CONSUMER NEUROSCIENCE

Spring 2014 New York University – Stern School of Business

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Office Hours: Wednesday, 4:00-6:00, and by appointment

Course Goals

Consumer Neurosciences

Most purchase decisions are unconscious. Behavior, learning, memory, sensation, attention, cognition, perception, emotions and brain activity are concepts that have acquired a new dimension in business and specifically in the context of marketing. This dimension is the main axis of Consumer Neurosciences. The analysis of consumer behavior is increasingly gaining importance from the emotional standpoint and it affects any marketing tool that we intend to use: the advertising and communication, point of sale, image and brand positioning or any other stimulus we present to our potential consumers or buyers.

Consumer Neuroscience is an important step in the analysis and understanding of consumer behavior through the rigorous application of the knowledge and techniques of neurosciences, and appears as a new fundamental tool for the present and future of market research.

The goals of this class are to:

Acquire knowledge of:

1. Brain anatomy and functionality (neuroanatomy and neurophysiology) and techniques used to register human brain activity.
2. Neural networks of cognitive processes, such as perception, attention, learning and memory, and especially emotion. Great emphasis on neural circuitry of decision making.
3. Economic behavior mediated by cognition and related neural systems.
4. How scientific discoveries can guide models of economics, and how to apply modern neuroscience to understand consumer behavior.
5. Current applications of neuroscience to consumer research through actual consumer neurosciences companies and cases.

And learn to apply this knowledge:

1. To solve business and marketing questions.
2. To discuss and understand the implications of this cutting-edge fashion of marketing research in the current fields of consumer research.

3. To analyze some actual results of different cases in which brain activity was used to answer marketing and business questions.

4. To discuss the limitations of consumer neuroscience and delineate which type of questions can and which ones cannot be answered through consumer neurosciences.

5. To discuss potential skepticisms about the ethics of applying neuroscience techniques to answer business and marketing questions.

Course Outline

Session 1:
Brain 101: Brain anatomy, physiology and techniques for registering human brain activity.
We will describe basic neuroanatomy and neurophysiology, in order to understand basic brain functioning and the distribution of brain functions in regions and networks. Furthermore, this knowledge will allow us to dig into the different techniques used in human neuroscience to monitor brain activity, including PET, MEG, fMRI, EEG and biometric measures.

Essay: Which types of business questions can be answered with these techniques?

Session 2:
Neural basis of cognition and decision making: Basic cognitive processes and models of human decision making and persuasion.
Neural basis of basic cognitive processes will be discussed, such as attention, perception, learning and memory, with especial emphasis in emotion. We will discuss how this neural networks shape persuasion and human decision making.

Essay: What is the impact of different neurocognitive processes indifferent marketing and business questions?

Case 1

Session 3:
Neuroeconomics and Consumer Neuroscience: Application of neuroscience to economic behavior and consumer research.
Basic knowledge on neuroeconomic and extensive description and discussion on how to apply neuroscience to shape economic models, and understand consumer behavior. We will discuss how the cognitive processes learnt before affect economic and marketing models.

Discussion of Case 1.

**Essay:** Describe different concrete applications of neuroscience to business and marketing problems.

**Case 2**

**Session 4:**
Consumer Neurosciences – Applications: *Applications of neuroscience that different companies are currently using to solve marketing and business problems*

Description of all the main applications of consumer neuroscience currently in the market, using different techniques of cognitive neurosciences to solve business and marketing questions, from eye-tracking and biometrics, to fMRI and EEG. Actual cases will be presented and discussed.

Discussion of case 2.

**Essay:** What implications will consumer neuroscience have in current models of consumer research?

**Essay:** Which limitations and ethical problems you see to the application of neuroscience to business and consumer research?

**Case 3**

**Session 5:**
Consumer Neurosciences – Implications: *New definitions of success, gain in efficiency and effectiveness and science and art in the same team.*

Description of current and future implications of the use of consumer neuroscience in market research. We will discuss how consumer neuroscience shapes the present and future of market research. Other actual cases will be presented and discussed.

Consumer Neuroscience – Limitations and neuro-ethics.

Description and discussion of current popular skepticism to the use of neuroscientific techniques on the fields of business and market research. We will also discuss the limitations of the field and which type of questions cannot be answered through consumer neurosciences.

Discussion of Case 3.
Session 6:
Team projects presentations.

Course Resources

Required Course Packet

(available through the NYU Bookstore)

Cases

The cases will be delivered closer to the beginning of the course.

Articles


Other Articles & Exercises

Additional exercises, journal articles, and recent news from the popular business press will be provided throughout the semester. The journal articles will provide you with a deeper insight into selected topics and methods of consumer neuroscience. The business news articles are used to illustrate the conceptual framework with current real-world marketing problems as well as the popular thoughts and perception
of the field. The articles will be posted on the class website.

**Course Website**

http://newclasses.nyu.edu
This website has many useful things on it, including continuously updated information on assignments, readings, course schedule, etc. Please check regularly.

**Class Notes**

The PowerPoint slides for each class will be available for downloading from the website. Note, however, that these slides only present an outline of the class discussion. You will still need to take additional notes to fully capture the material discussed in class.

**Additional Literature**

A special section on the class website will list optional additional readings.

**Student Evaluation**

Your evaluation will be based on one final exam, 3-4 case study preparations, 4 short-essays, a group project, and your class participation:

*Final Exam*        40%

The final exam will be based on the lectures, class discussions, assigned readings, and case assignments. The exam will primarily consist of short essay questions. Students who do not attend the final exam and who do not have a prior agreement with me will receive a zero for the exam grade.

*Group Project*     25%

A part of your course grade will be determined by a team project that will be presented and publicly discussed at the end of the course. The objective of this team project is to apply neuroscience techniques to answer a business question or diagnose some marketing material.

*Cases and short essays preparations*    25%

You will be asked to prepare 3 cases and 5 short essays for class discussion. To make sure that you have read and thought about the cases in advance, I will ask everyone to upload them on Blackboard by 10 pm the day before we discuss the case in class.

*Class Participation*   10%

I expect that you all realize the importance of attending the classes. It will give you the opportunity to actively participate in class discussions about the application and interpretation of science in business. It will also increase your understanding of the assigned readings, and of the many issues that are not covered in the readings. What matters more is the quantity and, especially, the quality of your contributions to class discussions.
Class Policy

✓ Be prepared: Make sure that you have carefully read the assigned cases and articles.
✓ Attend all classes: I expect everyone to attend all classes. Aside from being an essential part of the learning experience, regular attendance is an obvious prerequisite for contributing to class discussions and receiving a grade for class participation. Please also note that you are responsible for knowing any changes or assignments announced in class.
✓ Arrive on time: Late-comers disturb the class.
✓ Respect assignment deadlines: Late assignments will not be accepted without a prior agreement.
✓ Be honest: Cheating and plagiarism will result in a grade of “F” for the assignment/test for all parties involved.

All students are expected to follow the Stern Code of Conduct:
http://www.stern.nyu.edu/uc/codeofconduct