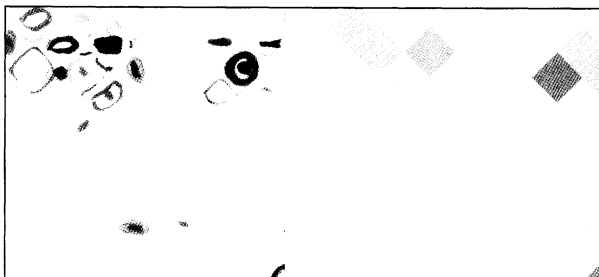


Response

Cavanagh and Kennedy elegantly apply Hering's 1905 theory to explain the disappearance of depth in Close's portraits. Their explanation that something about the marks vetoes the observer's interpretation of the dark region as a shadow is consistent with our impression that the nose of *Bill II* is invariably seen either as emergent and uniformly colored, or as flat and discolored.

However, Cavanagh and Kennedy suggest, with little evidence, that it is "small details within the marks" that prevent one from seeing the shadow and thus the emergence of the nose. The evidence they present is a correlation. They found that a particular detail is visible at distances at which the nose collapses and invisible (to "most" of their observers) at distances at which the nose emerged. First, "most" implies that at least one of their observers saw the feature when the nose emerged, contrary to their prediction. Second, the correlation does not establish causality.

Their explanation is contradicted by a direct test. We found that by removing all detail within the marks (block-averaging within each square mark, but not across marks), the shadow and emergent nose become harder—not easier—to see. On the basis of six observers, we found that the minimum distance at which the nose emerged with the block-averaged image (as in the figure, right) was about twice as far as for the original image (figure, left). For every observer, removing the details made it harder to see the nose emerge.



Detail of *Bill II* (1991) by Chuck Close. In original form on left, and block-averaged on right. Removing details within the marks, as in the right panel, increases the viewing distance required to see the nose emerge. For the six observers, the distance increased by a factor of 1.6, 1.9, 1.8, 1.3, 2.8, and 1.9. (Oil on canvas, 92.4 x 76.2 cm.)

Thus, we reaffirm our conclusion that the critical parameter is the size of the mark (though mark type does have some effect), but we agree with Cavanagh and Kennedy's suggestion that some aspect of large marks vetoes the shadow and collapses the nose. Perhaps the mark edges provide inappropriate contours (*I*).

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References

1. V. S. Ramachandran, *Sci. Am.* 259, 76 (August 1988).

CORRECTIONS AND CLARIFICATIONS

News Focus: "Asilomar revisited: Lessons for today?" by Marcia Barinaga (3 Mar., p. 1584). The remarks of Charles Weiner quoted on p. 1585 suggested that ethical issues of recombinant DNA technology had been discussed at the 1975 Asilomar conference on recombinant DNA, which was not the case. Weiner's remarks referred to comments made by several participants interviewed shortly after the 1975 conference who said they would draw the ethical line at human germ line intervention.

Naked Truth



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