Design Education and the Development of Affect

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April 1982
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How does knowledge about affective development relate to the tasks of the school and the practices of the teacher? One of the benefits of such knowledge is that it helps teachers understand the emotionally based causes of students' behaviour. Anger and aggression may be based on frustration of the children's goals, a direct or indirect attack on their values, or a threat to their beliefs about themselves. Excessive fearfulness can come from anticipated failure on a test, peer rejection, or failure to understand why their parents quarrel at home. Another benefit is that it helps teachers influence events in the classroom in such a way as to encourage the growth of a healthy personality.

The classroom is the place where children could be encouraged to acknowledge their own pictures of themselves as for example, an 'irresponsible youngster' or an 'antisocial delinquent'. The only real difference between a 'normal' child and 'delinquent' is one of degree. A normal child will test her power to destroy, to frighten, to wear down, to waste, to wangle and to appropriate. Everything that takes people to the courts (or to psychiatric units) has its normal equivalent.

In order to help pupils develop into mature adults it is necessary to initiate the kind of activities that will facilitate affective growth and to create the kind of environment in which this is most likely to occur. Too often emotion is ignored in education, yet school years are of paramount importance in the development and integration of a well-balanced personality.
**Affect**

Affect is a term that is often used as if it were synonymous with emotion and/or feelings. However, certain discriminations have been made between these three concepts.

One discrimination (by Ewart, 1970) makes affect and emotion interchangeable but states that they are based on interpreted changes in feelings. In this definition, a neutral feeling is taken as a baseline and any perceived change of feeling is called an affect (or emotion). Changes in feelings are accompanied by parallel changes in the central nervous system. The central nervous system is made up of structures in the brain and spinal column and is responsible for such things as muscle tension, hormone levels, and glandular activities. It is possible for changes in the basic rate of heart beat or blood-sugar level to occur without the person being aware of them. These changes would not, therefore, be interpreted and consequently would not accurately be called emotions or affects. Once they are perceived, the person interprets them within the context in which they occur. For example, a rapid heart beat and rush of adrenalin could be interpreted as either fear or excitement. The important thing to remember is that there is a relationship between (1) the event, (2) the feeling, and (3) the interpretation.

Another way of discriminating between the concepts has been to suggest that the strength of the feeling determines whether it is merely an affect or a more enduring emotion (Millenson, 1967). In this definition, an immediate response is termed an affect as, for example, surprise; while a more long term feeling, say anger, is termed an
emotion. In this classification the affect occurs within a particular emotion e.g. irritation may occur within anger while anger may occur within hatred.

Another analysis (Izard, 1972) refers to nine fundamental and innate emotions. These are: Interest, Enjoyment, Surprise, Distress, Disgust, Anger, Shame, Fear and Contempt.

There have been many approaches to the study of emotion including neuro-physiological, behavioural, cognitive and psycho-dynamic. The only real common ground is an agreement that a person's emotional state influences their perception, behaviour, motivation and judgement.

In the cognitive view of emotion 'appraisal' is an important concept. It is used to describe a state of mind which eventually attaches a label to changes in feeling. Mandler (1975) says that environmental stimuli lead to cognitive interpretation which results in the perception of arousal. This, in turn, leads to the emotional experience which leads to the perception and evaluations of the experience which ends with a change in the original cognitive interpretation leading to further continuation of the chain of events. The way it works is as follows: neurophysiological arousal occurs due to environmental stimulation, this lends itself to cognitive interpretation and the way this is consciously perceived and experienced influences the action which results.

The three major traditions in the study of emotions are:

(1) Expressive and behavioural, based on Darwin's theory of evolution.
(2) Feeling and brain structure, based on William James' idea that we don't run because we're afraid, but rather are afraid because we run.

(3) Developmental and psycho-analytic, based on Freud's idea that our emotions may not be accessible to our awareness.

The first of these approaches places emphasis on emotional expression such as increases in rates of defecation and urination during fear. The major concern of the second of these approaches has to do with the sequence of events relating perception, feeling and bodily states. This approach stresses the link between neuro-physiological events, physical sensations and affective states. Finally, the Freudian model introduces the idea that emotions may be unconscious thereby de-emphasising the feeling aspect of emotion.

This brief survey of some of the views expressed by psychologists on the topic of 'affect' permits a definition that will be useful within the context of design. Namely, that affect is a change in feeling and is closely related to emotion, but emotion is stronger and more enduring than an affect. Cognition is involved in the interpretation of our emotions; such interpretation is based on a perceived change in our 'neutral' feeling state.

Our emotions influence our judgements and the way in which we perceive our environment which in turn influences our behaviour. Values are placed on emotions. Envy and lust have negative values and shame, guilt and remorse are in themselves moral notions. Attitudes toward sex-appropriate behaviour for boys and girls result in girls being allowed more emotional expression than boys as the values of our society maintain that men should 'keep a stiff upper lip'.
The next section will be concerned with attitudes and values in order that the relationship between them and the development of affect may be more clearly understood.

Attitudes and Values

Attitudes and values are important because they transform an individual's world from a small set of perceptions into a vast universe made up of such components as good and evil and passion and apathy. They colour our conceptions of the world. Values are intertwined with emotions because they are what a person wants to be true (as opposed to what she knows to be true). Values refer to what a person considers to be desirable, for example, happiness, fame, wealth. Values include a certain amount of goal-related behaviours, so that if somebody's values include that of 'lawfulness' we should expect her to avoid breaking the law herself as well as avoiding the company of 'offenders'. Attitudes are directly dependent on values and combine cognitive and affective components. Any one value held by an individual may influence a wide variety of her attitudes. For example, valuing "good health" could result in negative attitudes to smoking and crowded underground trains but positive attitudes to diet and exercise. Any one attitude may be based on several values. For example negative attitudes to smoking may be based on a desire for good health, an unpolluted environment and a drug free population.

Attitudes are acquired through the socialization process to which we are all subject. Our parents, our education, our religious background, our community, society and culture, all mould us from a very early age.
Attitudes help us to organize our emotional responses to the material world, identify with or differentiate ourselves from other people and cope with our inner psychological concerns. A person's hatred of Fascists, or love of animals may play a substantial part in her inner emotional life even if she has little chance to express either attitude in the real world. Such strong inner enthusiasms may contrast with the routine dullness of everyday life in a "Walter Mitty" kind of way until such time as an appropriate manner of expression becomes available. This could take the form of joining in a demonstration or some other group activity; projecting the feelings onto people or objects representing these ideas or even expressing them in some externalized fantasy such as acting in a play or making some non-verbal symbol.

Non verbal symbols that stand for attitudes both express and tend to arouse emotional responses. They include such things as making a fist, showing a V for victory, or reversed V sign to somebody, dressing - according to a particular style, drawing a swastika or sculpting a representation of either the event (e.g. an innocent dolphin being threatened with death) or the emotion (e.g. a bust of a contorted face). Of course there is no end to the variety of ways in which the emotional component of attitudes can be expressed but what is important for the individual is that she has an outlet for pent up emotions within a context that is able to contain them.
Values and their relationship to affect

Bloom (1956) divides his taxonomy of educational objectives into three separate headings, one of which is the affective domain. The other two are the cognitive and the psychomotor domains.

Under the affective domain he lists objectives which emphasize a feeling, an emotion, or a degree of acceptance or rejection and includes interests, appreciations, values and emotional biases. He also mentions the artificial nature of his three divisions as people usually respond as 'whole beings' and combine thinking, feeling and acting. He points out that despite this, formal education does tend to make distinctions between them and priority is given to objectives in the cognitive domain.

Bloom wishes to focus some part of the educational process onto the development of affective components within the child by means of a gradual process which he calls internalization. Internalization is a continuum which appears in the following sequence:

1.0 Receiving (attending)
   1.1 Awareness
   1.2 Willingness to receive
   1.3 Controlled or selected attention

2.0 Responding
   2.1 Acquiescence in responding
   2.2 Willingness to respond
   2.3 Satisfaction in response
3.0 Valuing
   3.1 Acceptance of a value
   3.2 Preference for a value
   3.3 Commitment (conviction)

4.0 Organisation
   4.1 Conceptualization of a value
   4.2 Organization of a value system

5.0 Characterization by a value or value complex
   5.1 Generalized set
   5.2 Characterization

This happens, according to Bloom, in the manner described below:

"The lowest category is 1.0 Receiving. It is subdivided into three categories. At the 1.1 Awareness level, the individual merely has his attention attracted to the stimuli (e.g. he develops some consciousness of the use of shading to portray depth and lighting in a picture). The second sub-category, 1.2 Willingness to receive, describes the state in which he has differentiated the stimuli from others and is willing to give his attention (e.g. he develops a tolerance for bizarre uses of shading in modern art). At 1.3 Controlled or selected attention the student looks for the stimuli (e.g. he is on the alert for instances where shading had been used both to create a sense of three-dimensional
depth and to indicate the lighting of the picture, or he looks for picturesque words in reading).

At the next level, 2.0 Responding the individual is perceived as responding regularly to the affective stimuli. At the lowest level of responding, 2.1 Acquiescence in responding, he is merely complying with expectations (e.g. at the request of his teacher, he hangs reproductions of famous paintings in his dormitory room; he is obedient to traffic rules). At the next higher level, 2.2 Willingness to respond he responds increasingly to an inner compulsion (e.g. voluntarily looks for instances of good art where shading, perspective, colour, and design have been well used, or has an interest in social problems broader than those of the local community). At 2.3 Satisfaction in response he responds emotionally as well (e.g. works with clay, especially in making pottery for personal pleasure). Up to this point he has differentiated the affective stimuli, he has begun to seek them out and to attach emotional significance and value to them.

As the process unfolds, the next levels of 3.0 Valuing describe increasing internalization, as the person's behaviour is
sufficiently consistent that he comes to hold a value.

3.1 Acceptance of a value (e.g. continuing desire to develop
the ability to write effectively and hold it more strongly),
3.2 Preference for a value (e.g. seeks out examples of good
art for enjoyment of them to the level where he behaves so as
to further this impression actively), and 3.3 Commitment
(e.g. faith in the power of reason and the method of
experimentation).

As the learner successively internalizes values he encounters
situations for which more than one value is relevant.
This necessitates organizing the values into a system,
4.0 Organization. And since a prerequisite to interrelating
values is their conceptualization in a form which permits
organization, this level is divided in two: 4.1 Conceptualization
of a value (e.g. desires to evaluate works of art which are
appreciated, or to find out and crystallize the basic assumptions
which underlie codes of ethics) and 4.2 Organization of a
value system (e.g. acceptance of the place of art in one's life as one
of dominant value, or weighs alternative social policies and practices against the standards of public welfare).

Finally, the internalization and the organization processes reach a point where the individual responds very consistently to value-laden situations with an interrelated set of values, a structure, a view of the world. The Taxonomy category that describes this behaviour is 5.0 Characterization by a value or value complex, and it includes the categories 5.1 Generalized set (e.g. views all problems in terms of their aesthetic aspects, or readiness to revise judgements and to change behaviour in the light of evidence) and 5.2 Characterization (e.g. develops a consistent philosophy of life)."

<table>
<thead>
<tr>
<th>5.0 Characterization by a value complex</th>
<th>4.0 Organization</th>
<th>3.0 Valuing</th>
<th>2.0 Responding</th>
<th>1.0 Receiving</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Generalized set</td>
<td>4.1 Conceptualization of a value</td>
<td>3.2 Preference for a value</td>
<td>2.1 Acceptance of a value</td>
<td>1.3 Selected attention</td>
</tr>
<tr>
<td>5.2 Characterization</td>
<td>4.2 Value system of a value</td>
<td>3.3 Commitment</td>
<td>2.2 Willingness to respond</td>
<td>1.2 Receive willingness to</td>
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The range of meaning typical of commonly used affective terms measured against the Taxonomy continuum. (p.37 Handbook II)
Above is a diagrammatic representation of the process of Internalization showing how Bloom thinks it relates to such concepts as attitudes and values. The lines which relate to attitudes and values in this diagram extend from 2.2 Willingness to respond to 4.1 Conceptualization of a value. This is because the range of interpretations given to the terms "attitude" and "value" in educational objectives, range from situations where the student is expected to display a particular behaviour, especially with a certain amount of emotion (enthusiasm, warmth, or even disgust, if appropriate), to situations in which she might go out of her way to display the value or to communicate to others about it.

As internalization progresses, learners come to attend to phenomena, to respond to them, to value them, and to conceptualize them. They organize their values in a value complex which comes to characterize their way of life. Internalization is seen as related to socialization but is not a synonym for it.

Bloom's scheme has been the subject of many criticisms. These arise out of the implicit assumptions on which the scheme is based. The assumptions are that the child is a passive creature and that learning is of a linear kind. Given such a model all human behaviour can be explained in terms of external causes rather than inner purposes (Downey and Kelly, 1979). The intended outcomes of any learning which results from Bloom's approach are defined in terms of the behaviour the pupil is supposed to display in her thoughts, actions or feelings. Kelly (1974) refers to the 'computer-programming' character of such objectives and the means-end view of education when learning is always aimed toward something else and never because it is worth doing for its own sake.
Another important criticism of Bloom's scheme is the impossibility in practice of distinguishing the affective from the cognitive. How can anybody separate out the learning of a subject, in an intellectual sense, from other aspects of it such as enjoying it, appreciating it, seeing the value and so on? Kreuger (1928) insisted that all experience develops out of feeling and that the two are so closely interwoven that only the combination of emotion and experience forms the world as we know it. Even mathematics cannot be excluded from this. Mathematicians have often been heard to make all kinds of claims for the beauty of mathematics. Mathematics, may, indeed, have such a beauty and no-one should be given an education in mathematics that does not aim to reveal this beauty to them and to enable them to appreciate it.

There is an affective component even to the most intellectual of activities that can never be separated from it nor ignored if we are to educate people successfully in that area. In fact it would be difficult to educate anybody without bringing about in them an attitude of appreciation of the subject matter. To be educated is to have been brought to care about certain things, whatever those things are. To ignore this, in attempting to educate children, is to try to turn them into Daleks - beings noted for their total lack of feeling. These affective aspects of education concerned with appreciation and enjoyment are important to pupil's own personal development into fully functioning individuals as well as to their progress in specific subject areas.

The stages of the affective domain, as described by Bloom, are consistent with conscience (or superego) development in psycho-analytic theory however, and so we will now look briefly at what one personality theorist has said about emotional development.
Emotional development at adolescence

Erikson (1965) is one of the few personality theorists to believe that emotional development continues throughout life. Erikson's theory is a psycho-social theory. This means that emotional development occurs as a result of the individuals' interactions with their environment. Erikson's theory is based on the idea that at every period of life there is a developmental task which an individual has to accomplish. It is a stage theory and according to Erikson the mature adult must have successfully negotiated each of the eight crises which occur in sequence as we go through life. The way this is achieved is through interactions with society, its institutions, objects and tools. Play is important for the child's development, as are parents, teachers and peers.

Here is a chart summarising Erikson's developmental theory. It shows the eight stages of life together with the psycho-social conflicts associated with each stage.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Conflict</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>trust vs. mistrust</td>
<td>basic trust</td>
</tr>
<tr>
<td>B</td>
<td>autonomy vs. shame and doubt</td>
<td>autonomy</td>
</tr>
<tr>
<td>C</td>
<td>initiative vs. guilt</td>
<td>industry</td>
</tr>
<tr>
<td>D</td>
<td>identity vs. role confusion</td>
<td>identity</td>
</tr>
<tr>
<td>E</td>
<td>intimacy vs. isolation</td>
<td>intimacy</td>
</tr>
<tr>
<td>F</td>
<td>lust vs. stagnation</td>
<td>generativity</td>
</tr>
<tr>
<td>G</td>
<td>generativity vs. decline</td>
<td>ego integrity</td>
</tr>
<tr>
<td>H</td>
<td>integrity vs. despair</td>
<td>integrity</td>
</tr>
</tbody>
</table>

- 14 -
During the first three stages postulated by Erikson the child has to develop a sense of basic trust, autonomy and initiative. This happens as a result of experiences at home, nursery school and, possibly, church. By the time the fourth stage is reached the child is struggling to fend off a sense of inferiority that arises from the knowledge of being still a child, an incomplete person. To combat these feelings the individual delves into all opportunities to learn by doing, and experiments with the tools and symbols of the society. The world of peers assumes a position of equal importance to that of adults. Erikson stresses that successful development of a sense of industry arises from encouragement of basic skilled craftsmanship. He believes that this lays the roots for later scientific pursuits as the child becomes particularly interested in the operations of the material world. This stage is an important one within the context of design education as it is through encouraging the child to engage in 'making and doing' that the sense of industry which must be attained before passing into adolescence is achieved. However, the fundamental stage of identity formation happens at the fifth of Erikson's developmental crises.

During this period adolescents have to see their life in a definite perspective. "I aint what I ought to be, I aint what I'm going to be, but I aint what I was" is the message of this stage. Role experimentation is critical as it is out of the different self-images the adolescent projects that identity will eventually emerge. In addition adolescents have to become aware of the impact they have on others,
and to come to terms with their own sexual identity. During this stage adolescents may demand immediate action, or, alternatively, immobilize themselves completely. A struggle to complete a task, or even to start one becomes a crucial issue. This does not demonstrate any lack of ability as, according to Erikson, some of the most gifted people suffer from this most of all. Adolescents have to realize their potentiality both to lead and to follow and also that their great capacity for fantasy is matched by a 'strong enough' grasp of reality. Imagination is diverted into recreations such as literature, music and other expressive activities. Peers form a special group and adolescent friendships and loves are essential in finalizing an ego identity. Being 'against something' is one of the greatest needs in this stage as it is through contrasting themselves and their ideas with an opposite group that adolescents confirm their sense of themselves. The stage of adolescence is seen by Erikson as a moratorium, a time for the youth to slow down and take stock. Slowly, the individual moves into society as an interdependent member.

This most well-known of all his stages is the one which is also most relevant to design. Mainly because it is through such things as style of dress, decorating their own room to their own taste, and adapting and creating certain ornaments and objects to their own purposes that teenagers develop and project their own identity.

Erikson's theory continues well into maturity and the last three stages involve developing a sense of intimacy, generativity and integrity. He believes that adults become what they are as a result of the way in which they coped with the conflicts and anxieties of youth and
childhood. However, it is the fear of loss of identity which dominates most of our irrational motivations and this fear is supported by all the anxieties retained by us due merely to our having once been children.

His stages 3, 4, and 5 all give importance to practical approaches to the world and include the use of tools (and symbols) to achieve mastery of certain of the developmental tasks. Throughout his theory, play of different types is said to be the single most important factor in helping the individual to understand and, hopefully, resolve the crisis of that particular developmental stage.

The important stage 5, which occurs during the child's years at secondary school, includes testing several different kinds of "personality" coupled with periods of inactivity tantamount to "laziness" as well as bouts of demanding assertiveness and rebellion.

Aggression, frustration and embarrassment are emotions that are inevitable during the stage of identity formation and adolescents have to learn how to cope with them. Action and apathy, passionate involvement and disinterested indolence, are, according to this theory, all essential ingredients which contribute to the development of an emotionally healthy adult. In order to help this development it is necessary to base interactions with pupils on an understanding of the conflicting forces at work within them.
From theory to practice

In child psychotherapy practical applications of such theories as this forge links between personality development and the expression and perception of emotional impulses. Interpersonal theories of emotional development tend to stress the conscious 'self' rather than the unconscious. By applying techniques derived from cognitive and emotional psychological theories, therapists working with children can help them to further their development.

Axline (1971), a psychoanalyst using an interpersonal approach, describes the gradual development of a child from a problem 5-year old in danger of being diagnosed autistic into an adolescent with a measured I.Q. of 168. She used techniques that allowed Dibs to take the initiative both in building up their relationship and in deciding how he would behave. "To play or not to play. To talk or be silent". Through splashing water all over the room Dibs discovered that he could control the volume from a trickle to a gush; that objects placed in water made the level rise; that a smaller container would overflow when being filled from a larger container; that different amounts of water in glasses produced different sounds when the glass was tapped with a spoon; and that his skin became wrinkled after prolonged immersion in water. All this he learned while at the same time learning self-confidence and how it felt to be "all happy inside". This is important within the context of design because it was from experiences in the physical world of objects that Dibs learned about cause and effect and about relationships between people (himself) and things. The result was not only intellectual but also emotional and social growth. Eventually he was able to express affection for his parents and friendship to his classmates.
People have a need for acceptance. This is made apparent to them through love, approval, sympathy and respect, etc. If parents and teachers value academic success the child will develop a self concept which emphasises this. Failure to match up to her own high standards may result in the employment of defence mechanisms, which act to maintain the integrity of the self and to control anxiety.

In order to provide clues which may help therapists to understand a person's underlying but unexpressed emotional state projective techniques are used. The significance of such techniques lies more in the fact that people are able to project aspects of their own inner worlds onto the stimuli than in any particular ratings or diagnoses that arise out of these projections. This shows how cognitive processes are affected by feelings, how the perceptions of an object or event is so much more relevant to the perceiver than to the perceived and how the relationship between emotion and cognition is too complex to be successfully ignored.

For example, the Thematic Apperception Test consists of a series of pictures varying in explicitness and detail, from a blank card and a few vague shadows at one extreme, to clear-cut scenes such as a photograph of a young boy sitting alone in a doorway, at the other. The individual is asked to examine each card in turn and to tell a story about the scene portrayed, including what preceded the scene, the current situation, and the likely outcome. Responses are written down verbatim for later analysis. Interpretations are based mainly on any recurrent themes which may emerge in the stories; a person with much repressed hostility may, for example, 'project' her hostility into the stories by frequent reference to fights, death or severe criticism.
This test is also quite widely used to obtain ratings of fantasies of achievement. As people vary in their need to succeed, and also in their need to avoid failures, the stories they tell can be interpreted in a way that identifies the individual's own level of motivation.

Another projective device is the Rorschach test which consists of a series of ten 'ink-blots', or complicated unstructured formless shapes, with one half the mirror-image of the other. The individual is presented with each card in turn, and then asked to say what the blots could resemble. The tester notes down what the person says, and whether she uses the whole blot or just part of it. Common responses to some of the cards are, 'a butterfly' or 'a bear-skin rug', and these are not suggestive of a significant underlying conflict. More abnormal responses such as seeing genitalia or 'death' in the blots do suggest serious unresolved conflicts.

The 'Blacky' test features a puppy, Blacky, in a series of cartoon pictures. The individual is presented with a series of cards depicting a variety of situations in which Blacky is involved with other dogs, such as his parents, siblings, and play-mates. The person is required to explain what is happening in the cartoons, and the responses are alleged to provide clues to unconscious conflicts. The cartoons assess sibling rivalry, parental rejection and other tension-producing experiences related to early childhood development. Obviously this test is used mainly with young children.

These techniques for assessing the emotional state of people of all
ages are based upon individual responses to pictorial stimuli. In certain therapies that deal with emotional disorders people are encouraged to express their feelings through painting and modelling.

Winnicott (1964) a psycho-analyst, defines a 'good' environment for a child as one where aggressive feelings are tolerated if they are expressed in a more or less acceptable form. He considers it to be far better for the child to express her aggressive feelings in her handling of materials and tools and so channel them into constructive actions than to vent them at the moment of rage or not to vent them at all.

The design class and the total individual

No matter what their theoretical base, the psychodynamic approaches mentioned in this paper emphasize being before doing. To paraphrase one of them, "I am" must precede "I do" otherwise "I do" has no meaning for the individual. What this means for educators is that unless the pupils can relate what they are doing to their own experience it will have no effect on them. An example of this comes from an 11-year-old who wrote in an essay "Heat expands ... in summer days are long ... Cold contracts ... in winter days are short". The mistake occurred because the child was given the verbal labels before she had the concepts they were describing. Therefore she fitted the labels to what she knew from her own experience! This was in a science class.

A comprehensive method of education includes a combination of intellect and emotion and is concerned with practical as well as academic application. The Design class has features which increase the potential for a fulfilling learning experience.
We are emotional, as well as intellectual beings. To be effective education should include all the important components of our make-up. The techniques which develop a child's faculty for linear analysis are not best suited to develop faculties with the potential to create new ideas or emphases. An emotional reaction or experience is often the foundation of critical thought.

Part of learning a design approach is learning how to criticize basic assumptions underlying traditionally accepted ideas. It teaches adolescents to identify and criticize different perspectives while they attempt to construct new and more viable artefacts for the society they are helping to create.

Design can give pupils a perspective that allows them to make conscious decisions about whether they accept, reject or attempt to modify their environments. It helps them to become aware of alternatives. Any subject area that encourages pupils to think while incorporating their emotions into the process has an advantage over those areas that develop one aspect of a person while ignoring another vital developmental area.

Children need appropriate techniques for expressing non-verbally those aspects of experience which are non-verbal. Just as they respond emotionally to trees on a dark night (see Design Education Research Note 7) so they experience emotional reactions to stimuli which adults would not perceive as emotionally relevant as well as to more obviously emotionally related stimuli. They need to be given the opportunity to express their feelings and to acknowledge their anxieties in a constructive way.
It is no accident that art and music are increasingly being used in diagnosis and treatment of emotional disorders. Such activities as cutting out paper shapes, making mats, moulding plasticine and even tangling string have all succeeded as communication aids with children when verbal language has failed in a therapeutic context. Film-making and still photography have been successfully employed with 'delinquent' adolescents. These 'practical' activities provide a way for people to structure their experience through the articulation of strongly held views and pent up feelings such as those of aggression, frustration, anxiety, guilt and fear. Children should be given the opportunity to express all these emotions.

The types of activities currently contained (concealed?) within the design class are precisely those which could provide such an opportunity. For example, aggression can be released by hammering a nail into wood and frustration by experimenting with the changing forms of a piece of clay. Initially these activities will not be closely related to good craftsmanship but by the time the child has relieved her inner tensions, she will have become familiar with the materials and can proceed directly towards a more constructional approach.

The design class is also ideally suited to help pupils learn how to structure their own work and create a climate that is neither hierarchical nor competitive. It helps children to formulate and engage in work which is innovative and personally satisfying as well as potentially useful to the community. It is a place where unusual methods can easily be adopted. For example, an emphasis on co-operative, rather than competitive, activities that are group based would help to
take the pressure off of the individual. Consequently ideas can be refined collaboratively while the pupils feel freer to express themselves and allow free rein to their imaginations knowing that any criticisms of their efforts will be aimed at the concepts and not at their personal abilities.

The small group environment also permits the members to react personally while remaining comfortably aware that emotional and intellectual expression are equally appropriate and welcome.

Emotion in aesthetic experience is a means of discerning what properties a work has and what properties it expresses. This is as true for the designer as it is for the observer of the work after it has been completed. Aesthetic experience has been described as a function of the relationship between an object that is fit to excite an appreciative attitude in the observer, and an observer who is fit to appreciate the object (Rader and Jessup 1976).

When we do not like a given object we should consider whether the deficiency is in the object or in ourselves. If the latter, we should not condemn the object, but, if possible, learn how to improve our taste.

Good taste is not innate, it can be learned and cultivated. Good taste is discriminatory but tolerant, while bad taste arises out of ignorance. Bad taste is insensitive because of impaired sense of faculties or dullness of mind or emotions. If any object of art is valued for its snob appeal the taste is not aesthetic. If a building
is valued because of its cost it is not valued architecturally. If a work is found interesting because it throws light on a page of history it is a cognitive and not an aesthetic interest that is satisfied.

The work of artists reflects a particular way of perceiving the world and encourages observers of this work toward perceiving the world in a similar way. The medium used in their work plays a role in determining both what the artists manage to express of their view of the world and what the observer perceives.

Sometimes the materials used are extremely complex as for example in collages and junk sculpture. Colours, brightnesses, shapes and size are rivalled by the range of possibilities available in the form of unusual materials. Elements selected and put together in a novel manner may not be adequately understood when perceived only as physical stimuli as they usually have an emotional meaning built into them.

It seems that some people like works of art that represent their own latent or unconscious impulses and other people respond to works of art that reflect their overt behaviour or characteristics. This has been found in studies of people's preferences for visual art and for music (Wallach and Greenberg, 1960). As a result of these studies came the hypothesis that peoples' responses to a work of art is dependent upon whether or not the work facilitates the type of fantasies they seem to enjoy.
This hypothesis has been used in interpreting cross cultural variations in abstract elements of design (Fischer, 1961). The research was based on the relative presence of straight and curved lines in the art forms of various societies. Line designs have also been used with children to establish whether they perceived any relationship between a particular affect and a particular shape.

In an experiment by Demos, six and twelve-year-old children were shown drawings of eleven line designs and asked which design was most representative of each affect (happiness, joy, excitement, love, sadness, anger, shame, worry and fear).
When lines 4, 6, and 11 were grouped together because they were relatively straight and unchanging, and lines 5, 8, and 9 were grouped because they were upward curving and dynamic, the children chose the straight, unchanging lines as representative of the negative affects and the curved, dynamic lines as representative of the positive affects. They did not point to any one line as representative of a special affect, however, with the exception of number 2, whose sharp angularity nearly half of the children associated with anger. Anger seems to be a particularly salient emotion for children. Aesthetic taste, to be good, must be adequately perceptive. This means that what is responded to must be really there in the work and that what is really there must be responded to. The work must be seen as a whole and not merely in part. Good taste involves seeing sharply, hearing clearly, feeling what an emotionally sensitive person can feel and taking in what a fully functioning mind can encompass. Good taste is the full possession and exercising of these capacities. Emotional numbness disables in this respect as definitely, if not as completely, as deafness or blindness.

Work in the area of aesthetics has been confined to literature, music and art but there is no reason to suppose that design would be very different at the theoretical level. At the level of interaction with the object - whether in its creation or perception - design may permit different experiences on the part of both the creator and the observer. These experiences could have an important role to play in the development and expression of emotions.
Teaching Feeling?

When teaching emphasizes 'thinking' to the detriment of 'feeling' the pupils are in danger of having their emotional development stunted.

When people suffer the relative deprivation of any of those aspects of their development - physical, social, emotional or intellectual - which together make up their personality they become adults who live an impoverished life. Where it is their emotional development that has been inhibited they become so out of touch with their true feelings that they are continually distorted or denied.

An effect of the divorce of feeling and intellect in education has been the devaluing of those activities that have not been felt to have a fully intellectual content and, conversely, an emphasis on those subjects that stress the intellectual to the exclusion of all other things. The more totally intellectual an activity has appeared to be, the more readily has it found acceptance on the curriculum.

The result of this has been that the all-important area of the education of the emotions has been ignored as not being an important concern for educators except in so far as it is involved in developing good behaviour. There is, of course, a large cognitive element in the education of the emotions. The understanding of our emotions requires a great deal of knowledge, some of it of a purely 'factual' kind. The emotion of fear, for example, can only be dealt with by finding out more about the object of one's fear - either in order to dispel that fear or to focus it more clearly. It is not true that all fear is the result of ignorance, but much of it is. However, there is far more to the education of the emotions than this cognitive element. We certainly need to acquire, through our education, control over our emotions. But this control must not come from
repression and inhibition alone; it must come from a real understanding of our emotions at a personal level.

We must also have an opportunity to develop our capacities for feeling and perhaps too, our powers of empathy and compassion. They are certainly qualities to which the 'aesthetic' or 'creative' curriculum subjects have much to contribute. When education is concentrated primarily on the intellectual and the emotions are given only a minor place it is the important affective aspect of development which is inhibited.

There is no reason why teachers of design should not incorporate ideas and methods which arise from theories of emotional development, into the tasks they prepare for their pupils. These might include such activities as creating an interior decor for the classroom. The colours, shapes and materials used should be selected and moulded by the pupils according to their own judgement rather than to fit into some predetermined scheme. Alternatively, pupils could be encouraged to work out a programme of activities for themselves through guided discussion, facilitated, but not directed, by the teacher.

Summary

The development of affect is important to the integration of a healthy personality. This paper has set out to explain the relationship between affect, emotion and feeling. Our emotions are integrated through subjective perceptions of changes in our feelings and valued differently according to our attitudes.
Attitudes combine cognitive and affective components and are acquired through the process of socialization. They are dependent upon values which are important in design because they are concerned with choosing and deciding. However, forms and colours are among those things about which decisions need to be made and they are themselves emotion inducing.

In addition the special character of design education means that it has certain opportunities related to affective development to offer to children that other subjects do not. For example such considerations as personal style and taste help to establish a sense of identity. Similarly, such activities as modelling and making objects facilitate the expression of pent-up emotions. For these reasons affective development must be taken seriously in design education.
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