

Symbolic Systems 210

Learning Facial Emotions: Art and Psychology

Winter Quarter, 2009-2010
Stanford University, 3 units

Instructors:

David C. Wilkins, Symbolic Systems, dwilkins@stanford.edu

Office: Margaret Jacks Hall, Bldg 460, Rm 40E

Kay Kostopoulos Amarotico, Drama Department, kaykost@stanford.edu

Office: Drama Dept, Roble Gym, Rm 13

Guest Artist:

Michael Azgour, Figure Drawing, mazgour@stanford.edu

Class meets: Wednesday, 7-9pm, Wallenberg Hall, Room 160-124

Course prerequisites: Psych1 or consent

Class size: limited to 15 due to acting and art drawing studio component

Course Description

The focus of this seminar course is an exploration of the differences between an art and psychology approach to learning the universal facial emotions. Attention is given to the tasks of learning to express, recognize, feel, and respond to facial emotions. Dimensions of analysis include neuroscience, learning, and human-computer interaction. There is an emphasis on learning to recognize facial emotions in the presence of cognitive deficits such as autism.

A psychology approach to learning to recognize facial emotions is learning by being told the facial features that define the emotion, being shown examples of particular emotions, and being given feedback on performance. Paul Ekman's Micro Expression Training Tool (METT) and Subtle Expression Training Tool (SETT) learning methods are excellent paradigmatic examples of this approach, and will be used in the course.

An artistic approach to learning facial emotions involves methods used in art drawing and actor training. In art drawing, a live model is drawn in a studio setting. We will specialize facial drawing to those facial features associated with the seven basic emotions. Actor training focuses on those acting skills that assist the individual in understanding and recognizing facial emotional expressions of others. This includes exercises in observation, storytelling, emotional memory and empathy. Prior art and drama experience is not required.

The general topic of this course has not been previously studied, thus offering the opportunity to engage in original research.

1. Class Particulars

Office Hours

David Wilkins, Margaret Jacks Hall, Bldg 460, Rm 40E
Wednesdays 3-5pm and by appointment.

Kay Kostopolous, Drama Department, Roble Gym, Rm 13
By appointment.

Cognate Status

In addition to satisfying requirements for a major in Symbolic Systems, this course has cognate status in Psychology and Communications. It can be used to satisfy requirements of a major in these departments.

Coursework

This course will use Coursework, W10-SYMSYS-210-01. Readings are posted on the site. Homework and critiques are submitted using the drop box feature.

Course Readings

The readings are usually journal articles, available in PDF form on Coursework. All readings are made available at least two weeks in advance.

Course Art Kit

The following art supplies are in the art kit that has been prepared for this class:
Strathmore Sketch Pad 400 series, 9"x12", 100 sheets, 60 lb; Clipboard 9"x12"
Alphacolor Charkole black 3 pack; 2b 4b 6b charcoal pencils; Derwent graphite pencil
.5mm mechanical pencil; Pentel sign pen; China marker; Stick graphite 4b
Tombo brush pen black; Factis extra soft eraser ES20; Design kneaded rubber eraser
1224, Kum pencil sharpener with two holes to catch shavings; Pencil box.

A **SymSys Art Kit** that contains all of the above art items is available from Accent Arts, located at 392 California Ave, (650) 424-1044, 10-7pm. Ask for the SymSys Art Kit.
List Price \$52.02 Kit Price \$32.09 plus tax.

Homework and Critiques

The lecture-related homework is a one-page critique of the readings for the week. A critique provides a summary of strengths, weaknesses, and observations of the reading. Any lab-related homework will be announced in conjunction with the labs.

Critiques of the readings are turned in the day before the class in which they are covered at noontime. Normally, this is Tuesday at noontime. Please use the drop box feature of coursework to submit homework and critiques.

Term Projects

Everyone will be given the opportunity to define their own term project. A initial description of your planned term project is due the second week of the class. It should include your term project idea and at three references. If full text versions of your references are available, they should be placed in your coursework drop box.

Your term project should involve a number of words from the following lists. Facial Emotion Recognition and the Seven Universal Emotions. Art Drawing, Actor Training, Microexpressions, and Subtle Expressions. Autism and Cognitive Deficits. Human-Computer Interaction, Computer Animation, and Computer Games. Human Perception. The History of Art Drawing or Actor Training. Interactive Learning Systems, Human Learning, Learning Rate, Learning Retention, Learning Transfer, and Learning Motivation.

In one type of term project, you can formulate a hypothesis, explain why the hypothesis is of interest, describe related research, describe how the hypothesis can be experimentally tested, and conjecture the experimental results. In another type of term project you can design or program an interactive learning system that relates to learning facial emotions.

Actor Training Labs

In the acting portion of the class, we will be looking at a variety of acting skills that assist the individual in understanding and recognizing facial expressions as related to the feelings and emotions of others. We will do a warm up for physical relaxation, breathing, centering, grounding, and "being present in the moment" to enhance our ability to observe others, and be observed. We will then perform acting exercises in observation, storytelling, emotional memory and empathy. We will also explore "The Method of Physical Action" from the 19th century acting teacher, Constantin Stanislavski, who believed that physical actions inspire truthful emotion.

Art Drawing Labs

An art drawing approach to learning facial emotions involves methods used in traditional drawing. Students will first be introduced to basic drawing techniques using charcoal pencil. They will then be instructed to observe the facial features of a model, examine the subtle expressions, and draw them in a representational manner. We will discuss the positions of the feature points of the face as they relate to the seven basic emotions. Assignments will consist of short studies that attempt to convey the subtle expressions of the model's facial features in a drawing.

Library Reserve

Relevant materials will be on reserve at the Meir library reserve desk. This includes the METT/SETT training CD that will be available for two-hour checkout.

Literature Searches

With respect to the psychology literature, the main source relevant to the course is psychINFO, accessible at <http://library.stanford.edu/sulapp/databases/index.jsp>. Select psychology, and then select psychINFO. Another good source is www.pubMED.net. A major keyword is Facial Emotion Recognition.

Grading

60% Term Paper and Presentation, 25% Homework, 15% Lecture and Lab participation

Homework Readings

Week 3:

Matsumoto, D and Ekman, P, Facial Expression Analysis, *Scholarpedia*, 2008, Vol 3, No 5: 4237.

Russell T. A., Chu E, and Phillips M. L., A pilot study to investigate the effectiveness of emotion recognition remediation in schizophrenia using the micro-expression training tool. *British J. of Clinical Psychology*, Nov 2006, Vol 45, 579-83.

Week 3 Supplementary:

Barrett, L. F., Mesquita, B., Ochsner, K. N., and Gross, J. J., The experience of emotion. *Annu. Rev. Psychol.*, 2007, Vol 58, 373-403.

Russell, J. A., Is there Universal Recognition of Emotion from Facial Expression:? A Review of the Cross-Cultural Literature. *Psychological Bulletin*. 1994, Vol 115. No 1, 102-141.

Ekman, P., Facial Action Coding System, *Facial Action Muscle Unit Slides*, 2002.

Ekman, P., Friesen, W. V., Hager, J. C., *Facial Action Coding System: The Manual*, 2002, 500 pages

Ekman, P. *Emotions Revealed*, 2nd edition, Henry Holt and Co., 2007.

Week 5:

Wright, A., Shinkle, E. and Linney, A. Alter Ego: Computer Reflections of Human Emotions, *Proceedings of the 6th. DAC Conference*, Copenhagen, 191-199, 2005.

Bolte, S. and Fritz, P., The recognition of facial affect in autistic and schizophrenic subjects and their first degree relatives. *Psychological Medicine*. 2003, Vol 33, 907-915.

Week 5 Supplementary:

Adolphs, R. Neural systems for recognizing emotion. *Current Opinion in Neurobiology*, Volume 12, Issue 2, 1 April 2002, Pages 169-177.

Neumann, 2007, Neumann, D., Spezio, M. L., Piven, J. and Adolphs, R. Looking you in the mouth: abnormal gaze in autism resulting from impaired top-down modulation of visual attention, *SCAN*, Vol 1, 194-202, 2006.

Klin, A., Jones, W., Schultz, R., Cohen, D. Visual Fixation Patterns During Social Situations as Predictors Individuals With Autism *Archives of General Psychiatry*. Volume 59, 806-816, 2002.

Dalton, K. M., Nacewicz, B. M., Johnstone, T. Schaefer, H. S., Gernsbacher, M. A. Goldsmith, H. H., Alexander, A. L., and Davidson, R. J. Gaze fixation and the neural circuitry of face processing in autism. *Nature Neuroscience*, Vol 8, No. 4, 519-526, 2002.

Week 7.

Readings for week 7 to be determined by week 5 and will relate to the topics of most relevance to the evolving interests of the students.

Class Syllabus on Following Page....

Class Syllabus
Symsys 210, Winter 2010
Learning Facial Emotions: Art and Psychology

2. Class Schedule

Date	Class	Readings, Assignments
Week 1 Wed 1/6	No Class.	
Week 2 Wed 1/13	Lecture: Overview of Learning Facial Emotions Psych Lab: METT Microexpressions	Buy art supplies
Week 3 Wed 1/20	Lecture: The Universal Emotions Art Lab: Art Drawing Training Without Model	Critiques due Literature Search due
Week 4 Wed 1/27	Art Lab: Actor Training Art Lab: Art Drawing Training with Model	
Week 5 Wed 2/3	Lecture: FER and Autism-Neuroscience Lecture: FER and Human-Computer Interaction	Critiques due Draft Presentation
Week 6 Wed 2/10	Midterm Student Presentations 5 minute present, 2-3 min class feedback	Presentations
Week 7 Wed 2/17	Lecture: Topic TBD Psych Lab: SETT Subtle Expressions	Critique due
Week 8 Wed 2/24	Art Lab: Actor Training Art Lab: Art Drawing Training with Model	Draft Presentations
Week 9 Wed 3/3	Final Student Presentations 5 minute present, 2-3 min class feedback	Presentations
Week 10 Wed 3/10	Lecture: Summary and Conclusions Psych Lab: Measuring METT Improvement	
Exam Week Mon 3/16	Final research term papers due at 10pm	