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BERLYNE ON ART: A REVIEW OF D. E. BERLYNE'S AESTHETICS AND PSYCHOBIOLOGY[1]

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Experimental aesthetics, Professor Berlyne reminds us, is the second eldest sibling in the family of experimental psychology. Old Father Fechner himself delivered the child from its over-ripe and groaning past with his investigations, published in 1865, into the question of the golden section. That problem abides; so, unhappily, do most others put to trial in a century of effort to constitute a science of aesthetics. Ours is not a wretched little discipline, but neither can it claim more than the least pretentious of successes. Partly for this reason it sits uneasy among the psychological specialties, its position ill-defined. *Psychological Abstracts* catalogues aesthetics as a branch of social psychology. Few assignments could be more misinformed, as attested by the frequency with which work in the area is abstracted in other sections of the journal. My own experiments in lateral organization in pictures and aesthetic preference, although they carry the pivotal word in the title, are as likely to be classified as studies in perception. It is a measure of the distance that psychology has moved from a concern with consciousness and the several modes it adopts that aesthetics is today a conceptual vagabond.

Sixty years ago Edward Bullough published his admirable essay on "psychical distance" as an element in art and as an aesthetic principle. Distance is achieved "by separating the object and its appeal from one's own self, by putting it out of gear with practical needs and ends. Thereby the 'contemplation' of the object becomes alone possible" (p. 96). Distancing places things into " 'objective' " consideration. It allows only those responses which accent the " 'objective' " properties of an event. It relocates the " 'subjective' affections," so that we interpret them "not as modes of *our* being but rather as characteristics of the phenomenon" (p. 95).

The distanced attitude toward things is not our typical posture. Ordinarily, we engage objects through their immediate and practical aspects, assimilating such impressions as we experience to a continuing awareness of self. "The sudden

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[1]D. E. Berlyne. *Aesthetics and Psychobiology.* New York: Appleton-Century-Crofts, 1971. Pp. xiv + 336. $14.95.

view of things from their reverse, usually unnoticed, side, comes upon us as a revelation, and such revelations are precisely those of Art" (p. 95).

In eliminating the practical appeal of objects, distancing does not thereby transform the encounter to the impersonal sort distinctive of scientific enterprise. The distanced relation remains personal, "often highly emotionally coloured, but *of a peculiar character.*"

> . . . the personal character of the relation has been, so to speak, filtered. It has been cleared of the practical, concrete nature of its appeal, without, however, thereby losing its original constitution (p. 97).

In witness, we react to the happenings and characters of a stage play as to events and persons in daily life, save for that which would appeal to us "in a directly personal manner" (p. 97).

Comprehension, and thus appreciation, of an artistic work presupposes a preparation to respond to the particular appeal it makes. More precisely, "the success and intensity of its appeal would seem . . . to stand in direct proportion to the completeness with which it corresponds with our intellectual and emotional peculiarities and the idiosyncrasies of our experience" (p. 98). Having stated the "principle of concordance" (p. 99), we must immediately qualify it. Correspondence between the appeal of the work and the viewer's own psychological situation "should be as complete *as is compatible with maintaining Distance*" (p. 99, my italics). If the jealous husband, watching a performance of Othello — otherwise an auspicious conjunction — cannot maintain the Distance between his own feelings and the happenings on the stage, the perspective will reverse. ". . . he will no longer see Othello apparently betrayed by Desdemona, but himself in an analogous situation with his own wife" (p. 99).

It is equally so for the artist. Vivid personal experience is the likeliest subject for effective expression, but the transformation, to be art, requires that he separate himself from the event as personal. Hence, in both the appreciation of art and its construction, the most satisfactory paradigm is "the *utmost decrease of Distance without its disappearance*" (p. 100).

Distance is not an absolute. It varies as a function both of the nature of the object and of the individual's distancing-capability. In those engagements in which the failure to establish appropriate Distance devolves upon the viewer, the error typically is one of under-distancing. Attributes within the work itself frequently engender excessive Distance.

> The consequence of a loss of Distance through one or other cause is familiar: the verdict in the case of under-distancing is that the work is 'crudely naturalistic', 'harrowing', 'repulsive in its realism'. An excess of Distance produces the impression of improbability, artificiality, emptiness or absurdity (p. 101).

The principle of Psychical Distance extends an elegantly simple resolution of the critical issue in hedonistic aesthetics: how to separate "within the 'pleasure-field'" (p. 117) the beautiful and the merely agreeable. To wit, *"the agreeable is a non-distanced pleasure . . .* felt as an affection of our concrete, practical self" (p. 118). Beauty, in distinction, requires Distance.

> . . . the centre of gravity of an agreeable experience lies in the self which experiences the agreeable. The aesthetic experience, on the contrary, has its centre of gravity in itself or in the object mediating it, not in the self which has been distanced out of the field of the inner vision of the experiencer: 'not the fruit of experience, but experience itself, is the end' (p. 118).

In his lectures at Cambridge in 1907 Bullough identified the "modern" conception of aesthetics as *"the systematic study of aesthetic consciousness"* (p. 69). Introspection was distinguished as the primary, but not the sole, method of analysis. The view is quintessentially psychological, and was intended to encompass both artistic production and aesthetic appreciation. It marks a shift away from inquiries into the nature and causes of beauty toward a concern with its effects. Any object can, in theory, become the focus of aesthetic contemplation. By consciousness he denotes "a more or less fixed and habitual mental attitude towards things in general, towards life, experience and the world at large" (p. 70). Aesthetic consciousness, although distinct from the practical, scientific, and ethical modes, is at the same time coordinate with them.

Even in aesthetics sixty years is sufficient time for the "new" and the "old" to change referents. The title of Professor Berlyne's book epitomizes the progression. Psychobiology is the current leading edge in behavioral science. An aesthetics conceived as the systematic study of a mental disposition is mismatched to its requirements, which are to objectively analyze observable behavior in biological terms.

> . . . the psychologist cannot feel that he has completed his work and explained a form of behavior until he has placed it in a biological perspective, which means relating it to natural selection and to learning. Every form of behavior must depend on bodily structures, including characteristics of the human nervous system, that have appeared in the course of evolution because they could contribute to the survival of the individual and of the species. This must hold for aesthetic

> activities as well as for any others, so that the psychological study of art must include a search for the biological origins of art (p. 8).

Aesthetics and Psychobiology builds its case slowly and with circumspection. Science is but one approach to art, and not every question we can ask comes within its purview. While scientific and non-scientific treatments of the same event class may frequently be profitably brought into juxtaposition, to go beyond this contact and attempt to unify the two can only lessen each.

Progress in the aesthetic disciplines has been at a snail's pace. Berlyne charges six factors with having impeded advance: the belief in art as a supernatural phenomenon, the failure to separate factual from normative questions, the conception of art as a unitary phenomenon, the habit of treating art in isolation from nonartistic forms of behavior, the preoccupation with uniqueness in aesthetic taste, and the concentration on verbal judgments in aesthetic work. But the future looks brighter, due primarily to the following developments: (1) the rise of information theory, which provides procedures for rigorously analyzing some of the features of stimulus patterns that most concern aesthetics, (2) recent empirical and theoretical contributions in both psychology and neurophysiology to the understanding of pleasure and arousal, and (3) findings bearing on the nature of exploratory behavior, both in animals and humans, particularly as these teach the motivational importance of such elements as complexity, novelty and uncertainty, so-called "collative" variables, that "seem to be identifiable with the irreducibly essential ingredients of art and of whatever else is aesthetically appealing" (viii). The principal aim of Berlyne's book is to establish the ground gained in these three areas, compare it to the contributions made by earlier workers, and effectuate "a provisional synthesis that will at least bring key problems to the fore" (viii).

It is a formidable task. Inevitably, the effort fares better in some assignments than others. Ironically, what discrepancies in quality do exist would probably project less were Berlyne not so knowledgeable about his subject matter. He is, quite obviously, in the tradition of those "cultured gentlemen" with whom he is wont to populate the early history of psychological science. Parenthetically, one suspects that he could supplement the present work with a very creditable companion volume in the *philosophy* of aesthetics — and profitably so.

Of the three areas identified for treatment, the relevance of information theory for problems in experimental aesthetics

manages the weakest claim. Preference behavior and emotional responses must be construed as ordered by a *subjective* sample space. More generally, ". . . motivational, including aesthetic, phenomena must depend directly, not on the usual objective information-theoretic measures, but rather on their subjective equivalents" (p. 46). Now surely, even for relatively simple art objects, the subjective sample space will include so-called unconscious events as significant members. The problem of identifying these components and of assigning subjective probabilities to them, while perhaps not insoluble, is to say the least, considerable. It is not at all clear that Berlyne regards this as a serious matter. Indeed, quite early in the book he seems to suggest that unconscious processes in art are more legitimately the concern of the non-scientific specialist.

Four principal kinds of information are distinguished as transmitted in art: semantic, social, expressive and syntactic. These are proposed as a basis for defining certain styles. Semantic information, which has its source in conditions external to the artist, predominates in Naturalism and Realism. Social information, a subcategory of the first, prevails in ideological and academic art. Expressive information, which arises from processes internal to the artist, predominates in Expressionism and Romanticism. Syntactic information dominates Concrete painting, Constructivist sculpture, serial music and geometric decoration. It is information that is transmitted "between elements of the same work or between elements of a pattern comprising a portion of a work" (p. 44) and relates closely to the concept of redundancy.

It is not necessary to believe in art as a supernatural phenomenon to see in this analysis a dynamic to reduce aesthetic events to mere mechanical process. Berlyne himself instructs us that contemporary interest in the mathematical features of aesthetic patterns has been encouraged by "the growing use of computers to analyze the statistical properties of artistic material and to produce simulacra of poetry, graphic art, and music" (p. 38). But what have simulacra to do with Michelangelo's *Moses* or Shelley's *Ode to the West Wind?* Rudolf Arnheim (1966) proposes that one of the reasons for our poor progress towards a psychology of art has been "the compulsive need for quantitative exactness" (p. 19). As a case in point he cites the considerable work done to construct a formula for beauty from mathematical proportions — "a branch of study that in artistic practice has been little more than a quaint hobby, an attempt to canonize what had been

achieved before in order to strangle the freedom and grace of what was to come afterwards" (p. 20).

> Compositional structure also has been treated as though it consisted of rigid geometrical patterns that were to coincide with salient points of the pictorial design — an activity in which the intellect can rejoice as long as it pays no attention to the fact that the eye fails to discover any such mechanical relation between the compositions of the masters and the superimposed geometry (p. 20).

The book strengthens perceptibly in Berlyne's discussion of hedonic value and arousal. Pleasure, it appears, is associated both to an increase in arousal and to arousal reduction. On the stimulus side the relationship between hedonic value and arousal is mediated by their mutual dependence on three classes of properties: psychophysiological; ecological, i.e., those "involving association, whether inherent or learned, with conditions conducive or threatening to survival and well-being" (p. 81); and collative, i.e., structural properties, such as simplicity-complexity, novelty-familiarity, expectedness-surprisingness, and clarity-obscurity. At the physiological level Berlyne proposes to account for the association of pleasure to arousal through the interaction of the primary reward system, the secondary reward system, and the aversion system.

Collative variables involve the organism in comparing stimulus features that are either simultaneously present or present at different times. Research in the motivational properties of collative factors constitutes the " 'new experimental aesthetics' " (p. 181). It incorporates work in the general area of exploratory behavior, and thus helps to place aesthetic conduct in appropriate evolutionary perspective.

> . . . we must not forget that the aesthetic behavior of the human adult has emerged out of an evolutionary process lasting millions of years and out of an intricate, gradual unfolding of psychological functions in the individual. So we must not overlook the presages of aesthetic behavior that can be in the playful and exploratory activities of animals and human infants (pp. 181-2).

Berlyne devotes one chapter to four special problems: proportion, balance, rhythm and consonance. Substantial attention is given to the problem of the golden section. He includes as well a chapter on style, and the influence of personality and culture in aesthetic events. The book closes with a discussion of the uses and functions of art.

> If the immediate uses of art may be identified with its intrinsically rewarding immediate effects on the central nervous system, the secondary uses to which art can be applied must be limitless. After all, art is a means of communication (p. 278).

In respect of functions, art serves, among others, those of exploration, "with the proviso that, since aesthetic behavior and the stimulation resulting from it are singularly complex, art is likely to achieve the aims of exploratory behavior with singular thoroughness" (p. 289).

Between Bullough and Berlyne the separation may not be unbridgeable. The latter, in fact, is not unsympathetic to the notion of psychical distance as it is approached in Moles's statement that " 'aesthetic information . . . does not have the *goal* of preparing decisions' " (p. 121). But the discussion never advances beyond the relatively minor question of the inhibition of motor responses during aesthetic contemplation to the critical issue of the structure of the aesthetic disposition. The book brings us to the lip of this problem, but no further. It is, I submit, the most important question to emerge from Berlyne's synthesis. A liberalized psychobiology might admit of its solution.

References

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Résumé

Soixante années de travail dans le domaine de l'esthétique nous ont fait passer de la perspective d'Edward Bullough centrée sur la conscience esthétique à la perspective de Berlyne centrée sur la psychobiologie. Cette dernière perspective emprunte surtout à la théorie de l'information, aux études récentes (empiriques et théoriques) sur la compréhension du plaisir et de la vigilance, ainsi qu'aux expériences sur la nature des conduites d'exploration. De ces trois sources, c'est la théorie de l'information qui touche de moins près aux problèmes posés par l'esthétique expérimentale. Malgré leurs différences de perspective, le fossé qui sépare Bullough et Berlyne n'est peut-être pas infranchissable. Berlyne sympathise volontiers avec la notion, formulée en théorie de l'information, de distance psychique dans laquelle Bullough voit un élément artistique et un principe esthétique.