the practical exercise and the pleasure in sensory experiences which lead him to a security of feeling, and later to the creation of objects, which will satisfy human needs that are spiritual as well as utilitarian. (1)

He saw the problem of the age as "the reconquest of the biological basis of human life". A human being was developed by the crystallization of the whole of his experience. Man's individual needs should be matched against motives of technology and economic profit. He saw art education as searching for "those timeless biological fundamentals of expression" which were meaningful to everyone. The Bauhaus had attempted this by working as a group in the quest for the essentials of design, and had succeeded in uniting artistic, scientific and workshop training and changed the vision of the twentieth century - its furniture, its lighting, its textiles, its household appliances, its houses. Specialization was important but it should not stunt man's living in relation to his work, his recreation or his leisure.

Under Material (surface treatment and painting) the assumptions he had stated were made clearer. Exercises in surface treatment encouraged observation, imagination and creativeness, as they pass from free expression, to challenging limitations, to experimental application and finally, practical use. The sense of touch was critically analysed into pressure, pricking, rubbing, pain temperature vibration. Terminology was also defined. For instance, structure referred to chrystalline or fibrous forms, texture could refer to wrinkled skin, surface aspect to a beaten bowl or a gramophone record, and massing the visual impression of massed open umbrellas. He analysed the fundamental expression of modern art since Cubism as a continuing change in surface quality from the limits possible in paint, to collage and assemblages, to finally the absorption of the surface in the atmosphere and the play of light itself. (1)

Under Volume (sculpture) tactile sensations were explored through exercises in making hand sculpture in much the same way as texture had been explored previously. Five stages of volume modulation were listed, blocked out, modelled or hollowed out, perforated or bored through, equipoised or suspended, and kinetic or moving. This development of sculpture from block to motion was also a characteristic of the history of sculpture. He suggested a movement, in the future, into sculpture with light. This stage of development was already recognized in certain commercial lighting of the time, but it had yet to be developed aesthetically. Moholy-Nagy also at this stage attempted an outline of a "general system of elements" of artistic creation. It was based on the

1 ibid., p. 23-40.
relation of forms already known, such as the mathematical, and biotechnical, and free forms. The production of new forms could be founded on relations of measurements, different aspects of material or light.

These relationships of forms became effective as contrast, derivations and variations. The last named being divisible into relationships of shifting, dislocation, repetition in series, turning or mirroring, or combinations of these. The whole system was applicable to art both static and kinetic. (1)

Under Space (architectural) he began by listing forty-four types of space from mathematical to limitless. Architecture was not primarily a matter of characteristics, such as the rose window, but a quality of space. How this generation solved spatially its social, economic, technological and hygienic problems depended the fate of the next generation. The conflict between the organic and artificial had to be solved, with due recognition to the human element of society. (2)

The Language of Vision

The Language of Vision by G. Kepes published fourteen years after the New Vision, covered similar ground, only this time there was greater acknowledgment of the work of the Gestalt psychologists, M. Wertheimer, K. Koffka and W. Kohler. It was curious that Kepes made no verbal acknowledgment of the influence of Moholy-Nagy or mentioned their association at the Institute of Design, Chicago, where Moholy-Nagy had placed him in charge of the course on Visual Fundamentals. He did, however,

1 ibid., p. 41-55.
2 ibid., p. 56-64.
use work by students in those classes and twelve of Moholy-Nagy's works were used as illustrations.

The book was not as general in its scope as Moholy-Nagy's work, and concentrated on painting, photography and advertising. The text was divided into three sections, Plastic Organisation, Visual Representation and Towards a New Iconography. The first and last sections were comparatively brief. The major part of the work was concerned with a more extensive analysis of the section Moholy-Nagy had termed "Material". Termed by Kepes "visual representation", he considered it under twenty-three subdivisions. A further subheading "Light and Colour" under the same section made use of a further thirty subdivisions. Headings such as "Sources of Movement Perception, "Social and Psychological Motivations", and the "Psychological processes of Making" revealed the influence of the psychologist on his thinking. Kepes had recently taught at the North Texas State Teachers' College and at Brooklyn College, and the layout of the book suggested a specific teaching course with each unit acting as a stimulus for further elaboration.

Vision in Motion

Vision in Motion was published after Moholy-Nagy's death in 1947 but every detail of the production had already been planned. It broke new ground in presentation, in that text and illustrations were more closely integrated and designed. Comments on both illustrations and text were incorporated in the layout. This meant that Moholy-Nagy's statement on the Bauhaus could be read alongside A. H. Barr's comments in the book "Bauhaus 1923-28". The cumbersome turning back for notes
was eliminated. This marginal space was used by the author himself to comment further on a text. Moholy-Nagy’s general approach had also become more socially conscious and he considered his book in the nature of an attempt to add to the politico-social bill of rights, a biological one, asserting the interrelatedness of man’s fundamental qualities.

Moholy-Nagy’s concept of education was in a sense universal insofar as he concerned himself with creative citizenship. This was not a condition that could be imposed, but should arise from the relatedness and happy participation of educational experience in both the school situation and beyond. Workshops, plays, symposiums and political discussion would help disseminate ideas throughout the community.

In America, private patronage had developed in a haphazard way the instruments of social development, such as universities, museums, and art institutes. What was needed were thriving agencies striving for the co-ordination of activities and striving for a synthesis also to be translated into terms of common understanding. These centres of activity would operate at Educational, Regional and Global levels. They could consist of assemblies of outstanding scientists, sociologists, artists, writers, musicians, technicians, and craftsmen, giving their attention to the roots of our intellectual and emotional heritage. For example, town and country planning, nutrition, function of museums, television, general and higher education, village colleges, crime and rehabilitation, economics and government, could all profit by this sort of interrelated experience. Material from these assemblies could be published and disseminated in other ways. (1)

He saw these assemblies in their highest form as the nucleus of world government.

In accepting the responsibility of initiative and stimulus, it could serve as the intellectual trustee of a new age in finding a new unity of purpose; not a life of metaphysical haze but one based upon the biological justice to develop all creative capacities for individual and social fulfillment. It could write a new charter of human life, culminating in the right to and the capacity of self expression (the best bond for social coherence) without censorship or economic pressure. (1)

The last sentence implied a full exploration of man's expressive capacities, the first implied an understanding by man of both his own and societies potential. In the subtleties of these relationships the new unity of purpose for mankind would arise, and in the words of the last sentence of his book "it could translate Utopia into action".

Moholy-Nagy was convinced that the people of his day accepted technological change, in the pragmatic and intellectual spheres, quickly and readily, but in the emotional sphere they clung to obsolete standards and empty conventions of the past, regardless of logical argument, even if it was in their own interests. Nevertheless, he saw his book as an attempt to break down this barrier and introduce an understanding and appreciation of the interrelatedness of art and life.

...this book is an attempt to add to the politico-social a biological "bill of rights" asserting the interrelatedness of man's fundamental qualities, of his intellectual and emotional requirements, of his psychological well-being and his physical health. (2)

1 ibid., p. 5.
2 ibid., p. 6.
This emotional and visual literacy, for which he was striving, would eventually affect education from the kindergarten to the university, and give people the power to articulate their feelings in spheres they had not previously known existed.

The contemporary arts try to establish a new morality and a new ethics not hampered by metaphysical absolutes. Within this large scheme the work of the Institute of Design, Chicago, stands as a laboratory of the new trends. And though its investigations have been centered around the training of the industrial designer, my hope is that the principles and the scope of its program, as they are outlined in this volume and as they will be reported on also in future "i.d." books, will become an incentive to our whole general education, from the kindergarten to the university. (1)

Having given approximately a fifth of his book to explaining the basis for his theories, Moholy-Nagy gave another fifth to outlining the course he had designed for the Institute of Design, Chicago. The remainder of the space was given to an integrated analysis of the arts of painting, photography, sculpture, the film, other space time arts, literature and poetry.

The New Landscape in Art and Science

Gyorgy Kepes' second book *The New Landscape in Science and Art* appeared to have benefited from the approach used in *Vision in Motion*. The layout was much more imaginatively treated, and Moholy-Nagy's ideas of incorporating parallel texts was even more richly used with quotations from the writings of artists, scientists, philosophers, etc. Though the book was mainly visual, the verbal content was highly significant because of the breadth of comment collated. He seemed to be putting into practice

1 *ibid.*, p. 6.
Moholy-Nagy's scheme of agencies for common understanding. Seventeen people of significance in their field contributed brief essays. Five in the fields of literature and the arts, five from the sciences and mathematics, three educators, two architects and an engineer, psychologist and art historian. The bringing together of the arts, sciences and technology, seemed particularly meaningful. Page 354-5 for example, contained drawings by Professor Hans Haffenrichter of Polystyrols, the roof of Nervi's Exhibition Hall, Turin, and R. Buckminster Fuller's Model of Discontinuous Compression Structuring.

Charles Morris, one of the educators, stated the book had left him with the feeling of "a collapse of the sense of opposition between organic and ignorant process and between human and other than human phases of nature". The experience was one of gain as one became aware of the similarity of structure within and without our environment. Man's cultural perspective on earth and his spatial and temporal perspectives in the universe were, in fact, related in comprehensible terms. (1) Quoting L.L. Whyte's *The Unitary Principle in Physics and Biology*, Képes was prepared to emphasise structure as the key to our knowledge and control of the world — structure more than quantitative measure and more than relation between cause and effect. (2)

2 ibid., p. 173.
Structure in Art and Science

Gyorgy Kepes last book *Structure in Art and Science* seemed almost a materialisation of Moholy-Nagy's agency for the co-ordination of activities and synthesis of ideas that was to give Utopian qualities to world government. Not long after his appointment as Professor of Visual Design at the Massachusetts Institute of Technology, Kepes began conducting seminars with the participation of scientists, architects, and artists.

It was hoped that students might gain confidence that they could combine and reinforce their knowledge with the knowledge of other fields by stimulating the circulation of ideas and feelings, finding channels of communication that interconnect disciplines, and suggesting the interconnectedness of the world as a whole. (1)

*Structure in Art and Science* contained an introduction and series of "visual documents" by Kepes, but the rest of the book was composed of short essays by men who had made a significant contribution to the thought of their chosen field of study. For example, Buckminster Fuller contributed in the field of engineering, Luigi Nervi in architecture, and I.A. Richards in the field of communication. It was noteworthy that fourteen of the sixteen contributors were teachers, in the sense that they claimed to be teachers or they had engaged in lecturing activities.

In I.A. Richards' article, he made the following statement:

Constructive, forward-looking and responsible sequencing is hardest to design near the beginning of any subject. And there near the beginning, what you do not do matters most. It is there that the cognitive patterns, or sets, are formed. Later on in the subject you have indefinitely more choices open and just what you do next makes less and less difference; we have less to learn there about learning. (2)

He was talking of "Structure and Communication" in his own verbal sphere, but it had wider implications, for it was this introduction to the elements that had been important in the work of Wesley Dow and Ralph Pearson, and in the basic courses of the Bauhaus and the Chicago Institute of Design.

In looking at this series of books, a pattern appears to emerge. What began, in a practical way in the German Bauhaus as a relationship between art and technology, had become through the Massachusetts Institute of Technology, a consideration of structure and communication all-embracing in its implications. Participation of men of the calibre who had contributed to Kepes' book, (and Structure in Art and Science was only the first in a series) augured well for the significant editing of experience from all fields of knowledge. The relationship between art and technology had merged itself into an even wider unity, with positive social implications.

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General Education in a Free Society

In the American academic sphere, the relative value of verbalized skills, and expression on a visual and technological plane, was and still is a cause of some dilemma. Moholy-Nagy had drawn attention to it and Kepes had become involved in practical means of approaching the problem.

The Harvard report on General Education in a Free Society was evidence of ambivalence of thought in the matter. It stated that "for purposes of general education, art should be experienced in as many forms as possible from early infancy", but in the same paragraph it went on to say, "it may be doubted whether formal courses in these subjects should be required of students in the secondary schools". (1) The report thus mitigated against experience in depth, except for those who were specially gifted and chose to study the subject. The report admitted that aesthetic education in the principles of colour and form should equip a young person with standards of judgement he could apply in a wide range of experiences. It acknowledged that the public were patrons of the arts and there was a need that they be knowledgeable in their decision-making on things that concerned daily living and public spending. It also said, however, that for the average child, art's value was as a leisure-time occupation and one that led to the general enrichment of experience. (2)

2 ibid., p. 132.
As a result of his experience as Eliot Norton Professor at Harvard, the report on the Committee on the Visual Arts at Harvard issued in 1956, the artist, Ben Shahn, was very critical of the academic point of view. Harvard was concerned that the university's attempts to bridge the gap by the appointment of artists as teachers had not been a success. The artists failed to fulfil their early promise. The report stated:

In too many cases, unfortunately, the artist-teacher gradually develops into something else: the teacher who was formally an artist. Too often the initial basis for appointment was fallacious. In their desire to find an artist who would "get along" with art historians, the department acquired a colleague who got along well enough but turned out to be neither much of an artist nor much of a teacher. Few artists are sufficiently dedicated to teaching to make a career of it. Over a long time the danger is that the artist will produce less and less art while still preserving the attitude that his teaching is of secondary importance to it. (1)

Shahn suggested three major factors that could be relevant.

First, the subject itself was not considered as sufficiently professional by other disciplines, and the idea of incorporating the artists studio within the university was surrounded with similar prejudices as that which had once surrounded the incorporation of the scientists laboratory. (2)

By putting together selected statements from the report of the Committee on the Visual Arts and adding his own comment, he revealed the universities failure to grasp the field of the arts as a fundamental discipline.

2 ibid., p. 14.
(On page 10, for instance, we read): The Committee believes that the visual arts are an integral part of the humanities and, as such, must assume a role of prominence in the context of higher education. (Yet on page 66, we find): It is still doubtful if a student at Harvard can find space or time to apply himself seriously to creative work in the visual arts. (On page 9, the enlightened comment): At no moment in history since the invention of printing has man's communication with his fellow man been so largely taken over by visual media as today. (But on page 65 we read the following): We do not propose to inject the art school into academic life, but rather to give the experience of art its rightful place in liberal education.

(I wonder whether the university would also suggest offering the experience of calculus, of solid state physics; the experience of French or German; the experience of economics, of medieval history, of Greek.) (1)

Second, the apparent fear some universities in the U.S.A. had of creativity itself. Originality was consciously subordinated to the surveying, categorising and analysing of aspects of knowledge. While this may have been true of the universities he knew, his statement of the role of the scholar appeared to deny him the originality of discovering relationships, that he championed in the artist:

These (academics) have no need to create something new. It is enough that they discover the old and bring it home to the common consciousness in all its radiance. (2)

Third, the lack of understanding of the nature of the artist and the nature of his work. The feeling that the artist was a sort of mad genius who did not know the import of what he was doing. To quote from the Visual Arts Report.

1 ibid., p. 16.
2 ibid., p. 21.
It is a curious paradox that, highly as the university esteems the work of art, it tends to take a dim view of the artist as an intellectual. ... one encounters the curious view that the artist does not know what he is doing. It is widely believed and sometimes explicitly stated that the artist, however great his art, does not genuinely understand it, nor its place in the culture and in history. (1)
THE PROFESSIONAL ART EDUCATOR

Manuel Barkan

How has the professional art educator responded to these pressures of the twentieth century? Professor Manuel Barkan, Professor of Art Education in the School of Fine and Applied Arts at the Ohio State University, has made a significant contribution. He has conducted research into creativity, published a book on teaching method called Through Art to Creativity, and his article "Transition in art education: changing conceptions of curriculum content and teaching", first published in Art Education, has been republished in Eisner and Ecker's Readings in Art Education.

Professor Barkan's pilot studies for research into creative behaviour were first published in the Seventh Yearbook of the National Art Education Association in America. One of these studies was reproduced in the Journal of the Society for Education Through Art in England in 1959-60. This study aimed through an exploratory study of creative activity to develop more precise procedures for handling observational data; to select areas for more detailed observation; and to use this knowledge to help students to develop insight into their own creative potential.

The research team consisted of two educators, one research psychologist and one doctoral candidate in psychology. The subjects were chosen at college level. Three "creative students" selected on the "customary judgement" of instructors in the School of Fine Arts, were invited to participate but were only told that this was a study of art students. (1)

An observer was assigned to the particular students' class and made direct observations of specific things they did while engaged in art activities. Each student was given psychological tests (Rorschach and Bellevue) which were independently administered and interpreted, and anecdotal material was provided by the students' instructors. The research team held weekly case conferences where data from the above sources were brought together and analysed. The study lasted for nine weeks.

As a result of the study, the terms "concept bound" and "percept bound" were devised as hypothetical extremes on a continuum of creative activity. CONCEPT BOUND implied a person who tested experience against previously held expectations... "he tends to reject sensory data that does not conform with his expectations; he tends to reconstruct data to fit previously held concepts". PERCEPT BOUND implied a continuous testing of theories against experiences... "he would modify his rationale to account for new and unexpected happenings. He would, however, encounter difficulty in focusing for action". (1) Three hypotheses for future study emerged:

a. A creative person is sensitive to a broad range of possibilities, but he is also aware of the necessity for decision-making and action. He is able to tolerate ambiguities and uncertainties in weighing alternatives, and is able to focus on an alternative he has selected for action.

b. If education would provide the widest possible range of choices students can tolerate, while remaining able to focus alternatives for disciplined action, and, their behaviour would grow increasingly creative.

c. If the nature of choices in a teaching situation allows the individual to transform them into his 'private task', his behaviours will tend to be more rather than less relevant to the general 'official' educative task of fostering creative activity. (2)

The task ahead was to test these hypotheses in the teaching situation.

1 ibid., p. 10.
2 ibid., p. 11.
Manuel Barkan's book *Through Art to Creativity* was also in the nature of a research study. He chose eighteen good teachers of art, as recommended by administrators and friends, from kindergarten to sixth grade. He made a record on tape of a number of their lessons and, at the same time, a record on film of their class activities. Each alternate chapter was a selection from this record. Every other chapter was an analysis of how each teacher's personality affected her theoretical approach. Such things as the developmental achievements of the children, what the teacher talked about, how they organised their classroom time, how they used available space, and the children's work, were all taken into consideration.

His conclusions were that good teaching of art occurred at all levels with class teachers, art specialists, and with class teachers who functioned with the help of specialists. It was on the whole, rarer for a class teacher to be a good teacher of art because of her isolation from sources of stimulus. The specialist teacher, on the other hand, had the disadvantage of not seeing the children sufficiently and not being, therefore, able to integrate her work so closely with classroom experience. The system of class teacher plus a specialist adviser, seemed to offer the most advantages to the child. The specialist could introduce work and by studying its progress, make a further contribution herself or give advice to the class teacher on how to proceed. (1)

The main characteristics of a good art teacher that emerged from his study were, broadly, those of a knowledge of the subject and an understanding of children. Good teachers were enthusiastically appreciative of child

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work but they never just gave children material and left them alone, they presented them with stimulating and challenging situations.

They imposed no arbitrary restriction, although activities could be quite specific. They encouraged children to find their own ways of expressing their own ideas, but they also required them to be tolerant of the ideas of others. Teacher personality, in the group studied varied from the energetic and enthusiastic to the calm and reserved, but none could be described as passive. (1)

Barkan described the aims of good art teaching as follows:

(teachers aimed)...to encourage their children to reveal their own feelings through their art activities, and to become sensitive to the feelings expressed in the art works of other people.

...to help their children discover how art materials can be used for the creation, development, and refinement of ideas.

...to encourage children to improve their judgement through increasing sensitivity to the nature of organic unity in works of art. (2)

Effective teaching was very dependent of the creative ability of the teacher herself and her appreciation of art past and present.

Manuel Barkan's article in Art Education, 1962, looked ahead, and attempted to pinpoint areas of change in the approach to art education. He isolated "three clusters of assumptions". The first concerned whether a person being educated in art should be treated as a "whole" person or as an artist. The second concerned the criteria for understanding and judging a work of art. The third was concerned with the idea of encouraging individual expressiveness, particularly as regards the use of a variety of media. (3)

1 ibid., p. 351-2.
2 ibid., p. 348-9.
To help him explore these areas, he drew on the history of art teaching itself, the history of contemporary art, and the work of the psychologist, J. S. Bruner, and applied them to American art education.

The first assumption had arisen from ordinary teachers' reactions to the expressive nature of much twentieth century art. Lacking both knowledge and personal experience of creativity activity, they came to regard art as almost a therapeutic activity. This feeling amongst teachers had reached such a level that it was possible for one of them to write in the Journal of the National Education Association in 1949 -

As an art teacher, I believe that... art experiences are essential to the fullest development of all people at all levels of growth... art is specially well suited to such growth because it: encourages freedom of expression... art classes should be taught with full recognition that... art is less a body of subject matter than a developmental activity. (1)

It was such approaches as this which had helped the subject of art to be regarded administratively as purely marginal.

It was in the field of science that Barkan felt the clearest statements had been made on the need for an awareness of the fundamental structure of the subject, while not denying the personal developmental values that might follow from its study. He quoted from J. S. Bruner:

The Process of Education.

The dominant view among men... engaged in preparing and teaching new curricula... lies in giving students an understanding of the fundamental structure of whatever subjects we chose to teach.

... Intellectual activity anywhere is the same, whether at the frontier of knowledge or in a third grade classroom. What a scientist does at his desk or in his laboratory, what a literary critic does in reading a poem, are of the

1 ibid., p. 422.
same order as what anybody else does when he is engaged in like activities - if he is to achieve understanding. The difference is in degree not in kind. (1)

These statements on an awareness of structure, an awareness of degrees of intellectual activity, and the relevance for the learner of the attitudes of the craftsman, could all be paraphrased to apply to art teaching. In the following quotation this substitution has occurred.

The schoolboy learning art is an artist, and it is easier for him to learn art behaving like an artist than doing something else. (2)

The first cluster of assumptions thus made dual demands of the teacher as an artist, knowledgeable about creativity, and as an educator, knowledgeable about the child's physical, emotional and intellectual growth.

The second cluster of assumptions, understanding and judging of a work of art, had moved historically from an exclusive reference to the classics, through a period when the influence of any adult art on the child was considered bad, to a growing contemporary emphasis on surrounding the child with great works of art both old and new. The latter approach depended on a belief that the capacity for sensitive and knowledgeable judgment rested, in large part, on insights gained through acquaintance with a careful study of great art. It revealed itself in the more varied approach adopted by books on art history. Rene Huyghe and E.N. Gombrich were quoted as examples. Barkan analysed his editions of School Arts, a popular art education magazine, to find that it was not until April 1957 that a regular feature "Understanding Art", which analysed and criticised the works of professional artists, began to be published. (3)

1 ibid., p. 423.
2 ibid., p. 423.
3 ibid., p. 425-6.
The third cluster of assumptions had been influenced by three main sources. Firstly, the Progressive Education and child study movements, which were encouraging the exploration of the sensuous pleasure children derived from a whole variety of new material from thick tempera colour to clay. Secondly, twentieth century artists from Picasso and Braque onwards, had begun to set no limits on what could be used in the making of a work of art. Thirdly, the Bauhaus aesthetic ideology which concerned itself with the nature of materials and the almost limitless potential of their treatment with a great variety of tools. If the century had begun with only limited media, such as pencils, crayons and watercolour being used in schools, art magazines of the sixties suggested everything from birdseed to eggshells. Variety of media had become amongst some, a criteria of excellence in itself. (1) There was great value in variety of media but only if it was used as the artist used it - to select a means of expression, to master it, and exploit its powers of expression.

The whole article of Manuel Barkans represented a plea for art education of today to select its goals, with and intelligent grasp of the work of an artist, and an understanding of the child, and to state these goals with a clarity that showed an awareness of the points at which it was being challenged by contemporary thought. (2)

1 ibid., p. 427-8.
2 ibid., p. 128.
Irving Kaufman

A book on art method published in America as late as 1966, contained specific references to the relationship between the artist and the teacher.

Irving Kaufman, a member of the art faculty at the City College of the City University of New York, and an exhibiting painter, was considering the artist as an exemplar for the teacher of art.

Art education aims specifically for this third reality—the concrete artistic expression—but remains dependent upon the other two conditions. The symbolic transformation that brings this about would seem to come most intensely and truthfully through personal discovery. Thus learning in art must be guided as a finding out, a looking into, an internal probing and an external seeing, an intense and natural exploratory process that uniquely synthesizes the disparate elements of experience into a concrete shape, with the prize being twofold—a greater sense of self realization, and the creating of aesthetic forms that commune and communicate with people and conditions of a developing culture.

The most insightful source and model of expressive eloquence and authentic value to utilize in this aim is the artist himself. His creative restlessness, his passionate commitment, his ongoing search, and his inherently aesthetic viewpoint are all elements in a working process that teachers and students alike may confidently be guided by. (1)

Frederick Logan

This effort to seek some sort of relationship between the professions of artist and teacher was subject to investigation on a sociological level by Frederick M. Logan in an article entitled "Artist in the classroom;..." The third reality is a reference to Rene Huyghe..."the artist cannot reproduce the outer world without by the same token revealing his inner world and vice versa. In the work of art, each world lives only through the other, each can be conceived only with the help of the other, thus creating between them a third reality..." Rene Huyghe: Ideas and Images in World Art, H. Abrams, N.Y; 1959, p. 405.

1 I. Kaufman, Art and Education in Contemporary Culture, N.Y: Macmillan, p. 520.
A modern dilemma. The relationship was fraught with complexity in terms of professional prestige and relationships with the community. The view of the artist as the sophisticate in art and the art teacher as the provincial, was widely held. Insofar as many art teachers also believed this, it could lead to a limited view of the potentiality of contemporary art and art education. There was a need for the profession of art education to be replaced by a study of the arts in a humanistic tradition. (1)

The professional pride of the teachers of art should be equal to that of the artists, designers, and architects, for they also were responsible for a very complex task. They were required to use effectively a knowledge of art history, practical competence, an appreciation of modern art movements, and an understanding of aesthetics, to plan a programme of art experience which could be suited to any age group from infancy to adulthood.

It was significant that although the teacher and the artist in America shared certain aspects of their training, they also shared a generally lower income bracket than the architect or designer, whom the community seemed to value more highly. Artist and teacher were inclined to share a provincialism of a slightly different character. The teacher was often provincial in that he was isolated by the nature of his postings from art centres, while the artist tended to be a metropolitan provincial in that he was isolated from the thoughts and feelings of people outside his own small group of associates. (2)

2 *ibid.*, P. 433-43.
However, the artist's work was increasingly discussed and publicly approved and he was asked for his opinions, while the teacher's professional work was subject to considerable adverse criticism. The teachers' opinions were not often asked for, and art teachers tended to be left off curriculum committees.

A most important difference between the profession of the artist and that of the art teacher was that, while the artist was at liberty to detach himself from society as much as he wished and his work could become more interesting as a result, the teacher had to be involved with society as it existed. It was not expected that the artist be skilled in the use of words, the teacher, however, was expected to have greater sophistication in the humanistic studies and to have undertaken the appropriate academic work.

In aiming to expand the quality and quantity of public understanding of the visual and plastic arts, it was quite likely that the teacher be called on to give courses that were not practical at all, but concerned with art history, art appreciation, and surveys of current trends in art, architecture, and design. Such teaching in the arts inevitably pushed the teacher closer to the scholarly concerns of the philosopher, the critic, and the historian, and away from the practical experiences of the artist. While intellectualism of this kind was not in itself a bad thing, its isolation from practical experience in the field of art could create again in another form the approach to art teaching that marked the end of the nineteenth century and against which the first half of this century had revolted. (1)

1 ibid., p. 433-43.