Lecture #2

Readings: Chapter 2 Getting started in Research

QALMRI

Psychological Science

Lab 1

General skills

- Be able to read, understand, and think critically about psychological research
- Be able to write clearly to convey the purpose, findings, and meaning of a research project

QALMRI

- Question
- Alternative
- Logic
- Methods
- Result
- Inference

This is a method for critically evaluating experiments, as well as conceptualizing your own experiments

Question

- Research begins with a question, and the point of research is to answer the question
- There are usually at least 2 levels, the big question and the specific question
- Big questions usually take many experiments to answer, small questions are usually the focus of the present research

Question

- **Big Question**: Does language influence perception?
- **Specific Question**: If one language has a term for a specific color, and another language does not have that term, will the speakers of the two languages perceive that color differently?

Alternatives

- Good experiments consider at least 2 alternative answers to the specific question and explain why they are plausible
- When reading a paper or proposing an experiment, you should identify the alternatives discussed by authors

Alternatives

- It is plausible that speakers of different languages could perceive colors differently based on evidence that top-down processes can influence perception
- The alternative, that speakers of different languages will not perceive colors differently is plausible because color perception may be impervious to top-down influences, and entirely driven by bottom-up properties of the visual system

Logic

- The logic identifies how the experiment design will allow the experimenter to distinguish between the alternatives
- IF alternative 1 (and not 2) is correct, THEN when a particular variable is manipulated, participants behavior should change in a certain way.
- There should be separate logic statements for each alternative

Logic

- A1: If a person's native language influences their perception of color, then speakers who have a term for a given color should respond differently to that color than speakers whose language contains no term for that color

Logic

- A2: If a person's native language *does not* influence their perception of color, then speakers who have a term for a given color should respond *no* differently to that color than speakers whose language contains no term for that color

Method

- Identifies the procedures that will be used to implement the logical design
- Should state independent variable (what is manipulated) and dependent variable (what is measured)
- Describes subjects, how they were divided into groups, materials, stimuli, etc.

Results

- Identifies the outcome or findings from the experiment
- Did different groups produce different means? What were they? What was the pattern of results? Were the results reliable?
- Graphs, tables, statistics used to show data

Inferences

- What can the results of the experiment tells us about the alternatives?
- Well designed studies should be able to eliminate one of the alternatives

Inferences

- Any potential problems with the experiment that could have explained the results? Any confounds?
- Problems during data collection?
- What is the hypothetical next step, if you were to conduct a follow-up, what would it be? What next specific question remains unanswered?
- What new questions do your results raise?

QALMRI

- **Question:** What was the broad and specific question?
- **Alternatives:** What are possible answers, why are they plausible?
- **Logic:** If hypothesis 1 was true, what was the predicted outcome?
  If hypothesis 2 was true, what was the predicted outcome?
- **Methods:** What was the experimental design?
- **Result:** What was the pattern of data
- **Inference:** What can be concluded about the hypotheses based on the data

QALMRI

- For more tips on the QALMRI, see the chapter QALMRI chapter in the lab manual

New deal on quizzes

Lecture #2

Readings: Chapter 2 Getting started in Research

QALMRI

Psychological Science

Lab 1

Psychological Science

- Understand human and animal behavior.
- Why do we do what we do? How do we do it?

Fields of research

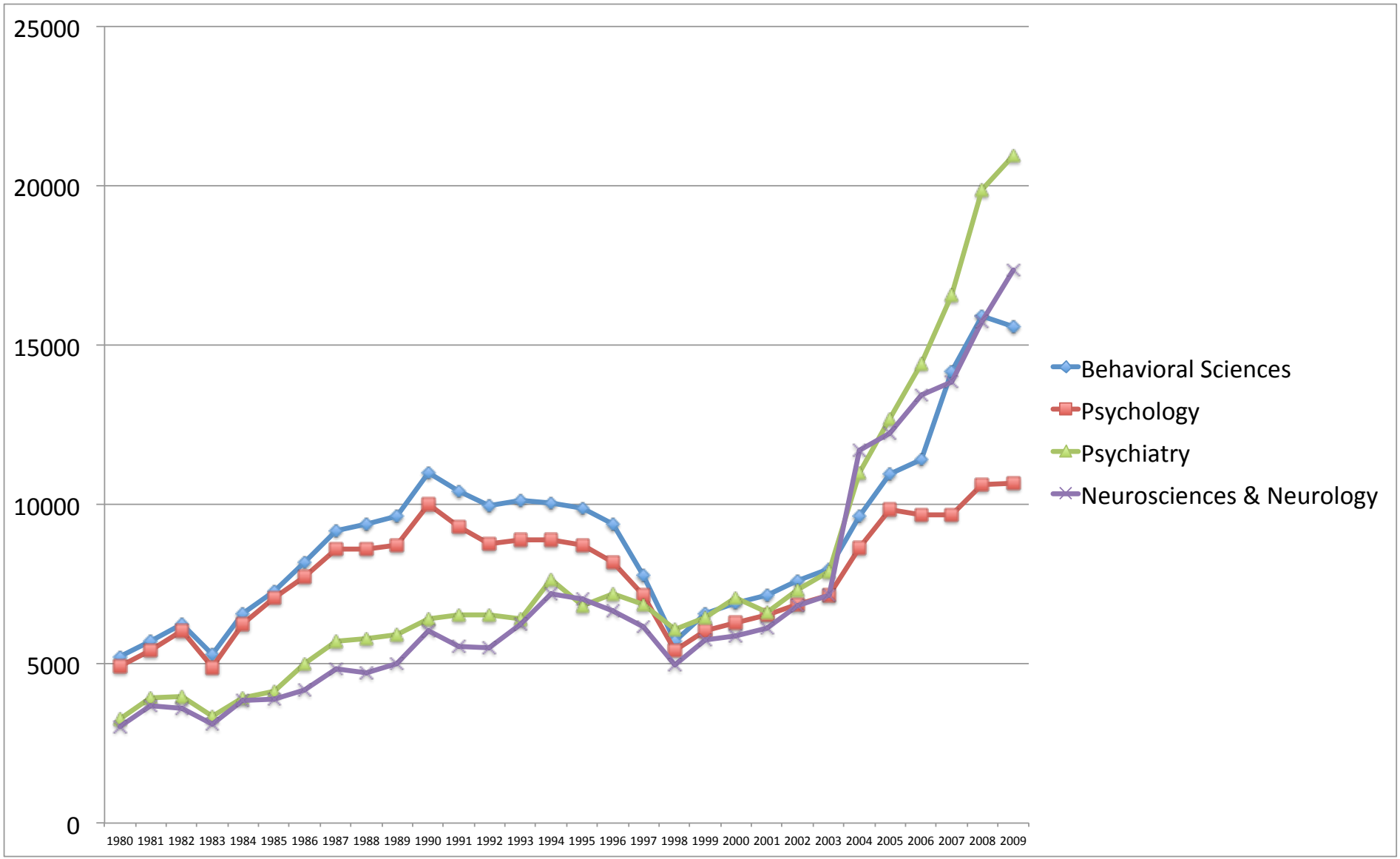
Biopsychology & Behavioral Neuroscience	Hunter College
Clinical	Graduate Center
Experimental psychology (Cognition, Brain, & behavior)	Brooklyn college
Developmental	Graduate Center
Environmental	Graduate Center
Industrial & organizational	Baruch College
Learning processes & behavior analysis	Queen's college
Neuropsychology	Queen's college
Social psychology	Graduate Center

Journals

There are about 287 current Psychology related journals

http://psych.hanover.edu/Krantz/journal.html

Articles per year



Employment stats

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2008	Projected Employment, 2018	Change, 2008-18		Detailed Statistics	
				Number	Percent		
Psychologists	19-3030	170,200	190,000	19,700	12	[PDF]	[XLS]
Clinical, counseling, and school psychologists	19-3031	152,000	168,800	16,800	11	[PDF]	[XLS]
Industrial-organizational psychologists	19-3032	2,300	2,900	600	26	[PDF]	[XLS]
Psychologists, all other	19-3039	15,900	18,300	2,300	14	[PDF]	[XLS]

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

Kinds of research

- Psychologists research different **content** areas
- but, they use similar **methods and processes**
- **This course is about how the methods work**

Kinds of research

- Basic Research
- Applied Research
- Lab Research
- Field research
- Qualitative research
- Quantitative research