

Letters to the Editor
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Scientific Evidence for Humanists

TO THE EDITOR:

Ellen Winner's "Art History Can Trade Insights With the Sciences" (*The Chronicle Review*, July 2) provides excellent insights into the "fury and indignation" shown by art historians when David Hockney and I presented our findings. Her essay makes a compelling case not only for why scientists need to be trained to evaluate scientific evidence, but also for why humanists would profit from such training as well.

In the case of our findings, to understand and evaluate our claims requires a more-than-superficial understanding of four disciplines: art, art history, optics, and the history of science. As Winner's essay implies, interdisciplinary work involving widely disparate disciplines is especially prone to objections that are either flawed logically, or based on insufficient knowledge.

CHARLES M. FALCO
Professor of Optical Sciences
University of Arizona
Tucson

TO THE EDITOR:

Ellen Winner urges readers to consider the evidence, but she presents only evidence supporting David Hockney's theory.

Consider her two examples: Jan van Eyck's portrait of Cardinal Albergati and the carpet in Lorenzo Lotto's "Husband and Wife." Dr. Winner believes a comparison of the drawing and painting of Albergati shows that van Eyck used optics. She must be unaware of the peer-reviewed discovery by Thomas Ketelsen et al. of tiny, pinprick holes along the contour of the Albergati silverpoint source that all but prove that mechanical (not optical) copying or enlarging was employed, such as by the *Reductionsziel* or *compasso da riduzione*, a simple device known since Roman times. Such distinctive holes play no role in the optical-projection theory, yet they explain the relationship of the two works better than does the use of optics.

Likewise she points to perspective anomalies in "Husband and Wife" as evidence of optics, but the optical explanation relies fundamentally upon the assumption that such carpets were symmetrical. She must be unaware of Rosamund E. Mack's published photographs of 16th-century "Lotto carpets" surviving in museum collections, which show that such carpets deviate significantly from symmetry. In short, this evidence strongly suggests that the optical "fits" to the anomalies in the painting are meaningless.

I hope Dr. Winner will take her own advice ("To decide whether to accept a scientific explanation of an artistic phenomenon, one must evaluate the evidence.") and consider alternate explanations and all the evidence, not just incomplete evidence handpicked to support a predetermined stance. When she does so, she too may join the vast consensus of ex-

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perts who reject Hockney's deeply flawed theory. . . .

DAVID G. STORK
Chief Scientist
Ricoh Innovations
Menlo Park, Calif.

Consulting Professor of Electrical Engineering
Stanford University
Stanford, Calif.

THE AUTHOR REPLIES:

David Stork's letter raises the question of how we can decide for or against the Hockney/Falco hypothesis.

Stork explains the Albergati enlargement by the use of a mechanical device called the *Reductionsziel*. He mentions a discovery by Ketelsen that suggests the use of such a device. However, this discovery appears to be as yet unpublished (it is referred to in a one-page paper coauthored by Stork and Ketelsen on the Internet as "2004, in press"). In the one-page paper, Stork and Ketelsen simply assert that their explanation is the better one. In addition, their explanation cannot account for the deviations between the drawing and the enlarged painting. In contrast, the Hockney/Falco hypothesis predicts these deviations precisely because they are consistent with a lens being accidentally knocked twice by a few millimeters.

Stork asserts that the deviations in perspective in the Lotto carpet result from Lotto's having painted carpets that were not perfectly symmetrical. But lack of perfect symmetry would not result in errors in perspective that are mathematically predicted to within a percent by the use of a lens.

The Hockney/Falco hypothesis could never rest on two examples alone: For any particular example, there are likely to be numerous plausible explanations. What is crucial is to determine whether there is a consistent pattern over many examples. It is such a pattern that Hockney and Falco have uncovered—the sudden emergence of highly realistic painting in the Northern Renaissance, alongside a pattern of errors predicted precisely by the use of a lens refocused at various positions.

ELLEN WINNER
Professor of Psychology
Boston College
Chestnut Hill, Mass.