Theory and Methodology for Esthetics

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(1902 –1989)

Introduction

(This paper was written in 1965, to introduce my 1939 volume on *Experimental Esthetics*. In reading it one has to put oneself into the 1920s. Q-methodology has developed considerably since then, but what one was saying of it then is worth remembering. The paper has not been changed in any substantive sense: it was meant as an introduction to esthetics [which, unhappily, I now prefer to spell as *aesthetics*]).

Putting a scientist in amongst artists is no doubt much the same as putting a cat in amongst canaries. However, I enjoy both canaries and art, although not to the same extent. I am a scientist interested in art from three sources: first as an ordinary member of the public which is supposed, apparently, to enjoy art; second as a psychologist—more especially an experimental psychologist; and third as something relatively new on the academic scene, a *communications theorist.*

As a member of the public I find an inordinate interest everywhere around me, of people painting very bad paintings—it is a little hard to explain why so many people want to paint pictures when they are obviously without talent or taste for it!

As a psychologist I have much involvement in art because there is a close connection between psychology and art, and more especially between experimental psychology and esthetics. The father of experimental psychology, G.T. Fechner (1801-1879), the founder of the psychophysical methods, was also the originator of experimental esthetics. Fechner was interested in studying the relationships between body and mind, and although that is no longer a real problem, the psychophysical methods are a permanent acquisition to knowledge—they are found today in every psychological laboratory, in operations research, and in my own methodology, called Q.

Fechner was the first to show how to make science out of what is essentially *subjective.*

Thus, as a psychologist I was trained in the methods of experimental esthetics, and at Oxford, now 30 years ago, I conducted experiments in esthetics which I shall discuss in the sequel, which have never been published, yet which will suggest what members of the public should do if they want to paint really "properly"!

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As for *communications theory*: Many of us, whether in physics, the humanities, law, or the behavioral sciences, are much concerned today about communication problems in the world, with how humans communicate with one another. We are in the throes of immense technological advances in communication systems, from telephones to satellites: but humankind still finds it difficult to communicate—we talk in ideological terms at each other. Communication theory has therefore become a matter of great concern, and one branch of it, information theory (or cybernetics), is particularly popular at the moment—professors of physics, engineering, and psychology, as well as of art and psychiatry, all can find points of common interest in the theory.

One can state the type of problem confronting us very simply: Is there a "proper way" to look at, and to judge a work of art? Can we measure the esthetic value of a Picasso painting? Is *ugliness* in a work, as in Genet's *The Thief*, really esthetically sophisticated—if only you look at it "properly"?

All such questions can be given an affirmative answer.

Theoretical Considerations

What, then are the important matters in art?

We should look at an anthology of esthetics. I chose for the purpose Melvin Rader's *A Modern Book of Esthetics* (1935, 1952, 1960) which has much to commend it, including the fact that I found three copies of it on my bookshelves—one belonging to myself of the 1935 vintage, another to my elder daughter who used the 1952 edition while she was at the University of Chicago, and the third belonging to my younger daughter who had obviously used it as a graduate student in art in Missouri. One finds papers in it from an Aristotle to a John Dewey, with Oscar Wilde, Jacques Mantau, Tolstoy, Bergson, and Freud, Nietzsche and Jung, besides a host of others in between.

First let us look at a theoretical position of an experimental psychologist. One such in Rader's anthology was Hugo Munsterberg, who had written widely on art in the early 1900s, the concern being with simple matters, such as whether reds and yellows are more pleasing than blues and greens, and oblongs more satisfying than squares. Munsterberg proposed (with Kant before him) that whereas scientists deal with things as they "really" are, art and esthetics deal with things as we use them, or as we experience them.

A picture is something to hang on a wall, to enjoy. To enjoy it you do not measure its size with a ruler, or analyze it into its sensations and parts; instead you have to isolate it from everything else—disconnect it from all causes, analyses, and effects—and bring it before one's mind so that nothing else but this one presentation fills the mind, and so that there is no room for anything else in it. It means complete isolation of the object—and for Munsterberg that was, *ipso facto*, complete satisfaction with the object—i.e., just another name for the enjoyment of beauty. He wrote, indeed, that:

> . . . to isolate the object for the mind means to make it beautiful . . . we are interested in the impression as it is in itself, without any reference to

> anything outside of it in space and time, and the complete repose, where the objective impression becomes for us an ultimate end in itself, in the only feasible context of the true experience of beauty (cited in Rader, 1960, p. 438) .

In the same anthology an article by Morris Weitz entitled "The Role of Theory in Esthetics" (1956) is of interest. Weitz concludes that in spite of many theories, from Plato's down to any of a dozen today, we are no nearer any adequate definition or explanation of art. He examines a few major theories. Bell and Fry, he suggests, provide a version of *Formalist* theory (that certain combinations of lines, color, shapes, and volumes evoke a unique response to such combinations)—painting, so conceived, is plastic organization. This, however, is not acceptable to the *Emotionalist*, who feels that the essential character of art is the emotion it enjoins. Without the projection of emotion into an art object there can be no art—so say Tolstoy, Ducasse, and many another theorist. The *Intuitionist*, however, disclaims both form and emotion. For Benedetto Croce, art is a primary stage of knowledge about the world, by which artists discover what is below the levels of ordinary cognition. So the child, and primitive men, may produce true art, grasped intuitively. The *Organicist* proposes, instead, that art is really classes of organic wholes, each unique. Weitz proposes that one can never define art, or have a theory for it in any definitive sense. The many theories in the past, he argues, have served to emphasize this or that aspect of art which was being neglected. Art, for Weitz and his master Wittgenstein, has to be an *open* concept. Like an "open society," it has to face the fact that new art forms, tastes, and movements are constantly evolving, and that art can never be exhausted. *Mobiles* are invented to confound statuary; pop and op arts erupt to plague Romanticism; and new literary forms appear to change things—*Finnegan's Wake* is scarcely a novel. The task of esthetics, therefore, according to this view, is not to seek a theory, but to *elucidate* art:

> To understand the role of esthetic theory *is* not to conceive it as definition, logically doomed to failure, but to read it as summaries of seriously made recommendations to attend in certain ways to certain features of art (Weitz, 1956, p. x).

The Problem of Meaning

Art is clearly a form of communication, and it is well known that the same painting may mean different things to different "viewers." Thus Michelangelo's *Ganymede and Tityus* depicts platonic love: educated Italians at the time knew that Ganymede symbolized divine love, and Tityus seasonal love; a few people "in the know" also guessed that Ganymede was Michelangelo and Tityus his young friend Tomaso Cavalieri, hinting at a certain homosexual involvement. In art generally there may indeed be different levels of meaning—of the object as such, of its symbolical meanings, and of its personal (and probably unconscious) involvements. We have to be cognizant of the form and the content of these different meanings.

But how to proceed?

An article in *Art International* (March 25, 1963, Vol VII/3, p. 25-29) by Jules Langsner, entitled "Franz Kline, Calligraphy and Information Theory," makes a good beginning. He shows us a reproduction of Kline's *Contrada*, a 92″ by 79″ painting of 1960, here Figure 1. Langsner suggests that some critics have felt Kline got his inspiration from oriental calligraphy. He took an oriental *sign*, and blew it up into a 92" by 79" painting. However, the painting is clearly more than a mere enlargement of a calligraphic sign. To begin with, there is no black figure on a white ground, nor a white figure on a white ground, but something far more complex—a configuration of black and white in a frame. Langner goes much further than this, calling it a "primordial archetype." He suggests that *Contrada* in some way parallels the "first meaningful inscriptions on a surface by an incipient artist in a remote prehistoric time":

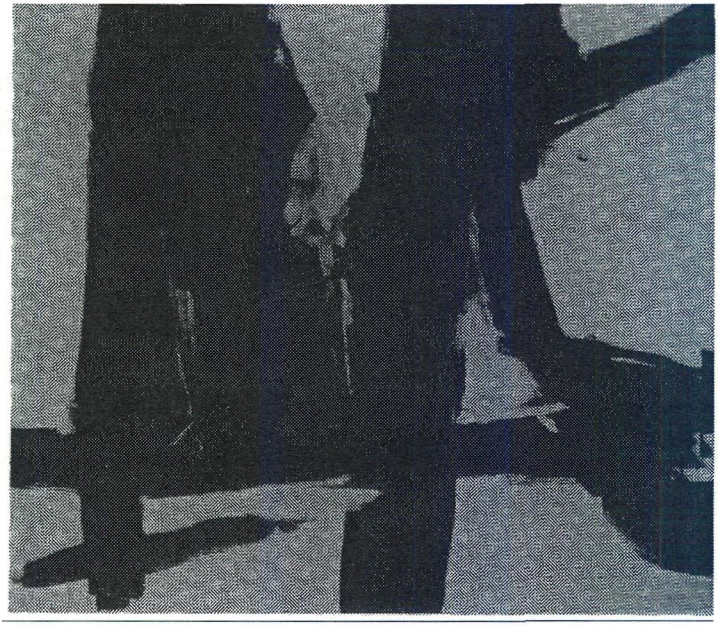

Figure 1: Kline's Contrada

> It is as if the magnetic force of the imagery partakes of the magical powers of such prehistoric visual signs as the rock formations at Stonehenge (Langsner, 1963, p. 28).

What, then, according to Langsner, does information theory do for this painting? Information theory, like telephony, concerns a language of *signs* which are *encoded* and channeled to a receiver, where the signs are *decoded.*

Such is a simple circuit, from sender to receiver; but it can be made as complicated as any radio system, with *feedback*, *coupling*, and similar electronic concepts in between. Such systems "work" without regard to any truth or value of the messages they convey: you can telephone a big lie quite as readily as the truth.

In Kline's *Contrada*, the sign system is characteristic of Kline, although it is not *unique* to him—there are other signs rather like his: The viewer has to decode Kline's to receive the "message;" if he cannot decode it, he receives no "message"—as we say, he fails to understand much less appreciate the painting. He may appreciate it in his own way, without understanding it.

Information theory takes care of the process by the "feedback" principle: There is continuous interaction between stimuli and receiver—one is not a passive receiver of "messages." Which is very useful to abstract painters, who can paint one image knowing full well that probably no one else will grasp it, but that is all right, because they will grasp something else.

Langsner's application of information theory goes a little further. He observes that the signs used by Kline (that is his paint, strokes, patches, shapes, forms, etc.) are similar to those used by some other artists. Langsner talks of this, in information theory terms, as an "echo" effect, and proposes that "echo" explains esthetics:

> When a scientist or a mathematician speaks of the esthetic aspects [of a painting] . . . he is talking about "echo effects" that may be induced by interconnections of sign systems.

However, a chimpanzee can paint an abstraction which shares many of these same signs, which is unfortunate, Langsner admits, because they can so easily be mistaken for the "proper" signs of a Kline. What is important is not just the signs—we all speak the same English signs more or less—but the kind of "message" conveyed. Thus, Langsner says that Kline's *Contrada* is "isomorphic"—the "structured image" painted by Kline corresponds to the experience it evokes in the viewer—and the painting happens "to be invested with the primal power characteristic of Kline at his best" (Langsner, 1963, p. 26).

What, then, is this "isomorphic" sign system? It has a meaning "like Stonehenge," but involves complex phenomena of "perception, image formation, cognition" and the like, which is said to be more tightly *coupled* to the imagery than would be the case for a representational work—that is, one concentrates on *sharing* rather than *gaining* information. One has to be highly active, skillful, and perceptive to read the signs in a Kline—one has to learn the language. The chimp cannot provide such coupling.

What, then, has been achieved? To grasp the physiognomic character of a work of art, in Gestalt psychology, required one to relax, to clear the mind of obtruding clichés and class imagery. Here, however, in information theory, the process is quite the opposite—it is itself an act of creation, to grasp the "echo," the intrinsic language employed by the artist. And indeed there are modern

poets who do not mind if no one can "get their meaning," can grasp what is echoing in their poetic minds!

Must each great painter invent his own "language," his own *signs*? The problems of human communication are difficult enough in the spoken work—there are more than 400 distinct languages in India. Why, then, should art confound matters by making us learn new languages just to experience something like a "primordial Stonehenge"? Perhaps pop art is the natural reaction to this—it at least uses signs of a popular, if not universal kind, that everyone can understand—as in Richard Hamilton's "Just what is it that makes today's homes so different, so appealing?" (1956, here Figure 2) and in Tom Wesselman's "The Great American Nude" (No. 44, 1963, here Figure 3).

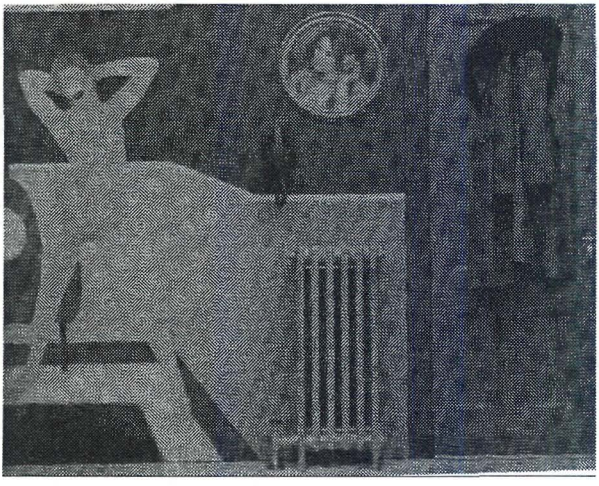

Figure 2: Hamilton's Homes

However, there do seem to be esthetic signs of a *universal* kind. I have in my home, for example, a large screen (8' x 4' 6") by artist Will Freund; everyone who sees it, educated or uneducated, sophisticated or not, finds it enjoyable to look at—it needs no rationalization as a Stonehenge. It is interesting *per se*, yet it is clearly modern. The artist is justified, therefore, in searching for the universality of his "signs," irrespective of any context or meaning otherwise conveyed: and, if only by default, we are reminded of this by Langsmen's exercise into information theory. Information theory cannot deal with what is beautiful; but what is "popular" and what is "universal" is within its province. Its messages, otherwise, are without truth or value.

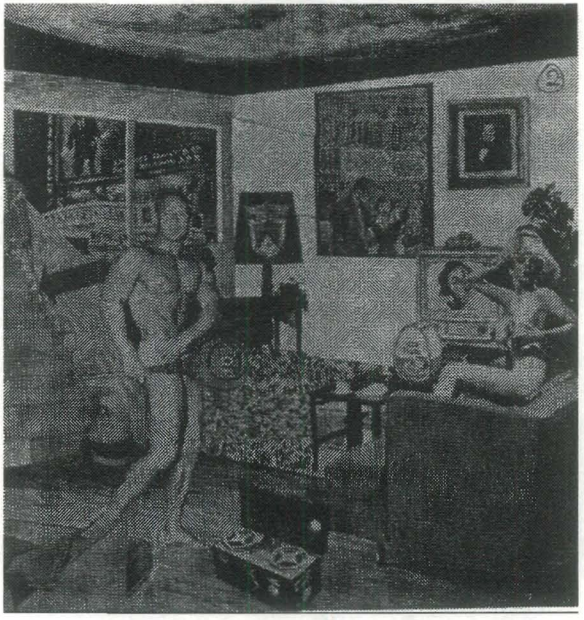

Figure 3: Wesselman's American Nude

If one looks at art down the ages, compared with modern art of the kind reproduced, for example, in *Art International*, the contrast between what most people would regard as *beauty* on the one hand, and *ugliness* on the other, seems apparent. In Taylor's (1954) *Fifty Centuries of Art*, we can see beauty from the *Lotform Cup* of Egypt (1320-1085 BC) to the exquisite Greek *Aphrodite*, to Botticelli's *Spring*, and so on down to a modern Cezanne. All evoke pleasure. But if an ordinary person thumbs through any recent issue of *Art International*, half of the works will seem to be ugly or meaningless. Are they really ugly? Is there any absoluteness in art? Is there a "proper" way to look at art and to judge it? Can the esthetic value of a Picasso painting be *measured*? Is ugliness a form of beauty, if only you look at it properly?

The answers given by experimental psychology are in the affirmative: There *is* a proper way to judge and look at a piece of art; Picasso *can* be measured; ugliness *is* very interesting esthetically.

Experimental Esthetics

First let me describe some of my studies of 30 years ago (in the 1930s). You are given five small pieces of paper, each a different color and shape (squares, oblongs), with which to compose a design on a quarto-size sheet of white

paper. Figure 4 shows the pieces.[1] First, you are asked to compose a *pleasing* abstract design with the pieces; later, you repeat, but now with the instructions to design an *ugly* design. Figure 5 shows a rather pleasing design—fitted by a Slade student of Fine Art into its own diamond-shaped background. The student shaded in the background, of his own accord, to enhance the diagonal lines of his composition. Figures 6 and 7 show what one subject produced as pleasing (6) and ugly (7). Figure 8 shows a piece by a bright 4-year old boy—IQ 210. Figure 9 shows his ugly piece.

I had hundreds of such abstract designs made at Oxford, by Deans, students, and members of the public, as well as by students at the famous Slade School of Fine Art (from London as well as Oxford). In each case a *pleasant* one had to be made, and then an ugly one.

An interesting result appeared. Ninety-five percent of all designs regarded as *pleasing* used the pieces of colored paper in *regular* (straight up-and-down, or diamond directions, as in Figures 5 and 6—most were like 6, because 5 is quite a sophisticated design). Fifty-five percent of all designs regarded as "ugly" used the pieces in *irregular* directions. This is clearly shown, even for the bright 4-year-old.

But, most interesting, many of the compositions regarded as ugly were in fact more esthetically pleasing than those regarded as *pleasant* when "properly" judged! This was tested by disturbing the pleasing design by "shaking it up," as illustrated by Figures 10 and 11.

Moreover, I could beat everyone else at this designing, merely by closing my eyes and dropping the five pieces at random on the quarto sheet—with a little jugglery I could usually do better than a Slade student anyhow.

You can see what my advice is going to be to amateur artists: they should try to paint *ugly* pictures, and not *pleasing* ones, and they will be far better artists! Indeed I am not so sure but that this advice is not good for all art departments as well—a course on how to paint ugly pictures might shake loose many conceits and rigid art forms!

How does one prove, however, that there is absoluteness in esthetic quality? For the psychophysicist it isn't very difficult, as we shall see. For the purpose we need to consider two or three psychological principles as well as an application of the psychophysical methods.

Principles

There are a number of principles to consider, which have the property of being law-like—they suggest what we should look for in examining art.

First, *identification.* if you can identify with a picture, by putting yourself into it in fantasy, you are likely to enjoy it; if not, you will not only not enjoy it, you will distort its meaning—you will call it ugly, and misperceive it, to save your own sense of self-worth.

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[1] See Appendix (*Ed.*).

Another is the general principle of *class schema*: we judge works of art in their "proper class."

Another is the principle of *physiognomic character*: many perceptions have emotional qualities attached to them in a primordial or primitive manner. A corpse is really *awesome*; a sunny meadow is indeed *happy-looking*; Wordsworth's daffodils dancing are indeed *gleeful*.

Another is a pair of principles concerning *communication*: we distinguish between *communication pleasure* and *communication pain*—the one brings no gain except a certain inflation of the self; the other deflates the self, as in shame.

These, together with suitable developments of the psychophysical methods, provide us with most of what we need in order to prove a ertain objectivity in art. The psychophysical methods accept *subjective* judgment as basic to measurement—one accepts what a person says about a painting, and proceeds to make a science out of it.

Let me amplify on these principles very briefly.

Identification

Like Langsner, I began some years ago to study magazine ads by way of information theory. I used the same concepts of signs, encoding, decoding, feedback, coupling, and the like, but it proved useless. Yet the problem remains, of a "message" to be conveyed.

What happens, however, when a young woman glances at the following magazine ad for Dorothy Gray perfume (Figure 12)? What went through her mind was the following:

> I'd certainly like to be in her place . . . out on my own doing interesting and exciting things. . . . There you are, in a big city . . . and all at once a chivalrous young executive picks up your silly little book. . . . If I saw someone walking down the street as handsome as the young man in the ad, I'd probably drop my book, a purse, or whatever else might be droppable. . . . It would be marvelous to meet someone, eligible maybe. . . .

She added, without probing:

> Yes, I love being coy and slightly sophisticated and feminine, and I like men to be attentive to me. . . . The more I look at the ad the more I envy the girl. She's terribly carefree and pretty sure of herself. . . . I wish I were in her place.

What happened is that the young woman has *identified* with the picture—she puts herself into it, seeing herself there on a city street. We have learned in advertising research that *identification with* an ad is tantamount to *enjoyment* of it. The ad is enjoyed, much as one enjoys a movie or a novel by projecting oneself into it, as Freud long ago taught, and as psychologists demonstrate every day with their Thematic Apperception Tests.

Figure 12: Dorothy Gray perfume

Moreover, if you *cannot* identify with an ad, what happens? Irrespective of any aesthetical or other quality it may have by other standards, the person will

dislike it—will distort its "signs," will regard it as ugly or the like. Baptists, for example, on looking at this Budweiser ad, are apt to dislike it, regarding the man as tipsy (Figure 13).

It takes a very powerful ad, indeed, such as the Fisherman's ad for Budweiser, to allow a Baptist or non-drinker to admit that the picture is *pleasing* (Figure 14).

What is critical, therefore, is a complex matter of how far the person is free to *identify with* a picture, by projecting himself or herself into it.

Several observations deserve mention: Identification can explain much that has been enigmatical in esthetics. Everyone knows that most people do not like modern art, but thoroughly *like* almost any painting of a country scene. What they cannot identify with they will dislike because of a threat to their "condition of worth"—their self-esteem is threatened, so they hit back by distorting what they see, calling it ugly.

Figure 13: Budweiser #1

Note also, however, that an advertisement is meant to bring about *action*—hopefully, the girl is meant to be induced to buy Gray's perfume. (Actually the ad did not achieve this—the girl was scarcely aware that perfume was being advertised.) Has a painting such a function, to bring about *action* of some kind?

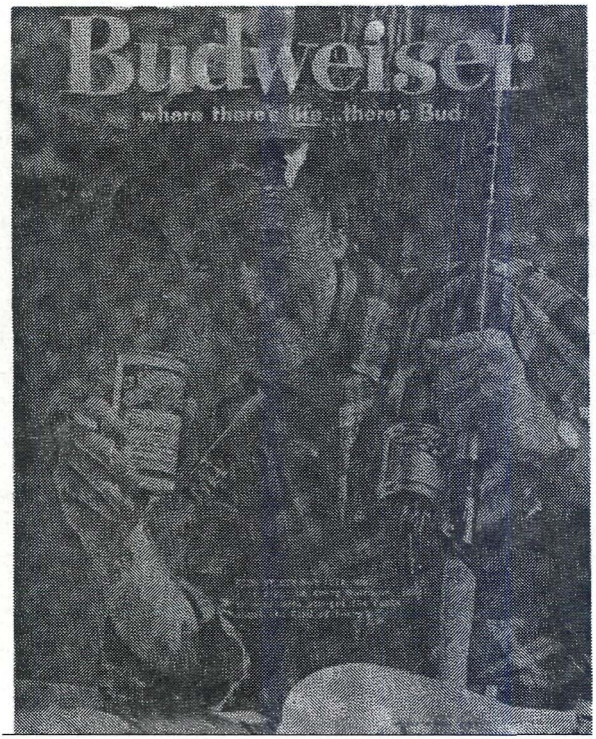

Figure 14: Budweiser #2

Communication Pain and Pleasure

My answer is that some art *should* serve to bring about action. Picasso's *Guernica* is such a painting; so is Van Gogh's painting of his rustic chair. But most art does not serve this function—instead, it is a pleasure, something enjoyed, beginning and ending with an esthetic appearance.

The difference is probably a profound one. It is interesting, I think, to distinguish between *communication pleasure* and *communication pain*. In the situation described by Langsner as isomorphism, a "being at one" with the art work, the person who is experiencing Van Gogh's painting is not seeing a *simple* rustic chair, but something akin to pity, to pathos for the world—in the process one feels *small* oneself, hurt, in pain; one's self is deflated, one is a

little ashamed for what the chair connotes. Similarly in Picasso's *Guernica*, one does not see sharp drawings and broken pieces, but guilt to man's cruelties to man, and again one is *ashamed*—one almost perceptively withdraws from it, hiding one's head. (It is said that some visitors to the Washington Vietnam War Memorial cannot at first go up to the marble wall containing the names of the 58,000 men killed in the war, as if it "hurts too much." Is this not to hide one's head in shame? A very natural feeling if, indeed, you are already aware of the horror of so many dead in an undeclared war. This observation was added, of course, as I was reviewing what I had written so long ago). The self again is hurt, deflated. All such are examples of communication pain. It is apt to be associated with action—it leads to action. So one is kinder, after "enjoying" Van Gogh; one is more resolute for peace after seeing *Guernica.*

Much art, however, is *communication pleasure*, and almost everyone thinks that art ought to be pleasing, beautiful, something to enjoy. Communication pleasure is enjoyment, without gain, leading to no *action.*

Much *art*, especially abstract art, is of this communication pleasure nature—if you can enjoy it at all. It serves only to *inflate* the self: one feels puffed up, delighted, at ease, just as if you have had a pleasant time, a bit of fun. Pop art, and the present flush of interest in optical art, is clearly communication pleasure.

These principles, of *communication pleasure* and *communication pain* are part of a new theory of mass communication. The theory considers the *play* element in mass communication; but it applies to art and esthetics as well. The Englishman plays for fun—certainly amateurs are supposed to do so; professionals play for money, i.e., for gain—and Americans are apt to play to *win* rather than for the fun of it. Communication pain is shown when football coaches cry after losing a match: probably no one in all England has ever cried after losing a game. Communication pleasure is absorption in a situation without *purpose*. We enjoy television, for example—most of us, at any rate, who are honest about it—without *expecting* anything from it other than a little fun, pleasure, and at best, delight. Eskimos enjoy a "drum trial" in much the same way (Huizinga, (1950): a man who has murdered his neighbor's wife is put on trial, lasting many weeks, and all of it enjoyed as great fun, without regard to the rights or wrongs of anyone involved. A "bull session" between college students is the same kind of communication pleasure. The reading of Pope's *Rape of the Lock*, as Hyman (1961) so well suggests, is of the same enjoyable nature: the pleasure needs no Freudian mind to explain it, and no Marxian doctrine either, but just a simple theory that people have *fun* at times, without thought of any material, scientific, or other gain. All play, at its best, is of this nature (Huizinga, 1950).

Even so, it is surely the purpose of great art, at times, to shock the viewer, to bring the world to its senses. My quarrel with much of modern art, including *Contrada*, is that the artist, in looking for new signs, and deeper individual experiences of esthetic images, is oblivious of the world in any

useful, pragmatic sense. *Guernica* is probably wonderful art, with distinct signs, complex forms, and all else of modern art: but its content is also its real significance.

So that on top of esthetic beauty, as it is ordinarily regarded, as absorption in an object, as isomorphism etc. with it, there is also the possibility of deeper effects which *deflate* the self, showing its *shame*. Esthetics, as it appears in communication pleasure, serves only to *inflate* the self, to make it feel bigger than life, to enhance it.

Class Schema

An experimental psychologist who believed that there *are* standards by which to judge whether an art object is a thing of beauty was Kurt Koffka, of Gestalt psychology fame.

Koffka (1935), like Muntersberg, came from Germany, but spent his years at Smith College amongst women, as Muntersberg spent his at Harvard amongst men. Koffka asks questions about the "proper quality" in a work of art, i.e., is there any *objective* standard by which to judge, as well as to *see*, a painting? There is, he concluded, provided it is remembered that each art object is a member of a *class* of such objects. We see a painting as a member of a class. He remarks that when pictures were first allowed in Samarkand all were equally desirable—one might show pop art, classical paintings, surrealistic, cubists, as well as canvases painted in the crudest manner, and all would be judged equally exciting! The superb Islamic buildings in Samarkand, with their glorious façades, had no esthetic carry-over to these pictures—which had been forbidden by Islamic religion—so that the populace had no picture reference. We shall show in a moment how to quantify such class schema.

Figure 15: Figure-ground example

Another observation from Koffka is related to the above: it is fundamental law of perception, in Gestalt psychology, that for most stimulus distributions or situations there is one most stable organization. This is said to be the "proper perception." Look for example at the figure-ground example familiar to psychology in Figure 15. The picture at first seems meaningless, mere patches of black and white, until is it suddenly seen as a woman's face. The grasp of such a "figure" on a "ground" is a complex organization. Some such organization or configuration, Koffka thought, explains esthetic pleasure—as

though the brain enjoyed the stable resolution of the perception. And we all know how unpleasant is the irresolution of the three-pronged tuning fork drawing, which we can never see as a three-pronged fork!

Physiognomic Character

Gestalt psychology is also responsible for this concept. A handle wants to be turned; a step-ladder invites climbing; chocolates want to be eaten. Things in the environment seem to tell us what to do with them. The trouble is that our preoccupation with the practical use and scientific analysis of things has put a block in the way of our perception of many such physiognomic characters—Van Gogh's simple chair is seen as a mere rustic chair instead of what it is, a symbol of pity for the human condition.

How many of us can still grasp, with Wordsworth, the *glee* of dancing daffodils? Esthetics, so it seems to me, is often near to Croce's *Intuitionism*—a corpse is really *awesome*, a ridge of daffodils really *gleeful*, a sunny field really *happy*! And a girl with the right physical character really *has* sex appeal! What one needs in order to really enjoy these "primitive" experiences is a certain release from all practical or scientific preoccupations, or from habitual fixities. It is such fixities that make people paint and design so badly; they explain the rigidities of the compositions made with the five pieces of colored paper.

Such are the principles I use. What, then, of the methodology?

Methodology

Thirty years ago I put forward an elaborate form of the classical method of *impression*, and called it Q-methodology (Stephenson 1935). I made some studies in esthetics using the method, and never had them published because the method was regarded as controversial. It is now gaining acceptance; a recent text on methods for the behavioral sciences (Kerlinger, 1964) devotes a chapter to Q-methodology, and many a Ph.D. candidate in clinical psychology owes much to Q. The first experiments with it, as in Fechner's case in 1870, were in esthetics.

Consider, first, how to measure a particular painting by Picasso—say his portrait of Gertrude Stein. I proceed as follows (and now I must be a little stilted and formal, a little systematic and scientific, to put across some simple enough ideas: it will seem childish, and wholly ridiculous, but I would counsel patience).

First I collect 49 colored representations of paintings in the same *class schema* as Picasso's painting (a matter I shall say more about in a moment). I add Picasso's to the 49, making a sample of 50 paintings of the class.

I now take a number of people, specially selected to compose a *P sample*—in this case two art critics, two artists of repute, two ordinary white-collar educated persons, two blue-shirt workers, and two children—one male and one female in each case. Each looks over the 50 pictures and marks them on a subjective scale (Figure 16) from -5 (disliked) to +5 (liked), with those neither

liked nor disliked in between. The individual first looks at all 50 pictures, and then sorts them on this "forced-choice" scale. The two liked best gain score +5, the next three, score +4, . . . and so on. The scoring is done by proceeding from one end of the sample to the other—having selected the two *most liked*, one next chooses the two *most disliked* . . . and so on.

Most Liked				Neutral			Most Disliked			
5	4	3	2	1	0	-1	-2	-3	-4	-5
2	3	4	5	7	8	7	5	4	3	2

N=50

Figure 16: Q-sort scale

The result is 10 Q-sorts. Each is correlated with every other, and the matrix (10x10) is factor-analyzed, using a computer program. The analysis tells us which of the Q-sorts tend to be alike—i.e., what agreement there is amongst the impressions.

Table 1: Factor Data for 10 Persons

	Persons	Factors A	B	C
1	Art Critic 1	X		
2	Art Critic 2		X	
3	Artist 1	X		
4	Artist 2	X		
5	White-collar 1		X	
6	White-collar 2		X	
7	Blue-shirt 1			X
8	Blue-shirt 2			X
9	Child 1	X		
10	Child 2	X		

X=significant loading, all others insignificant

We end with results as shown in Table 1. A,B,C, correspond to Koffka's *class schema*. The people in A are judging the paintings in one schema, those in B another, and those in C still another.

Each factor is itself a "theoretical" Q-sort, estimated from the empirical ones. Thus, the Q-sorts for 1, 3, 4, 9, 10 are averaged, to provide an "estimate" of factor A; Q-sorts 2, 5, 6 are averaged for factor B; and Q-sorts 7, 8 provide for factor C.

Each of the 50 paintings gains a score in each class schema A, B, C.

Picasso's *Gertrude Stein* was +2.5 in A, +2.0 in B, -2.5 in C. (The scores are in *standard* units, ranging from +3 to -3 approximately. Actually, in this case +2.5 was maximum, and -2.5 minimum. So that Gertrude Stein was given the highest score in class A—and apparently would gain such a high score in the class, no matter what the sample of pictures contained.)

The schema A is particularly interesting, and could be governed by physiognomic character, because the children 1, 2, are "on" the same factor as the art critics and artists. The "proper quality" for Gertrude Stein would be measured by A—although that there are other qualities is made manifest by B and C.

The painting by Picasso belongs to the class schema we selected originally, but not everyone judges it in that schema. Experts have been known to make mistakes, as when they have rejected as fraudulent or commonplace paintings which later on are shown to be great masterpieces. None, for example, looked at Van Gogh's work at the time "properly"—he could not sell any of his pictures in his life-time—because the critics were judging them in one class schema when they belonged to another. So also in our example, art critic no. 2 and the white-collar individuals have judged Picasso' painting in one schema—but it is probably the wrong one.

If we want, next, to measure a painting by, say, Kline, the same procedure would be followed, beginning with a set of 49 representations of paintings of that class schema (i.e., abstract paintings).

But I need not take the examples any further: it will be said that all is still relative to the Q-samples of 50 paintings of any class-schema, and that is true. A beginning has to be made, however, and at least it can be demonstrated that there is a definite objectivity in what is ordinarily held to be purely subjective, i.e., one's impression of a painting.

Thus, with respect to my studies of 30 years ago, I could *measure* any colored paper (CP) design. One first constructed a 13-point scale of such compositions, using the psychophysical methods of "equal-appearing intervals," or, more simply, Q-method. Thirty years ago I had such a scale at Oxford: there were four compositions at each of the 13 points. One could use judges (previously tested by factor analysis to be physiognomic for the CP composition class) to score any new compositions by finding its mate (as nearly as possible) on the scale. In this way, Figure 6 scored -2, and Figure 7 +3. Moreover, if one *shook* a person's designs, or otherwise gently disturbed their regularity, the irregularities led to higher scores on the scale.

Again, it was easy to show that anyone could produce a pleasing design by chance, merely by closing one's eyes and dropping the pieces randomly upon one another, shaking the result as in a kaleidoscope—more "properly" pleasing than one could compose deliberately, unaware of the trick involved in disturbing the dominance of the shapes upon one's own stilted compositions.

General Considerations

Let me return, in conclusion, to some general considerations. In Rader's (1956) anthology of *Esthetics* there is not a single reference to any systematic testing of theories. Nor has any fine arts department, to my knowledge, developed an experimental laboratory to study esthetics scientifically. There are no "backroom boys" in the fine arts.

I sit on a university research council, and I am clearly friendly to artists, but when a painter suggests that his painting is research, or corresponds to research in science, I cannot agree. Writing a scientific paper can be a work of art: doing the research is quite another matter. Academic artists, by and large, do little or no research as I understand it—even if they try different pigments, or different techniques, these are matters of technique, and in no way correspond to matters of basic research.

I have suggested that methods exist for testing any or every theory propounded in esthetics or in art journals. Advertisers are prepared to pay $20,000 to "copy-test" some of their magazine advertisements—no museum director has ever copy-tested a Picasso, or a Cezanne.

I make a plea, therefore, for the appointment to art departments of "back room" boys, whose purpose it will be to develop experimental esthetics. I do not mind what theories they test, whether those of information theory or of Gestalt psychology, or of play theory. The really important methods, however, are already well established in experimental psychology.

Experimental psychology distinguishes between two very different methodologies, one the methods of *expression*, and the other the methods of *impression*. These are axiomatic matters, and both are applicable to esthetics and art.

The thermometer, a pressure gauge, and a gadget to measure eye movements are instruments to measure *expression*. They have been applied to art, for example to measure eye movements as one looks at pleasant and unpleasant paintings (Stratton, 1902; Buswell, 1935; and others)—proving, in the process, that eye-movements bear no simple relation to the pleasure experienced in looking at a picture, or that muscular balance corresponds to esthetic pleasure. Most recently Rashevsky (1938) has proposed a mathematical theory of the esthetic value of objects, based on postulates concerning thresholds, synaptic resistances, and similar neurological terms, all of which have reference to the methodology of (physical) expression. I have never found these methods very pertinent to esthetical problems, although I was initially a physicist, and the methods as such are congenial to me.

The really pertinent methods are those of *impression*: they were invented to study esthetical problems. These, as the term suggests, rely upon a person's *judgment*—the individual is asked whether he likes or dislikes this or that painting, poem, or piece of sculpture. From his *judgments* we have to develop a science of esthetics.

It is no doubt difficult to believe that objective science can issue from what a person *says* about his innermost experiences. The methods of introspection were tried, but were discredited. The psychophysical methods are fully acceptable, however, and have been so since Fechner developed them to begin the scientific study of esthetics. Following a long line of experimental psychologists, all involved in one aspect or other of these methods to measure one's subjective judgments, I was able 30 years ago to devise Q-methodology, and this is now more widely accepted. The possibility presents itself again, that art can be studied scientifically—no one need doubt it—to good effect.

I suggest that the concept of communication pain is important, and that artists ought to seek to understand it. It relates to physiognomic character, and especially to anything that *deflates* man, to let him be ashamed at times for his own good.

I suggest that getting people to try to paint ugly pictures will greatly improve esthetic standards.

But I also suggest that artists have a purpose in searching for universality in their *signs*. There is a simple test of any such: can everyone enjoy it, at one level or another; and objective methods can prove that the "proper" way of looking at it corresponds with what even a child experiences.

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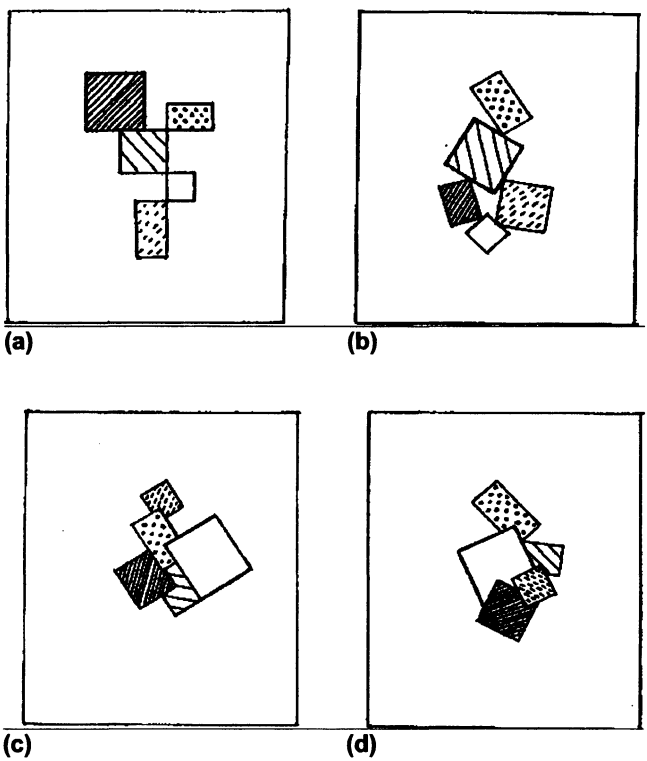
(All cited references are included to the completeness ascertainable by the editors.)

Editor's Appendix

Figures 4-11 were missing from Stephenson's manuscript and were no doubt to have been selected and put in place as it neared completion. Some idea of the abstract designs that were created can be gleaned from similar figures from the art-form test described in *The Study of Behavior*, and reproduced below). Squares and rectangles differentiated by size and color—the surface designs in the illustrations indicate different colors—were given to art students, who were instructed to create a *pleasing* and then an *ugly* design. The examples below represent principles factorially built into a set of designs: (*ab*) contiguous vs. (*cd*) overlapping, and (*ac*) regular vs. (*bd*) irregular. These categories, in turn, were cross-classified with five colors (red, green, brown, yellow, and maroon).



Source: William Stephenson. The study of behavior: Q-Technique and its methodology. (Chicago: University of Chicago Press, 1953, p. 130).