Cognitive Approaches to Media
Spring 2011

Instructor: Chen-Chao Tao
Time: Wednesday 4:40-7:20 pm
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Office Hours: Tuesday 12:00-2:00 pm and by appointment

Course Description

One of the key issues in communication research is concerned with the interaction between the mediated message and the human mind. Especially, how mental processes interact with structural and content features of messages is of critical significance. The conventional stimulus-response model, which attempts to answer only what media attributes or intrinsic message features produce effects, cannot fully explain and predict media effects, because “the black box” of the human mind is ignored. “Understanding how individuals process messages is central to any comprehensive theory of communication” (Geiger & Newhagen, 1993, p. 42).

Exploring “the black box” requires new theories, which propose possible theoretical frameworks of mental processes and explain how mediated messages are processed. In order to respond to this challenge, cognitive science, psychophysiology, and neuroscience are integrated into communication research, and a new area of research is emerging. Moreover, exploring “the black box” also requires new methods. Mental processes are inside the human brain and hard to measure. How to index the operation of mental processes becomes an important research topic. Scholars not only use a wide variety of measures to reflect mental processes, such as physiological indices and eye movements, but also examine the relationship between those measures and psychological constructs.
The purpose of this course is to introduce you to a broad range of topics that are tied together by communication research, cognitive science, and psychophysiology. This course is designed to critically examine the cutting edge theories and methods used to uncover the black box. New work executed over the past twenty years is of particular interest. This course will start with an overview of cognitive approaches to media. Next, core concepts and prominent theories will be discussed. Finally, psychophysiological measures (e.g., eye movements, heart rate, skin conductance, facial EMG, etc.) used to investigate the black box and measurement issues will be reviewed.

Goals and Objectives

Goals for the course include:

- To equip students with a solid knowledge of cognitive approaches to media;
- To understand psychophysiological measures used to study human information processing;
- To gain specific insights into cognitive approaches to media that will enable students to begin formulating their own research projects.

Grading/Evaluation

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percent of grade</th>
<th>Due date</th>
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<tbody>
<tr>
<td>Weekly reflections (critiques)</td>
<td>26%</td>
<td>12 pm on the day of the class</td>
</tr>
<tr>
<td>Writing assignments</td>
<td>16%</td>
<td>Weeks 6 &amp; 13</td>
</tr>
<tr>
<td>Expert discussion leader</td>
<td>10%</td>
<td>Weeks 8</td>
</tr>
<tr>
<td>Review article</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Research question</td>
<td>5%</td>
<td>Week 3</td>
</tr>
<tr>
<td>Annotated bibliography</td>
<td>5%</td>
<td>Week 7</td>
</tr>
<tr>
<td>Paper proposal</td>
<td>5%</td>
<td>Week 8</td>
</tr>
<tr>
<td>Paper draft</td>
<td>10%</td>
<td>Week 17</td>
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<tr>
<td>Peer review</td>
<td>5%</td>
<td>Week 18</td>
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<tr>
<td>Paper presentation</td>
<td>5%</td>
<td>Week 19</td>
</tr>
<tr>
<td>Final paper</td>
<td>15%</td>
<td>Week 19</td>
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Required Textbooks


Readings

Assigned readings are available on the Web. To access the readings, go to the course’s eCampus website (http://e3.nctu.edu.tw).

Recommended Textbooks


**Overview of assignments**

Weekly reflections (critiques) require students to read assigned readings every week and write a reflection. This reflection should consist of at least three parts: (1) identify the research question; (2) identify new concepts and definitions of interest to you; (3) either criticize these authors’ theoretical stances or apply these authors’ arguments to different situations, or both. Ask for clarification if there is something you do not understand. Remember that a reflection is not just a summary. In the reflection, the summary should be no more than five lines. Post your reflections on the assigned group weblog by 12 pm on the day the readings is due.

Writing assignments ask you to turn in to me a short paper on a question I give. Answering the question will require that you synthesize the recent readings. Papers should be 6-8 pages long.

Review articles of good quality create a firm foundation for accumulating knowledge, advancing theory, and uncovering areas for future research. Especially, review articles are needed in the face of controversies or the growing number of relevant studies. In short, the number and quality of review articles represent the progress of an academic filed. The crucial part of writing a review article is to determine the organizing framework. Through the organizing framework, you compare and evaluate a body of literature and demonstrate patterns in it. Critical evaluation assists you in identifying gaps in current literature or proposing new theories for future research, which is viewed as a process of creating knowledge.

**Schedule of Topics and Readings**

**Week 1**

02/21 Introduction & Overview of Course

**Part 1: Emergence of Cognitive Approaches**

**Week 2**

02/28 228 Memorial Day

**Week 3**

03/07 When Information Processing Theory Meets Communication Research

Readings:


Recommended:

**Part 2: Core Concepts**

**Week 4** 03/14 Attention

Readings:

Recommended:

**Week 5** 03/21 Memory, Associative Network Model, and Working Memory

Readings:

Recommended:
Memory

Working memory

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**Associative network model**


**Measuring memory**


**Week 6**

03/28 Dimensional Theories of Emotion and Coactivation

**Readings:**


**Recommended:**


**Week 7**

04/04 Spring Recess!

**Week 8**

04/11 Automatic and Controlled Processing

**Readings:**

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**Recommended:**


**Week 9 04/18 Expert Discussion Leader**

**Attention in Communication Research:**


**Memory in Communication Research:**


**Emotion in Communication Research:**


**Automatic Processing in Communication Research:**


**Part 3: Prominent Theories**

**Week 10** 04/25 The Limited Capacity Model

**Readings:**


**Recommended:**

**Week 11**

**05/02 Visual Salience Hypothesis & Contingent Attentional Capture Hypothesis**

**Readings:**

**Recommended:**

**Week 12**

**05/09 Processing Modes & Load Theory**

**Readings:**

**Recommended:**

**Week 13**  
05/16 Writing a Review Article  
Readings:  

**Part 4: Indicators of Human Information Processing**

**Week 14.1**  
05/23 Psychophysiology  
Readings:  

**Week 14.2**  
05/28 Workshop on “Applying Psychophysiological Measures to Communication Research” (tentative title)  
Recommended:  

**Week 15**  
05/30 Secondary Task Reaction Time  
Readings:  
information density affect the availability of cognitive resources. *Media Psychology, 10*(3), 317-338.

**Recommended:**

**Week 16** 06/06 Dragon Boat Festival

**Week 17** 06/13 Eye Movements

**Readings:**

**Week 18** 06/20 Eye Movements (continued)

**Readings:**

**Week 19** 06/27 Individual Advising on Review Articles

**Week 20** 07/01 at 1:30 pm Paper Presentations