Aesthetics and Cognitive Science, CSCC 330 (SO)
Wednesday, 1:30-3:30 (81 Wall, rm. 301)
Yale University, Fall 2015
Professor William Seeley
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Office Hours: W 11:0-1:00 (location in Calhoun College TBA) or email for an appointment

Course Description:
An examination of philosophical issues associated with interdisciplinary research in aesthetics and cognitive science. The aim of the course is to introduce students to the interdisciplinary field of cognitive science and to investigate the role psychology and cognitive neuroscience can play in explanations of art and aesthetic experience. The first part of the course introduces central concepts in aesthetics and the philosophy of art and the general methodology underlying research in aesthetics and cognitive science. The second part of the course examines whether an understanding of the perceptual relationship between viewers and works of visual art can play a role in explanations of art and aesthetic experience. See http://abacus.bates.edu/~wseeley/AeCS.html for syllabi for this course from previous years.

Course Goals:
1. Provide a general understanding of the objectives and interdisciplinary methods of the study of aesthetics and cognitive science with a focus on neuroscience of art.
2. Provide students with the philosophical background in philosophy necessary to evaluate research at the junction of the philosophy, psychology, and neuroscience.
3. Provide students with an introduction to cognitive science via an investigation of some foundational questions in contemporary vision science.

Requirements:
- Class participation & contributions to weekly online forum discussions (+/-10%).
- a 6 page paper early in the semester on an assigned topic (20%)
- a 6 page mid-term paper on an assigned topic (25%)
- a 12 page final paper on a topic of your own choosing . Students must see me to discuss the topic of their term papers by the end of week 10. (45%) 

Texts:
- journal articles available online as indicated on the syllabus (Onl)
- readings on e-reserve and print reserve Bass Library (B) password: art&attention

** This course does not presuppose any specialized knowledge of cognitive science or philosophy. The majority of the readings are drawn from philosophy of art and scientific review articles, perspectives, and opinion pieces. Students will not be expected to be able to evaluate the experiments or data presented in scientific papers on their own. We will discuss how to interpret relevant results in class. Our interest is in the value of the arguments provided in these texts for the theories under consideration.
REQUIREMENTS (overview):
All assignments should be handed in electronically via the Classes Server. Discussion forum contributions are due the night before the regularly scheduled class meeting. All other assignments, including weekly comments on discussion forum contributions, must be handed in electronically by 5pm Fridays.

- This course is a seminar. The pace and content of our discussions should, ideally, be student driven. Students are expected to come prepared to participate in discussion each day and class participation will factor into your grade.
- In order to facilitate class discussion students will be asked to contribute to a weekly online discussion forum. I will post discussion questions and comment on contributions in the public forum each week. The prompts for these discussions are also designed to help guide students through the interdisciplinary readings on the syllabus. Participation in class discussion and online forums will be factored in as 10% of the final grade. (10%)
- A 6 page (1800 word) paper on one of two assigned topics due at the end of week 4. The goal of this assignment is to analyze and evaluate the structure of a standard argument or model within the aesthetics and cognitive science literature. (20%)
- A 6 page (1800 word) mid-term paper on one of two assigned topics due week 8. The goal of this assignment is to demonstrate an understanding of the structure of some broad foundational debate within the literature covered by the syllabus readings and demonstrate that you can synthesize the range material covered in the first half of the semester into a coherent position. (25%)
- An 10-12 page term paper (3400-3600 word) on a topic of your own choice due week 13. You must meet with me to discuss your topic by the end of week 10. (45%)

Some Miscellaneous Notes and Guidelines: Moral behavior is the grounds for, and the framework of, a healthy society. In this regard it is each of our responsibility as individuals within the community of our classroom to act responsibly. This includes following the rules and guidelines set out by Yale University for academic behavior. Plagiarism is a serious matter. It goes without saying that each of you is expected to do his or her own work and to cite EVERY text that is used to prepare a paper for this class. In general philosophy papers are NOT research papers. Your preparations for papers and presentations should focus on material from the syllabus, assigned supplemental readings, and class discussion. The written assignments are designed to give you a chance to stretch your legs a bit while you learn about aesthetics & cognitive science (and to give me a chance to assess your understanding of the material). Your job for each of the writing assignments is to offer a defense of your take on the issue at hand. However, this does not mean that the papers are a free forum for opinions. Make sure that your discussions remain grounded in evidence and focused on the philosophical problems that surround the assigned question or topic.

I will occasionally suggest supplementary materials for students who want to pursue particular issues beyond class discussion.

Finally, please come see me at the beginning of the semester to discuss athletic schedules, extracurricular activities, or any accommodations you might need for the class work.
ASSIGNMENTS:

Class Participation – In addition to in-class discussion, every student is required to participate in a weekly forum discussion on the seminar website by posting a response to the discussion prompt or commenting on a response (please remember to be respectful of one another).

Due Date: Responses/Comments are due the evening before regularly scheduled class meetings in order to facilitate seminar discussion.

Project 1: First Paper - Please write a 6 page (1800 word) paper on one of the following topics. Your paper should be double-spaced in 12 point font with 1” margins. The purpose of this assignment is to critically evaluate a central argument from our class discussions of the general methodology of aesthetics and cognitive science. You may write on a topic of your own choice for this assignment, but please clear it with me in advance.

Paper Topic (1a): Evaluate Gombrich's critique of John Ruskin and Roger Fry in his chapter “The Analysis of Vision in Art.” What does Gombrich's argument teach us about artists methods? How does his notion of "making and matching" inform our understanding of the relationship between vision science (or just perception), art, and aesthetic experience? Is this a plausible foundation for a theory of art?

Paper Topic (1b): Zeki's thesis concerning the relationship between vision and art can be construed as both a perceptual and an aesthetic hypothesis. Please choose one of the following as a case study and evaluate whether it suffices to establish Zeki's thesis as an aesthetic hypothesis: Latto's discussion of half-shadows and irradiation, Livingstone’s discussion of Mona Lisa’s enigmatic expression, or Livingstone's discussion of McKay and Enigma effects in Monet's paintings?

Due Date: Week 4, Friday @ 5pm

Project 2: Second Paper - Write a 6 page paper (1800 words) on one of the following topics. Your paper should be double-spaced in 12 point font with 1” margins. The goal of this assignment is to demonstrate an understanding of the structure of some broad foundational debate within the literature covered by the syllabus readings and demonstrate that you can synthesize the range material covered in the first half of the semester into a coherent position.

Paper Topic (2a): TBA

Paper Topic (2b): TBA

Due Date: Week 8, Friday @ 5pm

Project 3: Final Paper Write a 10-12 page (3400-3600 word) seminar paper on a topic of your choosing. Your paper might focus on the critique of a position, the solution to a problem, or the evaluation of a debate within neuroscience of art. You might also undertake a discussion of an area you find under-represented in the literature. All students need to see me to discuss paper topics by the end of week 11.

Topics Due: You must email/meet with me to discuss your topic by the end of week 11.

Due Date: Week 13, Friday @5pm
**COURSE OUTLINE AND READINGS** (total: 281 pages / average: 21 pages per class session):

**Session 1. Introductory Lecture:**

The goal of this session is to open discussion by introducing students to some key philosophical concepts and the basic model for interdisciplinary research in aesthetics and cognitive science.

a) a philosophical definition of **aesthetics** as the study of sensory cognition and the phenomenal character of experiences associated with artworks.

b) a distinction between **theories of aesthetics** and **theories of art**.

c) a definition of **interpretation** as the use of background art historical and cultural knowledge to determine the **meaning**, of a work of art.

d) a **basic philosophical conflict** between aesthetic theories of art and the role background knowledge and interpretation play in our engagement with artworks: it has been argued that what differentiates artworks from ordinary artifacts is not the phenomenal content of aesthetic experience, but rather the way viewers interpret their meanings.

e) a general model for the contributions of **memory, affect, and attention** to perception:

   - knowledge of the structure, function, and value of objects and events within a particular context shapes the way we see our environment.

   - the contributions of background art historical and cultural knowledge cannot, therefore, be easily separated from the phenomenal content of aesthetic experiences.

f) a definition within aesthetics and cognitive science of artworks as **perceptual strategies** intentionally designed to direct attention to features responsible for the aesthetic effects and semantic associations constitutive of their artistic content.

g) a **first skeptical concern**: does the definition of artworks as perceptual strategies provide a means to resolve the objection to aesthetic theories of art raised in (d).

h) a **second skeptical concern**: are researchers within aesthetics and cognitive science asking questions germane to the general practices that define our concept of art.

**READINGS** (2 pages):


**Recommended Supplemental Readings:**


  *(Onl)*: http://www.cell.com/trends/cognitive-sciences/references/S1364-6613(14)00075-8


  *(B)*
A. Formalism, Aesthetics, & Neuroscience

Session 2. Formalism and Aesthetics:
The goal of this session is to discuss the central claim of aesthetic theories of art – the idea that artworks are artifacts intentionally designed to trigger aesthetic experiences in consumers - with an eye to the roles that formalism and aesthetic experience play in our commonsense conception of art.

READINGS (25 pages):

Session 3. Art & Neuroscience:
Semir Zeki claims that a) the function of art is analogous to the function of vision, b) artists are intuitive neurophysiologists whose works and formal vocabularies reveal a tacit understanding of the mechanisms and processes of early vision, and c) an investigation of correlations between the formal structure of artworks and the operation of the early visual cortex can serve as the foundation for a biologically based theory of art. The goal of this session and the next is to evaluate several case studies that illustrate Zeki’s claims.

READINGS (32 pages):

Recommended Supplemental Readings:
Session 4.  Discussion Session: Formalism, Aesthetics, and Neuroscience

It is open to debate whether explanations of the way we perceive an artwork, in itself, suffices to explain what is unique to the work as either an artwork or an aesthetic object. As a consequence, Zeki and Livingstone's frameworks for understanding art can be interpreted as either a perceptual hypothesis or an aesthetic hypothesis. In this session we continue our discussion of Zeki and Livingstone with an eye to whether their neurophysiological explanations of how we perceive the critical formal qualities of artworks suffice to explain why we find those aspects of the work either artistically or aesthetically interesting.

See the following supplemental materials for additional case studies:


(B)


(Onl): [http://rspb.royalsocietypublishing.org/content/264/1383/795.full.pdf+html](http://rspb.royalsocietypublishing.org/content/264/1383/795.full.pdf+html)


FIRST PAPER DUE FRIDAY @ 5PM
B. Art, Meaning, & Perception

Session 5. What’s in a Picture?

The goal of this session is to a) introduce students to some foundational concepts in vision science by discussing Gibsonian and constructivist approaches to picture perception and b) to provide a rudimentary model for thinking about our engagement with artworks as an information processing problem (i.e., discuss what kind of information is available in a picture and what psychological processes are involved in using that information to recover the content of the work).

READINGS (36 pages):
  (B)
  (B)
  (B)

Recommended Supplemental Reading:
  (Onl): http://www.perceptionweb.com/abstract.cgi?id=p3276
  (Onl): http://www.jstor.org/stable/1572228

Session 6. The Analysis of Vision in Art:

The goal of this session is to introduce a set of fundamental claims that underlie research in aesthetics and cognitive science: a) visual artists derive the content of their works from a careful examination of the underlying structure of natural appearances; b) viewers reconstruct the representational content of these works from visual cues derived from this examination; however c) there is no preferred set of image cues for producing even a realistic landscape painting, rather artists choose their formal vocabularies and compositional strategies relative to the formal, expressive, aesthetic, and semantic effects that they intend their works to produce.

READINGS (30 pages):
  (B)
Session 7: Art, Meaning, & Aesthetics

The goal of this session is to a) introduce contemporary skepticism about the scope of aesthetic theories of art, b) evaluate the general research model for neuroaesthetics in light of this skepticism, and c) introduce the idea that the purpose of the formal and compositional structure of an artwork is to direct attention to features responsible for its artistically salient content (e.g., formal aesthetic properties, expressive properties, and the semantic associations that determine its meaning).

READINGS: (23 pages)
  (B)
  (B)

Session 8: Art, Meaning, & Intentions

The goal of this session is to a) start to conceptualize how artworks might work as communicative devices to express ideas and b) introduce a philosophical debate about the role of artists' intentions in our understanding of artworks.

READINGS (15 pages):
  (B)
  (B)

SECOND PAPER DUE FRIDAY @ 5PM
Session 9: Discussion: Art, Meaning, & Perception

The goal of this session is to evaluate the loosely contextualist account of artworks that emerges from Danto, Carroll, and Fodor's papers and open a conversation about whether what we have learned about vision science is consistent with this story about our engagement with artworks. Does the information processing view of our engagement with artworks that was introduced in session 5 match to the story Fodor tells about art and communication. Does it match to the story that Carroll tells about artistic form? If not what would we need to build into the framework in order to model our engagement with artworks this way?

Recommended Supplemental Readings:

Session 10: Memory, Attention, and Perception I

The goal of this session is to a) develop an understanding of the sorts of psychological processes that support our engagement with visual artworks, b) discuss the ways that goals, expectations, and background knowledge can shape how we see objects and events in our environment, and c) and discuss how these effects might generalize to the influence of background knowledge on our engagement with artworks.

READINGS: (34 pages)

Recommended Supplemental Readings:
Session 11: Memory, Attention, and Perception
The goal of this session is to explore a) the various ways background knowledge, task demands, and affect contribute to attention and shape seeing and b) continue discussion of how these effects might shape our engagement with artworks.

READINGS: (23 pages)
  *(Onl)*: [http://www3.interscience.wiley.com/cgi-bin/fulltext/118505433/PDFSTART](http://www3.interscience.wiley.com/cgi-bin/fulltext/118505433/PDFSTART)
  *(Onl)*: [http://rstb.royalsocietypublishing.org/content/364/1521/1325.long](http://rstb.royalsocietypublishing.org/content/364/1521/1325.long)

Recommended Supplemental Readings:
  *(B)*

FINAL PAPER TOPIC PROPOSALS BY FRIDAY @ 5PM

Session 12: Art Critical Knowledge / Categories of Art
The goal of this session is to a) explore the structure of categories of art and b) discuss the productive role that categories of art play in our perceptual engagement with artworks with an eye to our discussion of the role played by memory and attention in perception.

READINGS (31 pages):
Session 13: Discussion Session: Aesthetics, Cognitive Science, and Art Critical Knowledge

The goal of this session is to revisit skeptical questions raised about the limited scope of research in aesthetics and cognitive science in light of syllabus material introduced in the second half of the course. The central question in this regard is whether aligning the information-processing model of aesthetics and cognitive science more closely with cognitivist models from philosophy of art (e.g., Carroll, Danto, and Fodor) suffices to meet the kinds of anti-aesthetic contextualist objections Blake Gopnik raises for contemporary research in neuroscience of art.

READINGS (30 pages):


  (B)

Recommended Supplemental Readings:


## Readings:

*See above for a complete list of recommended readings.*

### Assignments

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<th>Date</th>
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<td>1</td>
<td>- Noë, Art &amp; the Limits of Neuroscience. <em>(Onl)</em></td>
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| 2    | - Bell, The Aesthetic Hypothesis: 15-34. *(B)*  
- Fry, The Artist's Vision: 33-38. *(B)* | |
- Latto, The Brain of the Beholder (excerpt): 66-74. *(B)*  
| 4    | **Discussion: Formalism, Aesthetics, and Neuroscience** | First Paper Due: Friday 5pm |
| 5    | - Palmer, Classical Theories of Vision: 46-59. *(B)*  
- Palmer, Four Stages of Visual Processing: 85-92. *(B)*  
- Winner, What’s in a Picture? 81-95. *(B)* | |
| 7    | - Danto, Art and Meaning: 306-317. *(Onl)*  
- Levinson, Aesthetic Contextualism: 1-12. *(Onl)*  
- Carroll, What is Artistic Form: 137-148. *(B)* | |
| 8    | - Fodor, Déjà-vu All Over Again: 41-54. *(B)*  
- Levinson, Intention & Interpretation (excerpt): 188-189. *(B)* | Mid-Term Papers Due: Friday 5pm |
| 9    | **Discussion: Art, Meaning, & Perception** | |
| 10   | - Schyns, Diagnostic recognition (excerpt): 147-151. *(Onl)*  
- Pessoa et al, Neuroimaging Studies of Attention: 3990-3998. *(Onl)*  
| 11   | - Koivisto & Revonsuo, How Meaning Shapes Seeing: 845-849. *(Onl)*  
- Land & Hayhoe, In What Ways Do Eye …: 3559-3566. *(Onl)*  
- Barrett & Bar, See It with Feeling: 1325-1334. *(Onl)* | Final Paper Topics Discussions must be completed by Friday 5pm |
| 12   | - Walton, Categories of Art: 334-367. *(Onl)*  
- Carroll, Historical Narratives and Philosophy of Art: 313-322. *(Onl)* | |
| 13   | - Gopnik, Aesthetic Science...Artistic Knowledge: 129-159. *(B)* | Final Papers Due Friday 5pm |
**Potential Discussion Forum Topics:**

**Week 3:** How do the stories that Semir Zeki, Richard Latto, and Margaret Livingstone tell about art match to the stories Clive Bell and Roger Fry tell? Do you find this kind of formalism a plausible story about art in general? If not are there any particular kinds of art for which you think it might be a plausible story, e.g. early 20th century modernism?

**Week 4:** Does the neurophysiological story Semir Zeki, Richard Latto, and Margaret Livingstone tell about our basic visual sensory interactions with paintings suffice to account for the target aesthetic properties that they have set out to explain? Why or why not?

**Week 5:** Given your understanding of our ordinary interactions with artworks, how plausible is it that the information processing story Ellen Winner tells about our interactions with paintings can serve as the foundation for a psychologically grounded explanation/theory of art.

Do you think the top-down role assigned to categorization processing in perception renders Bell's style of formalism incoherent, or do you think there is a way to acknowledge these kinds cognitive influences in perception and save formalism?

**Week 6:** Do you think that E. H. Gombrich's psychological point about making and matching might help account for the role meaning plays in our understanding of art?

Given E. H. Gombrich's story about making and matching, do you think it is plausible to ignore the role meaning and interpretation play in art as aesthetic theorists often do?

**Week 7:** Do you find Arthur Danto's story about the relative roles of art theory and the aesthetic in art plausible? Why or why not? How does this story mesh with Noel Carroll's story about artistic form? How do the two stories together mesh with what we have learned about vision science so far?

How does E. H. Gombrich fit into the discussion of this week's syllabus material?

**Week 8:** Do artist's intentions matter in the way Jerry Fodor suggests?

Given what we have learned about vision science, and the general Danto-Carroll view of art we have discussed, do you think artists can use artworks to direct a viewer's understanding of its content in the way Fodor suggests?

**Week 9:** Can you explicitly map Noel Carroll's story about the way we retrieve the artistic form of an artwork to the general computational model for vision laid out by Stephen Palmer?

Can you map Jerry Fodor's story about artistic communication onto Noel Carroll's story about artistic form? What would the concepts that encode our general art historical/critical knowledge have to look like to make a plausible story out of all of this?

**Week 10:** Can you map Noel Carroll's story about the way we retrieve the artistic form of an artwork to the general story about the role of memory and attention in perception laid out in this week's syllabus material?

How does the general story about the role of memory and attention in perception laid out in this week's syllabus material influence your evaluation of aesthetic theories of art?

**Week 11:** What role might the range of semantic, affective, and sensorimotor processes introduced in this week's reading play in our engagement with art?

Given what we have learned about the role of memory and attention in perception, do you think artists can use artworks to direct a viewer's understanding of its content in the way Fodor suggests?
Week 12: Does Kendall Walton's thought experiment about Guernicas and Picasso's Guernica support Noel Carroll's story about artistic form? How does your answer influence your evaluation of the general model for neuroscience of art we have been trying to develop since the midterm?

How do Bell's formalism and aesthetic theories of art more generally fare against Carroll's story about historical narratives and the philosophy of art

Week 13: Does the story we have developed about the influence of artistic knowledge (background knowledge about categories of art) in our perceptual interactions with artworks suffice to answer Blake Gopnik's challenges to aesthetic science?