SIMON FRASER UNIVERSITY

MEMORANDUM

To: Senate

From: Senate Committee on
Academic Planning

Subject: Change - Joint Major Program
in Psychology, Linguistics
and Philosophy to Cognitive
Science

Date: November 15, 1985

At its meeting of October 9, 1985, the Senate Committee on Academic
Planning considered the attached revisions proposed to the joint-major
program in Psychology, Linguistics and Philosophy. The revisions have
received prior approval of the Faculty of Arts Curriculum Committee
followed by the Senate Committee on Undergraduate Studies at its
meeting of July 23, 1985.

The Senate Committee on Academic Planning approved all changes outlined
in the Proposal except the one relating to the GPA requirement for entry
and continuance. A motion to the effect "that a 2.5 grade point average be
required for entry and continuation in a Majors Program in Cognitive
Science" was defeated on the basis that, except for programs where
enrolment limitations are in effect, all majors programs at SFU require a
grade point average of 2.0 for entry and continuance.

Therefore, action undertaken by the Senate Committee on Academic
Planning gives rise to the following motion:

"THAT SENATE APPROVE AND RECOMMEND APPROVAL TO THE
BOARD OF GOVERNORS, THE FOLLOWING REVISIONS TO THE
PROGRAM IN PSYCHOLOGY, LINGUISTICS AND PHILOSOPHY:

(A)   THAT THE (JOINT-MAJORS) PROGRAM IN
PSYCHOLOGY, LINGUISTICS AND PHILOSOPHY BE
RENAMED AS (MAJORS) "PROGRAM IN COGNITIVE
SCIENCE",

(B)   THAT THE CURRICULUM FOR THE MAJORS PROGRAM
        IN COGNITIVE SCIENCE BE AS SET OUT IN SENATE
        S.85-58 WITH A MINIMUM GRADE POINT AVERAGE OF
        2.0 REQUIRED FOR ENTRY AND CONTINUANCE,

(C)   THAT AN HONORS PROGRAM IN COGNITIVE SCIENCE
        BE ADDED WITH CURRICULUM AS SET OUT IN SENATE
        S.85-58 AND WITH A MINIMUM GRADE POINT AVERAGE
        OF 3.0 REQUIRED FOR ENTRY AND CONTINUANCE.

WJW/gg

SIMON FRASER UNIVERSITY

MEMORANDUM

To: Senate Committee on
Academic Planning

From: W. R. Heath, Secretary
Senate Committee on
Undergraduate Studies

Subject: Change – Joint Major Program
in Psychology, Linguistics and
Philosophy to Cognitive Science

Date: September 4, 1985

At its meeting of July 23, 1985 the Senate Committee on Undergraduate Studies
approved the following motion:

That SCUS approve and recommend approval to Senate, as set forth in
SCUS 85-20, the proposed revisions to the program and change of title
to 'Program in Cognitive Science'.
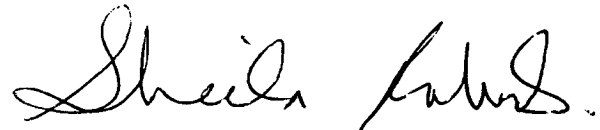
To........Ron Heath................................

........Registrar.................................

Subject....Cognitive Science.....................

From...Sheila Roberts...............................
Administrative Assistant
to the Dean of Arts.........................

Date...July 15, 1985..............................

The Faculty of Arts Curriculum Committee at its meeting of Thursday, July 11, 1985 approved the attached revision to the Program in Philosophy, Linguistics and Psychology, and the change of name to Cognitive Science. Would you please place this proposal on the agenda of the next meeting of SCUS.

Thank you.

S. Roberts

SR/mc
CC: S. Davis
Encl.

CURRICULUM REVISIONS

PLP Program

I.   Change of the name of the program

FROM: Joint-Major Program in Psychology and Linguistics
        and Philosophy

TO: Program in Cognitive Science

RATIONALE:
            The focus of the PLP program has been the
examination of a common set of questions about language which in
the last 15 years has arisen in a number of disciplines. The
purpose of the program was to draw together courses from a
number of different departments in which these questions were
being asked. In the initial program we included only
psychology, philosophy and linguistics. An important area in
which the same sorts of questions are being asked is computing
science, especially in the subfield of artificial intelligence.
With the addition of a computing science component, the new
program becomes a cognitive science program, a recognized
discipline in a number of universities.

II. Addition of a minimum Grade Point Average

ADD: Students are required to have a 2.5 Grade Point
        Average for entry and continuation in the
        Cognitive Science Program.

RATIONALE:
            The program is quite difficult and only
students who have the ability to complete the upper division
requirements should be allowed to enter the program.

III. Additions to lower division requirements for a major in
     Cognitive Science.

FROM: Lower Division Requirements (34 hours)
            PSYC 101-3   Introductory Psychology
                 180-3   Brain and Behavior
                 201-3   Research Methods in Psychology
                 210-3   Data Analysis in Psychology

            LING 130-3   Practical Phonetics
                 220-3   Introduction to General Linguistics
                 221-3   Introduction to Descriptive
                         Techniques I (Phonology and
                         Morphology)
                 222-3   Introduction to Descriptive

Techniques II (Syntax)

          PHIL 100-3   Human Knowledge, Its Nature and
                       Scope
               203-3   Metaphysics
               210-4   Elementary Formal Logic I

     TO: Lower Division Requirements (51 hours)

          PSYC 101-3   Introductory Psychology
               180-3   Brain and Behavior
               201-3   Research Methods in Psychology
               210-3   Data Analysis in Psychology

          LING 130-3   Practical Phonetics
               220-3   Introduction to General
                       Linguistics
               221-3   Introduction to Descriptive
                       Techniques I (Phonology and
                       Morphology)
               222-3   Introduction to Descriptive
                       Techniques II (Syntax)

          PHIL 100-3   Human Knowledge; Its Nature and
                       Scope
               203-3   Metaphysics
               210-4   Elementary Formal Logic I

          CMPT 101-4   Introduction to a High Level
                       Programming Language A
               105-3   Fundamental Concepts of
                       Computing
               201-4   Data and Program Organization
               205-3   Introduction to Formal Topics in
                       Computing Science
          MATH 151-3   Calculus I

     RATIONALE:
               The lower division computing science courses are
     prerequisites for the upper division computing science courses.

IV. Additions to upper division requirements for a major in
    Cognitive Science.

     FROM: Upper Division Requirements. At least 45 upper
             division hours structured as follows:

             Required courses:
             PSYC 320-3   Cognitive Processes
                  365-3   Psycholinguistics
                  425-5   Language and Thinking

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LING 403-3  Generative Phonology
     404-3  Morphology
     405-3  Transformational Syntax
     406-3  Introduction to Semantics

PHIL 340-3  Philosophical Methods
     344-3  Philosophy of Language I
     444-4  Philosophy of Language II
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Elective Courses. At least one from each of the following Disciplines for a total of 12 hours.

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PSYC 303-3  Perception
     335-3  Sensation
     351-3  Child Psychology
     360-3  Social Psychology
     402-5  Seminar in the History of
            Psychology

LING 300-3  Languages of the World: An Intro-
            duction to Topology
     401-3  Advanced Phonetics
     402-3  General Phonology
     407-3  Historical Linguistics and Dia-
            lectology
     422-3  Linguistic Theory

PHIL 341-3  Philosophy of Science
     343-3  Philosophy of Mind
     360-4  Seminar I
     467-4  Seminar II
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TO: Upper Division Requirements. A student chooses three out of the four disciplines in the program. The student is required to take all the upper division courses below in the three disciplines chosen, one course from the group of elective courses in each of the selected disciplines and two of the starred courses in the remaining discipline. (48-51 hours)

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Required courses:
PSYC*320-3  Cognitive Processes
            and either
    *365-3  Psycholinguistics
            or
    *425-5  Language and Thinking

LING 403-3  Generative Phonology
    *405-3  Transformational Syntax
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        406-3   Introduction to Semantics
       *422-3   Linguistic Theory

PHIL 343-3   Philosophy of Mind
     *344-3   Philosophy of Language I
     *444-4   Philosophy of Language II

CMPT*380-3   Computational Linguistics
      384-3   Symbolic Computing
     *410-3   Artificial Intelligence Survey
      411-3   Artificial Intelligence Topics

Elective courses:
PSYC 303-3   Perception
      335-3   Sensation
      351-3   Child Psychology
      402-5   Seminar in the History of
              Psychology

LING 300-3   Languages of the World: An
              Introduction to Topology
      401-3   Advanced Phonetics
      402-3   General Phonology
      404-3   Morphology
      407-3   Historical Linguistics and
              Dialectology

PHIL 301-3   Epistemology
      340-3   Philosophical Methods
      341-3   Philosophy of Science
      453-4   Background to Analytical
              Philosophy

CMPT 351-3   Introduction to Computer Graphics
              (Math 232 is a prerequisite)
      383-3   Comparative Programming Languages
      418-3   Special topics in Computing Science
              I (When content is relevant to
              Cognitive Science)
MACM 306-3   Introduction to Automata Theory
      402-3   Automata and Formal Languages
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RATIONALE:

     a) Philosophy 343, Philosophy of Mind, is substituted for Philosophy 340, Philosophical Methods, in the Upper Division Requirements under Philosophy, and Philosophical Methods is inserted in the list of electives. The reason for the change is that PHIL 343 is considered to have greater relevance for a cognitive science major.

     Phil 301, Epistemology, and Phil 453, Background to Analytical Philosophy are substituted for Phil 360, Seminar I and Phil 467, Seminar II in the list of Philosophy

electives. Phil 360 and Phil 467 are not offered frequently
enough with a content which makes them suitable for the Cognitive
Science Program.

b) Psyc 360, Social Psychology, is dropped from
the list of electives, since it is least relevant to a Cognitive
Science Program.

c) Linguistics 422, Linguistic Theory, is
substituted for Linguistics 404, Morphology, in the Upper
Division Requirements under Linguistics, and Morphology is
inserted in the list of electives. The reason for the change is
that LING 422 is considered to have greater relevance for a
cognitive science major.

d) The addition of the computing science courses
includes computing science in the Cognitive Science Major.

V.   Addition of an Honors Degree in Cognitive Science with a
      Concentration.

   FROM: Program Requirements for a Joint-Major (PLP) with
          an Additional Concentration in Psychology or
          Linguistics or Philosophy.

          In addition to taking a Joint-Major, a student
          may choose to concentrate in one of the three
          areas. To do so, a student must take upper
          division courses (numbered 300 and above)
          totalling at least 30 credit hours in one of the
          three departments. The minimum of 30 credit
          hours must, however, be drawn from the list of
          required elective and concentration courses as
          specified below.

   TO: Program Requirements for a Honors Degree in
          Cognitive Science with a Concentration in
          Psychology, Linguistics, Philosophy or
          Computing Science.

          An honors program is offered for students who
          wish to concentrate in one of the areas in
          cognitive science and is strongly recommended
          for students who plan to do post-graduate work.

          Students who wish to do an Honors Degree in
          Cognitive Science choose one of the four
          disciplines in the program in which they wish
          to concentrate. The requirements for a
          concentration in each of the disciplines are
          listed below.

A Grade Point Average of 3.0 in all courses in the Cognitive Science program is required for entrance and continuation in the honors program. Students who are interested in enrolling in the Honors program should consult the Coordinator of the Cognitive Science Program.

RATIONALE:

A concentration is designed for students who wish to continue their studies at the post graduate level in one of the disciplines or in Cognitive Science. The requirements for a concentration are equivalent to what the University and the Faculty of Arts requires for an Honors Degree. Hence, we decided to convert our concentration to an Honors Degree.

VI. Lower Division Requirements for an Honors Degree in Cognitive Science with a Concentration in Philosophy, Psychology, Linguistics or Computing Science.

FROM: These are identical to the lower division requirements set out under the Joint-Major (PLP). In addition, students concentrating in the area of Psychology must complete the two lower division courses, PSYC 207-3, History of Psychology and PSYC 210-3, Data Analysis in Psychology.

TO: These are identical to the lower division requirements set out under the major in Cognitive Science. In addition, students concentrating in the area of Psychology must complete PSYC 207-3, History of Psychology. Furthermore, students concentrating in Computer Science must complete CMPT 290-3, Introduction to Digital Systems and MATH 232-3, Elementary Linear Algebra.

RATIONALE:

CMPT 290 and MATH 232 are lower division requirements for upper division courses in the computing science concentration.

VII. Upper Division Requirements for an Honors Degree in Cognitive Science with a Concentration in Philosophy, Psychology, Linguistics, or Computing Science.

FROM: Psychology Concentration

Students interested in the Joint-Major (PLP) with a concentration in Psychology must fulfil the following requirements:

1. Completion of the upper division requirements as specified for the Joint-Major (PLP).
2. Completion of all elective courses specified for the Joint Major (PLP).
3. Completion of one other upper division Psychology course (suggested: Psyc 302-3 -- Learning).

Total credits in upper division Psychology courses: 31 hours. This is equivalent to a Major in Psychology.

Linguistics Concentration

Students interested in the Joint Major (PLP) with a concentration in Linguistics must fulfil the following requirements:

1. Completion of the upper division requirements as specified for the Joint-Major (PLP).
2. Completion of all elective courses for the Joint-Major (PLP).
3. Completion of the following courses:
   LING 408-3 Field Linguistics
        410-3 Second Language Teaching: Theory
Total credits in upper division Linquistics courses: 30 hours. This is equivalent to a Linquistics Major.

Philosophy Concentration

Students interested in the Joint-Major (PLP) with a concentration in Philosophy must fulfill the following requirements:

1. Completion of the upper division requirements specified for the Joint-Major (PLP).
2. Completion of all elective courses specified for the Joint-Major (PLP).
3. Completion of one other upper division course selected from the following:
   PHIL 314-3 Topics in Logic I
        354-3 Descartes and Rationalism
        355-3 Hume and Empiricism
   Total credits in upper division Philosophy courses: 30-32 hours. This is not equivalent to a Philosophy Major.

TO: Psychology Concentration

Students interested in an Honors Degree in the Cognitive Science Program with a concentration in Psychology must fulfill the following requirements:

1. Completion of the upper division requirements as specified for the Cognitive Science Program with Psychology chosen as one of the disciplines.
2. Completion of all Psychology elective courses specified for the Cognitive Science Program.
3. Completion of the following courses:
   PSYC 301-3   Intermediate Research Methods and Data Analysis
     490-5   Honors Project
     499-5   Honors Project

Students intending to enroll in PSYC 490 and 499 must first consult the members of the Cognitive Science Steering Committe from Psychology.
Total credits in upper division Psychology courses: 38 hours. This is equivalent to an Honors Degree in Psychology.

Linguistics Concentration

Students interested in an Honors Degree in the Cognitive Science Program with a concentration in Linguistics must fulfill the following requirements:

1. Completion of the upper division require-ments as specified for the Cognitive Science Program with Linguistics chosen as one of the disciplines.
2. Completion of all linguistics elective courses specified for the Cognitive Science Program
3. Completion of the following courses:
   LING 408-3   Field Linguistics
     419-3   History of Linguistics
     490-3   Honors Essay

   Students intending to enroll in LING 490 must consult the members of the Cognitive Science Steering Committee from Linguistics
Total credits in upper division Linguistics courses: 36 hours. A concentration in linguistics is equivalent to a Major in Linguistics, but is not equivalent to an Honors Degree in Linguistics.

Philosophy Concentration

Students interested in an Honors Degree in the Cognitive Science Program with a concentration in Philosophy must fulfill the following requirements:

1. Completion of the upper division requirements specified for the Cognitive Science Program with Philosophy chosen as one of the disciplines.
2. Completion of all Philosophy elective courses specified for the Cognitive Science Program.
3. Completion of one other upper division course selected from the following:
    PHIL 310-3   Modal Logic & Its Applications
         354-3   Descartes and Rationalism
         355-3   Hume and Empiricism
4. Completion of Philosophy 477-5 Honors Tutorial I, and Philosophy 478-5 Honors Tutorial II. Students intending to enroll in Philosophy 477 and 478 must first consult the members of the Cognitive Science Steering Committee from Philosophy.

Total credits in upper division Philosophy courses: 36 hours. This is not equivalent to a major in Philosophy or an Honors Degree in Philosophy

Computing Science Concentration

Students interested in an Honors Degree in the Cognitive Science Program with a concentration in Computing Science must fulfill the following requirements:

1. Completion of the upper division requirements specified for the Major in Cognitive Science with Computing Science chosen as one of the disciplines.
2. Completion of the following upper division courses:
    CMPT 305-3   Computer Simulation and Modeling
         351-3   Introduction to Computer Graphics
         354-3   File and Database Structures
         383-3   Comparative Programming Languages
         390-3   Digital Circuits and Systems
    MACM 306-3   Introduction to Automata Theory
3. Completion of any two upper division Computing Science courses drawn from Table 1 which is found under the Upper Division Requirements for Computing Science.

Total credits in upper division Computing Science
courses: 36-38 hours. This is not equivalent to a
major or an Honors Degree in Computing Science.

RATIONALE:
These changes add a concentration in Computing
Science to the Cognitive Science Program.