#### TRANSMITTAL

**DATE:** April 23, 2004

**TO:** Rebecca Scott

Senate Council

**FROM:** Lissa Holland

**Graduate Council** 

The Graduate Council met on April 22, 2004 and approved the following:

**GRADUATE CERTIFICATE** 

Cognitive Science

#### **Cognitive Science – Graduate Certificate**

We propose the creation of a Graduate Certificate in Cognitive Science, designed to be like the Graduate Certificate available in other interdisciplinary programs (e.g. Women's Studies, Social Theory). It would be housed in the College of Arts and Sciences, and it would be listed with the other interdisciplinary academic units there. It is expected that it will work closely with the Linguistics Program, with those faculty and research groups in Biology and Psychology whose work focuses on cognition, and with those faculty and research groups in Computer Science whose work focuses on artificial intelligence. In the course of creating such a Certificate we will be creating institutional conditions that will sustain the cross-fertilization of ideas of faculty from the participating disciplines.

The proposed Certificate has various features that should make it very attractive to the University community as a whole, the Graduate School, and also the College of Arts and Sciences:

- It is a shining example of true interdisciplinarity: not only does it join together various disciplines, but also, and more importantly, it joins together disciplines from each of the three main areas of the College of Arts and Sciences (The Physical Sciences, Social Sciences, and Humanities), as well as the different Colleges (Arts and Sciences, Medicine, and Engineering).
- It offers graduate students the opportunity to explore in an integrated and cohesive way cutting-edge research in the study of the mind, and to receive official recognition (in the form of the Certificate) for their studies.
- It offers the potential for a variety of connections (both academic and potentially financial) with local, national, and international high-tech industries.

That it achieves these virtues at such a small cost – both to the Administration and the faculty (in terms of the minimal extra burdens placed on anyone; see below) – is a further strength of this proposal.

#### Proposal for a Graduate Certificate in COGNITIVE SCIENCE at UK

Prepared by Sanford Goldberg UK Department of Philosophy July 2003 (final version Dec. 4, 2003)

#### **OVERVIEW**

- 1. Context (History; Contemporary Academic Context; Context at UK)
- 2. The Proposal
- 3. Staffing
- 4. Participating Faculty
- 5. Director's Duties
- 6. Cost Estimate
- 7. Benefits to the University Community

#### I. CONTEXT

#### A. History

Cognitive Science is an interdisciplinary field of study focusing on the mind conceived as an information-processing system. Arising from Noam Chomsky's seminal criticisms of Behaviorism in the 1950s, the interdisciplinary field of Cognitive Science has come to include such disparate disciplines as Linguistics, Computer Science (artificial intelligence, knowledge representation, theory of computation and computational complexity, algorithms), Psychology (cognitive psychology), Biology (evolutionary theory, neurobiology), Anatomy, Neuroscience, the Behavioral Sciences, and Philosophy (Language, Mind, and Logic). It is a conservative estimate that by the early 1980s Cognitive Science was widely recognized as offering an important new theoretical perspective to the age-old study of the human and animal mind.

#### **B.** Contemporary Academic Context

The vast majority of large private and public research universities have some sort of Cognitive Science component in their academic curriculum (see Appendix C, Benchmarks). These can be placed into three categories.

- (1) The most substantive offer programs that grant PhDs and/or other graduate degrees, in addition to undergraduate degrees (BS or BA). In this category the Tufts web site (http://ase.tufts.edu/cogstud/othccspg.htm), which does not claim to be exhaustive, lists 33 such programs, including but not limited to MIT, Tufts, Rutgers, Johns Hopkins, Brown, Illinois, Indiana, Pittsburgh/Carnegie Mellon, Maryland, Georgia Tech, Ohio State, Arizona, U.C. San Diego.
- (2) A second category includes those granting only undergraduate degrees (BA or BS) in Cognitive Science. The 1993 <u>Undergraduate Education in Cognitive Science: Current Status and Future Prospects</u> (a report prepared for the NSF, accessible from the web site <a href="http://www-psych.stanford.edu/cogsci/academic.html">http://www-psych.stanford.edu/cogsci/academic.html</a>) lists 83 US universities (and over 100 non-US universities) as having an undergraduate major in cognitive science, among which are many public universities (including Georgia, Florida, Iowa, Iowa State, Kansas, Michigan, Minnesota, Nebraska, North Dakota, Oregon, and Purdue) in addition to private ones, including Columbia, Northeastern, Northwestern, Penn, Vanderbilt, U. Washington at St. Louis, and Yale.

(3) A third category includes those that allow undergraduates to minor in Cognitive Science. Although I have not been able to locate any official list, such academic components can be found at Mississippi State and Florida State, among other places.

#### C. Context at UK

Despite the prevalence of Cognitive Science at Research-I universities, there is currently no Cognitive Science curriculum in the Graduate School. There are several (formal and informal) groups that meet, including a group on Logic and Artificial Intelligence (run by the Computer Science Department); a lunch series run on the general topic of cognition, run by the Psychology department; and regular meetings of various labs in Neurology and Anatomy on topics relating to information-processing (including Dr. Jane Joseph's bi-weekly lab meetings, which have focused quite a bit on cognition). In addition, there have been occasional workshops in related areas: the Center for Ecology, Evolution, and Behavior (located in the Biology Department) has sponsored workshops in Evolutionary Psychology and in the Evolution of Learning. And, of course, there is the UK Linguistics Program, currently a BA-granting program focusing on issues of language. (Relevant to this, in the upcoming semester there is going to be a seminar on Computational Linguistics, run by members of the Computer Science department, whose participants include several members from the Linguistics Program.) But there is to date no enduring institutional or curricular framework at UK devoted to Cognitive Science.

Given the prevalence of Cognitive Science throughout the Carnegie-I University scene, the lack of a Cognitive Science graduate curriculum is a glaring hole in the graduate academic scene here. What is more, there is a sense of urgency in having such a Component approved. To begin, in September 2004 there will be a week-long conference, organized by Kris Kimmel at the Lexington-based Kentucky Center for Science and Technology, on the theme of "The Mind's Eye: Exploring Consciousness," at which various Cognitive Scientists of international reputation will be giving talks. That conference, part of KCST's very popular bi-annual IdeaFestival, regularly attracts hundreds of participants from Lexington; it offers a wonderful opportunity for massive free publicity for Cognitive Science at UK. But this is not the only sense of urgency we feel. We also believe that, given the obvious enthusiasm of many UK faculty (as attested to by those who have agreed to participate in the proposed Cognitive Science certificate), given the dedication of a substantial minority of the interested faculty who have committed themselves to seeing Cognitive Science through the growth of the early years (as attested to in the supporting letters), and given the materials that are already at hand (i.e., for no further cost to the administration), now is the time to make this graduate certificate happen.

#### II. PROPOSAL

We propose the creation of a Graduate Certificate in Cognitive Science, designed to be like the Graduate Certificate available in other interdisciplinary programs (e.g. Women's Studies, Social Theory). It would be housed in the College of Arts and Sciences, and it would be listed with the other interdisciplinary academic units there. It is expected that it will work closely with the Linguistics Program, with those faculty and research groups in Biology and Psychology whose work focuses on cognition, and with those faculty and research groups in Computer Science whose work focuses on artificial intelligence. In the course of creating such a Certificate we will be creating institutional conditions that will sustain the cross-fertilization of ideas of faculty from the participating disciplines.

The proposed Certificate has various features that should make it very attractive to the University community as a whole, the Graduate School, and also the College of Arts and Sciences:

- It is a shining example of true interdisciplinarity: not only does it join together various disciplines, but also, and more importantly, it joins together disciplines from each of the three main areas of the College of Arts and Sciences (The Physical Sciences, Social Sciences, and Humanities), as well as the different Colleges (Arts and Sciences, Medicine, and Engineering).
- It offers graduate students the opportunity to explore in an integrated and cohesive way cutting-edge research in the study of the mind, and to receive official recognition (in the form of the Certificate) for their studies.
- It offers the potential for a variety of connections (both academic and potentially financial) with local, national, and international high-tech industries.

That it achieves these virtues at such a small cost – both to the Administration and the faculty (in terms of the minimal extra burdens placed on anyone; see below) – is a further strength of this proposal.

#### III. STAFFING

With very few exceptions, every course that will be part of the proposed Cognitive Science Graduate Certificate is already taught on a regular basis by the participating faculty. (Appendix A contains a list of the courses already on the books that will count for Cognitive Science credit, and it contains a description of the structure of both the undergraduate minor, requiring 18 credit hours, and the graduate certificate, requiring 12 credit hours). The one exception is a 500-level course entitled "Cognitive Science in Theory and Practice." (We plan to list the course as an 'AS 500' course until such time as we get a designation such as 'CGS' – at which point it will be changed to 'CGS 500'.)

In order to reduce the burden on any single person or department, we are conceiving this as a seminar-type course, as follows. The course will be taught once a year, and will be administered by one member of the steering committee. The administrator will teach the course as a regular course (counting towards her/his course load), and will be supported by the Director of the Cognitive Science academic unit (see below under Director's Responsibilities) and by the Dean of Arts and Sciences. Administration of the course will be designed so as (a) to distribute among various departments the need to put forth one of its members to assume this duty, (b) to minimize the number of times any single person has to assume this duty, and (c) to minimize the burden on the administrator over the course of the semester. To this end, the administration of the course will alternate between the various willing members of the steering committee, with the aim that the burden on any single person will not fall more than once every five to ten years. The administrator will be responsible for organizing the course to allow each of the other members of the steering committee (and to other members of the participating faculty, as decided by programmatic need and coordinator desire) to serve as a "guest lecturer" for one or two class sessions. The course might be organized into such units as "The Biology of Information-Processing", "Cognition in Human Psychology", "Computation and Artificial Intelligence", "Language Cognition", and "Philosophical issues in the study of Cognition", where the Biology faculty will participate in the weeks devoted to the first module, the Psychology faculty will participate in the weeks devoted to the second module, and so on. After each module is over, the administrator of the course will be responsible for making connections with previous modules or modules to come; he or she is expected to develop themes, accessible to the undergraduates in

the course (as well as to the graduate students), so as to emphasize both the interdisciplinarity but also the cohesiveness of Cognitive Science. (There are various Cognitive Science text books that might be useful in this regard.) The administrator will also have all grading responsibilities.

This course will be explicitly designed in such a way that it could be taken early in the student's career, or towards the end. This is important if only because it will be difficult to predict when students come to such a course (at the outset of their interest in Cognitive Science, or towards the end of the formal studies at UK). Graduate students aiming to receive a certificate will be encouraged to take the course early on. (The 500-level designation is helpful in this regard.)

One potential challenge that we face concerns the prerequisite structure of various courses listed as counting towards a Graduate Certificate in Cognitive Science. (The courses in question are typically in the sciences and in computer science.) Courses with substantive prerequisites will probably not be among those taken by non-majors or graduate students from other disciplines. Thus a philosophy graduate student with little or no course experience in biology would not satisfy the prerequisites for any biology course, and so at least one set of courses would not be available to her if she seeks to satisfy the requirements for a Certificate in Cognitive Science.

This prerequisite problem must be acknowledged. At the same time, it need not be as worrisome as might first appear. There are a variety of reasons for this:

- The Certificate in Cognitive Science has been devised so that, among the courses that count towards the certificate, there are sufficiently many courses that have few or no prerequisites. The result is that for any student who is interested in pursuing a Certificate in Cognitive Science, there will always be a variety of courses that she can take to pursue that minor. What is more, there will always be set of courses forming a coherent scheme for doing so. (See Appendix B for a sketch of how various students from the different participating departments might satisfy the requirements.)
- Many, perhaps most, of the graduate students with an interest in Cognitive Science will have at least an undergraduate training in two of biology, psychology, and computer science these being among the core disciplines that make up any undergraduate education in cognitive science thereby opening up the possibility of taking graduate courses from at least one other department beyond her home department.
- The participating members of our steering committee, most of whom come from departments whose students are likely to make up the majority of those interested in Cognitive Science, will be active in advising any interested students from their own discipline to look ahead to possible courses to satisfy the Cognitive Science requirements. This will enable the students to determine how best to pursue the Certificate in Cognitive Science, and to determine as well whether her interests are such that she should consider taking courses to satisfy some of the prerequisites for courses from another department.
- Any student who takes the "Introduction to Cognitive Science" course early on will be advised from the start to give thought to how she wants to pursue the Cognitive Science certificate.

These mitigating factors suggests that the extent of the prerequisite problem may not be as great as one might fear. In short, while the prerequisite problem is real, there is reason to think that it will not seriously hamper the ability to administer a successful Graduate Certificate in Cognitive Science.

#### IV. PARTICIPATING FACULTY

Each of the faculty listed below has expressed a commitment to participating in the Cognitive Science Academic unit.

#### **Steering Committee:**

Bosch, Anna Linguistics/English

Goldberg, Sanford Philosophy
Golding, Jonathan Psychology

Goldsmith, Judy Computer Science

Gottlob, Larry Psychology

Jiang, Yang Behavioral Science

Joseph, Jane Anatomy and Neurobiology

Lorch, Robert Psychology Schmitt, Fred Neurology

Stump, Greg Linguistics/English

Westneat, David Biology
Yan, Hong Biology
Zentall, Thomas Psychology

Other Affiliated Faculty:

Berger, Joseph

Bhatt, Ramesh

Bruzina, Ronald

Cerullo, Michael

Cooper, Robin

Crowley, Phillip

Peurology

Philosophy

Psychiatry

Biology

Biology

Finkel, Raphael Computer Science

Filmore, Mark

Gold, Brian

Ho, Dien

Holcomb, Harmon

Kramer, Phillip

Psychology

Psychology

Lorch, Betty Psychology
Marek, Victor Computer Science

Mazur, Joan Education Policy

Monton, Bradley Philosophy
Perry, Peter Mathematics

Rouhier-Willoughby, Jeanmarie Linguistics/Russian

Sargent, Craig Biology
Smith, Charles Neurology

Trusczynki, Mirek Computer Science

Zunshine, Lisa English

#### V. DIRECTOR'S DUTIES

The duties of the director will be as follows. First, the Director will be responsible for arranging for and running periodic (once-a-semester) meetings with the members of the Cognitive Science steering committee, for the purpose of discussing and deciding matters pertaining to the administration of the academic unit. Second, the Director will oversee the successful running of the CGS 500 course ("Cognitive Science in Theory and Practice"). This involves determining a system to assign the course an administrator; designing the syllabus for the course, either by herself or in conjunction with the course's assigned faculty administrator (as determined by the latter's wants and needs); and support the course's assigned faculty administrator in appropriate ways. Third, the Director will serve as the Advisor for the Cognitive Science Graduate Certificate, both to those graduate students who are already pursuing the Certificate, and to those who are interested in participating and who would like some additional information. Fourth, the Director will serve as the public face for the Graduate Certificate. In this capacity she will serve as the information distribution center for the Cognitive Science presence in the UK curriculum, answering any questions regarding the Graduate Certificate from students, faculty, or outside sources; distributing any relevant information to all of the Graduate Certificate's participating faculty and students; and publicizing all of the Cognitive Science activities to the university community. Fifth, the Director will coordinate the Speaker's Series in Cognitive Science: soliciting opinions from the participating faculty and students regarding whom to invite; coordinating the Cognitive Science Speaker Series with the Speaker Series in the respective participating departments; and arranging the travel and accommodations for speakers supported by Cognitive Science. And sixth, the Director will be responsible for interacting with the UK administration on an as-needed basis.

#### VI. COST ESTIMATE

The Graduate Certificate in Cognitive Science at UK is envisaged as a low-cost academic enterprise. As noted, except for the introductory course (CGS 500, "Cognitive Science in Theory and Practice") every course associated with this unit is already on the books and are offered by the respective departments on a regular basis. Consequently, there are only four areas where recurring funds will be needed, and **the total recurring cost** of the unit will come to approximately \$1750/year, or less than the cost of 1 PTI per year. This figure is composed of the following line items:

\$1250: Annual Speaker's Series support

\$500: Annual incidentals (office supplies, publicizing materials, phone support, etc.)

\$1750 TOTAL

The Dean has agreed to provide these resources on a recurring basis.

#### VII. BENEFITS TO THE UNIVERSITY COMMUNITY

Our proposed Graduate Certificate in Cognitive Science would have at least seven distinct substantive benefits to the University community.

First and foremost, it would bring together already-existing resources to provide students with the opportunity to take courses in an interdisciplinary field whose contemporary importance cannot be ignored.

Second, and relatedly, the Graduate Certificate in Cognitive Science at UK will build on a strength identified in President Todd's Strategic Plan of June 24, 2003 (entitled "The Dream and the Challenge"; see <a href="http://www.uky.edu/Home/2003-06StrategicPlan/plan.html">http://www.uky.edu/Home/2003-06StrategicPlan/plan.html</a>). In particular, the Graduate Certificate in Cognitive Science will both derive strength from, and will in turn yield dividends to, the Neurosciences, which was an area identified in the Strategic Plan as one of the "Priority Areas for Future Development."

Third, the Graduate Certificate in Cognitive Science at UK will enhance job prospects for those graduate students that participate. Most of the Ph.D.s coming from UK who choose to remain in academics wind up as faculty at teaching-intensive universities or small private colleges. From the perspective of such institutions, a job candidate is more attractive in proportion to the number of different courses she can teach. A job candidate who can represent herself as competent to teach an undergraduate Cognitive Science course, or a course with a substantial module on Cognitive Science, is a job candidate who will have a competitive advantage in the job market. (This is especially true in the fields of Psychology and Philosophy.) For this reason, the Certificate in Cognitive Science (which would attest to such teaching competence) will have great practical value for Ph.D.s on the job market.

Fourth, Cognitive Science at UK provides a forum for interested UK faculty and students to discuss our research with one another, and to develop some interdisciplinary lines of research. What is more, our colleagues from the various departments will encourage their respective departments to make some effort to include one speaker/year in their speaker series devoted to a topic of interest to the Cognitive Science community. This is a way to ensure that the limited speakers' budget of the Cognitive Science unit can go a long way towards developing a Cognitive Science speaker series on the back of strong speaker series' in each of these departments.

Fifth, it offers the prospect for new revenue streams. These might come from industry (perhaps in the future we could raise money for a speaker series from some Lexington-based high-tech industry, such as Lexmark), or else from the government. In the latter respect it is noteworthy that the members of the Graduate Certificate in Cognitive Science have already identified two relevant funding sources. The first is NSF grant earmarked for support of Science of Learning Centers (see <a href="http://www.nsf.gov/pubs/2003/nsf03573/nsf03573.htm">http://www.nsf.gov/pubs/2003/nsf03573/nsf03573.htm</a>). And the second is an NIH grant tailored to science pedagogy in new academic units. In connection with NIH funds, it is noteworthy that there is a statewide resource in the Kentucky Biomedical Research Infrastructure Network (KBRIN), which serves as an "Outreach" program meant to support local initiatives' attempts to secure federal grants, and which contains a Neuroscience component. Since KBRIN is already supported by NIH, and since we will be connecting with it (under the rubric of its Neuroscience component), having the Graduate Certificate in Cognitive Science at UK will increase our chances at landing an NIH science pedagogy grant. (The KBRIN web site, including links for local initiative support, can be accessed at <a href="http://www.kbrin.louisville.edu/education-tools/brochure.html">http://www.kbrin.louisville.edu/education-tools/brochure.html</a>.)

Sixth, it will be attractive in the recruitment and retention of both graduate students and faculty whose interests concern cognitive-science-related matters.

Seventh, it will eliminate an important hole in the interdisciplinary units offered at UK. As mentioned in the first section, Cognitive Science has some sort of presence at most large public and private research universities; that UK is not among them is something that the present proposal aims to rectify.

We should add that our proposal was designed so as to maximize the benefits to the university at a minimum cost; this was done out of our recognition of the difficulty budget situation facing UK. To our mind, the facts (first) that proposal for a Graduate Certificate in Cognitive Science at UK (if implemented) would bring so many different benefits, and (second) that it does so in such a cost-effective way, make the case for approving such a proposal extremely powerful. We hope you agree.

# Graduate Certificate in Cognitive Science APPENDIX B SCHEMES FOR PURSUING THE GRADUATE CERTIFICATE IN COGNITIVE SCIENCE July 2003

#### THE GRADUATE CERTIFICATE:

Given the interdisciplinary nature of Cognitive Science, it is desirable that graduate students who aim to achieve a certificate in Cognitive Science take courses (beyond CGS 500 "Cognitive Science in Theory and Practice") outside of their home departments. At the same time, we recognize the difficulty (and, in many cases, practical impossibility) of taking several courses outside of one's home department. In light of this, the requirements for the Graduate Certificate aim to satisfy two desiderata: first, that there be at least some effort made to take a course outside of one's home department; but second, that there not be such a burden on interested graduate students, so as to dissuade many otherwise-interested students from pursuing a Graduate Certificate in Cognitive Science, or as to place too great a burden on those who do decide to pursue such a Certificate (lest our requirements have an unjustifiable delaying effect on students' time-to-degree within their home department).

Given those interested in pursing the certificate will not be in a position to take very many courses in a department other than her own Ph.D.-granting department – whether for programmatic reasons, or for reasons pertaining to insufficient background – the most likely scheme under which a graduate student would get a graduate certificate in Cognitive Science is by taking 9 credits within her Ph.D.-granting department, together with the three credit-hours of "Cognitive Science in Theory and Practice," and three credit-hours in one of the listed courses from some department other than her home department.

This scheme is defensible both ideologically and administratively.

Ideologically, the Cognitive Science requirements will have the effect of highlighting certain graduate courses within each department, thereby highlighting for students a subset of the set of graduate courses offered in their home departments. This will have the effect of encouraging interested students to consider taking those particular courses, and to see them as forming part of a systematic way to approach certain issues within Cognitive Science. The result is that students who takes these courses, as part of their satisfying the requirements on the certificate, will thereby become immersed in the contribution that their home department makes to the contemporary Cognitive Science scene.

The above scheme is defensible on administrative grounds as well. In particular, we submit that any graduate student interested in pursing the certificate will be in a position to satisfy its requirements in a timely way. Since this is obvious with respect to those requirements pertaining to courses within the students' own department, we will focus on the requirements of courses outside of the students home department. The burden is two such courses: CGS 500 "Cognitive Science in Theory and Practice", together with one listed course from a department outside of her home department. We expect (but do not require) that the "Cognitive Science in Theory and Practice" course will be taken early on in the student's graduate career, although it can be taken as late as the student desires; and we expect that the one further course outside of her home department will be taken at some point after she has obtained the Master's Degree in her home department. (This will enable the student to

focus on work from her home department early on in her career, as is appropriate and conducive to an efficient time-to-Master's-degree within the home department.)

Some comments are in order regarding the satisfaction of the requirement of a course outside of the home department. In some cases (though we do not imagine that this will be the majority), this requirement will be easy for the student to meet, because the student in question has both sufficient background and interest in another discipline so as to satisfy the requirements on one of its courses. For purposes of illustration, imagine a biology student with an interest in the physiology of perception, who has the requisite background to take a graduate psychology course on that topic. In cases where the student does not have the requisite background to satisfy the prerequisites of any course in another department, she can take one of the related graduate courses that have no, or only limited, prerequisites, as follows (prerequisites in square-brackets):

LIN 512 Modern English Grammar [LIN 211 or permission of instructor]

LIN 515 Phonological Analysis [LIN 211]

LIN 516 Grammatical Analysis [LIN 211]

LIN 517 Special Topics in Linguistics [LIN 211]

LIN 617 Studies in Linguistics [LIN 211]

PHI 520 Symbolic Logic II [PHI 320 or permission of instructor]

PHI 560 Philosophy of Science

PHI 565 Philosophy of Language

PHI 575 Philosophy of Mind

Admittedly, this relatively restricted list does 'force' the hand of those students seeking the certificate who do not satisfy the prerequisites of some course from a department other than her home department. But, since the student will need to take only one such course, and since the courses listed above are clearly a core part of the subject-matter of Cognitive Science, we think that this outcome is defensible. It is worth remarking that in this respect Philosophy graduate students are in a category by themselves, since no prerequisite-free graduate course in a department beyond their home department is open to them. For this reason, the burden of the requirement of a course beyond the home department will be hardest on them. But this is defensible, first, because a certificate in Cognitive Science should reflect having experience in some empirical discipline (where this includes Linguistics in addition to the other empirical sciences); and second, because this burden can be addressed by making sure that interested Philosophy students take LIN 211 (perhaps during the summer after they have passed their Comprehensive Exams), and thereby prepare to take one of the listed graduate Linguistics courses.

For these reasons we are comfortable with what we imagine will be the standard way by which graduate students will pursue the Cognitive Science certificate.

# Cognitive Science Programs at SEC Universities at UK's Benchmarks July 2003 Prepared by S. Goldberg, UK Department of Philosophy

#### I. The SEC Universities

	CS Program	PhD	Progra MA	ms of St Grad Cert.	•	Minor
Alabama http://www.psy.uab.edu/cogscience.htm?dur	Yes <b>ki=45057</b>			X	X	X
Arkansas	No					
Auburn	No					
Florida	No					
Georgia http://www.ai.uga.edu/aicenter.old/cogscienc	Yes e.html				X	X
Kentucky	No					
LSU http://www.artsci.lsu.edu/cogsci/classes/class	Yes++ es.html		e			
Mississippi	No					
Mississippi State http://www.msstate.edu/dept/psychology/sub http://www.psychology.msstate.edu/Academi				e.html	X	X*
South Carolina http://www.cla.sc.edu/LING/grad/phdprogra	Yes** m.html					
Tennessee	No					
Vanderbilt http://sitemason.vanderbilt.edu/site/cUBtpC/	Yes cognitivescience	X	X	X	X	X

#### II. UK'S BENCHMARK UNIVERSITIES

	CS Program	PhD	Progra MA	ms of St Grad Cert.	-	Minor
North Carolina State University http://www.ncsu.edu/advising_central/minor	Yes cs_desc/cog_sci.	html			X	X
Ohio State University http://www.cog.ohio-state.edu/	Yes			X		X
Pennsylvania State University http://psych.la.psu.edu/neuroscience_area/in	Yes*** dex.htm				X	
Purdue University http://www.sla.purdue.edu/academic/fll/cogt	No**** heory/CogCircl	e-main.l	ntml			
Texas A & M University	No					
University of Arizona http://info-center.ccit.arizona.edu/~cogsci/	Yes			X	X	X
University of California - Los Angeles http://www.cogsci.ucla.edu/	Yes				X	X
University of Florida	No					
University of Georgia http://www.ai.uga.edu/aicenter.old/cogscience	Yes e.html				X	X
University of Illinois- Urbana http://www.cogsci.uiuc.edu/	Yes					X*
University of Iowa	No					
University of Maryland at College Park http://www.inform.umd.edu/NACS/	Yes	X				
University of Michigan at Ann Arbor	No					
University of Minnesota at Twin Cities http://cogsci.umn.edu/	Yes+					
University of North Carolina at Chapel Hill http://www.unc.edu/depts/cogsci/	Yes					X

a 9	CS Program	PhD	Progra MA	ms of St Grad Cert.	tudy BS/BA Minor
University of Texas at Austin Yes http://www.utexas.edu/research/utcogsci/		X		X	
University of Virginia http://www.virginia.edu/cognitivescience/	Yes				X
University of Washington	No				
University of Wisconsin	No				

#### KEY:

- \*- called a Concentration
- \*\*- program in conjunction with Linguistics Program
- \*\*\*- Cognitive Neuroscience
- \*\*\*\*- Home to the 'Cognitive Circle', a faculty research group devoted to bringing cognitive science to bear on the arts.
- +- involves a non-degree-granting Cognitive Science Center
- ++- there is a proseminar every semester, involving 4-6 faculty, though no degrees granted



College of Arts and Sciences

Office of the Dean 213 Patterson Office Tower Lexington, KY 40506-0027 Fax: (859) 323-1073 www.uky.edu

January 13, 2004

Jeannine Blackwell Graduate School Dean 355 Patterson Office Tower CAMPUS 0027

Dear Professor Blackwell:

This is a letter of support for the Cognitive Science proposal prepared by Professor Sanford Goldberg of the Department of Philosophy.

As Dean of the College of Arts and Sciences, I am happy to lend my support to this proposal. The proposed academic unit is well-conceived, building on some of UK's traditional strengths, bringing substantial benefits to the UK community, and enjoying extensive and deep support from across the University. From an academic point of view the benefits it will bring are many: it will fill a deficiency in our undergraduate and graduate curricula; it will build on UK's strengths, including our strength in Neuroscience (an area identified in the Strategic Plan of 6/24/03 as one of the "Priority Areas for Future Development"); and it is a shining example of interdisciplinarity, and so will provide a forum for interdisciplinary faculty and student research. What is more, the proposal clearly has deep and wide support from faculty, not only in A&S (with faculty participation from eleven different A&S departments), but also from faculty in the College of Medicine, the College of Engineering, and the College of Education. There can be little doubt that the program will be an important addition to the intellectual scene of the College of Arts and Sciences as well as to the University as a whole.

For these reasons, I am happy to support such a program, and see to it that it receives the financial support that it needs.

Sincerely,

Steven L. Hoch

Cc: Sanford Goldberg, Philosophy

At 2. Hot

Marilyn Lyons, Graduate School



Department of Philosophy 1415 Patterson Office Tower Lexington, Kentucky 40506-0027 606-257-1861 FAX 606-257-3286

June 14, 2003

Dr. Steve Hoch Dean, Arts and Sciences University of Kentucky

Dear Dean Hoch,

Professor Sandy Goldberg, as you know, has been putting together a program for the interdisciplinary study of Cognitive Science, which has now reached the point of being fully described and ready to be implemented. While I was not one of steering committee, and was not involved in the discussions leading to the overall conception, I wish to explain my full support for this program, and to encourage you to give it careful consideration. I believe it is a component of full-scale university studies that we should have at the University of Kentucky, but I also believe that its pursuit here should be marked by distinctive strength. The program at the University of Kentucky should develop dimensions that would make it more than simply an emulation of more established—and one ought to add, superbly funded and staffed—programs and institutes. At the University of Kentucky a Program in Cognitive Science should be one that supplies elements not always sufficiently emphasized in a richly ambitious and exciting field. Let me explain.

Cognitive Science is quite correctly characterized in Sandy's proposal as "an interdisciplinary field of study focusing on the mind conceived as an informationprocessing system." It is this conception that allows the interplay of diverse disciplines, and hence is the basis for the cooperative spirit that would typify the actual work done. However, one of the things that also typically happens in the work of cognitive scientists is that this unifying conception becomes an assumed final answer to the age-old question of what a "mind" in the end actually is. In other words, the working approach becomes a comprehensive dogmatic principle, rather than being a conception with which to begin, but which investigation as it proceeds may have to correct, radically modify, or even displace. The result can be that the purely formal character of an "information-processing system" is taken as adequate to understanding what the mental action of understanding itself is all about. Overlooked is what every one of us—even when involved in theoretical work—lives and experiences: that understanding takes place in the world of concrete engagements wherein alone individual living agents have their place and efficacy. To put it another way, in the end cognitive science, even by way of its initial focus, is meant to offer a contribution to understanding cognition as an action and process in human life.

Here is where the role of disciplines such as biology (especially neurology), psychology, anthropology, and, yes, philosophy can play an essential role. For some

V.

years now I have been following the work of both mainstream cognitive science such as found in the Journal of Consciousness Studies and independently pursued work in developmental neurology, most particularly in French developmental neurology, e.g., that of Jacques Monot, François Jacob, and Alain Prochiantz. What comes out of this is an approach to the action of the "mind" that sees it as integrated in the whole developmental process, specifically in terms of both the internal and the external milieus wherein alone the dynamisms of development and living occur. Even when information-processing principles are seriously considered (e.g., in Prochiantz's reading of Alan Turing), they are recognized as only having relevance if they are adjusted to and reinterpreted in terms of these milieu-integrated biological dynamisms. The analogy between this neurobiological approach and that of certain sociological and philosophical approaches offers strong incentives towards counterbalancing the formalism of information-processing principles with materially fundamental elements and contexts; and, once again, here is where the interdisciplinary character of a cognitive science program can show its advantages. In sum, inquiry that emphasizes the material dimensions of human being in the world can be, and in fact has to be, as methodical and rigorous as that conducted in the formal, mathematics-like analysis of mainstream cognitive science, without having to be reduced to the latter. This is how cognitive science can attain its goal: to offer contributions to the study of full-dimensional cognition.

Something of this kind of breadth is what I would see to be part of the essential potential of a Cognitive Science Program at the University of Kentucky, one that would justify its efforts not by imitation of other centers, but by forging a distinctive dynamic investigational and instructional undertaking that truly integrates diverse disciplines in a common goal. And it is from this perspective that I would look forward to participation in it, and that I encourage you to give the proposal your positive consideration.

Sincerely yours,

and Brina

Ronald Bruzina

**Professor** 



June 20, 2003

Dr. Hoch
Dean, College of Arts and Sciences
University of Kentucky, Lexington

Dear Dr. Hoch,

I am writing to express my strong support for the establishment of a cognitive science program at UK. Given the importance of this relatively new but already immensely influential area of interdisciplinary inquiry, such a program will contribute to attracting talented students and faculty to our university, consolidate efforts of scholars from different departments interested in cognitive science, and thus considerably add to the strength of UK's overall research profile.

For the last seven years (starting back in graduate school) I have been working on forging connections between literary studies and cognitive science. I co-organized the forum "Historicizing Cognition: Literature and the Cognitive Revolution" for an annual convention of the Modern Language Association (MLA) in 1998, coordinated the creation of the new discussion group on cognitive approaches to literature within the MLA, and served on that group's executive committee from 1999 to 2002. I have organized panels on cognitive science and literature for conferences in Israel, Norway, Canada, England, and Germany, as well as in Berkeley, San Diego, New York, Los Angeles, New Orleans, Washington DC, Atlanta, Pittsburgh, and Boston, and have published essays on cognitive approaches to literature in such scholarly journals as *Philosophy and Literature*, *Poetics Today*, and *Narrative*, as well as in several edited collections. I am gratified to see the growing interest in the field of cognitive approaches to literature on the part of literary scholars. To use the most recent personal example,

Department of English

1215 Patterson Office Tower Lexington, KY 40506-0027 (859) 257-7008 Fax: (859) 323-1072 www.uky.edu earlier this spring, at an annual meeting of the Society for the Study of Narrative at the University of California, Berkeley, our early morning panel on cognitive approaches drew sixty people out of the two hundred attending the conference, packing the room and making it the single most attended non-plenary panel at that scholarly meeting.

The current state of the field of cognitive approaches to literature already testifies to the spectacular diversity of venues offered by the parent fields of cognitive neuroscience, artificial intelligence, philosophy of mind, cognitive linguistics, evolutionary biology, cognitive psychology, and cognitive anthropology. Literary scholars have begun to investigate the ways in which recent research in these areas opens new avenues in gender studies (F. Elizabeth Hart); feminism (Elizabeth Grosz); cultural materialism (Mary Thomas Crane, Alan Richardson); deconstruction (Ellen Spolsky); literary aesthetics (Elaine Scarry, Gabrielle Starr); history of moral philosophy (Blakey Vermeule), and theory of narrative (Porter Abbott, David Herman, Paul Hernadi).

Given my long-standing interest in this field and its tremendous interdisciplinary potential, I am particularly excited about the possibility of having a cognitive science program at UK. If the proposal for establishing such a program is approved, I will certainly be interested and willing to teach courses on cognitive approaches to literature and culture within that program. I am equally open to developing my own courses in the area and to team-teaching it with professors from other departments.

Sincerely,

Lisa Zunshine



Anna Bosch, Director Linguistics Program

Department of English

1215 Patterson Office Tower Lexington, KY 40506-0027 (859) 257-7008 Fax: (859) 323-1072 www.uky.edu

2 July 2003

Dear Dean Hoch,

Please allow me to add my voice to the many who support the development of an interdisciplinary program in Cognitive Science at the University of Kentucky.

Indeed, as the flagship university of the state, the University of Kentucky continues to shortchange its undergraduates and, particularly, its graduate students by failing to offer a minor or certificate (at the minimum) in the growing field of cognitive science. As Professor Goldberg points out in his proposal, the majority of our benchmark institutions offer some type of program in Cognitive Science—several offer graduate degrees. While we cannot hope to "compete" with these degree programs, given our current funding problems, I continue to believe that we do our students a disservice if we fail to provide them with the working knowledge of this growing discipline.

As director of the UK Linguistics program, I particularly support the development of a cognitive science program. First, such interdisciplinary programs are becoming essential for our students, both undergraduate and graduate—especially those in Computer Science, Psychology, Biology, Neuroscience, Linguistics, and Philosophy. Second, as a linguist at UK I know very well how important such interdisciplinary programs can be to the faculty in related disciplines: to be able to step outside one's "home" department and meet with others whose research interests are related in new ways to one's own research is both refreshing and reinvigorating. I would even go so far as to say that my colleagues in Linguistics are essential both to my development as a scholar and to my "job satisfaction" here at UK, and I look forward to extending that circle of collegiality within a Cognitive Science program. The emotional value of the support of such interdisciplinary programs cannot be underestimated. And finally, as you and I both know well, these interdisciplinary programs are cost-effective. For a paltry amount of money, really, a program can be established which eventually may develop a very high visibility across campus and beyond. Current financial straights cannot be an excuse to postpone this academic program.

I will be on sabbatical for the coming year at the University of Edinburgh, where I have a visiting fellowship at the Institute for Advanced Studies in the Humanities to pursue linguistic research, also sponsored by a sabbatical fellowship from the American

Philosophical Society. Thus I will not be able to lend my voice to your discussions of this program, except through this brief letter. I sincerely hope that by the time I return to campus, the Cognitive Science Program at the University of Kentucky will be up and running!

Let me finally take this opportunity to welcome you to the College; as a former member and co-chair (2001-2002) of the College Council, I wish you well in your reorganization of the College administration, and I wish you the best of luck in all your endeavors.

Best wishes,

Anna Bosch

Linguistics Program Director

Associate Professor, English and Linguistics

bosch@uky.edu



June 25, 2003

Sanford Goldberg
Director of Graduate Studies and Associate Professor
Department of Philosophy
University of Kentucky
1427 Patterson Office Tower

Department of English

1215 Patterson Office Tower Lexington, KY 40506-0027 (859) 257-7008

Fax: (859) 323-1072 www.uky.edu

Dear Sandy,

I am writing to express my enthusiastic support for the Cognitive Science Program which you have proposed; there is, in my view, an acute need for such a program at here at UK.

At most major universities, my colleagues in the field of linguistics participate in cognitive science programs of exactly the kind that you envision for our campus. To an ever-increasing extent, current research in linguistics has profound consequences for other disciplines relating to human cognition--psychology, philosophy, computer science (including artificial intelligence), even neurobiology; by the same token, research in these same fields has never before had such substantive and extensive implications for the future of linguistic theory. What we currently lack here at UK is a framework within which faculty in these varied disciplines can exchange ideas and work collaboratively in anything more than an ad hoc fashion; we likewise lack a coherently structured curriculum in cognitive science to recommend to students who wish to explore the developing interfaces among the sciences of the mind. To the extent that these needs remain unfilled, we are short-changing both our faculty (whose research horizons fit less and less comfortably within the University's existing disciplinary strictures) and our students (who depend upon us to keep our curricular landscape up-to-date). establishment of the proposed Cognitive Science Program would help to redress these needs, providing a solid platform for interdisciplinary exchanges among our faculty and affording a systematically organized cognitive science curriculum for our students.

My own research would certainly benefit from the establishment of this program. As a theoretical linguist, I investigate universal properties of human language and seek the explanations for their universality; thus, in recent years, my work has been centrally concerned with the universal properties of inflectional systems. The establishment of the Cognitive Science Program would engender opportunities to share this work more closely with specialists in other disciplines who are themselves pursuing research on other sorts of cognitive universals; such opportunities should, of course, prove extremely valuable to everyone involved. I should add, too, that one aspect of my research has particular relevance to the interdisciplinarity of the proposed Cognitive Science Program: for several years now, I have been working collaboratively with Raphael Finkel (Department of Computer Science) on a large-scale project focussing on the computational generation and analysis of natural-language morphology; we have reported on this research in various venues (most recently, in our paper 'Generating Hebrew verb morphology by

default inheritance hierarchies', in M. Rosner and S. Wintner, eds., Computational Approaches to Semitic Languages: Proceedings of the Workshop, pp.9-18 [Philadelphia: Association for Computational Linguistics, 2002]). The constellation of computational and linguistic issues which Raphael and I are addressing in this research would, I feel, be of considerable interest to students interested in pursuing a specialization in cognitive science, and could be naturally explored in the context of the upper-division 'Introduction to Cognitive Science' course which you have proposed.

I want to reaffirm my willingness (rather, my eagerness!) to serve on the proposed program's steering committee. I will certainly be willing to administer the above-mentioned introductory course in rotation with other members of the steering committee and to contribute guest lectures for the course in those years in which I am not administering it. I look forward to participating in both of these capacities.

Please let me know of any ways in which I might help to insure the realization of this proposal, and many thanks for your energy and initiative in seeing it forward.

With best wishes,

**Gregory Stump** 

Professor of English & Linguistics



Yang Jiang, Ph.D. Assistant Professor, Department of Behavioral Science University of Kentucky College of Medicine 113 College of Medicine Office Building Lexington, KY 40536-0086

Office: (859) 257-2122 Fax: (859) 323-5350 Email: yjiang@uky.edu College of Medicine

Department of Behavioral Science College of Medicine Office Bldg. Lexington, KY 40536-0086 (859) 323-5771 Fax: (859) 323-5350 www.uky.edu

June 24, 2003

Dr. Sanford Goldberg
Director of Graduate Studies and Associate Professor
Department of Philosophy
University of Kentucky
1427 Patterson Office Tower
Lexington, KY 40506-0027

#### Dear Dr Goldberg:

I am writing to support your initiative to create a Cognitive Science program at the University of Kentucky. Cognitive Science has been a fast growing field in the past decade, and its impact has extended into the fields of philosophy, computer science, neuroscience, and human neuro-genetics. I think that your effort to establish a Cognitive Science program is feasible and much needed for the sizeable university like UK.

Given my background and training in Cognitive Psychology and Neuroscience, I would like to contribute by teaching a course under the Cognitive Science program in the future. As my research investigates brain mechanisms of cognition using functional imaging methods (e.g. fMRI and ERPs), I am particularly interested in team-teaching a "Cognitive Neuroscience" course. I have given such a course at the Graduate School of the National Institutes of Health, during my postdoctoral training at the Laboratory of Brain and Cognition, NIMH, and have also taught part of the course as a guest lecturer at the Cognitive Science Laboratory of the Catholic University of America.

I have agreed to serve as a member on the steering committee. Please let me know if I can be any further help to you in building a Cognitive Science program at UK.

Sincerely,

Yang Jiang, Ph.D.

Assistant Professor, Behavioral Science



May 15, 2003

Dr. Sandy Goldberg Department of Philosophy University of Kentucky 1427 Patterson Office Tower Lexington, KY 40506-0027

Department of Biology

101 Morgan Building Lexington, Kentucky 40506-0225 Office: (859) 257-4711 Fax: (859) 257-1717 www.uky.edu

Dear Dr. Goldberg,

I am writing this letter to support the initiative to formally set up a Cognitive Science Program in our campus.

The need to have Cognitive Science Program (CSP) in our campus has several advantages and benefits to students as well as faculty. First, CSP is an integrated field that has been gaining attention across the country. As I know the top 20 universities that we try to catch up all have similar programs. This type of integrative program tends to bring out synergistic inputs from faculty across many disciplines. Such an interaction brings out the best of faculty in terms of applying and obtaining graduate training grants and to build up a better graduate training program. Along the way, undergraduate students will also be benefited from the existence of such a program. One good example within our campus is the training program of Center for Ecology, Evolution and Behavior (CEEB). Its mission is similar to what we are going to do Cognitive Science Program, over the years CEEB has been very successful in bringing faculty and students from many departments to create a very strong and well recognized graduate program.

Second, I see the creation of Cognitive Science Program would allow us to formally apply federal funding through NIH-based training grant. My personal research is focused on Mechanosensory Physiology and Behavior of animals. I believe that my research could contribute greatly to the mission of Cognitive Science Program and my research program will also benefit greatly from interacting with other faculty members as well as students of the program.

Thirdly, I am willing to offer my time and effort in the proposed program. I have been offering BIO556 Communication Biology to both under- and graduate students over the past 10 years. I will be happy to contribute my time to offer a few lectures on a teamtaught course that will be offered by CSP. When it is necessary, I will also be willing to teach a core 500-level course for CSP once every five years.

Sincerely yours

Hong Y. Yan, Ph. D

Associate Professor



May 19, 2003

Department of Neurology

College of Medicine Kentucky Clinic - L445 Lexington, KY 40536-0284 Clinic: (859) 323-5661 Fax: (859) 323-6411

Office: (859)323-6702 Fax: (859) 323-5943 www.comed.uky.edu

Sanford Goldberg, Ph.D.
Department of Philosophy
1427 Patterson Office Tower, 0027
CAMPUS MAIL

Re: Cognitive Science Program

Dear Sandy:

I provide my whole-hearted support in your efforts to develop a Cognitive Science Program at the University of Kentucky. The investigators in the field of cognitive science are scattered around campus and often totally unaware of each others efforts. The development of a program would provide a framework for better interactions amongst investigators. My own interest in the development of the program pertains more to how I perceive faculty members within my department using it. As you are no doubt aware, individuals within the Department of Neurology have funded research in the investigation of a number of disorders affecting cognition, including Alzheimer's disease, AIDS, and stroke, to name a few. It is certainly conceivable that they will be able to use the resources in the nascent program. My own research interest is focused largely, although not exclusively, on the dementing illnesses associated with HIV infection. It is certainly conceivable that the cognitive program would be of some benefit to me personally.

Sincerely yours,

Joseph R. Berger, M.D. Professor and Chairman

JRB/ss



May 22, 2003

Sanford Goldberg Department of Philosophy University of Kentucky 1427 Patterson Office Tower Lexington, KY 40506-0027 Modern and Classical Languages, Literatures and Cultures

1055 Patterson Office Tower Lexington, KY 40506-0027 (859) 257-4641 Fax: (859) 257-3743

Dear Sandy:

I am writing in support of your proposal for a program in Cognitive Sciences. As you know, I teach two classes that relate to the proposal, Semantics and Pragmatics (LIN318) and Special Topics in Linguistics: Cognitive Linguistics (LIN517). LIN318 is offered each spring, while Cognitive Linguistics is on a rotating schedule with other special topics courses in the Linguistics program. I am also willing to participate in the core 500 level course, either as a guest lecturer each semester or as the primary teacher once every five years.

The Cognitive Sciences program offers multiple benefits to the university. Firstly, it unites people with common interests across many disciplines. Such opportunities promote significant developments in research. I myself am currently involved in a project on a cognitive semantic analysis of the Russian verbal system and would welcome input from others specialists in this area. Currently there is no venue for us to share our work or obtain such input. This program would thus be a valuable asset in this regard.

Secondly, this program would be of great benefit to students, both undergraduate and graduate. Cognitive Science is a field that is growing in scope and prominence. If we are able to offer our students the opportunity to gain a strong background in this field, it will stand them in good stead in graduate study in many areas, from psychology to philosophy, from linguistics to computer science. Our graduate students would also profit from access to a program that allows them to enhance their speciality by expanding areas for potential research.

Sincerely

Jeanmarie Rouhier-Willoughby

Associate Professor of Russian and Linguistics



June 2, 2003

Department of Psychology

College of Arts and Sciences 115 Kastle Hall Lexington, KY 40506-0044 Fax: (859) 323-1979 www.uky.edu

Dr. Sanford Goldberg Department of Philosophy University of Kentucky Lexington, KY 40506

Dear Sandy,

I am writing to you to express my **unequivocal** support for the proposed Cognitive Science Program at the University of Kentucky. In my 15 years at UK I have tried to become involved with programs that offer students an opportunity for interdisciplinary study. The Cognitive Science Program will clearly be such an opportunity. I believe that such a program is long overdue at UK, and that it will benefit both undergraduate and graduate students across the university. As a researcher in cognitive psychology who studies memory this program is especially appealing to me and many of my colleagues in the Department of Psychology who study issues related to information processing.

In supporting the Cognitive Science Program proposal I should add that I am willing to teach one to two class sessions of the core 500-level course as needed. I may also be able to teach the Introduction to Cognitive Science course that is being proposed, depending on my other teaching demands.

Sincerely,

Jonathan M. Golding

Full Professor

### UNIVERSITY OF KENTUCKY

## COLLEGE OF ENGINEERING DEPARTMENT OF COMPUTER SCIENCE

Dr. Judy Goldsmith 763E Anderson Hall Lexington, Kentucky 40506-0046

(859) 257-4245 FAX: (859) 323-1971 goldsmit@cs.uky.edu

June 2nd, 2003

#### Letter of Support: Cognitive Science Program

Dear Dean Hoch:

I am writing in support of the proposed Cognitive Science Program. It will fill real needs for our students and for the profile of the University of Kentucky. It is a program with which I expect and plan to be actively involved, in my teaching, research, and as a member of the Steering Committee.

For instance, I have in the last year had three students approach me about research in Computational Linguistics, a subject I have not in fact studied. After determining that their interests, and their overlap with my interests, are not in fact covered in the Linguistics Program or by anyone else in my department, I have agreed to facilitate a seminar on the subject.

An organized Cognitive Science Program will simplify such a search, and allow a seminar or course to be offered to a wider range of students and interested faculty members. Rather than forcing each of us doing interdisciplinary work to rediscover the research connections and should-be connections for each new project, we will have a central clearing house for this information. It will allow the many students whose interests in cognition overspill departmental boundaries to structure their studies to their own interests. Finally, the students who go through such a program will have ranges of knowledge and skills most appropriate to work in the current Information Technology and service economy.

I am concerned as I watch our best engineering students leave KY in search of interesting jobs; by nurturing such a program, we help create an atmosphere in Lexington and in the Commonwealth that will support the creation of new high-tech, biological, and psychiatrically grounded companies.

I expect that my courses on Artificial Intelligence, Machine Learning, and Formal Languages and Automata Theory will all be part of the program. I look forward to students with broad interests in cognition. I do a one-hour lecture, "What is AI?" for the first-year Computer Science students; I look forward to expanding that into a unit for the Introduction to Cognitive Science course. (It is the most popular lecture I give; years later, students still remember it and approach me about the prerequisites of my advanced courses.) I also look forward to broadening my own knowledge of Cognitive Science when it is my turn to teach the introductory course.

In short, this Program fulfills needs for the students, faculty, and the Commonwealth. I am enthusiastically involved in the planning, and will be in its administration. If you have any questions, I can be reached at goldsmit@cs.uky.edu, and occasionally by phone at 7-4245.

Singerely,

Dr. Judy Goldsmith

Associate Professor, Computer Science



Department of Philosophy

College of Arts & Sciences 1415 Patterson Office Tower Lexington, KY 40506-0027 (859) 257-1861

Fax: (859) 257-3286

www.uky.edu/ArtsSciences/Philosophy

June 6, 2003

To whom it may concern,

I am writing to give my full support to the proposal that UK should have a Cognitive Science Program. This is an important area of interdisciplinary research at many institutions, and having such a Program would help that to be the case at UK as well. Also, having the Program would encourage students to seek out connections between various academic disciplines, and hence would give them a deeper and more well-rounded education.

My research relates to cognitive science in that I have examined issues involving how observers (including people) are represented in various versions of quantum mechanics. Also, I sometimes teach issues relating to cognitive science, such as the influence of antidepressants on personality, and the ways in which memory is faulty.

I am willing to do work to help the Program succeed. For example, I am willing to teach one or two class sessions of the core 500-level course each year.

Sincerely,

**Bradley Monton** 

Broky monton

Assistant Professor, Department of Philosophy and Honors Program

bmonton@uky.edu



Department of Psychology College of Arts and Sciences 115 Kastle Hall Lexington, KY 40506-0044 Fax: (859) 323-1979 www.uky.edu

June 6, 2003

Dr. Sandy Goldberg
Department of Psychology
1427 Patterson Office Tower
CAMPUS 0027

Dear Sandy:

I would like to offer my strong support for the development of a Cognitive Science Program at the University of Kentucky. Cognitive Science is a discipline that cuts across a number of departments including psychology, philosophy, biology, anthropology, sociology, computer science, and robotics. My area of research is comparative cognition and the questions that I address have to do with how one defines various cognitive abilities and what evidence would be needed to demonstrate cognitive ability in a human, an animal, or a machine. At present, researcher who have similar interests are scattered around the campus and it would be very productive to offer and collaborate on classes and seminars with these colleagues. Cognitive Science Programs can be found at many of the leading universities and I belong to active group of researchers who belong to the Cognitive Science Society.

I believe that a cognitive science program would be attractive to undergraduate as well as graduate students. I currently have seven graduate students who work with me and I believe that all of them would be interested it taking courses in cognitive science if they were offered.

If such a program were to be developed at UK I would be willing to participate in the teaching responsibilities in the form of occasionally teaching a core 500-level Introduction to Cognitive Science course as well as teaching a graduate seminar in Comparative Cognition from time to time.

Please let me know if there is anything I can do to facilitate the development of a Cognitive Science Program at UK.

Sincerely,

Thomas Zentall

Professor of Psychology



Department of Philosophy

College of Arts & Sciences 1415 Patterson Office Tower Lexington, KY 40506-0027 (859) 257-1861

Fax: (859) 257-3286

www.uky.edu/ArtsSciences/Philosophy

June 9, 2003

Dear Sandy:

I am writing to express my support for and excitement about the development of a cognitive science program at the University of Kentucky. The formation of a cognitive science program not only will remedy a significant gap in our academic curriculum, it also will provide a permanent venue for researchers from different disciplines to draw upon each other's specializations in the study of the mind. Given the fact that most of the resources necessary for the program are already in place, the formation of a cognitive science program presents a wonderful opportunity to maintain growth at UK at a minimal cost.

I also expect my own research on the scientific method and epistemology to benefit immensely from a cognitive science program at UK. The ability to collaborate with faculty from psychology, for example, will add a clinical dimension to my research on rational belief revision. The fact that programs in cognitive science across the country have been held up as paradigmatic and successful examples of interdisciplinary study should convince us that we should expect likewise at UK. Like many faculty at UK also interested in the workings of the mind, I believe that the ability to transcend the orthodox disciplinary boundaries can only enrich and broaden our research.

Please let me know if there is anything I can do to assist in the formation of the program. I am extremely excited about the prospect of a cognitive science program at UK. It will be an integral part of our process of becoming a top-ranked public institution in the country.

Sincerely.

Dien Ho

**Assistant Professor** 

Department of Philosophy



201 Kastle Hall Lexington, KY 40506-0044 June 16, 2003

Dr. Sanford Goldberg Department of Philosophy University of Kentucky

Dear Dr. Goldberg:

Department of Psychology College of Arts and Sciences 115 Kastle Hall Lexington, KY 40506-0044 Fax: (859) 323-1979 www.uky.edu

This is a letter of support for the proposed Cognitive Science Program at UK. I have agreed to serve on the steering committee for the program, as a Cognitive Science program would serve an important role in synergistically joining together many areas including (but not limited to) psychology, behavioral sciences, linguistics, computer sciences, philosophy, statistics, biology, neuroscience, vision, and mathematics.

I was a graduate student at Arizona State University, a postdoc at Duke, and a visiting assistant professor at Syracuse. All of those institutions have active Cognitive Science groups that promote cross-fertilization between areas.

I am an experimental psychologist; my work has made contact with many allied areas, including mathematics (probability theory), statistics, linguistics, vision, and neuroscience. It is a great advantage in my work to be able to make contact with other researchers at UK who work in those areas. As an example, one of my areas of research requires developing statistical models for response time distributions; my colleague Kert Viele in Statistics has helped me to formulate these models. That work may also result in a dissertation topic for one of his graduate students. In addition, I have consulted with Arne Bathke (also in Statistics) who has developed non-parametric models for answering some of the questions in my research.

As part of my contribution to the Cognitive Science program, I will agree to teach the 500-level seminar once every five years or so. In addition, I agree to contribute to the seminar by teaching the modules devoted to psychology.

Sincerely

Lawrence R. Gottlob, Ph.D.

Assistant Professor



Department of Psychology

College of Arts and Sciences 115 Kastle Hall Lexington, KY 40506-0044 Fax: (859) 323-1979 www.uky.edu

June 17, 2003

Dr. Sandford Goldberg Department of Philosophy University of Kentucky 1427 Patterson Office Tower Lexington, KY 40506-0027

#### Dear Sandford:

I am writing in support of your proposed program in Cognitive Science in the College of Arts & Sciences. Cognitive science has had a tremendous influence on thinking in many, seemingly disparate areas of inquiry in its relatively brief existence. That influence promises to continue to grow because cognitive science has become a truly interdisciplinary field. In my own discipline of psychology, cognitive science has been a major conceptual force in every subdiscipline of psychology. It is high time that the University of Kentucky formed a structured program of study in cognitive science at both the graduate and undergraduate levels.

I have a personal interest in the development of a cognitive science program at UK. My own training is in cognitive psychology. I have conducted research in comprehension processes and memory in my 23 years at UK. I teach courses in cognitive psychology at both the graduate and undergraduate levels. The development of a cognitive science program would benefit me at both levels of training. At the undergraduate level, it would bring motivated students from outside psychology into my cognitive courses. At the graduate level, it would increase my ability to attract talented students to UK. And, of course, it would be great to have the opportunity to interact with colleagues who have similar research interests.

Given my interest in the formation of a program in cognitive science, I would be willing to contribute to a 500-level introductory course in cognitive science on a yearly basis. I would also be willing to administer the course occasionally (although I would hope that the course would not need to be treated as an overload, given the minimal expense of the program).

Sincerely,

Robert F. Lorch, Jr.

**Professor** 



Jane E. Joseph, Ph.D.
Department of Anatomy and Neurobiology
University of Kentucky
800 Rose Street
Davis-Mills Building, Room 308
Lexington, KY 40536-0098
jjoseph@pop.uky.edu

Department of Anatomy and Neurobiology

College of Medicine MN225 Chandler Medical Center Lexington, KY 40536-0298 (859) 323-5155 Fax: (859) 323-5946 Body Bequeathal Program: (859) 323-5160 www.mc.uky.edu/neurobiology

Dr. Sanford Goldberg
Director of Graduate Studies and Associate Professor
Department of Philosophy
University of Kentucky
1427 Patterson Office Tower
Lexington, KY 40506-0027

June 23, 2003

Dear Dr. Goldberg:

I am delighted to write this letter of support for establishing a Cognitive Science program for undergraduates here at the University of Kentucky (UK). Although many of the critical ingredients for a CS program exist at UK, there are currently no means for unifying these elements into a coherent program. The current proposal outlines an excellent plan for establishing this important academic program at a minimal cost to the university. I would like to stress the need for such a program in contributing to UK's efforts to become a "Top 20" university, given that many Carnegie Research-I universities already have well-established Cognitive Science programs.

I am very enthused about the prospect of this program and am happy to be a member of the steering committee. I would also like to be involved in teaching the core 500-level Introduction to Cognitive Science course – serving as course director once every five or so years, and also contributing specific lectures in this course once a year. I am thankful that such a proposal has been drafted and hope that this program comes to fruition.

Sincerely,

Jane E. Joseph

X-Auth-No:

From: marek@cs.uky.edu (Victor Marek) Date: Fri, 4 Jul 2003 00:27:38 -0400

ate: Fn, 4 Jul 2003 00:27:38 -0400

X-Mailer: Mail User's Shell (7.2.6 beta(5) 10/07/98) To: Sanford Goldberg <scgold@pop.uky.edu>

Subject: Re: meeting with the Dean X-Mail-Router: No infection found

Dear Professor Goldberg,

I apologize for the lack of response; I am out of town for the entire summer doing research with my friends at UCSD. This takes all my time, and even more importantly, attention.

Let me, however, address the issue of Cognitive Science program at UK.

I am looking at this matter from the Artificial Intelligence perspective. I am getting quite often queries from prospective students concerning AI program at UK. In such cases I can offer to such candidates only limited assurance - we cannot promise our students a proper education in the most fundamental aspects of AI, namely Cognitive Science courses. Moreover, for various, mainly historical, reasons we do not offer courses in widely understood Logic area.

The proposed program in Cognitive Science will fill, I hope, this void. This will have a tremendous impact on our ability to bring quality students, postdocs and, ultimately, first-class CS/AI faculty. Since the quality of our graduate students is the driving force of our ability of getting grants and contracts, I expect that the proposed program will soon be able to provide the university with a good return on the necessary investment.

I apologize again for the delay in answering your letter and sincerely hope that your iniciative will bring an important new exciting area to UK.

Sincerely,

Victor W. Marek Professor of Computer Science

Victor W. Marek marek@cs.uky.edu marek@cs.engr.uky.edu 859-257-3496 (office) http://www.cs.engr.uky.edu/~marek

Department of Computer Science
University of Kentucky
Lexington, KY 40506-0046
859-257-3961 (Dept)
859-323-1971 (FAX)

X-Auth-No:

From: mirek@cs.uky.edu (Mirek Truszczynski)

Date: Sun, 6 Jul 2003 15:48:42 -0400

X-Mailer: Mail User's Shell (7.2.6 beta(5) 10/07/98)
To: Sanford Goldberg <scgold@pop.uky.edu>
Subject: Support for the Cognitive Science Program

X-Mail-Router: No infection found

Dear Professor Goldberg,

I strongly support the proposal for the Cognitive Science Program. There are several close connections between cognitive science and computer science, especially, the field of artificial intelligence. At present there are four faculty members in the Department of Computer Science who list artificial intelligence as one of their areas of interest. These faculty members advise about 15 graduate students. That group of faculty and students would be most direct beneficiaries of the program and active participants in its curriculum.

Sincerely,

USA

Mirek Truszczynski Professor and Chair Computer Science Department

Mirek Truszczynski

Dept. of Computer Science University of Kentucky Lexington, KY 40506-0046 e-mail: mirek@cs.engr.uky.edu http://www.cs.engr.uky.edu/~mirek phone: (859) 257-3961

fax: (859) 323-1971



July 7, 2003

Department of Psychology

College of Arts and Sciences 115 Kastle Hall Lexington, KY 40506-0044 Fax: (859) 323-1979 www.uky.edu

Sanford Goldberg
Director of Graduate Studies and Associate Professor
Department of Philosophy
University of Kentucky
1427 Patterson Office Tower
Lexington, KY 40506-0027

Dear Sandy,

I very much support the effort to institute a cognitive science program in our university. Cognitive science has truly become an interdisciplinary endeavor, with philosophers, psychologists, neuroscientists, psychiatrists, linguists, sociologists, biologists, robotics engineers, computer modelers, and others examining the mental life of humans and other organisms. Recognizing this, many leading universities have set up interdisciplinary cognitive science programs to aid research and training.

I research and teach cognitive development in infants and children. My students and I have been able to collaborate with faculty and students from programs such as Behavioral Science, Pediatrics, and Anatomy and Neurobiology. I recognize, however, that these collaborations have been mostly due to chance encounters, and a more structured program would make it easier for faculty to develop joint projects that will benefit from synergistic interactions. Furthermore, because cognitive science is inherently multidisciplinary, graduate and undergraduate training need to incorporate multiple approaches that have hitherto been associated with disparate disciplines. Such training will obviously be easier in an interdisciplinary program. Thus, the proposed cognitive science program will greatly benefit both the research and teaching missions of the university, and I hope to be able to participate in such a program. Thank you.

Sincerely,

Ramesh Bhatt, Ph.D.

Associate Professor

X-Auth-No:

From: "Philip Crowley" <pcrowley@uky.edu>
To: "'Sanford Goldberg" <scgold@pop.uky.edu>

Subject: Cognitive Sciences

Date: Tue, 8 Jul 2003 12:04:10 -0400 X-Mailer: Microsoft Outlook, Build 10.0.2627

Importance: Normal

X-Mail-Router: No infection found

Dear Sandy,

I'm sorry to be slow in getting back to you—I've been frantically busy this summer with no end in sight. But I

certainly do want to respond to your request concerning the Cognitive Sciences Initiative.

I strongly support your notion of initiating a multidisciplinary approach to cognitive sciences research, student instruction, and training here at UK. It is clear that UK has critical mass in this area; with your enthusiastic organizational efforts and the new Dean's backing, things could start to snowball here. I would be particularly interested in improving the draw for graduate-student prospects interested in applying cognitive methodology to understanding animal behavior. The group of faculty you have assembled can help facilitate this and other related goals, while building toward collaborative grant projects and new programs in the area. Best of luck in bringing this exciting opportunity to fruition....Phil Crowley

#### UNIVERSITY OF KENTUCKY COLLEGE OF ENGINEERING DEPARTMENT OF COMPUTER SCIENCE



Raphael Finkel (859) 257-3885 (859) 257-3961 (sec) (859) 323-1971 (fax)

July 3, 2003

Computer Science Department Lexington, Kentucky 40506-0046 raphael@cs.uky.edu http://www.cs.uky.edu/~raphael/

Dear Dean Hoch,

Campus

Dean Steven L. Hoch

College of Arts and Sciences

I am writing in support of the proposed Cognitive Science Program.

My research largely deals with the interplay between Computer Science and other disciplines, including Linguistics (with Professor Greg Stump of English), Classics (with Professor Ross Scaife of Classics), and Biology (Professor Heinz Kohler of Microbiology). Within Computer Science, I have worked on constraint satisfaction, which is an aspect of Artificial Intelligence. Many of these diverse research directions have connection with Cognitive Science, defined broadly as the study of the mind.

I think the greatest benefit of this Program will be the increased opportunities for faculty members in diverse fields to see how their interests are related to each other's and to work together, just as I have sought out researchers in other fields to work with.

In support of this Program, I would be eager to present several guest lectures per year on aspects of my work, both in the core 500-level introductory course and in seminars.

Sincerely,

Raphael Finkel Professor X-Auth-No:

Date: Tue, 8 Jul 2003 12:42:23 -0400 Subject: Re: Cognitive Science at UK

Cc: Jane Joseph <jjoseph@POP.UKY.EDU>
To: Sanford Goldberg <scgold@POP.UKY.EDU>
From: "C.D. Smith" <csmith@mri.uky.edu>

X-Mailer: Apple Mail (2.552) X-Mail-Router: No infection found

functional magnetic resonance imaging.

Sandy - OK, yes I would be interested in participating in the development of such a program and contributing what I can. What I would bring is a behavioral neurology perspective, that is, interactions of cognition and other higher brain functions with diseases affecting the brain, particularly the degenerative dementias. My research work uses

There are certain thinkers in this field, e.g., Marcel Mesulaum, Ken Heilman, Antonio Demasio, Gerald Edelman, Mike Gazzaniga, Patricia Churchland and VS Ramachandran all with very different perspectives who would be worth bringing here to stir up some excitement. Perhaps one or more of them would be willing to serve on an advisory panel to kick-start cognitive science at UK. - CS

On Monday, June 23, 2003, at 02:09 PM, Sanford Goldberg wrote:

Dear Dr. Smith,

For the past seven months, I have been working on putting together a proposal to have Cognitive Science Program here at UK, one with both an undergraduate and a graduate component. To that end, I have recruited approximately 25 faculty, from across the campus, to participate, either actively (serving on the Steering committee) or passively (expressing their desire for and interest in such a program). One of these people is Dr. Jane Joseph, who mentioned your name in this connection. So I am writing to see whether you would be interested in participating either actively or passively in the program.

Below is the extended e-mail letter that I wrote to the original 25 participants; I cut-and-paste it here for your perusal. (I have an extended proposal already written; if you are interested in seeing it, let me know and I will send it as an attachment.)

Sandy Goldberg

I am writing to gauge your interest in participating in a COGNITIVE SCIENCE PROGRAM here at UK, modeled on some of the other interdisciplinary programs presently on the books (Linguistics, for example). At present there is no such program, but I am thinking of proposing one. Given your research interests, I would be most interested in knowing whether you would be interested in participating – whether loosely (i.e., you would be willing to allow the relevant classes you teach to be listed as counting for Cognitive Science credit) or more formally (i.e., you would be interested in being a member of the steering committee).

Basically, what I envisage for such a program would be not much more than a name and a loose structure organizing various faculty (and courses presently being offered) in Psychology, the Behavioral Sciences, the Neurosciences, Computer Science, Linguistics, Biology (especially neurobiology and evolutionary biology), and Philosophy (Mind, Language, and Logic). The program would offer undergraduates the opportunity to get some sort of certificate in Cognitive Science (I am presently investigating Cognitive Science programs at other universities to determine how we might structure requirements and related courses etc.); and the Program would also provide to interested faculty the opportunity to get together occasionally (perhaps when an outside speaker is invited in, as part of a speaker series that I hope to have funded by the Dean's Office). Participation in the Program will not be a time- or



July 3, 2003

Dear Dr. Sanford Goldberg,

Department of Biology

101 Morgan Building Lexington, Kentucky 40506-0225 Office: (859) 257-4711

Fax: (859) 257-1717 www.uky.edu

This is a letter of support related to your Cognitive Science Program.

I sincerely feel that it is important to have such a program as you have proposed at UK since it initiates discussion and a forum for which students can participate across disciplines. Not only is this program of benefit to the students but faculty as well will be encouraged to promote cross-fertilization of ideas from the various disciplines.

Such a program may even entice students to apply to UK for this major because of its uniqueness. We could use additional selling features to attract good students that will bridge various programs. The university community as a whole should benefit by having a Cognitive Science Program on campus.

Sincerely yours,

Dr. Robin L. Cooper

Associate Professor in Biology



Dr. Sandy Goldberg
Director of Graduate Studies and Associate Professor
Department of Philosophy
University of Kentucky
1427 Patterson Office Tower
Lexington, KY 40506-0027
fax: (859) 257-3286

Department of Biology

101 Morgan Building Lexington, Kentucky 40506-0225 Office: (859) 257-4711 Fax: (859) 257-1717 www.uky.edu

RE: Proposed Cognitive Science Program

7 July 2003

Dear Sandy,

I write in strong support for the proposal to establish a Cognitive Science Program at UK. I think such a program is very feasible here, would boost the University's visibility in this important area, and more selfishly, would benefit my research and my students in tangible ways.

Cognitive Science is a broad area encompassing the diversity of ways scholars have sought to understand the mind. The proposed program brings together a large number of experts already here on campus but who are scattered among existing departments. This program would foster increased interaction among these people, expand the training opportunities for both graduate and undergraduate students, and increase UK's ability to compete for funds and people. The program would thus add significant value to the activities of the institution.

I also think the proposed program has considerable potential to enhance my own research. I study the ecology and evolution of animal decision-making. The interactions among faculty and students that would occur in the proposed program are likely to reveal new ways of approaching my research. I have been interacting with several faculty members in the Psychology Department in this way and those interactions have had a significant impact on my research questions and my students' training. The Cognitive Science Program would add further breadth to my program, attract additional students as well has supplement the training of existing ones, and could open up new avenues for funding my research.

In sum, I am pleased that you are proposing a Cognitive Science Program and would be happy to assist you in garnering resources to make it happen.

Sincerely,

David F. Westneat, Professor of Biology



July 14, 2003

Dr. Sanford Goldberg Associate professor Department of Philosophy University of Kentucky Associate Provost for Undergraduate Education

217 Funkhouser Building Lexington, KY 40506-0054 (859) 257-3027 Fax: (859) 323-1932 www.uky.edu/UGS/

Dear Dr. Goldberg:

I enthusiastically support the creation of a cognitive science program here at UK. I believe that implementing such a program as certificate is a prudent way to inaugurate this academic initiative. Cognitive science and neuroscience represent two of the most vigorous interdisciplinary areas within academe. Each has grown precipitously over the past three decades, and the relationship between the two is quite extensive. The UK community currently features an active neuroscience group that includes faculty and students from central campus as well as the Medical Center. The formation of a cognitive science initiative would serve as a productive compliment to the neuroscience program.

The more compelling case for a cognitive science program, however, is the intrinsic value such an initiative affords the UK scholarly community. It is no hyperbole to assert that cognitive science is the schema by which research in the study of mind and behavior is now organized and funded across a wide band of disciplines. There are many faculty at UK within humanities, social science, and natural science departments who share an intellectual bond much more important than the department affiliations that segregate them; It is the problems that we study and the content of our inquiry that unite faculty. Anything UK can do to bring these faculty together and to exploit the vitality of adding cognitive science to the undergraduate and graduate curricula would greatly benefit UK.

My own research interests have been and continue to fall outside of departmental boundaries and are best conceptualized within the cognitive science framework. Beyond my interest as a scholar, I would be very willing to support this proposal with respect to my responsibilities as Associate Provost for Undergraduate Education. There are several ways in which I might be able to assist the development of the undergraduate minor, and I encourage you to rely on my support as your proposal moves forward. I am especially excited about the salubrious impact the minor could have on the College of Arts and Sciences.

As a footnote, the next Idea Festival to be sponsored by the Kentucky Science and Technology Corporation will focus on consciousness: not a bad endorsement for the relevance of a cognitive science initiative at UK!

Sincerely,

Philipp J. Kraemer

Professor Department of Psychology and Associate Provost



Sanford Goldberg
Director of Graduate Studies and Associate Professor
Department of Philosophy
University of Kentucky
1427 Patterson Office Tower
Lexington, KY 40506-0027

July 8, 2003

Department of Neurology

College of Medicine Kentucky Clinic - L445 Lexington, KY 40536-0284 Clinic: (859) 323-5661 Fax: (859) 323-6411

Office: (859) 323-6702 Fax: (859) 323-5943 www.comed.uky.edu

Dear Sandy,

This letter is to convey my interest and support for the Cognitive Science Program you are organizing at UK. Multidisciplinary research and scholarship is an important new approach to understanding the brain's higher functions. I would be interested in participating in the development of such a program and contributing what I can. We need to teach students the findings and techniques associated with Cognitive Science, and it appears to me that even many faculty are unaware of the remarkable progress and developments in this field in the past ten years, and its deep implications for understanding our universe.

What I would bring is a behavioral neurology perspective, that is, interactions of cognition and other higher brain functions with diseases affecting the brain, particularly the degenerative dementias. My research work uses functional magnetic resonance imaging.

There are certain thinkers in this field, e.g., Marcel Mesulaum, Ken Heilman, Antonio Demasio, Gerald Edelman, Mike Gazzaniga, Patricia Churchland and VS Ramachandran all with very different perspectives who would be well worth bringing here to stir up some excitement. Perhaps one or more of them would be willing to serve on an advisory panel to 'kick-start' Cognitive Science at UK. Thank you for beginning this important endeavor.

With Best Regards,

Charles D. Smith, MD Professor of Neurology