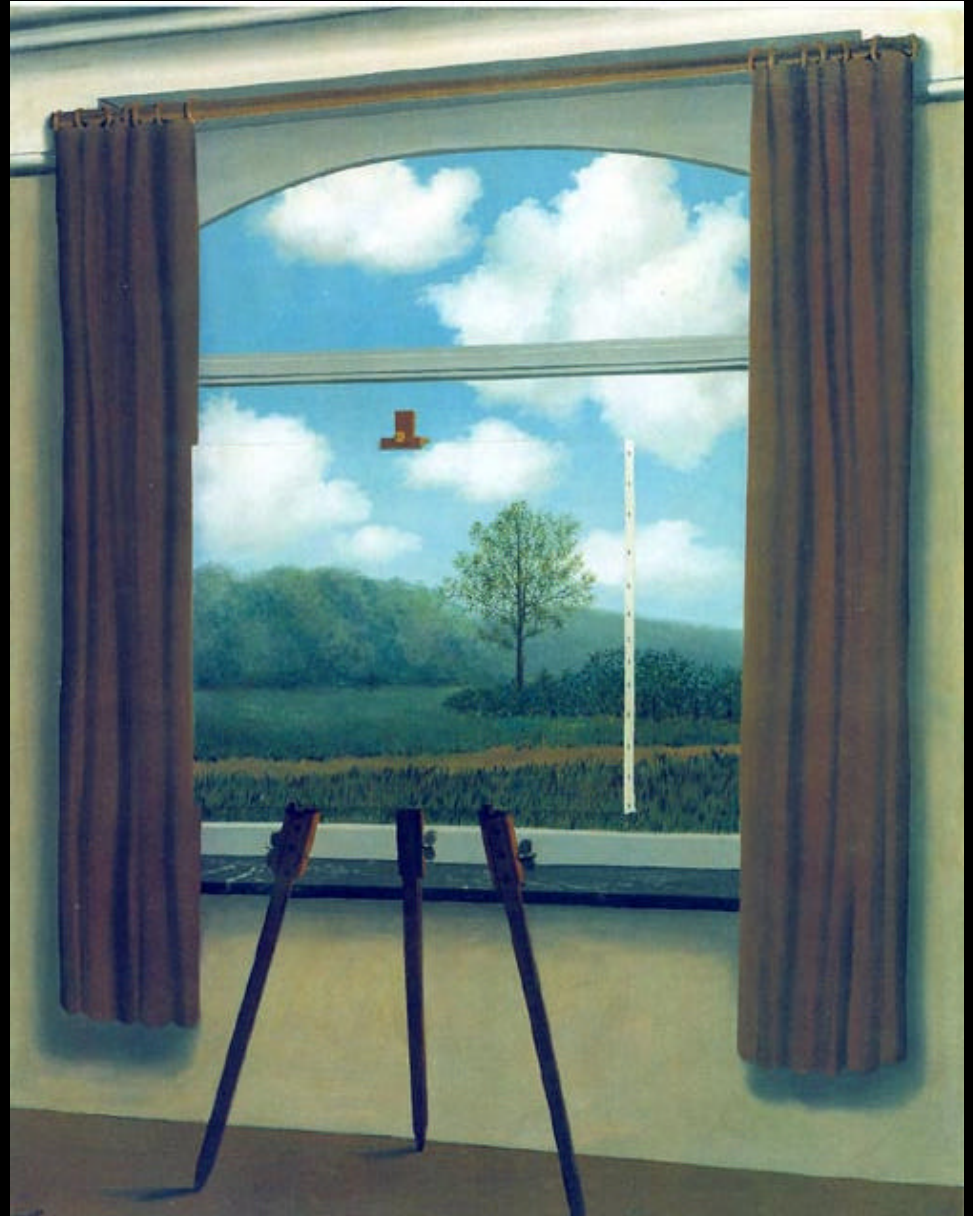


*The Art and
Science
of Depiction*

Frédo Durand
and Julie Dorsey
MIT- Lab for
Computer Science



Plan of the session

- Getting acquainted
- What are you expecting?
- Practical details
- Overview of the class

Sign up!

- Name
- E-mail
- Course

Presentation

- Name
- Background
- Professional goals
- Motivation for the class

Getting Acquainted visit

- 1/2h appointment
- E-mail: fredo@graphics.lcs.mit.edu

Brainstorming

- No criticism, in particular no self-criticism
 - The goal is quantity, not quality
- Steal other's ideas
 - Build upon what has been said
- Write everything down
- After the brainstorm: Synthesize

A Little Brainstorm

- What do you expect from this class?

Synthesis of the brainstorm

What will be discussed

- Any figurative picture
- Not only artworks (but mainly)
- Mainly static aspects (but will discuss cinema)

Pitch of the class

- Does not discuss essence of Beauty or Art
- We do not give recipes to make pictures
- No social/gender/political aspect
- This is only one possible viewpoint on images

- Technical issues about depiction
- Perception
- Language and tools to describe, compare and generate pictures

Some personal motivations

- Get some culture
- Importance of multi-disciplinarity
- Applications to Computer Graphics

Sharing knowledge

- Relativism
- Your knowledge
 - Probably more than us on some aspect
 - Share it!

Questions?

Organization of the sessions

- Brainstorming about the previous lecture
- Lecture
 - Attendance is mandatory
 - Ask questions during the lecture
 - Slides will be on the web
- Talks
- Discussion about the readings
 - Prepare your two issues

Organization off-sessions

- Reading: 3h/week
 - 2 books + articles and chapters
 - 1 page summary + 2 questions each week
- Feedback: 20 min/week
- Assignments: 3h/week
- Talk: 10h
- Project

- Will be discussed and negotiated

Assignments

- Due at the first session of the week
- Result+1 page description
 - Photoshop
 - Canoma
 - Piranesi
 - Manual activities
- Essays
- After each lecture:
 - Bring an illustrative image+half page comment
 - Most important thing you have learnt? (half page)
- Log of your readings/activities\

Activities

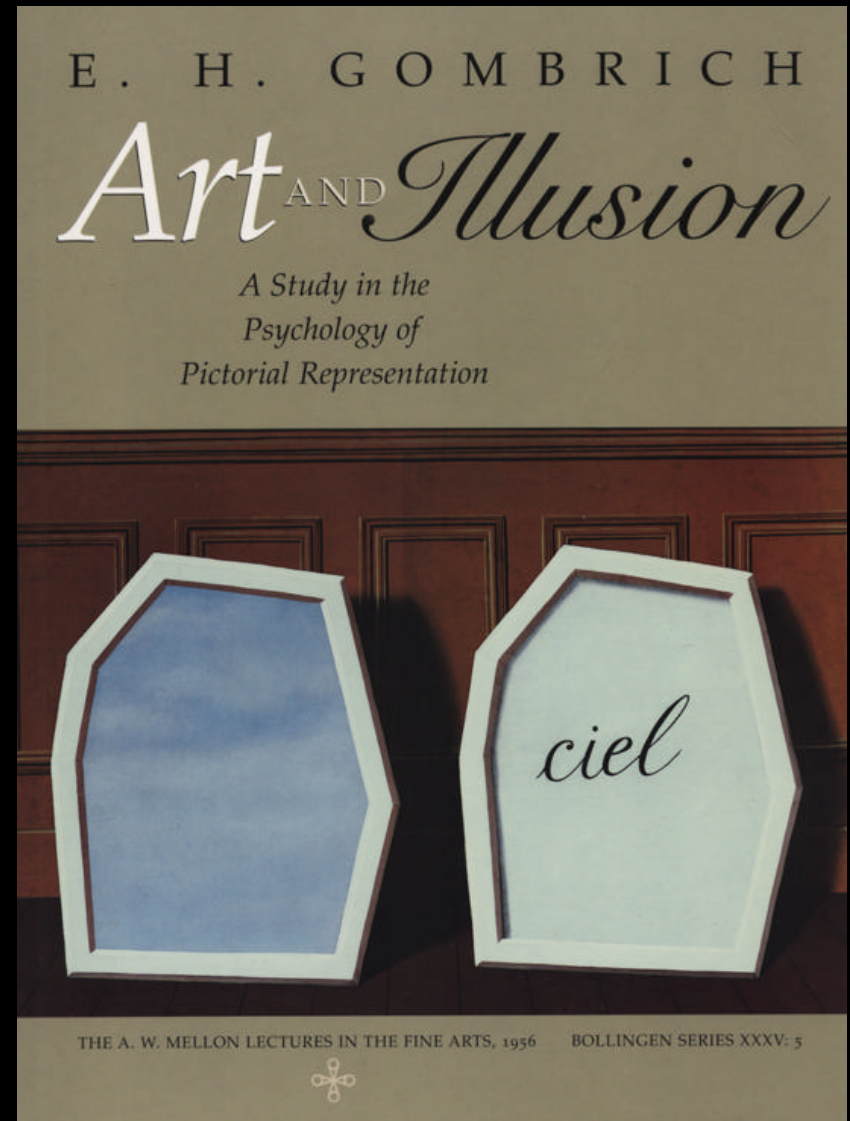
- Peer review
- Snapshots

Essays

- Importance of writing
- Multiple step with peer feedback
 - Outline
 - Draft
 - Final essay
- Provide a comment of the essay

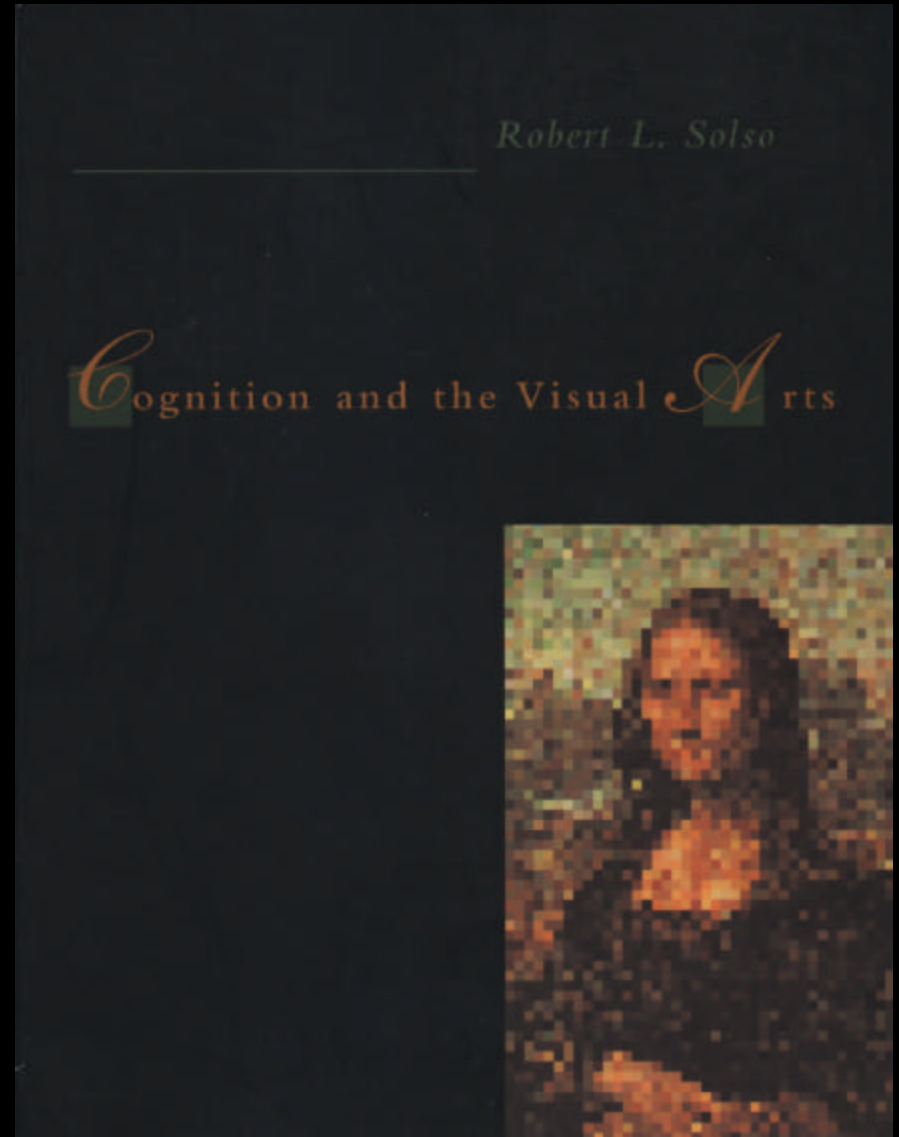
Art and Illusion

- Ernst Gombrich
- 1956
- Art Historian
- Landmark book



Cognition and the Visual Arts

- Robert Solso
- 1994
- Cognitivist
- Excellent textbook



Talks

- Highly flexible
- A book, chapters or articles will be provided
- Related subject
- In-depth specialized subject
- You can propose your own subject
- Look at the suggestions, make a vague decision in two weeks.

Projects

- Highly flexible
- Decide by week 4
- Report and presentation
- Can be
 - Computer Software
 - Essay
 - Multimedia document
 - Psychophysics experiment
 - Manual project

Other activities

- Museums
- Movies
- Further readings
 - Ask
 - Share

Questions?

Overview of the class

- Introductory discussions
- Human Visual Perception
- Limitations of the 2D medium
- Representation systems

Overview of the class

- Introductory discussions
 - Limits of realism
 - Chain reality-artist-picture-beholder
 - Dual nature of pictures, 2D/3D
- Human Visual Perception
- Limitations of the 2D medium
- Representation systems

Overview of the class

- Introductory discussions
- Human Visual Perception
 - Low-level vision
 - Vision as a cognitive process
 - Invariants, constancy
 - Colors
- Limitations of the 2D medium
- Representation systems

Overview of the class

- Introductory discussions
- Human Visual Perception
- Limitations of the 2D medium
 - The image is flat, the viewpoint is unique
 - The image is finite
 - The image is static
 - The image has a limited contrast and a limited gamut
 - Can be compensated or accentuated
- Representation systems

Overview of the class

- Introductory discussions
- Human Visual Perception
- Limitations of the 2D medium
- Representation systems
 - Drawing system
 - Denotation system
 - Tone system
 - Style?

Questions?

Next week's assignments

- Review of Computer Graphics
- Ansel Adams example
- Photoshop Tutorials