The Logical and the Empirical Form of Feeling
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The Logical and the Empirical Form of Feeling

MICHAEL M. PIECHOWSKI

Susanne K. Langer's theory of art seems to have suffered some neglect in recent years. The plausibility, usefulness, and demonstrability of her principal idea, that works of art present the logical form of feeling, have been questioned. The purpose of this paper is to invite attention to the work of Manfred Clynes on experimentally obtained forms of feeling and the inner pulse of music, for it appears to be a direct demonstration of Langer's logical form of feeling. Clynes's research has revealed important features of the nature of feeling which not only confirm Langer's ideas but have opened a new field of study: the study of expression as a function of its spatial and dynamic form. If aesthetic education is to be rightfully regarded as the education of feeling, then we are presented here with a rich source of implications, because suddenly feeling is no longer an elusive quality but has a precise and demonstrable form whose properties can be measured. The first part of this paper reviews the key concepts of Langer's theory, the second presents Clynes's discovery, and the third carries out an alignment of their concepts.

THE LOGICAL FORM OF FEELING

According to Susanne Langer, art articulates human feeling and renders an objective presentation of it. By "feeling" she means all aspects of human mentality ranging from emotions, the sense of balance, the

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sense of time, to the formation of images, concepts, symbols, and logical thought: “Feeling includes the sensibility of very low animals and the whole realm of human awareness and thought, the sense of absurdity, the sense of justice, the perception of meaning, as well as emotion and sensation.” A work of art embodies and portrays the artist’s idea of vital experience. The artist apprehends, abstracts, and recreates the form of feeling in tones, lines, colors, mass, and space for others to behold. The work of art becomes an image of “the reality which the artist has found in the world and of which he wants to give his fellow men a clear conception.” But there is something very special about the way in which this comes about. According to Langer, feeling is presented in art always as an organic form, because only living organisms can feel. By “organic form” she means not so much the familiar forms of crab shells, heart, or kidney as patterns of vital activity: growth, movement, heartbeat, the tensions of life processes and their forward thrust; in short, dynamic patterns that range from a single moving line to infinitely complex patterns of intertwined currents of activity. In the most general sense and at every level of activity, from molecular activity to that of the brain, these processes are composed of patterns of tensions. A work of art is successful to the degree that it has the quality of “livingness.” The artist in creating his work so constructs a pattern of tensions that it produces that quality and thus attains organic or “living” form.

In Langer’s theory, feeling as a vital process and feeling embodied in a work of art are analogues of the same logical structure. It is important to understand what she means by this. Logical structure is that basic design or inner organization of something that may be carried out in a number of ways. The same logical structure can be expressed by different forms. A musical scale, a temperature scale, and a social scale have nothing in common physically, but all three share the logical order of a series whose parts are arranged so that each is either higher or lower than the other. The physical counterpart of a scale is a ladder, and scala is the Latin word for ladder. As instances of stepwise order, the rungs of the ladder, the markings of degrees on the thermometer, and the symbols of musical notation share a structural correspondence which is the logic of analogy. The function of analogy is to provide conceptual equivalents. “If two things have the same logical form, one of them may represent the other, and not otherwise. Six mice may represent six horses, but even a fairy godmother would have had a hard time making six horses out
of five, or seven mice. Likewise, seven lean cows may mean seven poor years, and seven fat cows, seven years of plenty; but had the cows been all alike they would have lost their significance, for the analogy would have been broken.4 Langer’s suggestion that forms of musical motion are analogous to forms of human feeling rests on the recognition that there is a structural correspondence in the logical sense, i.e., similarity of form, between the temporal patterns of feeling, “forms of growth and attenuation, flowing and stowing, conflict and resolution,” and music which is “sounding forms in motion.”

The key terms of Langer’s theory may be outlined as follows:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Function</th>
</tr>
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<tbody>
<tr>
<td>Work of Art (an expressive symbol)</td>
<td>a constructed image of human feeling; an organic form, a semblance of living form</td>
<td>stabilization and articulation of fluid experience; expression</td>
</tr>
<tr>
<td>Image (a nondiscursive symbol)</td>
<td>a projection of an abstracted form to enhance visibility of its essential features</td>
<td>presentation of the appearance of things; transformation of experience into manageable items</td>
</tr>
<tr>
<td>Abstraction</td>
<td>apprehension of the logical form of a thing in one instance or a number of occurrences</td>
<td>reduction of the booming, buzzing confusion and its conversion to order</td>
</tr>
<tr>
<td>Logical Form</td>
<td>a relational structure, such as a coherent pattern, plan, design, or a distinct quality</td>
<td>discovery of true analogies (conceptual equivalents)</td>
</tr>
<tr>
<td>Logical Form of Feeling</td>
<td>the quality of “living-ness” as an attribute of the dynamic pattern of living processes</td>
<td>artistic creation; projection of feeling onto nature</td>
</tr>
<tr>
<td>Quality</td>
<td>an element in a logical structure or itself a logical structure; an order of experience which can be very complex and which allows for subtle yet very precise discrimination of differences of form</td>
<td>the taste and touch of reality; the intaglio image of reality</td>
</tr>
</tbody>
</table>

According to Langer, animals, not even Lilly’s dolphins, do not have minds, because animal mentality is always bound to the immedi-
ate situation; the sequence of their mental activity is always a continuous chain of acts, where every step is engendered by the immediately preceding one. Animals have mental processes but not minds. Humans, however, have minds by virtue of being able to imagine situations apart from an immediate context and by virtue of being able to anticipate consequences of acts. The human mind appeared in evolution with the "great shift" in the capacity to form, store, recall, and juxtapose images of felt experience, the beginning of symbolic activity. Works of art are the externally constructed equivalents of these images.

The function of an image is to present the appearance of things, what things seem to be, because at first this is what is perceived and remembered. The image alone does not engender reflection and analysis, because that requires language. But language, as it has evolved, at present bears no direct relation to the appearance and the feeling of things — the sense of things experienced, remembered, or anticipated. Language operates discursively by reference to known items, but the felt qualities of these items do not enter the discourse; they may be described but are not presented directly. To illustrate this, let us say that we want to tell someone how Roentgen discovered X rays. Roentgen found that unexposed photographic plates that had been left in storage had some images on them, and he set out to discover the nature of the strange phenomenon. He worked in the laboratory for several weeks, testing out the emanations that produced the images on stored unused plates. He was very excited to make this discovery.

Rendered like this, the story is presented discursively, the events are named in order and reported. We do not get the flavor of Roentgen's excitement so that we could almost feel ourselves transported into his lab and feel the contagion of his scientific fever. If the story had been told so that it conveyed how it felt to be in the lab with Roentgen, we would have been given the quality of that experience, and the story would have presented the feeling of the process of Roentgen's discovery. To create that feeling is to create an image based on a significant degree of correspondence with what actually happened. A factual report without the feeling of what went on in that laboratory lacks this vital relation. Thus we can say that there is no structural correspondence between linguistic symbols and the terms they stand for, but there is such a correspondence between images and the matters that inspired them. An image is a nondiscursive symbol, because what it does is to present the appearance of something (i.e., a felt quality).
Linguistic symbols are, for the most part, arbitrary, while nondiscursive symbols are nonarbitrary, because they retain a logical relationship with the actuality of which they are an image.7

An image that persists, i.e., that has a degree of stability, allows the isolation of significant features of experience prior to analysis; in this sense it is an abstraction. An image also allows the presentation of items of experience so that the quality of the experience can be recognized. Works of art are images of this kind; they isolate out of the welter of experience something of poignancy and significance and allow it to become articulate. Thanks to this, felt experience can be communicated by being suggested. (But suggestion is direct presentation of the appearance.) One can suggest a seascape by an appropriate combination of rectangular patches of, say, blue and green without ever painting anything directly representing seaside items. But the qualities of light, sea, and grass near the dunes are all present in such a painting. What is presented is the abstracted form of the felt experience of a sunny day by the sea on a wild stretch of land. Such a painting (Ocean Park No. 45 by Richard Diebenkorn) embodies the felt quality (i.e., the form of feeling) of such an experience.

Because an image is constructed on the logical relation of structural correspondence with the original experience, the discovery of analogous forms is made possible. Rungs in a ladder, gradations of coldness and warmth, higher and lower pitch, prestige and affluence, when apprehended as instances of a pattern of relations, allow the concept of a scale and scalar order to emerge. But it is the original scala, or ladder, which stands as the model of the other scales, because it is the simplest, the commonest, and the most concrete. And it is the simpler and the more negotiable of two analogues that can become the image of the other. The image of a ladder becomes in a scale the nondiscursive symbol of stepwise order. And so with music, the "tonal analogue of emotive life": "Sound is a negotiable medium, capable of voluntary composition and repetition, whereas feeling is not; this trait recommends tonal structures for symbolic purposes."8

This, then, is Langer's argument for regarding works of art as expressive symbols of feeling.9 Critics of this argument, and they have been legion, have mainly objected to the difficulty that even if Langer's argument were true, we would have no way of placing human feeling and works of art side by side, as it were, to test the truth of her analogy. As Casey says, "There is an immediate and obvious objection to Mrs. Langer's theory. How do we know that works of art stand in a rela-
tion of logical analogy to forms of feeling? Have we any way of becoming acquainted with these 'forms' apart from their artistic (or religious or mythical) expression, so that we can compare them with the works in which they are said to be instantiated, and so decide whether they have been satisfactorily realized?" 10 This objection is removed by Clynes's discovery which for all practical purposes makes such a comparison possible. We now turn our attention from the logical to the empirical form of feeling.

THE EMPIRICAL FORM OF FEELING

"If one looks at the phenomena of experience more closely, one soon discovers that words can only be a rough guide to the actual qualities of experience. The onset and decay, repression and changes of intensity of feeling with time, and many of its shades and combinations cannot be exactly represented by word. Music, however, using specific expressive dynamic forms, permits a more precise communication of many subtleties of qualities," 11 writes Clynes. Here, then, is another statement to the effect that music is an analogue of emotive life precisely because it does a better job than language, and it can do a better job precisely because it is made of dynamic forms.

Playing music, thinking music, and observing expressive gestures of conductors led Clynes to the discovery of a way to capture these dynamic forms. 12 A person thinks an emotion. He calls up in his mind the idea of that feeling, then expresses it by exerting pressure on a finger rest hooked to a recording apparatus. Thus when one thinks "anger," one stabs the finger rest vigorously and briefly; but when one thinks "grief," the finger rest is pressed slowly, heavily, and for a longer time. The apparatus has two pressure transducers, one to measure the pressure exerted down on the finger rest (the vertical component) and the other to measure the direction of pressure—to or away from the body (the horizontal component). These two components are recorded as separate curves, and together they give characteristic forms. 13 Clynes called them essentic forms. Essentic forms are the precise, biologically determined dynamic forms that underlie the expression of distinct qualities of experience. Qualities are the irreducible elements of experience. The inner state of the organism felt as a distinct quality is called a state of emotion or a sentic state. Such a state and its motor expression form one biological unit. Sentic states and the essentic forms that govern them have a number of properties which flow from the biological design of the generation, transmission,
FORMS OF FEELING

and recognition of qualities of experience that can be expressed through the motor system. (There also exist qualities that cannot be so expressed, e.g., jealousy, guilt.) The description of these properties follows Clynes.14

The Property of Exclusivity

A sentic state is a single-channel system; only one state can be expressed at any one time. A single act of expression permits only one sentic state; one cannot express simultaneously, say, anger with one arm and grief with the other. An attempt to do this results in the blocking of each expression. This does not mean that a sentic state cannot be complex, only that its complex form has to be composed prior to expression.

The Property of Equivalence

A sentic state may be expressed by any of a number of different output modalities. A particular feeling state can be expressed with the
arm, leg, or even the chin (as recorded in one case); the face, tone of voice, musical phrase, and the same dynamic form will be produced. Thus the sentic state and its expression are independent of the particular mechanisms of expression.

**The Property of Coherence**

*Regardless of the particular motor output chosen to express a sentic state, its dynamic expression is governed by a brain program or algorithm specific for that state which shall be called “essentic form.”* If the expression is genuine, there is a one-to-one correspondence between the emotional state seeking expression and the essentic form of that expression. Without this property, the property of equivalence would not be possible. A correctly expressed essentic form generates satisfaction in its expression, and with repeated expression it also intensifies the experience. Genuine expression is also self-correcting, that is, with repeated practice one begins to recognize better the true form by its power to generate emotion in the subject. “Repeated expression teaches.” A search for proper phrasing in music and for the overall interpretation of a piece is really the search for its essentic form. Essentic forms are universal. Clynes's cross-cultural studies have shown that their actual expression does not vary more between cultures than

![Figure 2](image-url)
it does between individuals of one culture. Each form is so distinctly determined that within an existing range of variation no overlap or confusion with other forms is possible. A mathematical differential equation was found by Clynes which uniquely describes each essentic form.

**The Property of Complementarity**

The production and recognition of essentic forms are governed by inherent data processing programs of the central nervous system, biologically coordinated so that a precisely produced form is correspondingly recognized. The recognized form in turn generates a sentic state in the perceiver. It is important to realize here that the fact that essentic forms are recognized is not self-evident at all. Production occurs through one system, recognition through another. One hears a voice, but one does not produce it through the ear. One sees a dance step, but one does not produce it with the eyeball. The closest we come to the involvement of the same system is in touch. But touching someone’s arm feels very different from having one’s own arm touched. The production of essentic form is a process different from the recognition of one, and their congruence is not an obvious matter. But the congruence between production and recognition of these forms is absolutely necessary to make expressive communication of emotional meaning possible. Three conditions must be fulfilled: (1) biological congruence between the capacity to produce and the capacity to recognize essentic forms, (2) successful production of the form (departure from correct form results in loss of meaning), and (3) successful recognition.
Unlearned, innate instances of essentic forms are represented by laughter and yawn. The production and recognition of song in crickets and in birds have been demonstrated to be under genetic control. The stability and universality of the essentic forms studied by Clynes clearly point to a genetic program in the brain that makes them possible.

**The Self-generating Property**

*The intensity of a sentic state is increased, within limits, by the repeated, arrhythmic generation of essentic form.* Each essentic form can be expressed, at first, without feeling the corresponding sentic state. But repeated expression generates the corresponding feeling, increases it up to a certain level, after which it becomes attenuated. The repetitions, however, must be timed slightly irregularly so that each consecutive expression is not a mechanical repetition but a focused expression. Expression has the power to generate the feeling appropriate to the essentic form that is being expressed. On this rests the phenomenon of emotional contagion. Actors (and demagogues) rely on this property to generate emotion in the audience.

**The Property of Generalized Emotion**

*Sentic states may be experienced and expressed as pure qualities or identities, without reference to auxiliary relationships to generate or receive these qualities.* When asked to think and express anger or grief, one usually starts by recalling occasions and situations in which one was angry or grieving, and one “lets go” to vent pent-up feelings. This type of practice is cathartic and may be draining, but it does bring relief. But it is also possible to skip these personal occasions and concentrate on the expression and the feeling of the pure essentic form without specific personal content. This type of practice is energizing and uplifting. The generalized manner of experiencing emotion is the one that corresponds to the celebrated term “aesthetic emotion” — the contemplation and enjoyment of pure qualities without ego-involvement.

**Communicative Power as a Form Function**

*The power of essentic form in communicating and generating a sentic state is greater the more closely the form approaches pure or ideal essentic form for that state.* This property explains the phenomenon of expressive impact — the difference between a performance that leaves us cold and one that is compelling, alive, even electrifying.
Musical notation, even though it is built partly on analog principles — i.e., on some degree of correspondence between the durations of sound, pitch, and the marks on paper — nevertheless has its limitations. Clynes, being a concert pianist, has this to say:

All too often the faithfulness required by teachers is not to the inner sound but merely to so-called tradition, or the totally inadequate notation of the score. The musical score is not able to define the real subtleties that are essential to give a truly living character to the music. It is no exaggeration to say that in the hands of a master such as Casals the sound is defined to a precision of hundredths of a tone (that is to say, a single tone is shaped with such meaningful detail that if represented by a curve such a tone would have to be divided into one hundred ordinates to denote its course adequately). This estimate is not far removed from the ability of the ear to distinguish changes in essentic form amounting to less than 100th of a second.  

Thus the absence of very subtle modulations, those that define the ideal form, marks the loss of the living quality in music as well as in acting, singing, and human interaction. The ideal form is a family of forms that carry the quality of livingness in the shape of their curves. Clynes's sentographic studies made possible the systematic analysis of such qualities. Furthermore, it is also possible to practice essentic expression.

At present such practice, which takes twenty-seven minutes in front of a tape recorder, consists of the repeated expression of a series of emotions, so constructed that each one prepares the way for the next. For instance, grief expressed as hopelessness and inner collapse makes room for the restoration and expansion in the embrace of love, and love fully expressed flows, in time, into the vibrant life energy of sexual feeling, which in turn facilitates the expression of joy, for a brief moment perhaps sexually colored but quickly to become pure joy. In fact, the expressive cycle for each emotion normally feels complete so that there is no spillover from one emotion to the next. The currently utilized sentic cycle consists of a sequence of seven emotions: Anger, Hate, Grief, Love, Sex, Joy, Reverence. This sequence has its own wave form, as it were. The quick and vigorous form of Anger is followed by the more sustained form of Hate and reaches the broad floor of the trough in Grief; a rise occurs in Love, quickening in Sex to reach its peak in Joy, which is followed by the cadential and inwardly recollected broad form of Reverence.

A number of persons have provided reports of one to two hundred sessions of such practice and found it beneficial either in terms of
personal release and catharsis or in terms of the energizing property of generalized emotion. A commonly observed effect is a sense of gladness in the present, a sense of emotional security and rootedness. Not a few persons reported spontaneous awakening of interest in the arts, while artists saw themselves becoming more discriminating in the recognition of expressive qualities and more adept at producing them.  

It is important to realize that sentic expression of the so-called "negative" emotions of anger and hate has nothing negative about it. Leaving aside release of anger and hate when there has been occasion for it, one must bear in mind that the vitalizing effect of the practice is the result of expressing the pure form. While release brings satisfaction, expression nourishes.

Even though Clynes's base is in music, he points to several examples of works of art in which the essentic forms are clearly visible. In Picasso's drawing *Mother and Child* there is an abundance of embracing curves analogous to the essentic form of love; and in the drawing *Pan*, the horns, arms, and shoulder show the rounded angularity and dynamic thrust of the essentic form of sex. In Goya's painting *Saturn Devouring His Child*, rough and angular forms of the arms and legs present raw, destructive violence and clearly correspond to the essentic form of hate. In the *Pietà* of Michelangelo, the main expression is grief and compassion. The Madonna's head is tilted slightly to one side, a common posture encountered in those in grief. The contour of Christ's collapsed body follows the essentic form of grief, while the folds of the draped sheet below suggest love and reverence. In Giotto's painting *The Epiphany*, the reclining figure of the Madonna is a pure expression of the essentic form of reverence, while Joseph's arm has the rounded curve of love. The curves of the horns of the little goats correspond to joy. The painting contains a number of other essentic forms such as hope, exaltation, awe, wonder, sudden revelation. And a painting by an Australian aborigine artist is populated by figures whose form of movement corresponds to the essentic form of joy, which is how the aborigine people view it themselves. These examples have much greater expressive power when viewed from slides projected on a screen than they have on a printed page, but either way, once the essentic elements are located, they can be found more easily in other works of art and in art of various cultures. However, the present list of known essentic forms is not yet complete, and mixed and more complex forms will require special methods of
analysis. It is also important to bear in mind that essentic forms give us only the most obvious and most easily recognizable elements of a work of art. Clynes's analysis of musical meaning goes far beyond that.

The expressive power of painting and sculpture can now be viewed to be, at least in part, a function of the presence of discernible shapes and curves that have a one-to-one correspondence to universal essentic forms. This fact corrects one of Langer's repeated statements, "In a work of art, however modest, the peculiar character of life is always reflected in the fact that it has no parts which keep their qualitative identity in isolation. In the simplest design, the virtual constituents are indivisible, and inalienable from the whole. Yet no analysis can uncover a simple and direct relation of an element to the work as a whole."\(^{18}\) On Clynes's analysis, essentic forms are constitutive parts of a work of art and retain their identity in isolation. They do so for the simple reason that they are prior to the work of art; on them depends the quality of livingness.

**A LANGER-CLYNES ALIGNMENT**

Langer's concept of the logical form of feeling encompasses the whole range of felt life, from a single emotion to a sense of an individual life in its total span and with its intricate fabric of life, in its continuous stream of occurrences and interactions. Clynes's essentic form is one category of Langer's logical form of feeling.\(^{19}\)

Remember that essentic forms can be expressed and experienced as generalized emotion. It is this property that gives the experience impact and makes it vitalizing. It clearly corresponds to the impact of repeated contact with art — which, by the way, at one time persuaded quite a few people that aesthetic emotion is worlds apart from all other emotion. But Langer makes it quite clear that the vitalizing power is generated by contact with a clearly conceived form of feeling: “Creative work always produces an actual excitement, which is colored by the feeling to be projected, and is sometimes more massive than the intended import. It is, I believe, this intellectual excitement, the feeling of heightened sensibility and mental capacity which goes with acts of insight and intuitive judgment, that the artist feels as he works, and afterwards evokes in those people who appreciate his creation, . . . what the creative form expresses is the nature of feelings conceived.”\(^{20}\) Clearly conceived and vividly expressed, a form of feeling first exerts its power on the artist, then on the perciipient. This is an instance of the property of complementarity mentioned above, the congruence
between the production and recognition of a precisely produced form, where “the recognized form in turn generates a sentient state in the perceiver.”

For Langer, artists are the experts in the lore of feeling. Art, then, is not self-expression but the expression of the artist's knowledge of human subjecivity:

In the course of projecting the forms of feeling into visible, audible, or poetic material, an artist cannot escape an exact and intimate knowledge of those passages of sentence which he succeeds in expressing. . . . He knows something of how feeling rises, develops, tangles or reverses or breaks or sinks, spent in overt action or buried in secrecy. He is not a psychologist interested in human motivation and behavior; he simply creates an image of that phase of events which only the organism wherein they occur ever knows. This image, however, serves two purposes in human culture, one individual, one social: it articulates our own life of feeling so that we become conscious of its elements and its intricate and subtle fabric, and it reveals the fact that the basic forms of feeling are common to most people at least within a culture, and often far beyond it, since a great many works do seem expressive and important to almost everyone who judges them by artistic standards. Art is the surest affidavit that feeling, despite its absolute privacy, repeats itself in each individual life. It is not surprising that this is so, for the organic events which culminate in being felt are largely the same in all of us, at least in their biologically known aspects below the level of sentence.21

The above passage is a prime example of Langer's conception of how feeling appears and functions. It "rises, develops, tangles or reverses or breaks or sinks." It rises from "organic events which culminate in being felt." What this last statement means is that feeling is not an entity in itself but a phase of those processes in the living matter which culminate in being felt. As iron heated to high temperature starts to glow red, so vital processes at a certain level of intensity attain the phase of being felt. The red glow is not added to the iron; it is but a phase of the iron when very hot. Similarly, feeling is not an added thing but a phase of those processes that at a certain level of complexity and intensity are registered as something felt. But the organic matrix of which feeling is an attribute is "largely the same in all of us." This "sameness" is the dynamic structure of living processes that distinguishes them from inanimate ones; consequently, as patterns of vital activity, forms of feeling must be universal.

While to Langer the universality of forms of feeling is a logical conclusion, Clynes has demonstrated it to be an empirical fact. And
while Langer arrives at universal forms of feeling from an analysis of art, Clynes has shown the reverse but direct path from pure forms of feeling to art, music, and human communication.

Because feeling exists only in living things, its expression is possible only as "living form." It is a form that appears endowed with life, even though the materials may have no organic character — sound, stone, charcoal, or paint, for example. "The necessity of 'living form' for any rendering of psychical events rests simply on the fact that such events are the very concentration of life, acts in which the deeper rhythms of the organism, mainly unfelt, are implicated so that the dynamic structure of the individual is reflected in the forms of feeling as it is in the form of every voluntary movement of the body."22

The living form, however, is not so much a visual shape as a dynamic form, an act: "Elements in art have not the character of things but of acts... In a broad sense... any unit of activity is an act,"23 and every act "has an initial phase, a phase of acceleration and sometimes increasing complexity, a turning point, or consummation, and a closing phase, or cadence."24 This is the act's internal tensive structure. The indivisible dynamic arc of an act is an elementary unit of a living process — a unit of activity. Langer's act is Clynes's acton, "the simplest elementary unit of voluntary action." The only difference between Clynes's acton and Langer's act is that actons are units of deliberate movement, while acts are units of voluntary, involuntary, and molecular activities as, for instance, in the case of contractile protein molecules.

The essential form of a complete act is prefigured in its impulse, the impulse being the initial phase of the act. For instance, the pattern of heartbeat is prefigured in the pattern of its pacemaker (the group of specialized muscle fibers that regulate the pulsation of the whole heart) and sympathetic nerve activity. Clynes, using the anthropomorphic language of computer science, defines the acton further as consisting of a decision, or command, and its execution. The decision contains the idea of the action to be executed, its prior envisagement. A singer forms the idea of vocal sound before she utters it. Without an idea to guide it, the utterance would be unpredictable. The only other way of making it predictable would be to make it entirely guided by innate instinct, but then it could not be voluntary and intentionally expressive. The dynamic form of a voluntary movement defines its quality; the form differs for each kind of movement, as
singing blues differs from singing country and western. The singer has to set her mind so that she can set her throat appropriately to each style. The more precise the idea of a style, the more convincing its execution. Such envisagements Clynes calls *idiologs*; they are the formed ideas of qualities of experience. A quality is an irreducible element of experience, and it is also its carrier, because in the exact modulation of the spatiotemporal profile lies the unique character of every discernible quality. A pure quality, such as redness, joy, or one complete movement, is irreducible, because it cannot be split into other elements of sensation and experience. But Clynes has also demonstrated that for each perceived visual quality, there is a space-time code in the brain whose design is identical in all subjects with normal vision. Thus, when you and I are looking at the same patch of redness, my perceived red is really the same as your perceived red. From the brain-evoked potentials alone, a computer can identify about a hundred different patterns of color and form perceived by subjects. A quality, then, is a precisely defined order of experience.

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<tr>
<th>Clynes's Term</th>
<th>Definition</th>
<th>Langer's Term</th>
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<tbody>
<tr>
<td>Acton</td>
<td>the simplest elementary unit of voluntary movement: the decision and its execution</td>
<td>act: a formal unit, or module of living processes; an indivisible element constituted by its internal tense structure</td>
</tr>
<tr>
<td>E-acton</td>
<td>an expressive acton; a movement modulated by the feeling seeking expression</td>
<td>expressive movement; form of feeling</td>
</tr>
<tr>
<td>Idiolog</td>
<td>an envisaged quality of experience*</td>
<td>image: the artist's idea; the commanding form</td>
</tr>
<tr>
<td>Quality</td>
<td>an irreducible element of experience; a spatiotemporal form</td>
<td>quality: a way of feeling; in a work of art, constructed as a pattern of tensions</td>
</tr>
</tbody>
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* Clynes's examples are of simple qualities such as red, warm, shrill, joy, sigh, caress, while Langer's "image" encompasses anything from the poignancy of a single experience to the sense of life as a whole and the envisagement of social order. Nevertheless, both share in common the concept that the formed idea exercises a governing function.
Essentic Form  precise dynamic form  the logical form of feeling
characteristic of each emotional quality; the form of its expression

Ortho-essentic Form  the ideal true expressive form of an emotional quality; a reference standard for improving expression and recognition toward the "livingest" quality of experience
quality of livingness; living form

Both Langer and Clynes approach perception, feeling, and art through formal and empirical analysis of qualities. And qualities—the irreducible elements of experience—turn out to be space-time forms very precisely fashioned in the expressive movement of music, dance, acting, and the human communication of feeling; in graphs, painting, and sculpture they are projected into spatial form alone.

THE INNER PULSE OF MUSIC

Anyone listening repeatedly to music of different composers eventually forms an idea of the quality of their styles. An expert can tell Orff from Stravinsky, Ravel from Debussy, Haydn from Mozart, or Mozart from Paisiello. But a musician develops the idea of each style to the point of being able to produce it, as is sometimes demonstrated by taking a theme and improvising it in the style of different composers.

Clynes asked several outstanding musicians to think a piece by a given composer and then express their idea of the composer's style by pressing the finger rest of the sentograph. Different musicians produced remarkably similar essentic forms of the inner pulse of the same composer. It did not matter whether they thought of different compositions, nor whether the movement of the piece was slow or fast.

Clynes (personal communication) demonstrates this by asking the participants to move one arm with the felt movement of music. He then switches from one piece to another, from a fast movement to a slow one and back; but the movement of the arm is in phase with the movement of music as long as the pieces are by the same composer.

To experience this is most remarkable indeed. It shows that the inner pulse is independent of the meter and rhythm of a piece and of its tempo. But the personal signature (a synonym for the "inner pulse") of the composer is there as a living presence. This method, plus the
sentographic trace of the pulse, provides an objective criterion of a correct conception of the style of a given composer. It confirms the occasions when the conception feels absolutely correct and those when it does not, e.g., an attempt to play early Beethoven with the inner pulse of Haydn or Mozart, for the inner pulse of Beethoven is already present in his early works. The inner pulse of music can be regarded as another category, perhaps of higher order, of the logical form of feeling.

Clynes presented in his book a number of musical examples in
which the currently known essentic forms are clearly discernible, e.g.,
grief and love in Bach's Prelude in F Minor, "Das wohltemperierte
Klavier," book 2; or longing, yearning, and ecstatic feeling in the
opening of Chopin's Ballade no. 3 in A-flat, opus 47. But Clynès's
sophisticated analysis involves much more than just the identification
of elementary essentic forms. He points out that the possibilities of the
modulation of actual sound have their limit not only for the piano
but even for the strings and the human voice. The more subtle qual-
ties of the inner sound are created in the listener. Nevertheless, they
are made possible by the ideal essentic form presented by the musician.

What is most remarkable in the phenomenon of music is that the
same essentic forms can be found on top of the inner pulse of different
composers. In experimental situations, two sentographs are used, and
while one hand is expressing the inner pulse, the other is expressing
the essentic forms. This is very much like what a conductor does. The
musical notation is only the suggestion of the raw material of the
musical line and texture, which is to be taken and worked with to
discover what kind of living expressive forms can be made with it.

It is important to note that the two different forms of expression,
the essentic shapes and the inner pulse, are entirely congruent. This
is particularly interesting in light of the fact, explained earlier, that
attempts to express two different emotions simultaneously result in
blocking (by force of the property of exclusivity). Rather than block-
ing, the inner pulse enhances the essentic forms. Therefore, one may
regard the inner pulse as an essentic form of a higher order.

What, then, are we listening to in music and what are we listening
for? Are we listening for specific emotions, for articulation of experi-
ence, or do we expect to be brought in touch with a particular inner
pulse? Certainly all of that. When we like a composer, we tend to like
all of his works rather than just one; and when we dislike another,
we tend to shun all his works, not just some. So it is the inner pulse of
the composer that makes us feel an affinity, or lack of it, for his music.
Probably, then, our own inner pulse is energized by those composers
with whom we feel the greatest affinity. We are presented an oppor-
tunity for inner expansion when we get to know and appreciate other
composers. Thus we are on the threshold of discovering how the
infinite possibilities of individual variation and expression are created,
while sharing unmistakably clear and precise universal forms.
APERÇU

1. Feeling is a precisely defined phenomenon where emotion and its expression are one unit, and its dynamic form can be traced instrumentally with great accuracy.

2. Forms of feeling (essentic forms) are stable and universal across individuals and across cultures.

3. Forms of feeling (essentic forms) with the special power of expressive impact are shown to be empirically demonstrable ideal forms. The quality of such a form is perceived with great precision. The permissible margin of deviation is small, and beyond it the quality becomes unrecognizable. This accounts for the difference between a work of art or performance that comes across "alive," i.e., one that carries the quality of livingness, and one that is cold, indifferent, i.e., one that fails to produce that quality.

4. Langer's belief that no qualities in a work of art can retain their identity outside of it is shown to be incorrect: essentic forms are irreducible elements of experience that exist prior to works of art. Consequently, they retain their identity in and out of them.

5. Clynes's discovery of essentic forms gives empirical reality to Langer's concept of the logical form of feeling. Essentic forms and the inner pulse of music are two categories of the logical form of feeling.

6. The terms of Langer's theory of art and Clynes's sentic theory show perfect agreement. It is one of the rare occurrences of a match between an independently developed theory and empirical findings that validate it.

Notes

1. For example, Susanne K. Langer, Feeling and Form (New York: Scribner's 1953), pp. 401-2; Bennett Reimer, Philosophy of Music Education (Englewood Cliffs, N.J.: Prentice-Hall, 1970), p. 148; Harry S. Broudy, Enlightened Cherishing (Urbana: University of Illinois Press, 1972), p. 58. Criticisms of this position have two basic failings: (a) a complete lack of understanding of Langer's theory and of her concept of feeling and (b) a lack of understanding of the nature of feeling and emotion. It is common practice to reduce Langer's feeling to feelings, emotions, or "having a feeling." Langer's concept of feeling is that of life processes that attain a psychological phase (see note 9, below). It is also common to think of feelings and emotions as reactions to stimuli, whether external or internal. They do perform this function; however, it is important to begin to recognize that, more basically, feelings and emotions are the constitutive elements of human


3. Langer, Feeling and Form, p. 182.


6. The purpose of this example is to explain the difference between discursive and nondiscursive symbols. A lively story is not yet a work of art. What is needed for it to become one is yet another matter. I owe this point to Dr. Bennett Reimer. For a detailed discussion of Langer's view on this, see her Feeling and Form, pp. 287-305, where she says that "literal, logical thought has a characteristic form, which is known as 'discursive,' because it is the form of discourse. Language is the prime instrument of thought, and the product bears the stamp of the fashioning tool. A writer with literary imagination perceives even this familiar form as a vehicle of feeling — the feeling that naturally inheres in studious thinking, the growing intensity of a problem as it becomes more and more complex, and at the same time more definite and 'thinkable,' until the demand for the answer is urgent, touched with impatience; the holding back of assent as the explanation is prepared; the cadential feeling of solution, and the expansion of consciousness in new knowledge. If all these phases merge in one configured passage, the thought, however hard, is natural; and the height of discursive style is the embodiment of such a feeling pattern, modeled word by word, on the progressing argument. The argument is the writer's motif, and absolutely nothing else may enter in. As soon as he leads feeling away from the motivating thought to (say) mystic or moral reaction, he is not supporting the process of understanding" (p. 302).


8. Langer, Feeling and Form, p. 27.

9. It is not the only line of argument that she developed. If the study of art suggested to her a new concept of feeling, the study of feeling compelled her to trace the evolution of human mind (Langer, Mind, vol. 2). The conception of art as the image of human experience suggested to her that the acquisition of the capacity to form images and to transform them into symbols was the essence of the great shift from animal mentality to the human mind. In this vast evolutionary panorama, art is the natural expression of the human capacity to form images and becomes biologically necessary in
the evolution of mind as a shift from dependence on instinct to reliance on symbolization. Both art and the development of concepts depend on the more basic capacity for abstraction or logical forms and for discovery of true analogies.


13. An informative description of the sentograph and the manner of recording is given in Clynes, “Communication and Generation of Emotion.” To obtain a precise and reliable profile free from accidental variations between single acts of expression, usually fifty acts are averaged with the aid of the Computer of Average Transients invented by Clynes. These averaged forms are stable across individuals and cultures, and there is a mathematical equation to fit them.


16. Ibid., p. 54.

17. Personal applications and reports of practice are given in ibid. Information and materials can be obtained from the American Sentic Association, P.O. Box 2716, La Jolla, Cal. 92038.


19. Clynes, *Sentics*, p. 66n. Clynes expressed the view that his essentic form is not Langer’s symbolic form of feeling. However, like many others, he took the conventional meaning of “symbolic,” not Langer’s, which is that of a form that presents a quality directly to perception. In a personal communication, Clynes wrote: “The essentic forms are not symbolic but as depicted by artists they are true to life, so to speak accurate representations of what exists.” I take this to be the exact sense of Langer’s meaning of “presentational” (or nondiscursive) symbol. “Accurate representation” cannot mean sameness in every detail but fidelity to the character and appearance of what is depicted. To achieve this, essential features of the event or experience have to be abstracted. That abstracted form is “the artist’s idea” and a higher-order idiolog for a form of feeling.


21. Ibid., pp. 64-65, emphasis added.

22. Ibid., p. 152.
24. Ibid., p. 291.
26. A travel grant from the School of Education and from the Northwestern University Research Committee (no. 8049) supported my participation in a workshop with Dr. Manfred Clynes in Mill Valley, California, in April of 1979. This support is gratefully acknowledged.
27. An unusual, if not bizarre, instance of such misconception is Régine Crespin’s deep, throaty rendition of Rachmaninoff’s soaring vocalise in the style of Villa Lobos’s Bachianas Brasileiras.