

Readers' comments on texts published in *Leonardo* are welcomed. The Editors reserve the right to shorten letters. Letters should be written in English and sent to the Main Editorial Office.

Comment on David Carrier's "Theoretical Perspectives on the Arts, Sciences and Technology"

As a creative artist actively concerned with the uses of artificial intelligence in modeling and extending perceptual and compositional processes, I feel that David Carrier's Theoretical Perspectives section (*Leonardo* 19, 77-80, 1986) raises some important questions. I have not yet had the opportunity to read either Rosenberg's or Schiff's work, so it would be inappropriate for me to comment on them or make critical judgements on Carrier's treatment of these works. Nonetheless, I think Carrier's excellent consideration of these two works points to some critical issues in our concern with the interaction of technology and the creative process (and its results).

The field of artificial intelligence, viewed in terms of where it must certainly progress, cannot be described as nascent. Until now, far too much of our time and effort has been spent simply understanding the tools (computer languages and architecture, mass storage technology, input devices and sensors) and the fundamental techniques (searching and parsing algorithms, pattern recognition, and even the theory of information itself). We have not truly had the chance to produce many results that will give us new notions of art and perception.

There are, of course, faint but significant indications of what the future will bring. In my own discipline, music (I am a composer), the work of such artists as James Tenney, David Rosenboom, Iannis Xenakis and even John Cage have suggested an astonishing field of compositional possibilities. Within the next century, highly intelligent processes and technology will significantly change our notions of musical form and perception. Currently, the available technology hinders our efforts (though less and less every day), and we labor hard and long to make small progress in obscure venues.

But Minsky's definition of artificial intelligence is, above all, a hopeful one. If applied to art it might read: an intelligent composing (perceiving) machine is one in which the results might be confused with

those of human composition (perception). Curiously, this is where I very much agree with Carrier's evaluation of Schiff's work. We must first seek and develop new pseudo-logical languages for the description of perceptual and creative processes. Some of our best sources for this are radical and visionary 'non-formal' descriptions of art. We have found that unusual and radical critical languages may often be translated to clear and fertile algorithmic ones.

In this way, Carrier's dissatisfaction with Rosenberg's theorizing creates a resonance for me. It is perhaps too early to formulate general theories in this field; most of them may be doomed to be only mildly interesting or challenging for a very short period of time. What we need are experiments, algorithms, devices, equations and, more than these, languages for dealing with art in new and visionary ways — ways that will evolve our own perception in much the same way that Cezanne's personal language did.

Further, it is now of great importance that the workers in this field be kept aware of each other's progress, as small and slow as it might be. For the grand results will not come at once, from any one composer, artist, dancer, writer or theorist. Rather, the revolution in our thinking, hearing and seeing will emerge from the cumulative efforts of artists and scientists attacking small problems in novel ways.

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Comments on Carrier on Art Versus Gombrich on Art

The argument between Carrier and Gombrich [1] about whether theories of language or theories of representation and ornament are more relevant to *contemporary art* can only be settled after that otherwise elastic label [2] has been defined. Carrier, who admits to finding the world very verbal, confines himself to *modern art*, Gombrich, who takes "the

visual creations of all ages and cultures as [his] province" and who says he is "bound to see [our] own age in the perspective of this millennial history", is free to lay claim to the universal meaning in that label. His story of art is not obliged to end in the cul de sac of modernism; it can instead continue with the explosion of *modern media*.

Gombrich looks at easel painting in its heyday, whereas Carrier treats easel painting as the paradigm of contemporary art! The philosopher's error is more serious than mere anachronism. A particular is mistaken for the universal, and a question of category is confused with a question of quality. On this last point, Coomaraswamy [3] provides the saving catchphrase: "art is good that is good of its kind".

Modernist painting is a kind of painting, which in turn is a kind of art, but it is untypical both of easel painting as a whole and of contemporary art as a whole. Its anti-picture plus anti-pattern tendency makes it untypical of art as a whole (just as modernist music is untypical of both music and contemporary music by being anti-melody and anti-rhythm). It would therefore serve much better as a paradigm of anti-art. Its typical obscurity contrasts exactly with the typical lucidity of art in any age or culture, including our own. Moreover, in order to understand how the profession of painters can evolve from Leonardo da Vinci to Jackson Pollock it is necessary to place that story in the context of the bigger story: the rise of modern media.

REFERENCES

1. *Leonardo*, "Letters" 18, 126-127 (1985).
2. Raymond Williams, *Keywords: A Vocabulary of Culture and Society* (London: Flamingo Edition, revised and expanded, Fontana paperbacks, 1983).
3. Ananda Coomaraswamy, "That Beauty is a State", *Burlington Magazine* (April 1915).

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Reply to Robert Dixon

I am of course grateful to Robert Dixon for his support, though I am not quite sure whether he correctly presents Carrier's point of view. In any case I agree with him that the arts of our century often stand in need of words. Since, contrary to a widespread assumption, I have never wished to disregard that art, I was pleased to be invited in 1980 to give the first annual Hilla Rebay lecture at the Solomon R. Guggenheim Museum in New York and to take as my subject that very problem. The text of that lecture is now available in E.H. Gombrich, "Image and Word in Twentieth Century Art", *Word and Image, A Journal of Verbal/Visual Enquiry* I, No. 2, 213-241 (July-September 1985) to which I wish to refer the participants in this discussion.

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Reply to Robert Dixon

I do not believe that Robert Dixon's stimulating letter is a fair representation of the views of either myself or, if I may say, Ernst Gombrich. I certainly do not confine myself to modern art; nor does Gombrich look primarily or only at

easel painting. Like Gombrich, I am interested in the relation between modern and earlier art, works which include icons, frescoes and many other representations which are not easel paintings. Gombrich's views of modern art are complicated, and he has been justly unhappy at those writers, myself included, who would over-simplify his account; I might call Dixon's attention to the rich discussion of decoration in Gombrich's *The Sense of Order*, which has very little to do with easel painting [1].

Just as I find Dixon's account of myself and Gombrich puzzling, so I am baffled by his analysis of modernism. According to Greenberg's justly famous account, modernist painting continues the tradition of easel painting and constitutes the major movement of contemporary art [2]. This view may certainly be questioned, but I am unable to understand how the 'anti-picture' or 'anti-pattern' tendencies define that 'modernist' tradition which, as that word is usually used, includes Manet, Picasso and Pollock. I grant that modern media have, for several decades now, played an important role in contemporary thought about art; whether or not these media are central to the story of art today is, of course, highly debatable. Some paintings involve use of images from popular

media; much other visual art does not. As Leo Steinberg has well indicated, artists of all times have been engaged in borrowing from a tradition of visual images [3]. An adequate analysis of the situation of contemporary painting would need to explain the difference between such borrowings in, say, baroque painting and those which today make explicit reference to the modern media. Since much has been written about this situation, it would be interesting for Dixon to explain his own view and how it differs from that provided by these earlier commentators [4].

REFERENCES

1. E.H. Gombrich, *The Sense of Order* (Ithaca, NY: Cornell Univ. Press, 1979).
2. Clement Greenberg, *Art and Culture* (Boston: Beacon Press, 1961).
3. Leo Steinberg, "The Glorious Company," in Jean Lipman and Richard Marshall, *Art about Art* (New York: E.P. Dutton, 1978) 8-31.
4. See Richard Hertz, ed., *Theories of Contemporary Art* (Englewood Cliffs, N.J.: Prentice-Hall, 1985).

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