MR Design

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Some Media Concepts
Ontology, Aura, Presence, Liveness,

Why consider media history?

History of media contributes to understanding new media
(Digital design affected by evolving cultural assumptions)

Media issue of the 20th and 21st centuries

     medium's ability to reproduce reality
         photography
         film
         television

         VR
         AR/MR

Media Concepts: Ontology, Presence

12

Thursday, April 26, 12

Issues of media theory and their relationship to our AR design projects.

trying to consider the meaning for digital design of these earlier media.

Ontology of the Image

Andre Bazin, Ontology of the Photographic Image

       What does Bazin mean by "ontology"?
              (not what semantic web researchers mean)
              means the status as real, resemblance to the real

       Striving for realism in painting:
              Renaissance perspective
              Camera obscura of Renaissance --> camera of Niepce
              two ambitions of painting
                     spiritual reality
   psychological reality - illusionism

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belief in the reality of the photograph - goes back to 19th century. Fox Talbott The Pencil of Nature. William J. Mitchell. The Reconfigured Eye. this would now be considered the naive view: why? Post-modern claims that arts can't resemble the real because the real has disappeared. common neoMarxist view that arts are ideological - reflect ruling class view, not reality (if there is such a thing).

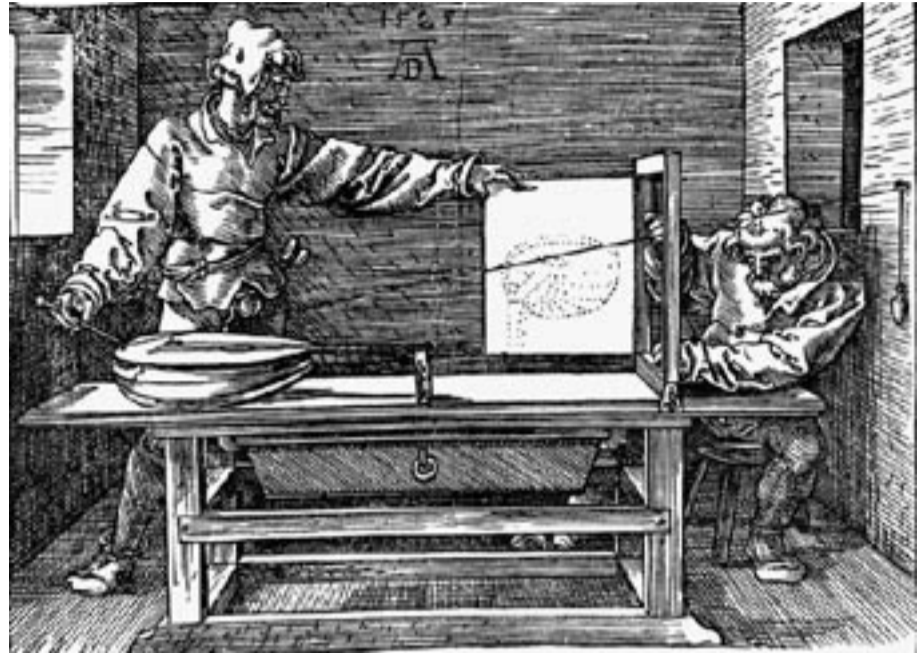What happened in the Renaissance with regard to painting.

Renaissance painting as new kind of realism. new balance between between artist's desire for spiritual expression and optical illusion (or realism - note how the terms illusion and reality conflate in this kind of discussion.

[what is perspective painting - claim to mathematical solution to experience of viewing. projection of 3D onto 2D plane. is it "natural"? - what the viewer "really" sees? does not reveal as much as certain other forms of representation that are less realistic.

Renaissance and linear perspective
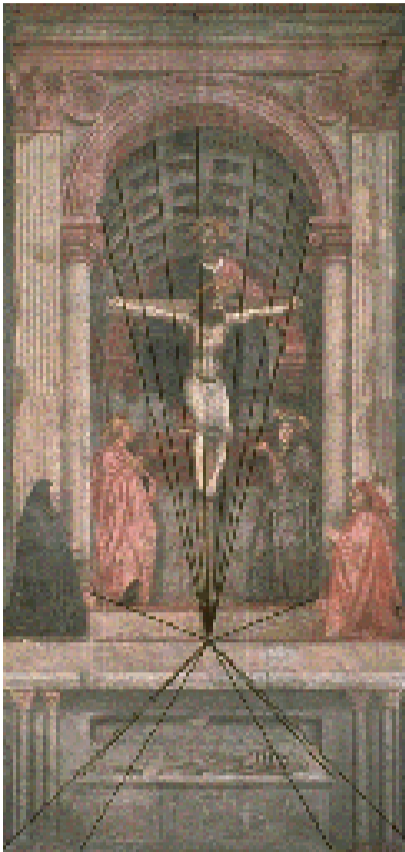
Massacio

Dürer

Media Concepts: Ontology, Presence
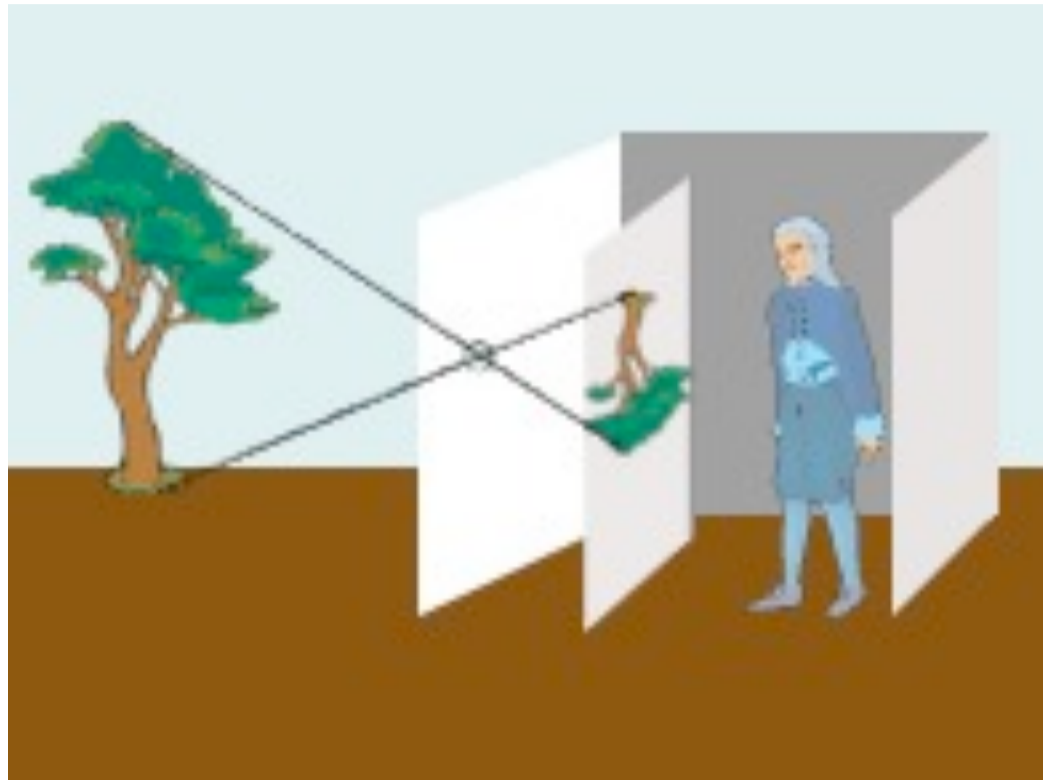
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Massacio   Dürer and renaissance perspective

What happened in the Renaissance with regard to painting.

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Ontology of the Image

Camera Obscura

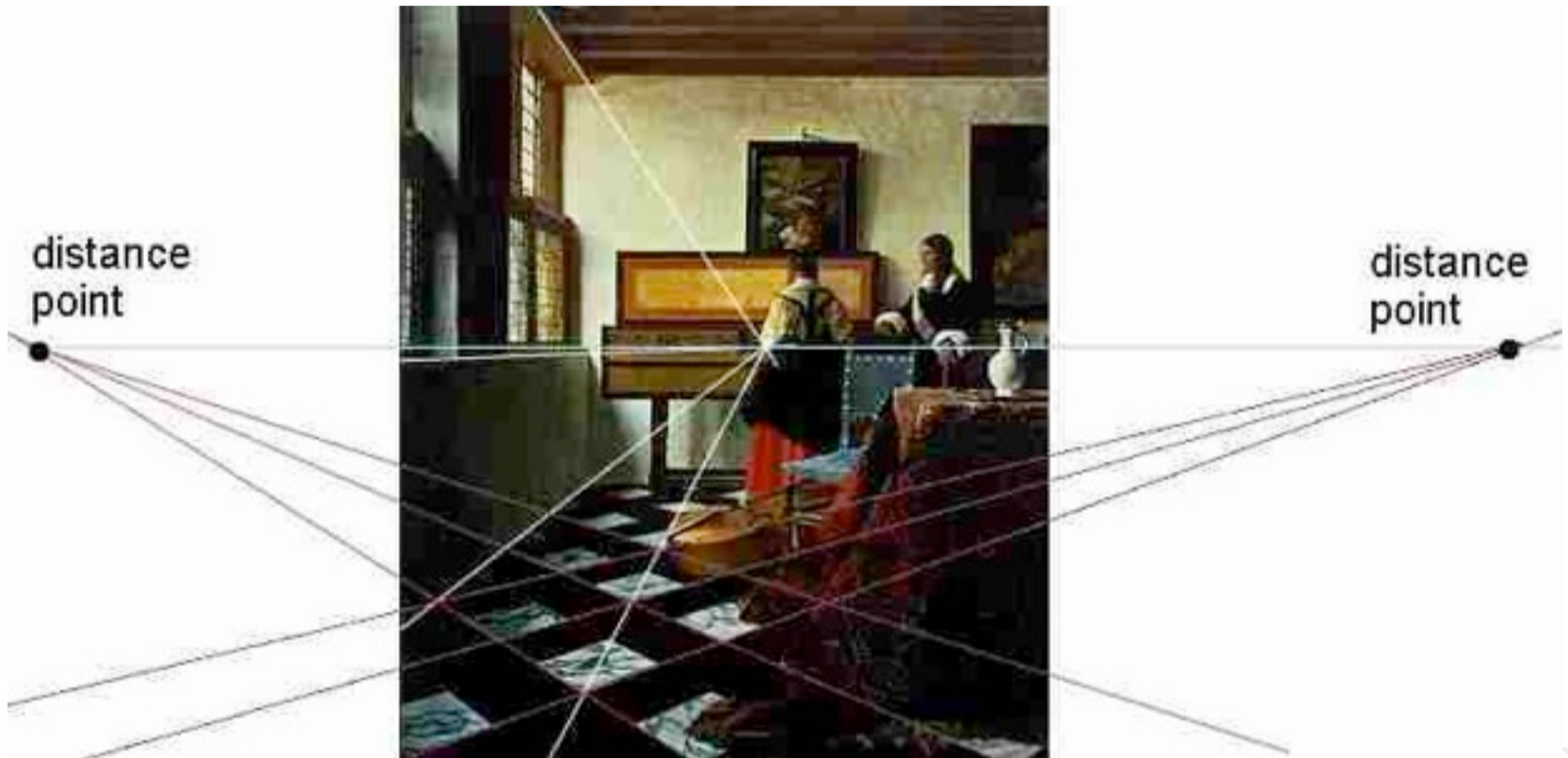Media Concepts: Ontology, Presence

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Camera obscura realization of the camera (later becomes the photographic camera) but here in Renaissance it was one way of getting a projection that was more or less mathematically true.

Ontology of the Image

Techniques of linear perspective

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Renaissance painting as new kind of realism. new balance between between artist's desire for spiritual expression and optical illusion (or realism - note how the terms illusion and reality conflate in this kind of discussion.

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Mathematics of projection

7

Steadman's 3D model: belief that Vermeer actually painted using a camera obscura

What happened in the Renaissance with regard to painting.

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Photorealism before photography: Canelleto

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Caneletto in 18th century
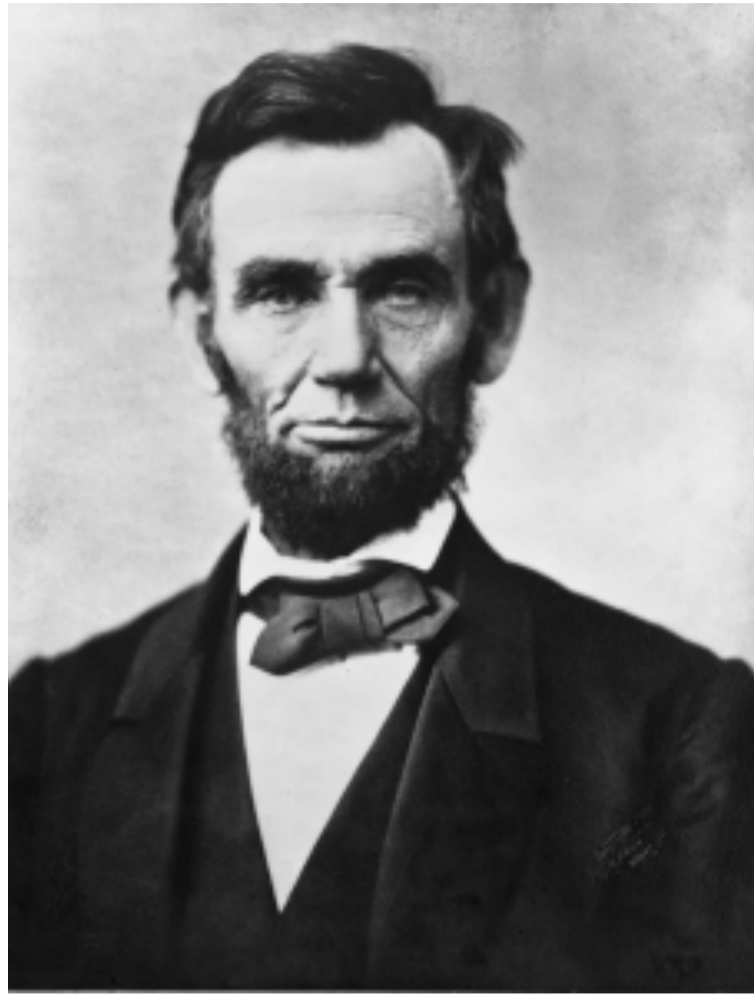
Not the best example. but realism of portrait is getting. Ingres early 19th century. These portraits got largely replaced by photography.
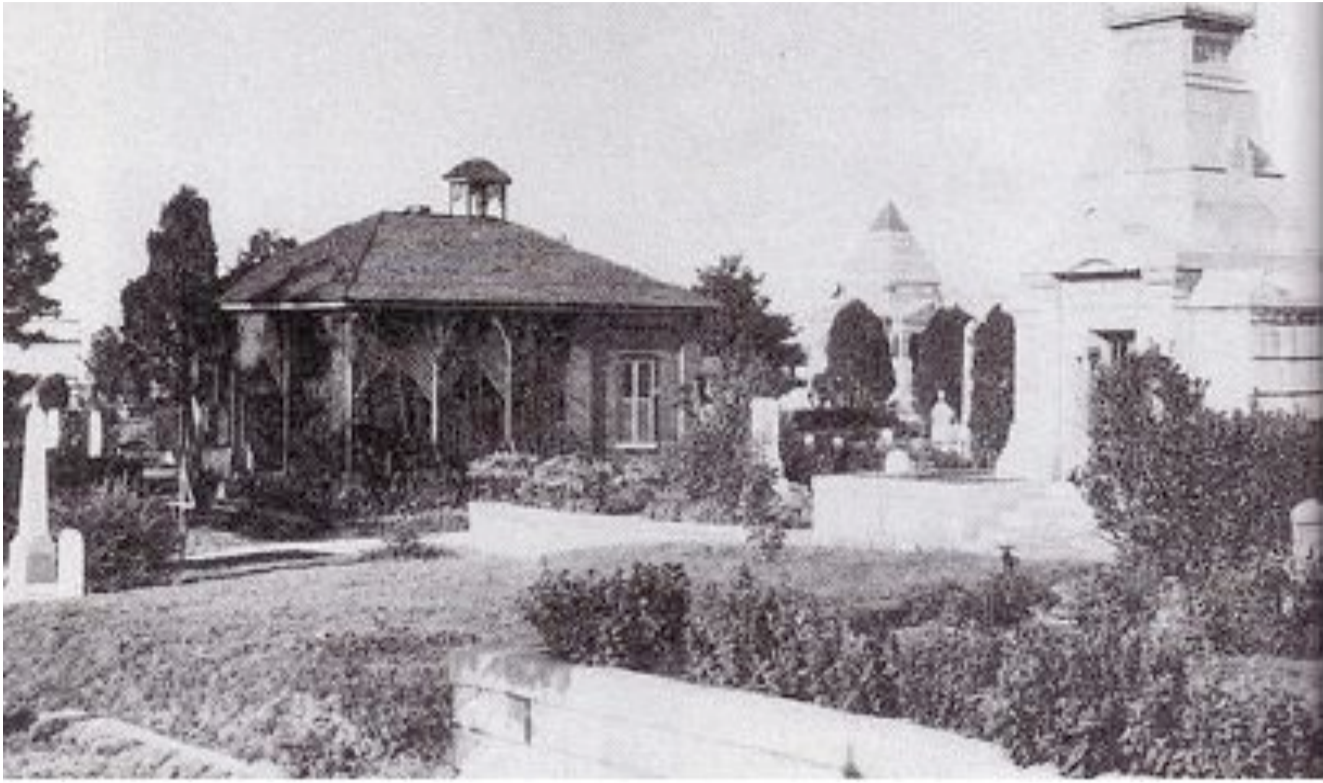
Photography as photorealism

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Not the best example. but realism of portrait is getting. Ingres early 19th century. These portraits got largely replaced by photography.

Pencil of nature

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Not that old a picture - but dates from 19th cetury so it will do for this puprose -

belief in the reality of the photograph - goes back to 19th century. Fox Talbott The Pencil of Nature. William J. Mitchell. The Reconfigured Eye.

What happened to painting in the aftermath of the creation of photography?

Painting after photography

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This is Kandinsky from the 1930?

Ontology of the Image

Andre Bazin, Ontology of the Photographic Image

Perspective as "original sin" of Western painting
redeemed by Niepce and Lumière
(by photography and film)

Photography is automatic and "objective"
principle of transparency: photograph as transparent record

Cinema is objectivity in time
(adds temporal dimension to reproduction of the real)

Photography "freed" Western painting
from realism and allowed it to recover aesthetic autonomy

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Ontology of Photographic Image

Ontology of the Image

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We talked before about the Hollywood style and how it follows Bazin - Ontology of the Image

Ontology of the Image

what is this? the death video from the Ring. Most of the Ring is done in Hollywood style -

talk about the avant-garde

Ontology of the Image

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Comparison of popular vision of avant-garde and "true" avant-garde Chien d'andalou

Ontology of the Image

Two representational strategies in 20th century:

transparent	hypermediated	(representation)
looking through	looking at	(user)
mainstream?	unusual? avant-garde	(cultural status)

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Ontology of the Image: analog/digital

Is any medium really transparent?

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W.J.Mitchell - manipulation of images does not depend just on digital. How we believe newspapers.

Ontology of the Image: analog/digital

Is any medium really transparent?

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How do we know that Geitner and Obama were really together in the same room a couple of days ago?

Photorealism

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Is this a photograph or a photorealistic computer graphic, neither - it is a painting.
Ralph Goings

Photorealism: Goings

Media Concepts: Ontology, Presence

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Is this a photograph or a photorealistic computer graphic, neither - it is a painting.
Ralph Goings

Ontology of the Image: Computer Graphics

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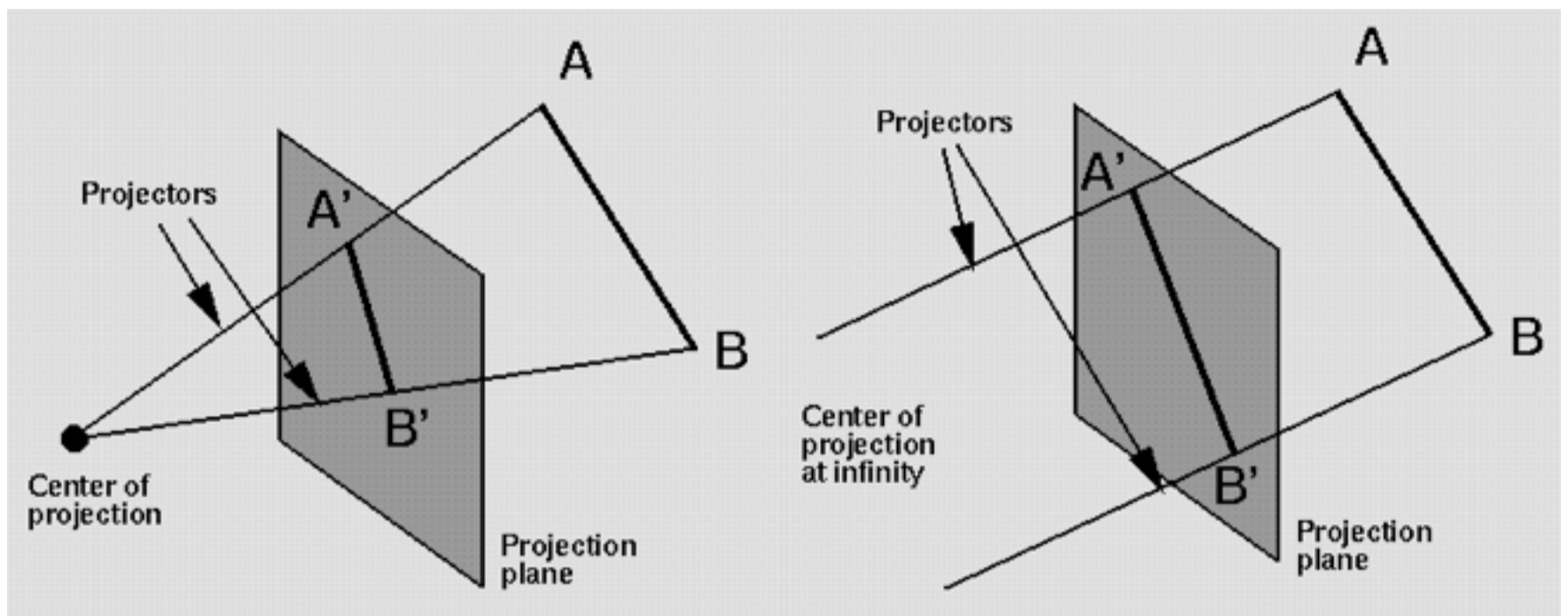
Computer graphics - perfect (at least potentially) mathematization of the image because the image is never taken from the light at all. entirely constructed. So it is totally realistic according to principles of Renaissance and yet totally fabricated. Like animated film - it is just a construction.

Ontology of the Image: Computer Graphics

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Computer graphics - of course more than just projection - also texturing and shading to achieve photorealism.

Ontology of the Image

Two representational strategies in digital technology:

transparent	hypermediated	(representation)
looking through	looking at	(user)
mainstream?	unusual?	(cultural status)
Virtual Reality photorealism CG	Mixed/Augmented Reality	

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these strategies still operate today in the digital realm

Ontology of the Image

Photographic realism: VR and AR

      Ontological status of VR?
           uses both perspective and motion
           but NOT a record of what happened "in the light"
           yet VR subscribes to principal of transparency
           employs first-person POV

      Ontological status of MR/AR
           shows user the physical world
           supports multiplicity of representational modes
                physical world + computer graphics
           can employ first-person POV
           aura of place

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How does this relate to VR or VE? what is the ontological status of VR?

What is the status of VR or VE given this notion of photography as scientifically assured by the light? because VR rejects the light. yet uses both perspective and motion. movies of things that never were. but what about issues of perspective. VR uses perspective projection to give user sense of being in the scene.

[what happens if you try other projections in VR or computer graphics generally? - in particular oblique affine projection. where there is no point of view, but there is a direction of projection. is this a God's eye view?]

yet VR subscribes to the same belief in transparency. goal is to create perfect, seamless illusion. VR is all about point of view.

what about AR? - by definition does not necessarily subscribe to the myth of transparency, since the computer graphics are added to the scene. most AR applications assume that the user distinguishes between the graphics and the real world, but not necessarily. We also have the notion of AR creating a world where the user could not distinguish between the computer graphic part and the physical part.

however, many AR applications are multiple - support heterogeneity. notice how connected to the world AR is. notice the applications like Mackay and Ishii - how these are insisting on the connection between paper or other artifacts and the computer. and therefore heterogeneous.

Aura: Mona Lisa

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Now switch to a psychological dimension of media rather than purely perceptual dimension. talk about aura. Why do people line up in Louvre to "see" Mona Lisa

Aura: Mona Lisa (oil reproduction)

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Oil reproduction is available for sale - $70 on ebay.

Aura: Mona Lisa

Leonardo Da Vinci, Mona Lisa

fine art giclée   view giclee on canvas   view custom framed

exclusive, custom-printed on 100% cotton archival paper

Media Concepts: Ontology, Presence

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giclee repoduction method.

Aura: Mona Lisa

Graphic Tee Mona Lisa Pink and Black T-shirt by greenbaby ★★★★★ (7 votes)

Art turned on its head!

Views: Model **Product** Design

Ladies Sheer V-Neck (Fitted) (starting at $32.10)

A super-sheer super-fashionable v-neck shirt. 100% pima cotton. Longer length with a tapered waist. Pre-washed, no shrinkage. Cold wash only. NOTE: Sizes run small. Order 1 size larger for looser fit. Made by Alternative Apparel Imported.

Select a different shirt style
Choose from hundreds of shirts for men, women, and kids. Also, select sustainable, sport, and fashionable apparel.

Color: Black (+$6.45) (info for dark colors)

Size: Adult L

S M L XL View Size Chart

Body Size For: Adult L	Fitted	• Follows body closely for a snug fit
Chest: 34.5 - 37.5 in		• Order one size up for a classic fit
Waist: 26.5 - 29.5 in		• Order two sizes up for a relaxed fit
Hips: 36.5 - 39.5 in	(learn more)	• Sizes may run smaller than expected

Qty: 1 (save in bulk) $38.55 Add to cart

Customize: Change the design, add your own ideas! Customize it

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giclee repoduction method.

Aura

Walter Benjamin, The Work of Art in the Age of Mechanical
   Reproduction

   Background
        The Frankfurt School: Marxist critique of culture
                Horkheimer, Adorno

        Benjamin loosely associated
                striving for revolutionary politics of art

        1933: moves to Paris

        1936: writes "Work of Art"

Media Concepts: Ontology, Presence   12

Now switch to a psychological dimension of media rather than purely perceptual
dimension. talk about aura

Aura

"Work of Art in the Age of Mechanical Reproduction"

> history of reproducibility in art
>> mechanical reproduction: photography, film

> reproducibility allows art work to leave its place
>> but work loses aura

> aura - presence is time and space
>> uniqueness of object

> historical circumstances help determine modes of perception
>> decay of aura <-> change in perception

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Issues of media theory and their relationship to our AR design projects.

Aura

"Work of Art in the Age of Mechanical Reproduction" (cont.)

uniqueness of art: embedded in tradition

art originated in ritual
cult object always remains distant, no matter how near
same quality for aura of object

in era of mechanical reproduction
exhibition value replaces cult value
happened early in history of photography
19th century debate over photography as art

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we discussed issue of photography versus art last time

Aura

"Work of Art in the Age of Mechanical Reproduction" (cont.)

comparison of theater actor and film actor
film actor loses aura, unlike a stage actor

film responds to shriveling of aura by building up
cult of personality of film stars

POV of camera
painters maintains distance
film camera is immediate, penetrates reality

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But what about the aura of the Hollywood star system -- this to Benjamin is apparently a kind of false or ersatz aura.

Chaplin

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But what about the aura of the Hollywood star system -- this to Benjamin is apparently a kind of false or ersatz aura. Yet he thought that film would destroy aura. Notion of penetration and filmic space.

Aura: really ever lost?

Media Concepts: Ontology, Presence

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Film was often acknowledged as the popular modernist medium

Aura

"Work of Art in the Age of Mechanical Reproduction" (cont.)

Film is art of the masses
unlike avant-garde painting
Dada sought to destroy aura, make contemplation impossible
Film achieves on popular scale what Dada set out to do

Epilogue on Fascism
aesthetization of war (Marinetti)
communism responds by politicizing art

Media Concepts: Ontology, Presence

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Film was often acknowledged as the popular modernist medium

Aesthetization of Politics
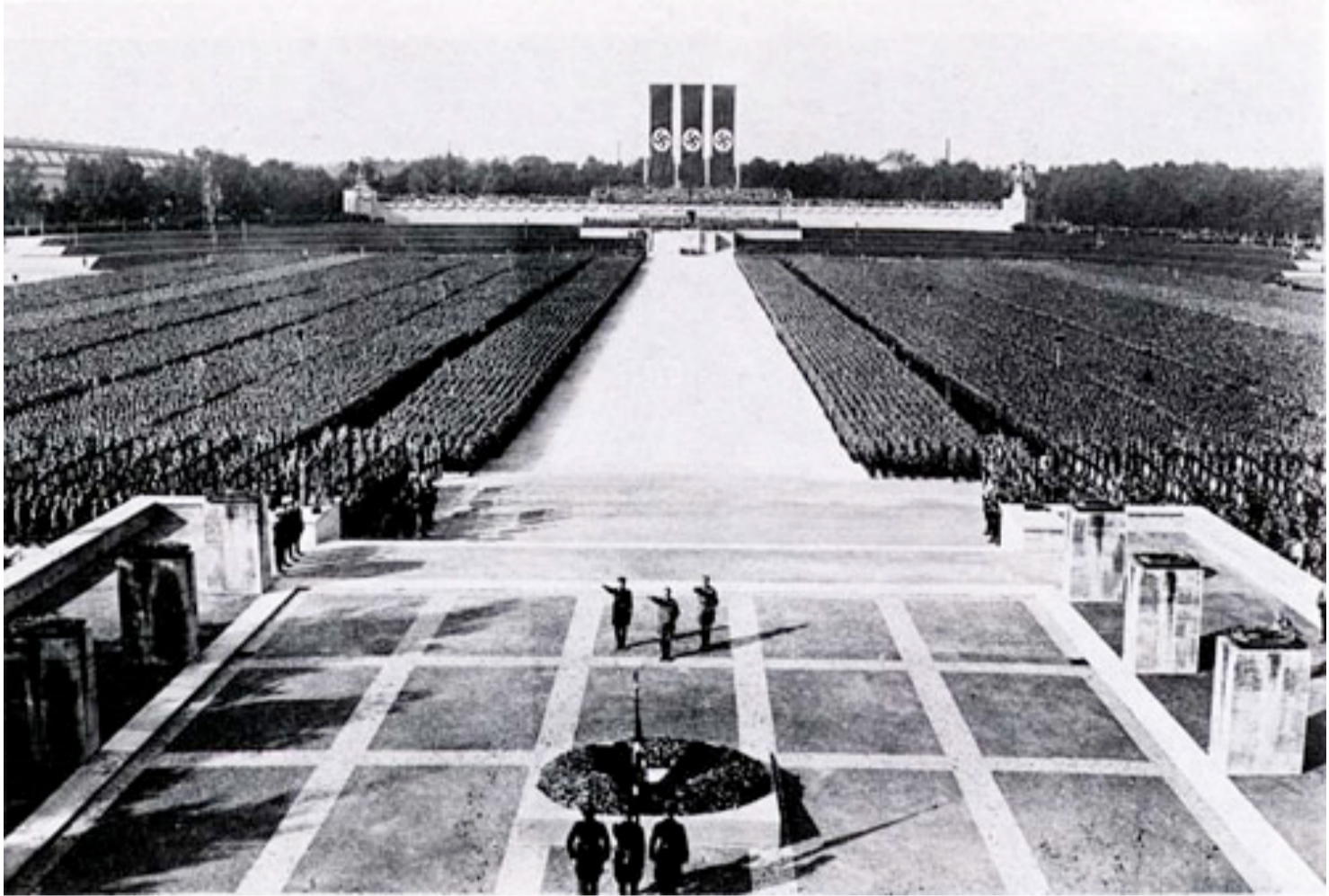
Media Concepts: Ontology, Presence

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Film was often acknowledged as the popular modernist medium

Aura

Aura and (digital) media

    aura:
        associated object or place
        cultural and personal significance for user

    VR, like film, seems to diminish aura
        because CG world is complete, seamless
        all places and objects are mediated
        yet some aura may remain

    aura of place can be maintained in AR
        because user experiences place as unmediated

VR and screen-based experiences like videogames seem to diminish aura

Aura

Oakland Cemetery Experience: which has (most) aura?

Prose description (guidebook) of Cemetery

Photograph of Cemetery

Film (TV) presentation of Cemetery (like Burn's Civil War)

VR experience of Cemetery

AR experience in Cemetery

Human-guided tour in Cemetery

Media Concepts: Ontology, Presence

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It would seem that the AR experience and the human-guided tour would have the most aura, unless these two failed to take advantage of the inherent possibilities

Aura

Photograph of Cemetery (aura because of "poor" quality)

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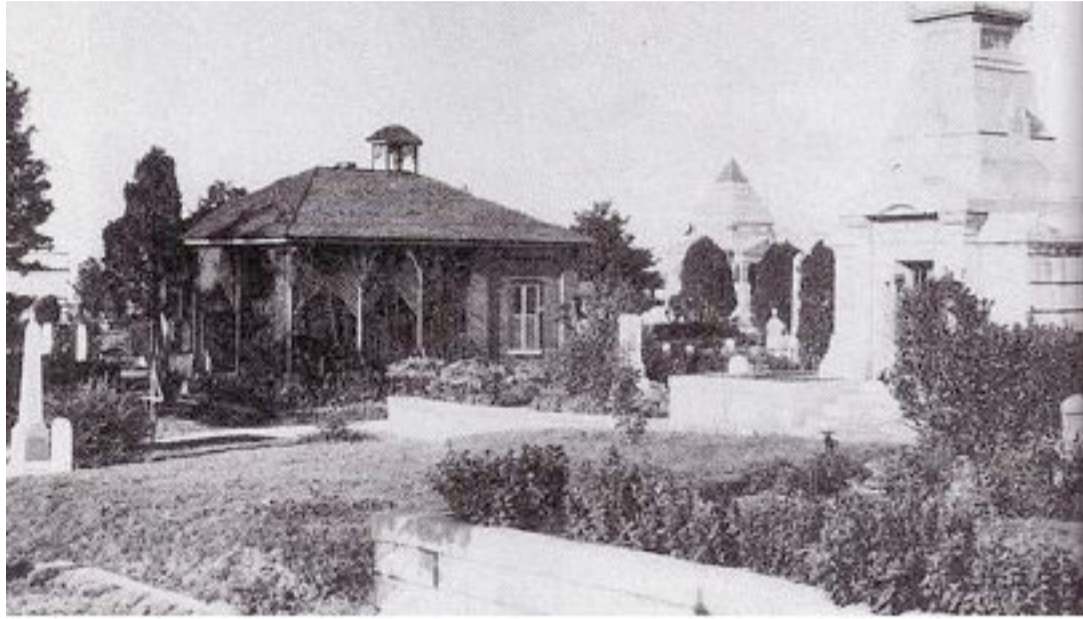
Grainy b/w photograph has more aura than a contemporary color picture or a computer graphic

Aura

Audio tour

Media Concepts: Ontology, Presence

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Showed you this before: Auratic or not?

Aura as a design parameter

Aura in
     traditional art
     Hollywood cinema

Aura in
     Locative media: museum tours
     Flash mobs
     Alternate reality games?

Media Concepts: Ontology, Presence

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None of you are doing narrative experiences - get them to consider this?
    None reallly using the aura of place either. Why not?

what about the social dimension

Presence and Aura

Presence in VR

       Definition (Sheridan, Steuer etc.):
            "the feeling of being there"

       Can presence be measured
            subjectively (user reports)
                Slater et al.
            objectively (galvanic skin response etc.)
                Brooks et al at UNC

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Presence and Aura

Presence in VR, AR

      Definition (Sheridan, Steuer etc.):
          "the feeling of being there"

      Alternative definition (Lombard, etc.):
          "absence of sense of mediation"
          forgetting about the VR apparatus

      Can presence be measured
          subjectively (user reports)
             Slater et al.
          objectively (galvanic skin response etc.)
             Brooks et al at UNC
             Gandy and MacIntyre at GT

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Presence and Aura

Lombard and Ditton, "At the Heart of It All: The Concept of Presence"

"Although the conceptualizations discussed above vary considerably, they share a central idea. Each represents one or more aspects of what we define here formally as presence: the perceptual illusion of nonmediation. The term "perceptual" indicates that this phenomenon involves continuous (real time) responses of the human sensory, cognitive, and affective processing systems to objects and entities in a person's environment."

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Presence and Aura

Lombard and Ditton, "At the Heart of It All: The Concept of Presence"

"The illusion of nonmediation can occur in two distinct ways: (a) the medium can appear to be invisible or transparent and function as would a large open window, with the medium user and the medium content (objects and entities) sharing the same physical environment; and (b) the medium can appear to be transformed into something other than a medium, a social entity."

Media Concepts: Ontology, Presence

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The Pit

Gandy and MacIntyre et al: "Experiences with an AR Evaluation Test Bed: Presence, Performance, and Physiological Measurement"

This paper discusses an experiment carried out in an AR test bed called "the pit". Inspired by the well-known VR acrophobia study of Meehan et al. [18], the experimental goals were to explore whether VR presence instruments were useful in AR (and to modify them where appropriate), to compare additional measures to these well-researched techniques, and to determine if findings from VR evaluations can be transferred to AR. An experimental protocol appropriate for AR was developed....

Media Concepts: Ontology, Presence

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The Pit

Gandy and MacIntyre et al: "Experiences with an AR Evaluation Test Bed: Presence, Performance, and Physiological Measurement"

...The initial experimental findings concern varying immersion factors (frame rate) and their effect on feelings of presence, user performance and behavior. Unlike the VR study, which found differing frame rates to affect presence measures, there were few differences in the five frame rate modes in our study as measured by the qualitative and quantitative instruments, which included physiological responses, a custom presence questionnaire, task performance, and user behavior. The AR presence questionnaire indicated users experienced a high feeling of presence in all frame rate modes...

Media Concepts: Ontology, Presence

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The Pit

Gandy and MacIntyre et al: "Experiences with an AR Evaluation Test Bed: Presence, Performance, and Physiological Measurement"

...Behavior, performance, and interview results indicated the participants felt anxiety in the pit environment. However, the physiological data did not reflect this anxiety due to factors of user experience and experiment design. Efforts to develop a useful AR test bed and to identify results from a large data set has produced a body of knowledge related to AR evaluation that can inform others seeking to create AR experiments.

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Aura and Presence in MR and AR?

Presence as sense of "being there"
> should be easy (almost automatic) in AR experience
> because user IS present in the place

Presence as absence of mediation, transparency?
> not usually striving for absence of mediation

Aura may or may not be operative in MR and AR
> possible in historic locations
> or with narrative experiences

> not with heterogeneous mediated experiences and games

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What is the relationship to AR

Nerdherder

<u>Nerdherder</u>

What are the experience design issues in this game?

Based on the video, how could the game be elaborated and refined?

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 VR and screen-based experiences like videogames seem to diminish aura

Video (vs. 3D0

Video actors in Argon

Imagine one or more experiences that could use this technique effectively?

When would video be better than animated 3D? When would animated 3D be better?

Media Concepts: Ontology, Presence

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VR and screen-based experiences like videogames seem to diminish aura

Google glasses

Project Glass

Are google glasses the future?

Are they AR?

What are the interface and experience issues that are highlighted in the video?

What issues are ignored or downplayed?

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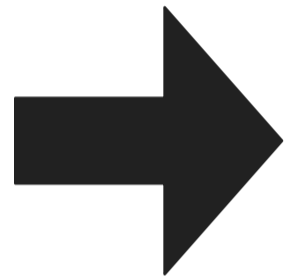
VR and screen-based experiences like videogames seem to diminish aura

Media Theory and MR Design

Ontology of the Image
Aura
Presence...

Liveness

So we have looked at three media concepts and now look at a fourth. the concept of liveness and its relationship to MR design

Theory and Practice

How does media history and theory relate to design?
    Larger question of relationship of theory to practice

    Critical Theory
        Film theory
        Cultural studies of visual culture
        Communications theory
        etc.

    Contrast this to "productive" theory
        e.g. graphic design theory or color theory
        or HCI

Issues of media theory and their relationship to our AR design projects. The larger question is the relationship of all forms of critical theory to the practice of new media design. Engage that larger question briefly. Critical theory in the humanities and social sciences differs from productive theories which aim to improve practice. Critical theory may seek to show the dangers of mass media or new media without necessarily proposing anything that could improve the practice. For example, may believe that new media are hopelessly enmeshed in global capitalism.

We will not address these questions in this course. but do what to see whether some background on a few key terms can help us.

Historicity of our assumptions. because these assumptions are changes are

Presence as Transparency

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Brings together the concept of presence and the concept of the ontology of the photographic image. Use Matrix as allegory. the allegory the desert of the real.

Matrix and notion of transparency. VR world is reversed.