

## Leonardo da Vinci and Optics (Firenze, 26–28 May 2011)

Florence, May 26–28, 2011

Tim Urban

Leonardo da Vinci and Optics  
International Conference

Kunsthistorisches Institut in Florenz – Max-Planck-Institut, 26 - 28 May 2011

organized by

Francesca Fiorani (McIntire Department of Art, University of Virginia)

Alessandro Nova (Kunsthistorisches Institut in Florenz – Max-Planck-Institut)

Leonardo regarded optics as foundational to painting. Throughout his life, he observed optical phenomena and recorded them in geometrical diagrams, jotted notes, sketches, drawings, and lengthy passages. Relentless was his attempt to transfer his optical observations from one system of representation (geometrical and optical diagrams) to another (painting and drawing), indeed to ground in optics his 'sfumato', chiaroscuro, aerial perspective, reflected colors, and theory of proportions. Leonardo read carefully ancient and medieval optical treatises, hunting them in the libraries of his patrons: Aristotle, Euclid, Ptolemy, Roger Bacon, John Pecham, Witelo, Biagio Pelacani of Parma, and Alhazen. On these authoritative writers, he based his investigation of every possible aspect of medieval optics, from mirrors, shadows, and proportions to the anatomy of the eye, the propagation of light, and the geometry of reflection and refraction. He made or imagined experiments with colored light sources, projective screens and apertures, and investigated optical illusions and errors. He also ventured in philosophical musing on the interaction between sensory data and the intellectual faculties of the 'sensus communis', imagination, and memory, attempting an explanation of the role of the senses in the acquisition of knowledge. Above all, he intended to make optics the basis of artistic training and planned an illustrated book on the topic, which characteristically he never completed.

The conference addresses the fundamental role of optics in Leonardo's thought and art from the point of view of the history of art, science, philosophy, and literature. It examines both Leonardo's theoretical writings on optics and his drawing and painting techniques that had to translate his optical knowledge in visual form. The conference takes advantage of the booming scholarship of the last couple of decades pertaining to Leonardo studies, Renaissance scientific culture, and optics. The modern understanding of Leonardo's optical knowledge and research has increased considerably in conjunction with modern analysis of his painting and drawing techniques as well as of his idiosyncratic form of writing, which combined freely note taking from observation with excerpts from earlier authoritative texts and the recording of imagined experiments. Scientific cul-

ture has finally been recognized as part and parcel of Renaissance humanistic culture to such an extent that a new picture of mainstream humanism is actually emerging. As for optics, its prominent role as the experimental science 'par excellence' in medieval and Renaissance Europe has been restored: grounded in Al Haytham's 'De aspectibus', the eleventh-century Arab text on visual perception that was translated into Latin in the early thirteenth century and into Italian about a century later, optics became the discipline uniquely positioned to address the relations between cognition and the senses.

More broadly, by concentrating on Leonardo, whose research was rooted in artistic practice and theoretical writings, and on optics, which was a middle science ('scientia media') between philosophy and mathematics, the conference offers the opportunity for a reconsideration of the relations between theory and practice in the Renaissance, between university and workshop training, the writing of manuals and of scientific treatises, and the role of the senses in cognition and knowledge.

## PROGRAM

Thursday, 26 MAY 2011

18:00

Alessandro Nova and Francesca Fiorani

Welcome

David Summers

Chiaroscuro, or the Rhetoric of Realism

Friday, 27 MAY 2011

Chair: Paolo Galluzzi

9:15

Francesca Fiorani

Introduction

9:30

Sven Dupré

Leonardo and Lomazzo on Reflected Light and Matter

10:15

Frank Fehrenbach

Leonardo's Point

11:00

Coffee break

Chair: Alessandro Nova

11:30

Fabio Frosini

"...come calamita il ferro". Leonardo da Vinci dalla magia alla prospettiva (1487-1492)

12:15

Frank Zöllner

The Measure of Sight, the Measure of Darkness

Chair: Antonio Natali

14:30

Francesca Fiorani

Leonardo's Shadows

15:15

Romano Nanni

Luce e ritratto nel Trattato della Pittura di Leonardo da Vinci (capp. I-CLXV)

16:00

Pietro Marani

Il primato dell'occhio e della pittura: Il Paragone fra le arti e i ritratti milanesi di Leonardo

16:45

Break

18:00

Martin Kemp

Leonardo and Experiment

Saturday, 28 MAY 2011

10:00

Visit (for speakers only)

Museo Galileo – Istituto e Museo di Storia della Scienza, Firenze

Location

Kunsthistorisches Institut in Florenz - Max-Planck-Institut

Palazzo Grifoni

Via dei Servi 51

50122 Firenze

ITALY

Contact

Christine Klöckner

+39 055 24911-85

kloeckner@khi.fi.it

Further information

<http://www.khi.fi.it/en/aktuelles/veranstaltungen/veranstaltungen/veranstaltung296/index.html>

CONF: Leonardo da Vinci and Optics (Firenze, 26-28 May 2011). In: ArtHist.net, May 7, 2011 (accessed May 2, 2026), <<https://arthist.net/archive/1345>>.