Visual Imaging in the Electronic Age

Uses of Distorted Perspective Geometries and Images (Architecture & Stage Set Design)

Lecture # 4
September 3, 2015
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Uses of Distorted Perspective Geometries in Enlarging Architectural Space (3D)
Santa Maria presso San Satiro

Fig. 18  S. Maria presso S. Satiro, Milan. Groundplan
A. Sacristy  B. Viewpoint for perspective construction
C. Domed crossing  D. Transept  E. Real choir
F. False choir  G. Chapel (after Willich and Zucker)
Santa Maria presso San Satiro
Santa Maria presso San Satiro
Santa Maria presso San Satiro
To make the object A look larger (closer) which scheme do we use?
St. Peters Plan
Teatro Olimpico Plan  

Palladio
Teatro Olimpico – Vicenza
Teatro Olimpico – Vicenza
Teatro Olimpico
– Vicenza
Imss, Firenze 2004 - 3 Scenografia prospettica
Farnesina - Perruzzi
Sant' Ignazio
View Dependent Perspective Images

Anamorphism
Hidden Messages

The projection of a screen or grid in anamorphic perspective makes the transfer of a representation possible.
Hans Holbein
The Ambassadors
Hans Holbein
Skew Camera
Projection on different geometries
Theater and Opera Set Design

**Known data** –
- Desired Virtual Geometry
- Stage Dimensions
- Position of Viewer (eighth row center orchestra)

**Unknown data** –
- Shape and Position of Distorted Virtual Objects (Stage Sets)
Original picture

$$(x'_p, y'_p, z'_p)$$

Ideal transformation

$$(x_v, y_v, z_v)$$

Viewer's image space

Pre-distorted slide

$$(x_p, y_p, z_p)$$

Physical transformation

$$(D)$$
Paolo Uccello
When inscriptions have to be placed on high walls, Dürrer advises that the letters be made larger as they go upward. He assumes that the angle of vision remains constant.
Michelangelo
Truck Art

http://www.wltc.org/Documents/TruckArt.htm
Truck Art
Julian Beever - Chalk Drawings
Julian Beever Video

http://www.youtube.com/watch?v=15oIzkWO-wU
End...