PHIL 221: History and Philosophy of Science

Topic for Winter Semester, 2019: History and Philosophy of Cognitive Science

Course description

Cognitive science developed in the 1950s out of confluence of ideas in various disciplines. Its central theoretical commitment, however, is that the mind is a kind of machine – a computational device – and thought is a form of symbol manipulation. Elaborations of this idea led to the "computer model of the mind" – the conceptual framework that remains mainstream for all of the sciences of the mind. The purposes of this course are (*a*) to explore the seminal intellectual events in the establishment of cognitive science; and (*b*) to outline the computer model of the mind.

Objectives

On successful completion of this unit, students will *(a)* understand the contemporary conceptual framework of the sciences of the mind; *(b)* have a grasp of the innovations that led to this framework; and *(c)* have developed skills in careful reading and expository writing.

Course commitments

This course is made up of three one-hour lectures each week.

Times and venues

Lectures: MWF 10:35 – 11:25
Location: Stewart Bio S3-3

Contact details

LECTURER: IAN GOLD

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Leacock 908
Telephone: x-8939
Office hours: by appointment

Assessment

The work for the course includes (*a*) an electronic journal (30% of the final grade); (*b*) a short paper (35% of the final grade); and (*c*) three in-class tests (35% of the final grade).

Readings (all available on mycourses)

Bruner J, Goodnow J, Austin G. 1956. *Study of Thinking*. New York: Wiley.

Chomsky N. 1957. *Syntactic Structures*. Berlin: de Gruyter.

Chomsky N. 1959. Review of B. F. Skinner's *Verbal Behavior*. *Language* 35:26-58.

Descartes R. 1641. *Meditations* (various editions).

Dreyfus H. 1972. *What Computers Can't Do*. New York: Harper and Row.

Fodor J. 1975. *The Language of Thought*. New York: Thomas Y. Crowell.

Hebb D. 1949. *The Organization of Behavior*. New York: Wiley.

Marr D. 1982. *Vision*. San Francisco: Freeman.

Miller G. 1956. The magical number seven, plus or minus two: some limits on our capacity for processing information. *Psychological Review* 63:81-97.

Putnam H. 1960. Minds and machines. In *Dimensions of Mind*, Hook S (ed). New York: New York University Press.

Searle J. 1980. Minds, brains, and programs. *Behavioral and Brain Sciences* 3:417-24.

Skinner B. 1957. *Verbal Behavior*. New York: Appleton-Century-Crofts.

Turing A. 1950. Computing machinery and intelligence. *Mind* 59:433-460.

Watson J. 1913. Psychology as the behaviorist views it. *Psychological Review* 20:158-177.

Wiener N. 1948. *Cybernetics*. Cambridge: MIT Press.

Handicaps

If you have a visible or invisible handicap (e.g. mental disorder), I encourage you to let me know about it so that I can accommodate and assist you.

The fine print

McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students /srr/honest/students/ for more information).

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site www.mcgill.ca/students /srr/honest/students/).

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.