

PSYD52F: Fundamental Issues in Cognitive Science—a web-based course  
Fall, 2004

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Text to purchase: S. Cunningham, What is a Mind?

Evaluation: two essay tests (40% each), 5 short papers (4% each)

Sept 9-15. Introductory

Sept 16-29. Theories of mind (pp. 1-53)—first short paper due by Sept 29

Sept 30-Oct 13. Consciousness (pp. 54-95) —second short paper due by Oct 13

Oct 14-20. Midterm exam—exact date to be announced

Oct 21-Nov 3. Emotions (pp. 96-130); Evolution of Mind (pp. 131-158) —third short paper due by Nov 3

Nov 4-17. The Self (pp. 159-188); Cognition and Behavior (pp. 222-258) —fourth short paper due by Nov 17

Nov 18-Dec 1. Minds and Machines (pp. 189-221) —fifth short paper due by Dec 1

Final exam period: second exam

## Miscellaneous Information for PSYD52

This year, PSYD52 is experimenting with an almost totally e-mail-based format. There will be no classroom meetings (with three exceptions—see below). Communications between teacher/TA and students will be via e-mail. The only exceptions to this are an initial meeting in the first week of classes, and live attendance at the administration of the two exams (time and place to be announced). By the way, the two exams are non-cumulative short-essay tests.

The five short papers should each be 2-3 pages long (double-spaced, in 10- or 12-point type, with standard margins). They may be replies to one or more of the discussion questions that appear at the end of each section of the book; they may also be original reflections on or criticisms of the text. What I'm looking for is evidence that you've thought about the readings. You may, if you wish, make use of outside material, such as the suggestions for further reading given in the book.

Each of the short papers will be graded on a 4-point scale: 4 = very good, 3 = okay, 2 = acceptable, 1 = bad job, 0 = worthless. The course outline indicates when these papers are due. Late papers get an automatic zero!

The short papers should be e-mailed to the instructor in the body of the letter—not as an attachment! E-mail to <psyd52@utsc.utoronto.ca >.

All students must e-mail their e-mail addresses in the first week of classes. E-mail to <psyd52@utsc.utoronto.ca>.

Students must check their e-mail at least once a week for class-related information.

Grades obtained on the papers and on the midterm will be e-mailed to the student as soon as possible.

Students are invited to e-mail any questions they might have about the material to the instructor. Questions deemed to be of general interest will be forwarded, along with their replies, to the entire class.

It is strongly advised that you read the instructor's notes on each chapter before and again after you read the chapter. These notes will sometimes call your attention to important points or questions that you might otherwise miss. The notes appear immediately below.

## Introduction: What PSYD52 is About

A few words about the two key phrases in the course title: “cognitive science” and “fundamental issues”.

Cognitive science (CS) is currently the most influential paradigm with which to approach the problems of psychology. It's been so since the 1980s. CS superceded the previous paradigm, which was behavioral psychology (BP). BP and CS have different answers to the most basic question of all about psychology: What is psychology about? According to BP, the subject matter of psychology is *behavior*; according to CS, psychology studies mental processes, or *cognition*.

Why do these enterprises conflict? Why aren't they just two different branches of science? Because behavioral psychologists assert that there *cannot be* a science of mind. This is the doctrine that goes by the name of *behaviorism*. The case for and against behaviorism comes up early in the readings. Cognitive scientists don't say that there can't be a science of behavior; but they maintain that behavior can only be understood as a function of cognition: we do what we do because of what we think. So for CS, the study of cognition is primary.

Now what is meant by “fundamental issues”? It means that this course *won't* deal with the experimental details of research into cognition—these are covered in the other 50-series courses. This course deals with the broad theoretical and philosophical issues that *underlie* the specific research. A few examples:

- (1) What *is* a mind? Is it the same thing as a brain, or is it something more mysterious, perhaps something non-physical?
- (2) How can you tell what's going on in other people's minds? The fact that they *say* they feel pain doesn't prove that they do (this is a motive for behaviorism). In fact couldn't you build a device that says “I'm in pain” when you slap it, although it's constructed entirely of mechanical and electrical parts? For all I know, couldn't other people just be devices of this kind?
- (3) The last question brings up the issue of *artificial intelligence* (AI). Suppose you can program a computer to carry on a conversation which is indistinguishable from the conversation of human beings. Would the computer then also have a mind? If we say that it doesn't, then what is it about human beings that impels us to attribute minds to them? It can't be anything they tell us. So what is it?
- (4) Some people complain that with its exclusive emphasis on the cognitive, CS misrepresents what human beings are like. People aren't just elaborate thinking machines. People have *feelings* too. Where do emotions fit into the cognitive paradigm? What *are* emotions anyway?

Questions like these slide from psychology to philosophy with no clear line of demarcation between the two—which brings us to another major difference between BP and CS: cognitive scientists are much friendlier to philosophy than behavioral psychologists used to be. Science involves both observation and reasoning—gathering data and theorizing about the data. Different scientific traditions have emphasized one or the other of these two processes. Those who believe that observation and experimentation are where the action is in scientific research are loosely referred to as *empiricists*; those who think that reasoning, argumentation, and conceptual analysis are the most important scientific activities are called *rationalists*. Now philosophy is the maximally rationalistic activity: it's all argumentation and analysis, and not at all experimental. Behavioral psychologists tended to be extreme empiricists. They were often explicitly hostile to a philosophical approach to the problems of mind, derisively calling it “armchair psychology”. CS is much more rationalistically inclined. Many cognitive scientists regard philosophers as partners in the enterprise of coming to understand the mind. The best cognitive science journals publish articles by both psychologists and philosophers side by side. Our textbook clearly belongs to this lineage. It calls itself a book in the philosophy of mind, but the names in the index are just about evenly divided between philosophers and psychologists. The bottom line is that PSYD52 is much more philosophical than most other psychology courses. This is not to every student's taste. Please consider this when deciding whether to take this course.