October 25, 2007
EC8490(b)

To: Elizabeth Bjork, Chair, Academic Senate
    Executive Board

From: Robert Fowell, Chair
      UCLA College Faculty Executive Committee

Re: Proposal to Establish a Center for Interdisciplinary Instruction (CII) in Society and Genetics

At its October 12, 2007 meeting, the Faculty Executive Committee (FEC) of the UCLA College approved a request to create a Center for Interdisciplinary Instruction (CII) in Society and Genetics, as described in the proposal dated September 28, 2007 (copy of proposal attached). The proposal was presented to the Committee by Professors M. Norton Wise and Sally Gibbons, on behalf of the Center for Society and Genetics. The proposal’s intention was endorsed with a vote of 9 in favor, 1 opposed, and 1 abstention. The proposal states that the CII will be under the aegis of the Executive Dean Patricia O’Brien; however, due to the fact that the College is in a transition phase, the reporting line for the CII is pending resolution of College leadership issues.

While Committee members were strongly supportive of the proposal, concerns were raised about how the review process would be conducted for faculty holding a 100% appointment in the CII and a 0% appointment in a department. The Committee feels that, a faculty member should also be reviewed in the department in order to place the faculty’s contribution within the context of a discipline, assuming that the CII would best address the interdisciplinary perspective. The FEC requests that the Council on Academic Personnel consider this issue in light of Appendix 15 (The UCLA CALL) that governs the appointment of ladder faculty in multidisciplinary units. Section A-1 of this Appendix states that “full-time, 100% appointments may be made in CII’s”. Section A-4 notes that “Joint or split appointments are the primary form of ladder faculty appointments in CII’s...” The FEC recommends that 100% appointments in the CII be limited, with such a limitation to be specified in the CII’s bylaws.

The FEC recognizes the importance of this intellectual discipline and the significance of this program to the UCLA campus. The faculty involved are to be commended for their sustained commitment to the Center for Society and Genetics: a center that is recognized for its cohesion, breadth and quality. The Committee believes that maintaining a balance between North and South campus disciplines is necessary for the Center and CII’s continued success.

The Committee commended the collaborative efforts to develop this well-documented proposal, and also the support shown by Scott Waugh, Interim Executive Vice Chancellor. The Committee recognizes the unique scope of the proposed center and that it is ideally positioned to take on
bridge-building activity. It was acknowledged that a multidisciplinary approach to education is in demand regarding the co-evolution of science and society; a niche the center is positioned to aptly fill.

It is noted that a separate request for a free-standing minor in Society and Genetics was approved by the Committee at the same meeting, with the understanding that it would be transferred to the CII upon its activation.

This request was a discussion item on the agenda. The FEC respectfully requests an expedited Academic Senate review and an effective date of Fall 2008.

Attachment

cc: Reynaldo Macias, Dean, Social Sciences  
    Edward McCabe, Co-Director, Center for Society and Genetics  
    M. Norton Wise, Co-Director, Center for Society and Genetics  
    Sally Gibbons, Associate Director, Center for Society and Genetics  
    Jaime Balboa, Chief Academic Officer, Academic Senate  
    Francine Alexander  
    Kim Alexander  
    Stuart Brown  
    Randy Cirilo  
    Kathleen Copenhaver  
    Penny Hein-Unruh  
    Leann Hennig  
    Robert Kilgore  
    Masai Minters  
    Roxanne Neal  
    Tom Nykiel
September 28, 2007

Professor Robert Fovell, Chair
Faculty Executive Committee
Murphy Hall A-265
Mail code 157101

Dear Professor Fovell:

We are pleased to submit for your consideration the enclosed proposal to establish the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). This proposal has been endorsed by the Center-wide interim faculty advisory committee, and it is the product of many months of careful thought and effort.

The Center’s directors and faculty firmly believe that becoming a CII will provide the most suitable structure to achieve our research, teaching and service aims. Given our multidisciplinary mission, being a CII will give us needed flexibility to recruit and hire outstanding faculty in this newly emerging field and to develop signature academic programs by fostering an environment in which teaching and research inform each other.

We believe UCLA can take an important leadership role nationally and internationally in shaping the challenges and opportunities generated by the new genetics only if it supports cross-campus multidisciplinary academic units such as the Center. The integrated administrative structure of the CII offers just this support.

Thank you for your consideration of this proposal.

Sincerely,

M. Norton Wise, PhD
Co-Director, Center for Society and Genetics
Professor of History

Edward McCabe, MD, PhD
Co-Director, Center for Society and Genetics
Executive Chair, Pediatrics
Professor of Human Genetics
PROPOSAL TO ESTABLISH
THE UCLA
CENTER FOR SOCIETY AND GENETICS

A CAMPUS-WIDE CENTER FOR INTERDISCIPLINARY INSTRUCTION

SUBMITTED TO THE

COLLEGE FACULTY EXECUTIVE COMMITTEE

OCTOBER 12, 2007
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I. Overview

A. Need for a CII

The initiative in society and genetics was first established by Chancellor Emeritus Albert Carnesale in September 2001. The goal was to launch a program at UCLA that would stand at that crucial intersection where biological science meets the humanities and social sciences. In this scarcely populated domain, the Center for Society and Genetics (herein referred to as CSG or the Center) would produce cutting-edge cross-disciplinary research and education and engage in public outreach regarding the challenges and opportunities presented by the new genetic sciences in their dynamic relation to the larger social world.

To this end, the Center has worked to develop a broad-based community of faculty, postdocs and graduate students who can cultivate the intellectual life of the Center. It has mounted an ongoing colloquium series as well as an annual public symposium on such pressing topics as sexuality and stem cells, adding a two-day academic conference on stem cells in 2006. In addition, we have already built a core group of Center-specific scholars and researchers. Two faculty hires are in place and other searches are underway. (For a fuller account of the Center, please see the UCLA College Report spotlight article in Appendix 1.)

As the Center continues to grow, it has become apparent that we require an organizational status that can fully support and integrate our teaching, research and service mission. In this proposal, we request that the Center become a Center for Interdisciplinary Instruction (CII) to achieve this goal and to recognize its standing as an academic unit.

Background: Why a CII

The Center is becoming increasingly recognized nationally and internationally for contributing to the creation of a vital new area of scholarship. Chancellor Carnesale and the organizers of the Center recognized early on that because this area lay at the intersection of the life sciences and the human sciences where few scholars tread (see Section III.C below), it could not be pieced together from elements of existing academic units alone or by drawing only on current faculty members from various departments (as many interdepartmental programs do). Instead, it required building a distinctive academic unit organized around a critical mass of new faculty. With these specifically committed faculty members at its core, and with a strong support belt of existing faculty, the Center would be able to realize its goal: to shape the direction of a newly emerging field and to create and sustain research and teaching that are mutually reinforcing.

This opportunity to build something entirely new and genuinely cross-disciplinary will be best supported by establishing the Center in what is a relatively new organizational structure—that of the CII. CIIs are notably distinguished from interdepartmental programs (IDPs) by receiving significant resources, including both funding and an allocation of permanent FTE, and by having the ability to make appointments up to 100% for a group of core faculty. They are also distinguished from ORUs (organized research units) in encouraging the integration of teaching and research, rather than focusing on a program of research. Finally, CIIs are distinguished from departments by their mission—to act as attractors bringing people together from all corners of the campus, and to set the agenda for the campus with respect to this complex new field. By becoming a CII, the Center will be able to implement this important integrated academic mission.
The most recent such unit is the Institute of the Environment (IoE), established as a CII in 1997. It is instructive to look at the similarities between the Center and the IoE and their parallel histories, as summarized in the following table.

<table>
<thead>
<tr>
<th>INSTITUTE OF THE ENVIRONMENT</th>
<th>CENTER FOR SOCIETY AND GENETICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom Smith, Acting Director</td>
<td>Ed McCabe, Co-Director Norton Wise, Co-Director</td>
</tr>
</tbody>
</table>

| Origin | Established by the Chancellor in early 1990s to foster strong research and education programs in environmental studies | Established by the Chancellor in 2001 as part of an initiative to foster strong interactions between biomedical and human sciences |
| FTE allocation | 7.25 3 filled, 4.25 unfilled | 6 2 filled, 4 unfilled |
| Faculty distribution | Current total: 15 1 full, 4 split, 10 joint | Current total: 12 2 split, 10 joint |
| Structure | Established as a CII in 1997 Also runs a small “c” research center | Proposal to become a CII (2007) Also runs a small “c” research center |

Origins and FTE: Both the IoE and CSG were established by the Chancellor (Chancellor Young in the case of the IoE and Chancellor Carnesale in the case of CSG), who recognized that UCLA had the opportunity to create signature programs that cut across disciplines and tackled problems that urgently needed addressing in the twenty-first century. To that end, the Chancellor provided a significant number of FTE to each unit—7.25 to the IoE and 5.5 to CSG (with an additional .5 FTE provided later to CSG by the Executive Dean of the College). The goal was to give these units the autonomy to make important hires that further their scholarly mission without being tightly bound by disciplinary constraints.

Both units now have significant core faculties. Currently, the IoE has one full, four split and ten joint appointments among its core faculty. The CSG has two split and ten joint appointments and anticipates making five to seven new hires as split or full appointments. CSG further expects that a handful of additional UCLA faculty will choose to seek joint appointments in the future, bringing the joint appointments to roughly 15.

Although the Center intends to continue collaborating with departments in making joint hires (see Sections III.B.1 and V.A), our experience shows that hiring across disciplines can flounder if it is too circumscribed by the needs and expectations of individual departments. The mission of the Center to work at the intersection of biology and society demands that we be able to attract candidates whose work escapes disciplinary boundaries, and this aim requires that we possess the array of hiring options that being a CII would provide.

Academic Programs: Both the IoE and CSG initiated their instructional programs with a Freshman Cluster. The IoE launched the Global Environment cluster in 1997, and CSG launched the Sex: from Biology to Gendered Society cluster in 2006 in addition to taking responsibility for the Biotechnology
and Society cluster which began in 2002. Using the experience of the clusters as a starting place, both the IoE and CSG developed undergraduate minors and majors, or are in the process of doing so. The IoE’s minor in Environmental Systems and Society was launched in 2002, while CSG anticipates launching its minor in Society and Genetics in Winter 2008. The IoE introduced its major in Environmental Science in 2006, and CSG is working on developing a major in the near future.

By becoming a CII the Center will, like the IoE, be in a strong position to mount both of these important educational programs. In addition to providing a visible and systematic curriculum to students under the “Society and Genetics” rubric, being a CII clarifies the teaching responsibilities of faculty members. Interdepartmental program (IDP) directors often find themselves negotiating for course releases to have faculty teach in their programs rather than in the faculty member’s home department. In addition, some departments contest who should be teaching what courses, generating a kind of intellectual turf battle. Fortunately, the CII organizational structure offers a more positive way to design and implement a cross-disciplinary major and minor.

In short: becoming a CII will allow the Center to perform essential functions that foster cross-disciplinary research and teaching on a campus-wide level. By having an integrated administrative structure for research and teaching and a core faculty committed to both these functions, we can create an environment in which research and teaching can fundamentally inform each other and shape the direction of cross-disciplinary work in this field.

B. Proposal Approval Process

The idea that the Center for Society and Genetics should become a center for interdisciplinary instruction grew out of faculty discussions over the last five years. In particular, the CII became the most viable option to the faculty involved as they sought to develop the minor and initiated conversations about housing a new cross-disciplinary major.

Over the last two years, we have consulted with participating faculty, Senate leadership, Chairs, Deans, the EVC and the Chancellor about becoming a CII. The present proposal grew out of those discussions.

In Spring 2007, Acting Executive Vice Chancellor Scott Waugh appointed a temporary faculty advisory committee to review and vote on the CII proposal and the proposal for the minor, as well as new faculty appointments for the Center for Society and Genetics. (See correspondence in Appendix 2.) The Interim Faculty Advisory Committee comprises fourteen individuals, most of whom will seek joint or split appointments in the Center, as indicated in the table below. The appointment request letters from the faculty are contained in Appendix 3.

<table>
<thead>
<tr>
<th>NAME</th>
<th>DEPARTMENT</th>
<th>CSG APPT. STATUS</th>
<th>VOTING RIGHTS</th>
</tr>
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<tbody>
<tr>
<td>de Chadarevian, Soraya</td>
<td>History; CSG</td>
<td>Split</td>
<td>Yes</td>
</tr>
<tr>
<td>Panofsky, Aaron</td>
<td>Public Policy; CSG</td>
<td>Split</td>
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<td>Grody, Wayne</td>
<td>Pathology; Human Genetics</td>
<td>Joint</td>
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<tr>
<td>Herman, Barbara</td>
<td>Philosophy</td>
<td>Joint</td>
<td>Yes</td>
</tr>
<tr>
<td>McCabe, Edward R.B.</td>
<td>Pediatrics; Human Genetics; Bioengineering</td>
<td>Joint</td>
<td>Yes</td>
</tr>
<tr>
<td>Silk, Joan</td>
<td>Anthropology</td>
<td>Joint</td>
<td>Yes</td>
</tr>
<tr>
<td>Timmermans, Stefan</td>
<td>Sociology</td>
<td>Joint</td>
<td>Yes</td>
</tr>
<tr>
<td>Vilain, Eric</td>
<td>Human Genetics; Pediatrics; Urology</td>
<td>Joint</td>
<td>Yes</td>
</tr>
<tr>
<td>Wise, M. Norton</td>
<td>History</td>
<td>Joint</td>
<td>Yes</td>
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</tbody>
</table>
This group discussed the CII proposal at two publicly announced faculty meetings on March 15 and April 5, 2007. A ballot was taken on April 5, 2007 and the faculty advisory committee voted unanimously (14-yes; 0-no) to approve the proposal.
II. Introduction

The Human Genome Project was completed in April 2003 and represents a major biomedical accomplishment. Knowledge of the sequence of our human genome is profoundly affecting not only our understanding of the fundamental basis of disease, but also our consideration of our position in the biosphere, the relationship between race and ethnicity, and the nature of sex and gender. From our food and medicine to our sexuality and emotions, the avalanche of new findings in genetics is requiring us to rethink our views about what it means to be human, to form social bonds, and to live in society.

Chancellor Carnesale brought to UCLA his vision for a multidisciplinary center to interrogate the interface between genetics and society. Dr. Edward McCabe originally implemented this initiative with the UCLA Center for Society, the Individual and Genetics (CSIG) in September 2001, located primarily in the medical school. The desire to extend the reach of the Center to the human sciences led to the appointment of Professor M. Norton Wise to act as co-director with Dr. McCabe and to coordinate the human science expansion. The newly constituted Center for Society and Genetics (CSG) was formally named in July 2004. Collectively, the Center membership now represents 26 departments, nine professional schools, and three College divisions at UCLA. Areas of scholarship include, but are not limited to, anthropology, business, history, human genetics, law, philosophy, psychiatry, psychology, public policy, and sociology. While many universities have established centers or institutes with similar-sounding names, to the best of our knowledge the UCLA Center is unique in the breadth and commitment of its faculty to cross-disciplinary education and research.

This proposal outlines the establishment of a new campus-wide academic unit with an innovative structure and program to promote these cross-disciplinary activities and to enhance their effectiveness, extent, coordination, integration and visibility at UCLA, nationally and internationally. The Center currently sponsors graduate student and postdoctoral fellows; it is involved in a number of cross-disciplinary courses; and it has submitted its proposal for a minor. The Center hosts both an annual public symposium and a fortnightly campus colloquium. It also facilitates cross-disciplinary scholarship among individual faculty members, postdocs and graduate student fellows and provides a site for their collaborative research. Taken together, these activities will be facilitated and enhanced by the CSG becoming a center for interdisciplinary instruction (CII).

A. Motivation

Niels Bohr reminded the United Nations regarding the development of the hydrogen bomb, “Any widening of the borders of our knowledge imposes an increased responsibility on individuals and nations through the possibilities it gives to shaping the conditions of human life.”

If Bohr were alive today, he would surely be fascinated by the possibilities for shaping human life opened up by the flood of new knowledge in biology. The UCLA Center for Society and Genetics aims to harness the promise of the new genetic sciences by providing a comprehensive understanding of their power to reshape humanity while generating responsible solutions to ethical, social and legal issues and encouraging socially informed innovation.

The exhilarating promise of the new genetics lies in its potential to extend life, improve well-being, and even reshape humanity. But it also reveals more clearly than ever before the need to integrate social thought with genetic research. At every level, human genetics is inherently social: genes, gene expression, genetic research and medical therapies all co-evolve with society. This complex reality creates an unprecedented need for new approaches to research and analysis. To secure the public good, the Center for Society and Genetics will take the lead in creating and disseminating the integrated knowledge necessary to understand and shape the complex interactions between the new biology and
the social world—a world that is not only profoundly affected by the science but also ultimately responsible for directing it.

**B. Organizational Vision: Co-Evolution**

The more we learn about the relation between genes and behavior the more we appreciate the complexity and plasticity of these relations. Nature and nurture cannot be separated as two opposed determinants of who we are. For that reason, the Center takes as its intellectual focus the idea of *co-evolution* of society and genetics shaping each other in a dynamic interrelationship.

This orientation follows naturally from the Human Genome Project, which has focused attention on two major concerns. The first area of concern has to do with the ethical, legal and social issues arising from knowledge of the human genome and from associated research and technology. The second concern has to do with our tendency to accept genetic determinism, clouding our appreciation of the fact that the genetic basis of human life far exceeds mere gene sequences. The evidence that we are much more than the sum of our genomic sequences is based on scientific observations of the complex interactions of multiple genes and the crucial role of both microscopic and macroscopic environments, including social interactions, on gene expression. In fact, both concerns draw attention to the iterative, co-evolutionary nature of the scholarship integrating society and genetics.

A first level of co-evolution involves the social structuring of genetic research and technological development and of the lives of those affected by them. Research and development typically occur in universities and corporations, laboratories and production facilities. They are structured spatially and temporally, involve hierarchies of responsibility and work, and develop modes of discourse that interrelate their form and content. We need to understand how this socially structured milieu is related to the knowledge and the technologies being produced within it and its relationship to the larger society—all of us—served by those products, whether well or badly.

On another level are the genes themselves. From an evolutionary perspective, the human genome is inherently social; it has co-evolved with language, tools, and the domestication of plants and animals. Originally unable to tolerate lactose, for example, many of us descended from members of herding societies now carry a genetic mutation that allows us to drink cow’s milk. Co-evolutionary forces have contributed to our capacity to live as individuals in complex societies. These forces may even help explain such things as the tendency to respond violently to insults in some cultures, to honor informal contracts, or to establish close relations with animals and pets.

A rather different level of co-evolution reflects the process of gene expression in individuals over the course of their lifespan in particular environments. For example, the present epidemic of diabetes throughout the developed world may be a consequence of rapid social change with increased caloric intake and decreased exercise leading to obesity. It has been hypothesized that the appearance of diabetes in some individuals may be due to their possessing a metabolism that is specially adapted to cope with unpredictable food supplies, which cannot evolve genetically at the same rate as social change.

As another example, we now know that moral sentiments such as empathy and the sense of fairness emerge as children develop an understanding of others’ thoughts and feelings, and these sentiments have biological manifestations evidenced, for example, by functional brain imaging. But we also know that the moral values that people hold are a product of the societies in which they live. The simultaneous biological/social nexus implies that the future for reconsideration of venerable questions in the humanities and social sciences is wide open. Those reconsiderations will by no means obviate
traditional philosophical, literary, and historical modes of investigation but will be built directly on them.

Much of the traditional scholarship at the intersection of society and genetics addresses ethical, legal and social issues raised by genetics research. The Center will be no exception in grappling with these problems. It has already sponsored research, talks, and symposia reflecting these concerns. However, we address these issues not simply as outcomes of the impact of the new genetics research, but also consider the historical and socio-cultural context that frames the direction and priorities of that research.

With a more sophisticated consideration of all these levels of co-evolution, we will be in a better position to evaluate how as a society we are engaged at every level in the process of producing who we are and what we are becoming. Most importantly, we will be better able to judge the benefits and harms, the freedoms and inequalities that are being generated by genetics and genomics and to make informed ethical judgments about matters of law and policy. The issues are ever more pressing as genetics becomes an increasingly prominent aspect of everyday life.

C. Organizational Structure

The basic organizational structure of the Center for Society and Genetics is one of concentric circles. At the core are the co-directors, associate director, and core faculty. This critical mass of permanent Center faculty and leaders is essential for the Center to be sustainable. Thus far, the Center has hired two of its core faculty members, with two or three more faculty appointments anticipated in each of the next three years, for a total of eight or nine faculty by 2009. Along with these appointments, ten faculty members from other UCLA departments expect to take joint appointments in the Center when it becomes a CII (see Section III.B.1.c. below).

Surrounding and supporting this core is a circle of annually appointed faculty fellows, as well as the postdoctoral and graduate student fellows and their mentors (about ten individuals). On a year-to-year basis, this second circle contributes significantly to the intellectual life of the Center, as well as teaching key courses and providing critical membership on committees, thereby allowing the Center to operate.

Finally, there is a third, outer circle of UCLA affiliates who participate in Center activities selectively when relevant. These faculty members are available to contribute to specific projects (e.g. mentoring, search committees, presentations, etc.). Combined, the three rings maintain an effective cross-disciplinary unit. Over the last few years, they have contained an active group of more than 50 individuals. See Appendix 4 for a complete list of Center affiliates.

The Center has two co-directors, one from the natural sciences and one from the human sciences, reflecting its focus on the deep interaction between science and society. Dr. Ed McCabe, physician-in-chief at Mattel Children’s Hospital, Mattel Executive Endowed Chair of Pediatrics and Professor of Pediatrics, Human Genetics and Bioengineering, provides crucial leadership to the communities involved from biological sciences and medicine. Among his extensive list of accomplishments, McCabe served as president of the American Board of Medical Genetics (1995-96), president of the American College of Medical Genetics (2001-02), president of the Western Society for Pediatric Research (2002), chair of the U.S. Department of Health and Human Services Secretary's Advisory Committee on Genetic Testing (1998-2002) and chair of the Secretary's Advisory Committee on Genetics, Health and Society (2002-04). He is the current President of the American Pediatric Society, and is a member of the Institute of Medicine and a fellow of the American Association for the Advancement of Science.
Professor M. Norton Wise, Distinguished Professor of History, is the Center’s co-director representing the social sciences and humanities. With PhD degrees in both physics and history, he has published widely on topics in the history of science from the eighteenth century to the present. He is best known for his works on the relation between science and industrialization and for his contributions to the “cultural history of science,” which may be understood as the co-evolution of science and culture. Author or editor of four books and many articles, Wise has been elected a Fellow of the American Academy of Arts and Sciences, the Académie Internationale d'Histoire des Sciences, the American Physical Society, and the American Association for the Advancement of Science. In addition to regular positions at UCLA and Princeton, he has held visiting appointments in France, Italy, Israel, and Germany.

D. Objectives

CSG is an interdisciplinary center that embodies creative new approaches to knowledge formation and social engagement. It draws on the breadth and depth of expertise in the College and the professional schools in order to:

- Establish a core faculty engaged in multidisciplinary teaching and research on a long-term basis;
- Attack critical problems through programs that can simultaneously engage the biological and social dimensions of complex issues such as stem cell research, diabetes and obesity, identity and race, gender, and aging;
- Propagate collaborative global networks and develop sophisticated electronic tools to enhance collaborative research at a distance;
- Create and offer new cross-disciplinary courses and degree programs;
- Foster public outreach; and
- Develop innovative policy proposals and influence policy at a global level through annual reports and evaluations on timely issues.
III. UCLA’s Center for Society and Genetics

Many of the decisive problems and possibilities of the twenty-first century are located at the intersection of the biological and human sciences. And yet, the contemporary research university, organized into discrete departments and schools, is ill-suited to meeting challenges that demand an integrated approach to knowledge creation and problem solving. The Center for Society and Genetics unites UCLA’s world-class departments in the College of Letters and Science with its top-ranked professional schools in the mission of achieving this integration in that domain where the biological is also social and the social is biological.

As Chancellor Carnesale has observed, this will be the century of the life sciences—biology, medicine, genetics and nanotechnology. But to harness the full benefits of the revolutionary nature of biology for improvement of the human condition, we have to do more than develop outstanding bench and clinical science. We must also strengthen our ability to understand and make informed choices about the complex interactions between biology and the social world.

A. Opportunities

1. New Challenges

Today, no university has a major forum for bringing together the insights of the natural and human sciences to mutually inform each other in a thoroughgoing and systematic way. Nor do universities adequately grapple with the breakdown of the distinction between the pure and applied sciences. The Center for Society and Genetics can begin to tackle both these problems.

The failure of universities to integrate the insights of the natural and human sciences is due largely to old ways of thinking about how the world is divided up—namely, into a physical component distinct from and unaffected by human beliefs, actions and desires on the one hand and a social component that is the product of precisely these features on the other. Although it has long been recognized that this division imperfectly reflects the complexity of the real world, universities have continued to find it expedient to divide scholarship roughly along these lines. The revolution in the biological sciences demands that we give up this old strategy and embark on a significant multi-disciplinary effort to understand and direct the complex interactions of these spheres.

Further, the classic separation of pure from applied research has become untenable. For example, it is widely recognized that technologies are often the basis, rather than the product, of new scientific understanding (e.g. computers and DNA technologies). Moreover, basic research is often carried on in commercial environments, while “applied” research takes place in universities. These shifts have brought commercialization into a prominent but as yet poorly defined position in the university. Only through sustained collaborations among the schools of management and law and the College can we understand and shape the relationship between the university and industry in ways that encourage vital innovation while maintaining the traditional values of the university.

2. Community Outreach

Our annual symposia, held since 2003, attract an audience of 300 to 400 individuals from throughout southern California. These symposia have brought together international experts to discuss their topics, permitting them to interact with CSG faculty and members of our community. Because of our commitment to improving K-12 education about society and genetics, we have made a special effort to attract teachers and students to our symposia, with more apparent success in drawing high school age students. Topics have included: The Storefront Genome – implications of the availability of the human

CSG faculty members are also regularly called upon for community-based educational events. For example, Ed McCabe was one of four members on a panel discussing reproductive cloning at the California Science Center, and provided an introduction to the science of cloning. That presentation and panel discussion was videotaped and has been shown as part of the Science Matters series on PBS TV.

B. Necessary Actions

As discussed above, the departments in professional schools, and those dedicated to the human and natural sciences have developed largely independently and isolated from one another. The dynamic intersection between society and genetics does not fit easily into these traditionally constructed departmental structures. While UCLA is more open to cross-fertilization than many other universities, the interactions between faculty members across disciplines are often quite limited.

CSG, despite its youth, has demonstrated the ability to teach and investigate across these traditional disciplinary boundaries and to make valuable contributions to the literature and to policy. However, it is clear that the departmentally based structure of the university and its academic promotion system pose significant challenges to cross-disciplinary activities. Academic traditionalists do not necessarily value or even trust new areas of research that cross these boundaries.

By developing a robust multidisciplinary, cross-campus unit, the Center can be a central agent in creating integrated knowledge across the natural and human science domains and between pure and applied science. This unique unit will prepare students to address fundamental scholarly as well as real-world problems. Genetics and genomics are relatively new disciplines and their challenges rarely fit neatly into extant traditional university departments. Future researchers and leaders, whether involved in business, law, medicine or public policy, or as academics in the natural or human sciences, must be educated more broadly. The appeal of the cross-disciplinary education of CSG graduate students and postdoctoral fellows is evidenced by the ease with which they have been able to find outstanding faculty positions in top-rate research universities.

1. New Administrative Structures

The Center for Society and Genetics, constructed as a CII, would provide the administrative structure to foster these cross-disciplinary instructional and research activities. Recognition of CSG as a CII by the university’s faculty and administration would provide a very real acknowledgement of the acceptance and value of this area within our learned community. To the individual faculty member, this acknowledgement would be not only symbolic but also would affect decisions related to their own promotion and tenure. Most importantly, the establishment of CSG as a CII would allow the Center to fully implement its cross-disciplinary mission in a way that would not otherwise be possible.

The Center for Society and Genetics will be organized according to the following principles:

- Its structure will be based on the guidelines for a Center for Interdisciplinary Instruction (CII).
- It will also be a small “c” center for research, rather than an ORU.
- Its program will include instruction, research and outreach activities.
• It will be a campus-wide entity, reporting initially to the Executive Dean of the College, Pat O’Brien, until an appropriate home is identified, keeping in mind that the mission is not restricted to the College.

A key attribute of the Center for Society and Genetics is that its mission includes faculty who are focused on research within their traditional discipline—a discipline that overlaps with our Center’s intellectual mission—and whose work at the same time fosters cross-disciplinary intellectual exchange. Our goal is to attract the very best scholars to the Center who wish to engage in this intellectually creative enterprise.

Faculty within CSG must be willing to teach and carry out research with colleagues across traditional disciplinary barriers. In addition to classroom teaching, our faculty members are asked to serve on mentoring committees for our graduate students and postdoctoral fellows. For example, many of our students and fellows have not been formally trained in the natural sciences, and yet all have had one or more natural science mentors who have contributed very substantially to their research.

The Center, like the IoE, is devoted to developing interdisciplinary instruction, and its organization is consistent with the Senate regulations regarding CIIIs (see Appendix 5). As outlined below, the Center meets all of the CII characteristics:

a. CSG currently holds six institutional FTE and hopes to obtain additional FTE with the further development of the Center and the Biology and Society major.

b. The Center faculty includes those who hold permanent appointments in the Center, which could be joint or split appointments. In the period prior to CSG’s being established as a CII, an interim faculty advisory committee (listed on p. 6) has been appointed by the Executive Vice Chancellor to review and vote on all major Center matters regarding personnel, as well as curricular and administrative proposals. The committee also has established and approved bylaws to govern CSG (contained in Appendix 6).

c. Initially, the majority of faculty will hold joint appointments in CSG, with their academic home located in another department, as seen in the table below. All faculty members will have voting rights on all matters, including academic personnel issues, except in cases where individuals waive those rights.

<table>
<thead>
<tr>
<th>FACULTY, DEPARTMENT</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soraya de Chadarevian, History and CSG</td>
<td>Split appointment</td>
</tr>
<tr>
<td>Wayne Grody, Pathology and Human Genetics</td>
<td>Joint, with voting rights</td>
</tr>
<tr>
<td>Barbara Herman, Philosophy</td>
<td>Joint, with voting rights</td>
</tr>
<tr>
<td>Russell Korobkin, Law</td>
<td>Joint, voting rights waived</td>
</tr>
<tr>
<td>Ed McCabe, Pediatrics, Human Genetics, Bioengineering</td>
<td>Joint, with voting rights</td>
</tr>
<tr>
<td>Aaron Panofsky, Public Policy and CSG</td>
<td>Split appointment</td>
</tr>
<tr>
<td>Christina Palmer, Psychiatry, Biobehavioral Sciences,</td>
<td>Joint, voting rights waived</td>
</tr>
<tr>
<td>Human Genetics</td>
<td></td>
</tr>
<tr>
<td>Joan Silk, Anthropology</td>
<td>Joint, with voting rights</td>
</tr>
<tr>
<td>Janet Sinsheimer, Human Genetics, Biomathematics,</td>
<td>Joint, voting rights waived</td>
</tr>
<tr>
<td>Biostatistics</td>
<td></td>
</tr>
<tr>
<td>Stefan Timmermans, Sociology</td>
<td>Joint, with voting rights</td>
</tr>
<tr>
<td>Eric Vilain, Human Genetics, Pediatrics, Urology</td>
<td>Joint, with voting rights</td>
</tr>
<tr>
<td>Norton Wise, History</td>
<td>Joint, with voting rights</td>
</tr>
</tbody>
</table>

Proposal for a Center for Interdisciplinary Instruction – October 12, 2007
d. The percentage appointment assigned to the Center will range from 100% to 0% depending on the source of the FTE, the responsibilities in the Center, and the negotiation of the position. In certain cases, particularly in the appointment of a co-director, the percentage time in the Center may be 100% with a joint appointment (WOS) in another academic department.

e. As a CII, CSG will assume responsibility for academic personnel actions affecting its faculty and staff such as appointments, promotions, advancements, and terminations. For faculty members with split appointments, the home department will initiate the actions and CSG will participate. For faculty with 100% appointment in the Center and a joint appointment in another department, members of the other department will be included on the CSG personnel committee (if the Center faculty member has not waived voting rights in that department). All personnel actions will be conducted in a manner consistent with The CALL.

2. Reporting Responsibilities

Initially, the Center’s academic home will be under the aegis of Pat O’Brien as Executive Dean of the College. Given her commitment to cross-disciplinary studies and the current transitional nature of the Deans’ positions in the College, it seems best to establish the Center with a report to the Executive Dean. This relationship will be established initially for two years, with a subsequent assessment of its advantages and constraints.

C. Similar Programs on Other Campuses

No university in the country, to our knowledge, has a program like UCLA’s Center for Society and Genetics. Very roughly, programs divide into three types: (1) more narrow bioethics centers that work on the ethical, legal, and social implications (so-called ELSI scholarship) regarding the new genetics and biomedicine more generally; (2) HPS (history and philosophy of science) and STS (Science and Technology Studies) programs which engage social scientists in exploring not only how science and technology are produced and shaped by society, but how science and technology in turn shape the social world; and (3) biology programs that bring various scientists (biochemists, engineers, computer scientists, biologists and clinicians) together in a multidisciplinary setting to understand the biology itself at a deep level and use it to combat disease and promote well-being.

UCLA’s Center for Society and Genetics draws on the strengths of all three kinds of programs to create robustly cross-disciplinary scholarship and education focusing on the co-evolution of society and genetics. This approach allows us to contribute to important ELSI scholarship, while at the same time highlighting and clarifying the interaction between society and biology (as STS programs often do) and insisting on the centrality of the social to the biology itself (thereby complementing and extending the exciting work being done in various multidisciplinary life science programs).

The table in Appendix 7 briefly describes many of the better-known programs around the nation.
IV. Academic Program

A. Teaching and Curriculum

1. Undergraduate Curriculum

Since its inception, the Center has considered education to be a vital part of its mission. Center-affiliated faculty have taught a number of important Center-related undergraduate courses, including the freshman cluster GE71, *Biotechnology and Society* (which has been offered for the past five years); HC80, *Genomics and the Boundaries of the Self* (offered for the past five years); and the new freshman cluster GE72, *Sex: From Biology to Gendered Society*. In addition to these courses, Center fellows have offered an array of *Fiat Lux* courses, as well as upper division seminars that are directly related to the cross-disciplinary focus of the Center. A list of these courses is provided in Appendix 8.

As a CII, all of these courses would be listed in the catalog under the Society and Genetics rubric, informing students in a systematic way about the range of courses available to them in this area.

a. Minor in Society and Genetics

This existing curriculum will be augmented by a minor in Society and Genetics that will provide undergraduates throughout the College and other schools at UCLA with the opportunity to understand and probe the complex problems and possibilities presented by genetics, with special attention to its social context and content.

Given the intimate interaction between genetics and the social world in which it is embedded, the Society and Genetics minor will be necessarily multidisciplinary. It will supplement a range of majors: life science majors will have the opportunity to engage in an in-depth exploration of the social content and implications of the science they already study, while humanities and social science majors will have the chance to use the tools of their disciplines to explore one of the most significant areas of science and medicine shaping our world today.

The Center’s emphasis on multidisciplinary scholarship will be reflected in the collaborative approach to instruction in the core courses of the minor as well as in the wide range of elective courses in such areas as history, philosophy, sociology, anthropology, public policy and biology available to students in the minor. We anticipate launching the minor in Winter 2008. For a full account of the proposed minor, see Appendix 9. This proposal is being reviewed concurrently with the CII proposal.

We are requesting that the subject heading “Society and Genetics” be created for the minor. We are expecting the minor to be initially launched as a freestanding minor under the aegis of Reynaldo Macias, Acting Dean for Social Sciences. It will be housed in the Center once the Center becomes a CII. Among new courses created under the subject heading will be the core courses (SG 101, 102W, and 191 A-Z), a variable topics seminar (SG 188), and an independent research tutorial (199) as well as a corequisite research seminar (190), which may be taken as electives. Further upper division elective courses will also be offered through the departments of participating faculty, and with the approval of the faculty advisory committee.

b. New Major at the Intersection of Life and Human Sciences

In addition to the minor in Society and Genetics, the Center is collaborating with the College divisional deans and the Vice Provost for Undergraduate Education to develop and mount a new major at the intersection of the life and human sciences. Many of the decisive problems and possibilities of the
twenty-first century are located at this intersection, requiring an integrated approach to knowledge creation and problem solving. The proposed new major aims to bring together faculty from around UCLA to help students achieve precisely this integrated knowledge and perspective, thereby equipping them to solve problems at the boundaries of the natural and human sciences. We believe that the Center is a natural home for such an enterprise, and that it will be especially well-suited to serve this function as a CII.

On February 22, 2007, the Center convened an introductory meeting, attended by almost thirty faculty members from around the campus as well as most of the deans of the College, the Executive Vice Chancellor and the Chancellor, to initiate discussions about what developing such a major might involve. Our intention to develop a uniquely cross-campus curriculum focusing on topics that sit at the intersection of biology and the social sciences/humanities was enthusiastically supported by the faculty in attendance. We are moving to create a faculty affinity group to pursue these discussions further. And we have begun discussions with the life sciences dean and chair about designing focused but rigorous biology courses tailored to this major. See vision statement and curriculum heuristics in Appendix 10.

2. Graduate Curriculum and Training

The Center supports two graduate student fellows annually. Graduate student fellows help organize and participate in the CSG Colloquium series, interact with faculty, postdocs, and other graduate fellows in regular fellows’ meetings, and teach or TA one seminar. Each student has a mentoring committee involving at least two CSG faculty members whose areas of expertise intersect with the student’s project. In addition, one of our co-directors, Ed McCabe, serves as an ex-officio member of each mentoring committee. We have found that these committees bring Center faculty together in ways that may lead to new collaborations.

The Center is developing an ethics education and training program at the graduate level. The proposed *Self-Reflexive Bioethics* program integrates research and education and expands traditional models of ethics education. It is described in more detail below. (See Section IV.B.1.)

3. Postdoctoral Fellowships

The Center also supports one to two postdoctoral fellows annually. As with the graduate student fellows, postdoctoral fellows are expected to help organize and participate in the Center colloquium series, interact with faculty, other postdocs, and graduate fellows, and teach one seminar per year. Like the graduate student fellows, postdoctoral fellows have a mentoring committee involving at least two CSG faculty members.

4. Student Diversity

The Center envisions training a diverse student body from the undergraduate to the postdoctoral level. It is essential to train a diverse student body because the effects of interactions between society and genetics bear on human diversity and how it is constructed and viewed. To that end, the Center is currently actively seeking funds to launch a program to train ethnically, racially, and linguistically diverse students.

B. Research Program

The Center for Society and Genetics has been established to foster individual faculty, postdoctoral and graduate student research programs that integrate topics related to society and genetics and to create opportunities for synergy that will lead to collaborative multi- and cross-disciplinary research
related to our mission. We see the research programs related to the Center as being broadly defined and changing with new emerging themes. Our fellows program is structured to create a lively, creative research environment for both the individual and collaborative projects.

1. Individual Research in a Cross-Disciplinary Environment

As stated in the Overview, the Center provides individuals with cross-disciplinary interests the opportunity to work with scholars in other disciplines. In this way, Center affiliates can gain the tools and insights necessary to shape their research to incorporate an awareness of the significance of the co-evolution of genetics and society. Indeed, Center affiliation modified and deepened the research program of one of our former graduate student fellows in quite a significant manner. This case is exemplary of the kind of opportunities afforded to CSG fellows and affiliates:

Angela Nonaka (Ph.D., 2006) is a linguistic anthropologist whose work in Thailand charts the life course of Ban Khor Sign Language and its attendant speech/sign community, examining the processes of language emergence, maintenance, and shift, in relation to genetic, demographic, ideological and interactional dimensions of a speech community. Using Ban Khor as a case study, she identifies the genetic underpinnings of language emergence; revisits the core linguistic anthropological idea of the “speech community,” examining, among other things: the theoretical and definitional assumptions behind a “speech” as opposed to a “sign” community, versus a “speech/sign community”—a term inclusive of a notion of moral habitus.

Because of her association with the Center, Nonaka was able to develop the genetic aspect of her research with her two CSG mentors—Dr. Wayne Grody (Pathology & Laboratory Medicine and Human Genetics) and Dr. Christina Palmer (Psychiatry, Biobehavioral Sciences and Human Genetics). This interaction enriched her dissertation with a new disciplinary perspective that otherwise would not have been available to her. Subsequent discussions with Ed McCabe led to further collaborations between Nonaka and geneticists who, after reviewing her data, believe she may have identified a new syndromic association not previously reported. McCabe will help her prepare a manuscript describing this new syndromic association for the medical genetics literature and assist her in pursuing the collaboration to investigate the cause of this syndrome. Nonaka has since accepted a tenure-track position at the University of Texas, where she will continue her exciting work.

A second example of the way in which individuals’ research will be shaped by working in the cross-disciplinary environment of the Center is provided by the graduate-level ethics education and training program currently under development. The Self-Reflexive Bioethics program will be organized around the two interrelated ideas of (1) self-reflexive ethics—in which graduate students study ethical problems that emerge from the research they already pursue in their own disciplinary areas; and (2) expanding who counts as the “ethical expert.” This ethics education model is based on the view that researchers themselves need to identify and assess the ethical issues within their research. The basic idea is that researchers are often the only ones with adequate access to the specific circumstances under which problems arise and, indeed, with sufficient interest to pursue them before they become social/political problems. Here again, individuals, through lively discussion and collaboration in the Center, are encouraged to extend their research into terrains they would otherwise not explore.

2. Future Cross-Disciplinary Collaborations

Ultimately, the Center intends to be a hub of research studying the co-evolution of society and genetics. Building on a core faculty, a vigorous fellows’ program, and an educational program, we
anticipate cross-disciplinary collaborations that will benefit from and contribute to the CSG intellectual environment. In addition, external funding associated with these projects will further enhance the research mission of the Center.

We anticipate pursuing a number of complex problems through collaborations across the College and professional schools, with the Center acting as the focal point of these collaborations. Topics that demand this cross-disciplinary approach include:

- **Diabetes and obesity**: While scientists are identifying individual genes that predispose individuals to obesity, it is also clear that obesity and diabetes are associated with the expression of not one but many genes and many regulatory sequences, forming a complex network of interactions that act as a system. It is this system that is “expressed” as a phenotype. The system, furthermore, evolves over the long run with the population that carries it. Even in the short term it is sensitive to the conditions of life of individual members. A full examination of the problems of obesity and diabetes must integrate knowledge at many levels—including but not limited to the level of the gene, gene interactions, gene-environment interactions, public discourse, products, policy, law, R&D, insurance and markets. The deeper the analysis, the more apparent becomes the complex interplay of biology and society at every level.

- **Race and pharmacogenomics**: Race is a fraught concept of current social life, partly because we possess no clear idea of what it is, either culturally or biologically. There is a crying need for informed dialogue about the biological and cultural markers of race and about the ways in which they affect each other. In this context, the current use of race as a (rough) proxy for individual differences in the new field of pharmacogenomics offers a crucial area in which social and biological scientists must collaborate to understand the assumptions and expectations of the research and to determine what the consequences of approaching disease in terms of race and ethnicity may be for individuals and groups politically and socially as well as medically.

- **Commercialization of the university**: Every major research university has many faculty members who act as consultants for private companies or who start companies of their own to bring inventions to market (materials, techniques, instruments, drugs, and therapeutics). Although most university researchers will not selectively promote their own products and will not let commercial interest alone drive their research, the public recognizes that the temptation for such conflicts of interest is always there. While entrepreneurial action is often a great motivator, the public must have confidence that their interest is ultimately realized. How can these inherent tensions be managed to minimize potential problems while encouraging participation in the market in the interest of the public good? Only through collaborations among faculty in law, public policy, management and biology can we begin to address this question.

- **What is normal?** Many individuals with deafness consider themselves to be normal members of “Deaf culture.” Sometimes they will utilize prenatal diagnosis along with molecular genetic testing to have a child who will be deaf, and they object to the medical terminology that labels their particular genetic variation a mutation. Similarly, the genetics of sex determination is highly complex. Sex is not biologically dichotomous – male or female – but is continuous, with some individuals having intersex conditions. The more one knows about such variation—and the more one can intervene in it—the more the concept of the normal becomes open to question, both biologically and socially. This situation makes it vital that the human sciences be directly involved in shaping biological research—from the questions asked to the methods used to the answers ultimately given.
• **Malaria and mosquitoes:** Charles Taylor (Professor, Ecology and Evolutionary Biology) is participating in a large multi-institution project on the possibilities of genetically modifying the mosquitoes that act as vectors for malaria and dengue fever in Africa. Serious ethical issues arise not only with respect to changing the ecology and perhaps producing a mosquito more dangerous than the originals, but also in how research experts and advisors from outside the country interact with local peoples, scientists and governments. Once again, collaborations among faculty in biology, policy, science and technology studies, public health, history, anthropology, law, ethics and economics are required to tackle these issues, not simply with a multidisciplinary team, but with an intellectually synthesis that reflects the inseparable interaction of these various factors.

These and other research projects are the subject of various grant proposals the Center is preparing to submit to NIH, as well as to private foundations, including the Greenwall Foundation.

**C. Public Symposia**

An important part of the Center’s public outreach is our annual symposium. As discussed earlier, we have successfully organized four public symposia on topics regarding our understanding of human genetics. Each event has attracted 3-400 attendees and significant media attention.

Our most recent event, held on January 21, 2007, was entitled *The Genetic Marketplace: A Citizen’s Guide to the Genomic Bazaar*. Our speakers included such nationally known figures as Lori Andrews, Troy Duster and former U.S. Surgeon General David Satcher.

In February 2006, the Center sponsored a public symposium entitled *Stem Cells: Promise and Peril in Regenerative Medicine*. This event was expanded beyond the standard public symposium to include a two-day academic conference. The purpose of the conference was to inform participants of the state of the art in stem cell research, highlighting the relationship between that research and the social, political, and regulatory context in which it occurs. The conference included panels on the relationship between stem cell research and public health, intellectual property, state and federal regulation, the economic and political implications of Proposition 71, embryo ethics, recent developments in neural stem cell research, and more. It included over 20 panelists and speakers and more than 100 conference participants. The Center also commissioned a law review article by two UCLA legal scholars on stem cells and the law, which has since become a book manuscript and multiple articles.

The objectives for the one-day public symposium that followed were similar to those of the academic conference, although these talks and discussions took place on a lay rather than an expert level. Given not only the controversy but also the great potential associated with stem cell research, the Center believes it is imperative to provide the public with an opportunity to learn about and contribute to discussion of the range of costs and benefits connected with it.

Our previous symposia also include *The Storefront Genome* (January 26, 2003). This event presented discussion of the science and social implications of the proposition that within a decade, any individual will be able to completely sequence his or her genome for less than $1000. On February 8, 2004, the Center organized *Nurturing our Nature: Genomics, Diet and Nutrition*. This symposium suggested that as we decipher human biology and personal genetic screenings become readily feasible, we will face great challenges in interpreting and using the information. On January 30, 2005, the Center presented *Gender and Genomics - Sex, Science and Society*. The event posed the questions: Are we born male or female? Will men one day be extinct? How do we choose our
mates? Is gender divided into feminine and masculine, or does it cover a diverse spectrum?

D. Campus Colloquia

During the last two years, the Center has organized and hosted an active colloquium series. CSG invites prominent scholars from an array of disciplines relevant to the co-evolution of society and genetics to give broadly accessible talks about their research and to engage in dialogues with Center fellows, associates, and interested members of the public. The series includes scholars from across the country as well as UCLA faculty and CSG fellows from UCLA. See Appendix 11 for a list of past colloquium speakers.

The colloquia provide an important intellectual focal point of activity for the Center. We have established a regular time slot (Thursdays, 4:00-6:00 pm), and when no formal presentations are scheduled, the CSG graduate, postdoctoral, and faculty fellows meet to informally discuss a work in progress or a paper of common interest. The discussions have provided a lively forum for synergistic interactions.
V. Administrative Structure

A. Academic Personnel

As stated previously, the Center currently holds six institutional FTE to support faculty hires as well as the eventual hiring of a co-director to replace Norton Wise. Earlier we discussed the description of the faculty positions as it pertains to the criteria established for a CII. Here we will address the recruitment process and how the positions fit into the administrative structure.

In seeking to build a fully cross-disciplinary center, our recruitment process has involved searching across multiple disciplines based on areas of need identified by the Center and the interests of departments, schools, and College divisions. By initiating multiple searches at once, we have asked departments to “compete” for our available FTE. Thus, in 2004-05 we were able to search in conjunction with four departments simultaneously with the expectation of making several offers. And indeed, we did make two offers, with one of those accepted and already in place (Soraya de Chadarevian in History, specializing in twentieth-century biomedical science).

In 2005-06, we searched again with two of the departments that began searches previously (in addition to the Law School). The search with the Department of Public Policy was successfully completed with the hire of Aaron Panofsky—a sociologist with policy-relevant research and interests who will very likely also have a 0% appointment in the sociology department. Searches with the Departments of Human Genetics, Philosophy, Sociology, and possibly Anthropology, and with the Law School are ongoing.

The tenure home of each Center faculty member is presently in a department. Faculty members contribute research, teaching, and service according to the standards of the home department, with the stipulation that 50% of teaching and 75% of service is contributed to the Center. Our goal has been to develop strong ties to departments and to ensure departmental support and credibility for Center faculty.

During the initial launch phase, CSG provided the full FTE for faculty appointments from our institutional allotment. Now that the Center is more established, we intend to leverage most of the remaining FTE through split appointments with interested departments, although, where appropriate, the Center also retains the right to make 100% appointments. (See Section III.B.1 above.) We have joint searches in progress with the Law School and the Department of Sociology on the basis of a 50/50 split. We intend to request additional FTE from the College and professional schools to complement our FTE.

B. Staff

The current support staff of the Center includes a management services officer (1.0 FTE) responsible for coordination of Center staff, activities and events; an administrative specialist (1.0 FTE) to provide additional support; and a development officer (0.49 FTE) to help establish a community board and to identify development opportunities with foundations, corporations and individuals. CSG also coordinates with the Department of Pediatrics to share a communications manager (0.25 FTE) and a research specialist (0.25 FTE) to facilitate external communications, planning for the public symposia and academic meetings, and to prepare grant and other funding proposals. Anticipating the Center’s growth, the latter position eventually will increase to .5 FTE.
Additional staff proposed for the Center include a student affairs officer (0.25 FTE) to advise students enrolled in the forthcoming minor. This position will likely evolve into a full-time responsibility in the future.

C. Facilities

Fourteen offices in Rolfe Hall (rooms 1315-1328) have been assigned to the Center by the Executive Vice Chancellor. Given our anticipated future growth, we hope the Center will be able to acquire additional space adjacent to these offices as the need arises. Since all of our faculty have appointments of some kind in another academic unit, a key component of meeting our space needs is to ensure that faculty members have research space in their department. In particular, recruitment of faculty in the life sciences may require that departments provide the laboratory space for their research. This model has worked effectively in the Institute of the Environment.

D. Budget

1. UC-funded budget

Appendix 12 contains memoranda from former EVC Dan Neuman and Chancellor Carnesale outlining the chancellor’s commitment of FTE and funding in support of the Center. In addition to a total of 5.5 FTE, Chancellor Carnesale allocated a permanent budget of $730,000 plus .20 FTE release funding to support a co-director. The correspondence also sets out his intention to commit $100,000 per 1.0 FTE for recruitment and set-up costs. This figure is described as a “placeholder” to be revised (assuredly upward) based on the requirements of the … new faculty members.”

2. Anticipated Income

Grant Funding Possibilities

CSG supports both educational and research endeavors. To help support these endeavors, the Center has applied for external funding with some success and will continue to do so. When such external funding resources are received, indirect cost returns will be allocated in the following manner (as approved via email by the cognizant dean, Pat O’Brien—see Appendix 13):

- For CSG-initiated proposals, 100% of the indirect costs normally awarded to an academic unit will be allocated solely to CSG.
- For faculty-initiated proposals, indirect cost allocations to both CSG and the faculty’s affiliated academic unit will be decided on a case-by-case basis.

One of the CSG activities that has received funding is the Oral History of Human Genetics (OHHG) Program. This program is a collaboration between Ed McCabe and Marcia Meldrum at UCLA with colleagues at UC Berkeley and Johns Hopkins University. The OHHG Program received grant support from the National Human Genome Research Institute (NHGRI) Ethical, Legal and Social Issues (ELSI) Program, the National Science Foundation (NSF), the March of Dimes Birth Defects Foundation, and the American Society of Human Genetics. The OHHG Program is bringing attention to the CSG within the human genetics community, and the UCLA Library is an archive, not only for the oral histories, but also for other documents from individuals and groups representing this community.

The Center also received funding from the Greenwall Foundation for the 2006 Stem Cell Conference and Symposium. This foundation has an interest in ethical deliberations related to biomedical topics,
particularly genetics, and has expressed a desire to learn more about CSG and to consider additional funding for the Center.

Although the interests of CSG range far more broadly than ethics or the NHGRI ELSI Program, initiatives related to these topics will offer funding opportunities for the Center. We will seek additional funding, particularly in the area of training grants.

Development Possibilities

The public has sincere interest in, and serious concerns about, topics discussed and investigated in the CSG. This is evidenced by the attendance at the Center's annual symposium. We anticipate that this interest will provide additional funding opportunities from individuals and foundations, and we are currently pursuing these possibilities.

The Center has begun to form a Board of Advisors whose role is envisioned to be threefold: to assist the Center in communicating its vision and priorities effectively to the general public; to make recommendations about programs and events that adequately address public needs and interests; and to assist the Center in securing support for identified funding priorities.
VI. Collaboration with other Units at UCLA

The Center is contributing to the vitality of the UCLA campus through interdisciplinary collaborations with several other units. Indeed, the Center relies on building and sustaining such relations as a key part of its multidisciplinary mission—a mission that must engage not only those hired in the Center, but many others across campus. To date, we have received ten letters endorsing this proposal indicating the broad support for the Center around campus. These letters are contained in Appendix 14. Each describes the variety of collaborations that have occurred and continue between these departments and the Center.

Thus far, the Center has engaged in joint faculty searches with anthropology, history, public policy, philosophy, and law. We have had faculty fellows from anthropology, human genetics, public policy, law, sociology, psychiatry and biobehavioral sciences, and biostatistics. We have run joint seminars with the anthropology department and the ecology and evolutionary biology department. Finally, the 2006 stem cell conference/symposium was cosponsored by nine different units around campus, including the UCLA Anderson School of Management, the College of Letters & Science, the David Geffen School of Medicine at UCLA, the Institute for Stem Cell Biology and Medicine, the Mattel Children’s Hospital at UCLA, the School of Dentistry, the School of Law, the School of Public Affairs and the School of Public Health.

UCLA Institute for Stem Cell Biology and Medicine

The UCLA Institute for Stem Cell Biology and Medicine was established following passage of Proposition 71 in 2004. [In recognition of a $20 million gift, it was recently renamed the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Biology at UCLA.] From the announcement of the establishment of the Institute, Chancellor Emeritus Carnesale made it clear that the Center will collaborate with the Institute to elucidate the social issues and implications regarding the basic science investigations and therapeutic applications of human stem cells. The Center focused a number of colloquia during the 2005-2006 academic year on the subject of stem cells, and developed the academic conference and public symposium to explore this area further. These efforts represent an important collaboration with the Institute. Further, Center-affiliated faculty members are participating in the ethics aspect of the training grant the Institute was awarded by the California Institute for Regenerative Medicine (CIRM).

UCLA School of Law

The dean of the School of Law, Michael Schill, with his own academic interests in real estate and property law and discrimination, seeks to recruit a legal scholar to address issues relevant to the intellectual focus of the Center. In addition, two faculty members, Russell Korobkin and Stephen Munzer, working with a student, developed a law article on stem cells and the law to help guide the discussions at the stem cell conference. The Center supported this effort financially. Professors Korobkin and Munzer subsequently developed the article into a book manuscript which is being published by Yale University Press in the fall of 2007.
APPENDIX 1

“Where the Issues of Science and Society Meet”
(Center for Society and Genetics Spotlight)
Medical researcher Eric Vilain works with children whose anatomy is not fully determined as either male or female, making their gender uncertain. Vilain, an associate professor of human genetics, pediatrics and urology, sees children with this condition, known as intersexuality, in a clinic where he helps anxious parents understand what has caused the condition and to determine a gender for their offspring.

In these cases, should the children be altered so they conform to society’s definition of what’s normal? Or can society be educated to try to be more accepting of these children as they are?

Such complex questions occupy Vilain and other researchers who are working together across disciplines in the UCLA Center for Society and Genetics. Launched in 2001, the center seeks to go beyond simply examining difficult social and medical issues. A multidisciplinary center in the College, the center’s bold aim is to give direction to the many—and increasingly complex—ethical questions involved in genetic research, and to bring clarity to the “co-evolution” of science and humanity. In so doing, the center confronts the most basic questions about who we are.

Coevolution of Society and Genetics

“Some people think of genetic discoveries in terms of reducing ourselves to our genes, but there is a deep, intimate relationship between our genetic being and our social being,” said M. Norton Wise, a professor of history who co-directs the center along with Edward R.B. McCabe, executive chair of the pediatrics department and physician-in-chief of the Mattel Children’s Hospital at UCLA.

“From our food and medicine to our sexuality and emotions, the flood of new findings in genetics is requiring all of us to rethink our views about what it means to be human, to form social bonds, and to live in society,” Wise said. “The Center for Society and Genetics focuses attention on both the opportunities and the challenges that these issues bring to our world. The questions we face cannot be separated into biological and social components; they move together, or coevolve—society and genetics shaping each other in a dynamic relationship.”

One example of the coevolution of genetics and society that Wise cites is lactose tolerance.

“Lactose tolerance is often said to be caused by a simple genetic mutation,” Wise said, “which makes it seem purely a matter of biology. But the mutation would be meaningless if it did not arise in a society that was domesticating cattle for milk consumption; otherwise, it would disappear.”

In this sense, the cause of lactose tolerance in a population might equally be said to be their dairying practices. Indeed, researchers have found that
this story has been repeated at least three times, with lactose tolerance arising in different populations at different times in association with different DNA changes. A full understanding of lactose tolerance, then, must simultaneously stem from the biological, social and historical dimensions of its emergence and persistence.

"Many other issues in science, medicine and human development can only be explored adequately by linking the findings of genetic researchers with those of scholars in social and cultural fields," Wise said. "And findings about social and cultural developments must be reappraised once researchers are aware of the role that genetics plays in what they are examining."

A case in point, Wise said, is the recent discovery that the several British peoples all have a common genetic heritage dating to Spain 12,000 years ago, compelling historians who study British heritage to rethink previous conclusions about the origins, and arguably the identities, of the Scots, Welsh, Irish and English.

**New Faculty, New Research in New Fields**

At the center, faculty and students come together from 26 departments, nine schools and three divisions of the College for research, teaching and public events exploring the dynamic intersection of genetics and society.

"The breadth of disciplines represented in the center is phenomenal," said McCabe, "and is testimony to the fact that the problems of the 21st century occur at the intersection of many disciplines, not within the strictly defined academic fields that developed at universities 200 years ago."

The center attracts faculty members from around campus who want to cross these intellectual boundaries in their work. Christina Palmer, an associate professor-in-residence in psychiatry and biobehavioral sciences at the Neuropsychiatric Institute, is examining genetic testing for deafness, while also exploring the perspectives of those in the deaf community who don't see the condition as a disability. Herefore question the necessity of testing and treatment. And, Professors of Law Russell Korobkin and Stephen Munzer study and write extensively about legal and philosophical issues raised by stem cell research. Their work, for example, explores potential problems with creating markets for human eggs and creating human–non-human chimeras—issues that require us once more to examine fundamental questions about our humanity.

Basic questions and choices about human health and well-being arise in other areas as well, again typically at the intersection of traditional academic disciplines. McCabe and his wife, Linda, an adjunct associate professor in genetics, have personal experience with crossing disciplines—their lifelong work to develop newborn genetic screenings for more than 50 diseases involves them not only in exerctions at the lab bench but also in debates about ethics and public policy.

"There are many policy issues that focus on when babies should be tested," said McCabe, who chaired an advisory committee on genetic testing for Presidents Clinton and Bush. "For example, early discharge from the hospital interferes with some testing and each state tests for a different number of diseases. We've been active in trying to get a national standard policy."

Working with Sean McGhee, a UCLA pediatric allergist and immunologist, the McCabes are currently trying to develop new screenings for severe combined immunodeficiency (SCID), popularly known as the "boy-in-the-bubble" disease. "Early diagnosis is critical," said Ed McCabe, "because we know that with early bone marrow transplantation, we can cure SCID in greater than 90 percent of cases. Without it, these children will die by age two."

A segment of the population that they are especially eager to test for SCID is Native Americans, who are 25 times more likely to have the disease than the general population. However, some Native American tribes are reluctant to undergo testing because of their claims that genetic material...
previously gathered by other researchers was used without their consent, and because genetic information about their origins may run counter to their oral history and beliefs.

"Genetic research has to be culturally sensitive," said McCabe, since it can challenge the self-understandings and practices of individuals and groups. "Laura Foster, a UCLA women's studies graduate student who is also a graduate student fellow at the center and a lawyer, brings to the center a familiarity with indigenous peoples around the world and a concern for how to involve them as participants in the research. She hopes to ensure that university investigators show proper respect for indigenous people, and she hopes to broker relationships between indigenous people and the researchers."

The notion that science simultaneously shapes and is shaped by society is an insight that informs the Center's approach to ethics education in general, since it underscores how ethical problems and possibilities are integral parts of the science itself.

"We want to promote a way of thinking about the ethical dimensions of an issue so scientists see ethics not as an unfortunate obstacle, but as a dimension of their work that has value and significance to them," said Sally Gibbons, associate director of the center and an adjunct assistant professor of philosophy.

Historical Context of Genetic Developments

Hired in 2006, Professor of History Soraya de Chadarevian holds the distinction of being the first faculty member to have a joint appointment in the center and her department. Her research focuses on the historical context of modern scientific developments, including the development of molecular biology and, more recently, genetics.

"Studying this history is useful because it sharpens our understanding of the present," de Chadarevian said. "It helps us understand why genetics became so important in the late 20th century, why certain questions are asked, why certain practices and institutions are in place, what alternatives existed, and why they weren't chosen."

She has traced the development of genetics in the context of research on radiation biology in the 1940s-60s.

"After World War II and the development of atomic energy for military and peaceful uses, there were concerns about the effects of radiation on workers in the field and, later, the general population," de Chadarevian said. "The biggest worries were cancer and long-term genetic effects, so a lot of money went into investigating the biological effects of radiation."

As part of this effort, researchers developed new techniques to visualize human chromosomes and study mutations on the chromosomal level. This research, she said, led to the understanding that humans have 46 instead of 48 chromosomes, as previously believed, and to the discovery of unusual chromosome forms or numbers, as in the case of Down syndrome. These findings, in turn, led to the development of new diagnostic techniques.

Giving Undergraduates and the Public Food for Thought

With Gibbons, de Chadarevian has taught one of the center's upper division core courses, which explores historical and philosophical perspectives regarding genetics. She is also teaching a graduate seminar on the history of science and commercialization. This year, Vilain and three other faculty members in the biological and social sciences launched a year-long general education cluster course for freshmen. Titled "Sex: From Biology to Gendered Society," the popular course encouraged students to think and write critically about the interaction of the biological, psychological and social factors that influence our behavior and experiences as human beings.

In addition to the cluster, the center is also planning to offer undergraduates a minor in society and genetics, as well as a major in biology and society. And the center reaches out to the community by presenting a public symposium each year.

"The biological and social developments of the last 50 years have been overwhelming in terms of how we think about ourselves. The Center for Society and Genetics wants to explore this territory—which is nothing less than what it means to be human."
APPENDIX 2

Correspondence from Acting EVC Waugh
Regarding Interim Faculty Advisory Committee
MEMORANDUM

March 7, 2007

Acting Professor Soraya de Chadarevian
Professor Barbara Herman
Professor Russell Korobkin
Executive Chair Ed McCabe (co-chair)
Assistant Professor Aaron Panofsky
Professor Mark Peterson
Professor Joan Silk
Professor and Chair Victoria Sork
Professor Stefan Timmermans
Associate Professor Eric Vilain
Professor Norton Wise (co-chair)

Dear Colleagues:

I am very pleased to support the efforts of the Center for Society and Genetics to become UCLA’s third Center for Interdisciplinary Instruction (CII). As a CII, Society and Genetics will gain greater stability and autonomy, primarily by housing permanent and temporary FTE.

To move this process forward, I am asking you to serve as an Interim Faculty Advisory Committee for Society and Genetics, to be co-chaired by Dr. Ed McCabe and Dr. Norton Wise. The Committee is charged with:

- Approving the CII proposal (now in development);
- Establishing bylaws that will govern the CII, including academic personnel appointments, voting rights, and so forth;
- Voting on all academic appointments (two faculty searches and a search for a Co-Director are underway at present); and
- Voting on all proposed academic programs, such as the Minor in Society and Genetics, which will be included in the CII proposal.

Thank you for your help in establishing the Center for Society and Genetics as a CII. This Committee is crucial in ensuring that the Center becomes fully operational, and I am grateful for your willingness to serve. Staff from the Center for Society and Genetics will contact you shortly to schedule the first meeting of the Committee.

Sincerely,

Scott I. Waugh
Acting Executive Vice Chancellor and Provost
cc: Acting Chancellor Norman Abrams
    Executive Dean Patricia O'Brien
    Vice Chancellor Thomas Rice
    Academic Senate Chair Vivek Shetty
APPENDIX 3

Center for Society and Genetics
Faculty Appointment Request Letters
20 February 2007

Dr. Ed McCabe  
Professor Norton Wise  
Directors, Center for Society and Genetics  
1323 Rolfe Hall  
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). As a tenured faculty member currently appointed in the History Department but with 50% of my teaching and 75% of my service committed to the Center, I intend to formalize this arrangement with a 50-50 split appointment when the Center becomes a CII.

In this split appointment, I prefer my tenure to remain in the Department of History and to have the Department of History initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that both History and the Center will participate and vote on these personnel actions with respect to research, teaching and service.

Sincerely yours,

Soraya de Chadarevian  
Professor  
Department of History
April 16, 2007

Dr. Edward R B McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my past role as an advisor for the Center, my current membership on the interim faculty advisory committee, and my research interests in genetic testing and its ethical implications, I will be happy to seek a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I prefer to have the Department of Pathology & Laboratory Medicine continue to initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand the proposed CII will also participate and vote in these personnel actions on research, teaching and service.

I look forward to my continued involvement with the Center.

Sincerely,

Wayne W Grody, M.D., Ph.D.
Professor
Pathology & Laboratory Medicine, Pediatrics, and Human Genetics
29 December 2006

Dr. Ed McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my scholarly interest in the ethical problems the Center explores and given my membership on various Center committees as well as my role as faculty advisor to a number of the Center’s graduate student fellows, I would be happy to have a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I prefer to have the Department of Philosophy continue to initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that the proposed CII will also participate and vote in these personnel actions on research, teaching and service.

I look forward to my continued involvement with the Center.

Sincerely,

Barbara Herman
Professor
Department of Philosophy
February 2, 2007

Dr. Ed McCabe  
Professor Norton Wise  
Directors, Center for Society and Genetics  
1323 Rolfe Hall  
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my engagement in the Center as a faculty fellow for the past two years and my research interests in the legal issues regarding stem cell research and products, I will be happy to seek a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I intend to request that the Center waive participation in my personnel actions. I understand that this waiver must be addressed to the chair of the CII and voted upon by the full faculty.

I look forward to my continued involvement with the Center.

Sincerely,

[Signature]

Russell Korobkin, J.D.  
Professor  
UCLA School of Law
November 20, 2006

Professor Norton Wise  
Co-Director, Center for Society and Genetics  
1323 Rolfe Hall  
Campus Mail: 722102

Dear Norton:

I am writing to affirm my personal support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my long-term engagement in and commitment to the Center as its founder and co-director, I will be happy to have a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I prefer to have the Department of Pediatrics continue to initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that both the Department of Human Genetics and the proposed CII will also participate and vote in these personnel actions on research, teaching and service.

I look forward to my continued involvement with the Center.

Sincerely,

Edward R.B. McCabe, M.D., Ph.D.
April 18, 2007

Dr. Ed McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my role as a graduate student advisor for the Center and member of the interim faculty advisory committee as well as my research interests in genetics of complex behaviors and the educational, psychological, and biological outcomes of genetic counseling and testing, I will be happy to seek a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I intend to request that the Center waive participation in my personnel actions. I understand that this waiver must be addressed to the chair of the CII and voted upon by the full faculty.

I look forward to my continued involvement with the Center.

Sincerely,

Christina Palmer, Ph D
Associate Professor in Residence
Psychiatry and Biobehavioral Sciences
Human Genetics
February 7, 2007

Dr. Ed McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). As an assistant professor appointed in the Department of Public Policy (with a start date of January, 2008) with 50% of my teaching and 75% of my service committed to the Center, I intend to formalize this arrangement with a 50-50 split appointment when the Center becomes a CII.

In this split appointment, I prefer to have the Department of Public Policy initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that both Public Policy and the Center will participate and vote on these personnel actions with respect to research, teaching and service.

Sincerely yours,

[Signature]

Aaron Panofsky
Assistant Professor
Department of Public Policy
13 December 2006

Dr. Ed McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my engagement in the Center as a faculty fellow (2004-05), as a member of the ad hoc committee for the minor and as a mentor to graduate student fellows, I would be happy to have a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I prefer to have the Department of Anthropology continue to initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that the proposed CII will also participate and vote in these personnel actions on research, teaching and service.

I look forward to my continued involvement with the Center.

Sincerely,

Joan Silk, Ph.D.
Professor
UCLA Department of Anthropology
March 28, 2007
Dr. Ed McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I would like to lend my support towards establishment of the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my role as a member of the Center’s interim faculty advisory committee and my research interests in the statistical methodology for mapping complex trait and disease genes, I will be happy to seek a joint appointment (0% without salary) in the proposed CII.

I also request that the Center waive participation in my personnel actions. I understand that this waiver must be addressed to the chair of the CII and voted upon by the full faculty.

I look forward to my continued involvement with the Center.

Sincerely,

Janet Sinsheimer

Janet Sinsheimer, Ph.D.
Associate Professor
Human Genetics, Biomathematics, and Biostatistics
December 6, 2006

Dr. Ed McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my engagement in the Center as a faculty fellow and my work in medical sociology, I would be happy to have a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I prefer to have the Department of Sociology continue to initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that the proposed CII will also participate and vote in these personnel actions on research, teaching and service.

I look forward to my continued involvement with the Center.

Sincerely,

[Signature]

Stefan Timmermans, Ph.D.
Professor
UCLA Department of Sociology
December 6, 2006

Dr. Ed McCabe
Professor Norton Wise
Directors, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed and Norton:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my engagement in the Center as a faculty fellow for the past three years and my research interests in the genetics of sex determination, I will be happy to seek a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I prefer to have the Department of Human Genetics continue to initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that both the Department of Pediatrics and the proposed CII will also participate and vote in these personnel actions on research, teaching and service.

I look forward to my continued involvement with the Center.

Sincerely,

Eric Vilain, M.D., Ph.D.
Associate Professor of Human Genetics, Pediatrics and Urology
Chief, Medical Genetics, Department of Pediatrics
Director, Laboratory of Sexual Medicine, Department of Urology
David Geffen School of Medicine at UCLA

Eric Vilain, M.D., Ph.D.
Department of Human Genetics
David Geffen School of Medicine at UCLA
Gonda Center, Room 6357
695 Charles E. Young Dr. South
Los Angeles, CA 90095-7088
Phone (310) 267-2455
E-mail: evilain@ucla.edu
28 November 2006

Dr. Ed McCabe
Co-Director, Center for Society and Genetics
1323 Rolfe Hall
Campus Mail: 722102

Dear Ed:

I am writing to affirm my support for establishing the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). Given my three years as co-director of the Center and my scholarly interest in the history of science, I would be happy to have a joint appointment (0% without salary) in the proposed CII.

In this joint appointment, I prefer to have the Department of History continue to initiate and take primary responsibility for processing all personnel actions involved in my promotion and merit reviews. I understand that the proposed CII will also participate and vote in these personnel actions on research, teaching and service.

I look forward to my continued involvement with the Center

Sincerely,

M. Norton Wise
Professor

Cc: Dr. Sally Gibbons
   Carlene Brown
APPENDIX 4

Center for Society and Genetics Affiliates
### CORE/ AFFILIATE FACULTY

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
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<td>Sinsheimer, Janet</td>
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<td>Sork, Victoria</td>
<td>Ecology and Evolutionary Biology; Institute of the Environment</td>
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<td>Wise, M. Norton</td>
<td>History and CSG</td>
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### FELLOWS/MENTORS

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<tr>
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<th>Years served</th>
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<tr>
<td>Braslow, Joel</td>
<td>Psychiatry and Biobehavioral Sciences</td>
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<td>Browner, Carole</td>
<td>Psychiatry and Biobehavioral Sciences</td>
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<tr>
<td>Cannon, Tyrone</td>
<td>Psychology</td>
<td>Postdoc Mentor 2004/05</td>
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<tr>
<td>Harding, Sandra</td>
<td>Education</td>
<td>Grad Student Mentor 2006/07; 2005/06; 2006/07</td>
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<td>Philosophy</td>
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</tr>
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<td>Faculty Fellow 2005/06; Grad Student Mentor 2006/07; Postdoc Mentor 2005/06</td>
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<td>Sabl, Andy</td>
<td>Public Policy and Political Science</td>
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<td>Shiffrin, Seana</td>
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<td>Sinsheimer, Janet</td>
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<td>Vilain, Eric</td>
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<td>Zucker, Lynne</td>
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<td>Faculty Fellow 2005/06</td>
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### CENTER ASSOCIATES

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<tr>
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<tr>
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APPENDIX 5

Organization and Operations of a CII
[Legislative Assembly Notice and Excerpted Sections of Multidisciplinary Studies Task Force Report]
Report of the Executive Board—Proposed Bylaw Change to Address Senate Status of the Cesar Chavez Center for Interdisciplinary Instruction

Background

Establishment of the Cesar Chavez Center for Interdisciplinary Instruction in Chicana/o Studies [Chavez Center] was approved by the Regents on June 18, 1993. In accordance with advice provided by the Academic Senate, Chancellor Young created this Center for Interdisciplinary Instruction [CII] as an academic unit with the following characteristics:

1. A CII receives an allocation of permanent and temporary FTE.
2. For the purpose of determining voting rights, the faculty of a CII are those who hold permanent appointments in the CII.
3. Joint appointments of faculty whose academic homes are in other departments, and the use of faculty from other departments on temporary appointment, will be encouraged and will constitute the majority of faculty.
4. The percentage of time for permanent appointees to a CII may run to 100% for a group of core faculty to insure stability of structure and leadership.
5. Existing faculty could be approved to move their appointments to the CII either temporarily or permanently for up to 100% time.
6. A CII has the same responsibilities for academic personnel actions, i.e., appointments, promotions, advancements, and terminations, as does a department, namely, full responsibility for those who hold full appointments within the CII and joint responsibility for those who hold joint appointments.

The Chavez Center differed from the traditional form of an IDP in that it could have permanent faculty appointees; a majority of these appointees would have to hold joint appointments with departments, and a minority could hold 100% appointments in the CII. This unit also differed from a department because its focus was instruction, and only a minority of the faculty appointees could be 100%.

The Executive Board’s Analysis and Recommendation

Although the basic elements of the Chavez Center were set forth at the time of its creation, some details of its structure and function remained to be specified. The Executive Board is particularly concerned about the status of the Chavez Center and the faculty who are its 100% appointees, for purposes of Senate representation and other Senate benefits and privileges. This issue must be addressed immediately, as candidates are now under consideration for 100% faculty appointments in the Chavez Center that would become effective on July 1, 1994.

The Board addresses here issues of faculty and unit status that entail bylaw changes. For purposes of elections for the Legislative Assembly, Committee on Committees, and Faculty Executive Committee of the College of Letters and Science, as well as other privileges and benefits of the Senate addressed in the bylaws, the Board recommends that the Chavez Center be treated the same as a department. Thus, the Chavez Center would be permitted to send representatives to the Legislative Assembly on the same basis as a department, would be allocated to a constituency of the Committee on Committees on the same basis as a department, and would have the same status as a department in allocating voting rights for the Faculty Executive Committee of the College.

The Board’s recommendation derives from two considerations: 1) the resemblance (though not identity) between the Chavez Center and a department; and 2) the prospect that 100% appointees in the Chavez Center would otherwise be disenfranchised and denied university benefits and privileges available to all other ladder faculty. The fact that the 100% members of the Chavez Center may be few in number is no reason to deny them equal Senate citizenship. Some very small departments have full Senate status.
Proposed Bylaw Change

The Executive Board therefore recommends that Bylaw 10(C) be added to the Manual of the Academic Senate as follows:

For purposes of sections 45(C) (right of a hearing), 55(A)(2) (representation in the Legislative Assembly), 65.2(a) (membership on the Graduate Council), 85(B) (membership on the Committee on Committees), 105 (definition of the Senate Electoral Committee), 150(C)(4) (conduct of elections for the Legislative Assembly), and 184 (membership in the faculty of the College of Letters and Science) of the Manual of the Academic Senate, a Center for Interdisciplinary Instruction shall be treated the same as a department.

CAROLE GOLDBERG-AMBROSE, CHAIR

References to particular committees do not imply exclusion of Chavez Center faculty from other committees. Rather, the bylaws for only certain committees make reference to departmental status.

Rules and Jurisdiction

The Committee on Rules and Jurisdiction has reviewed the proposed legislation and finds it consonant with the Code of the Academic Senate.

PAUL ROSENTHAL, CHAIR

Report of the Committee on Educational Policy to Establish Undergraduate Minors

Background

The Committee on Educational Policy (CEP) examined the proposal to establish minors at its April 20, 1993, May 14, 1993, May 28, 1993, June 14, 1993, December 3, 1993 and April 22, 1994 meetings. Testimony from its proponents, Dean of Honors and Undergraduate Programs, Edward Alpers and Chair of the Faculty Executive Committee of the College of Letters and Science, Paul Sheats indicated that minors would help some UCLA students and that some programs were eager to establish them. Specifically, minors would facilitate entry into graduate and professional studies in the area wherein a minor was obtained and could enable UCLA graduates becoming teachers to teach secondary school courses in the minor. Additionally, Professor Alpers estimated that the extra advising which availability of minors would impose would not unduly tax departmental counselors, and he pointed out that UCLA and UCSD are the only UC campuses that do not now offer minors. In December 1993, the current FEC chair of the College of Letters and Science, Malcolm Nicol, assured CEP, through its chair, that there continued to be strong support of minors among L&S and its student body.

In its deliberations, CEP heard affirmations of these views and entertained concerns, namely that the structure of some fields might not make it appropriate for those particular departments/programs to offer minors because the limited study involved in a minor would not provide the breadth and depth normally associated with a minor and that it would be confusing for a department/program to offer both a minor and a specialization for non-majors. In regard to specializations, the CEP membership acknowledged that minors are better understood outside UCLA and are likely to offer students more currency in advancing their academic and professional careers. When invited to discuss costs of initiating minors in December 1993, representatives from the Registrar’s Office pointed out that minors would require some modifications in the software now used in managing student records. Since modifications in that software are going to be necessary in coming years anyway, the direct costs of minors alone couldn’t be estimated. The representatives opined, however, that costs could be constrained in the short run if a department/program offered only a minor and not both a minor and a specialization for nonmajors.

Proposal

At its meeting of May 6, 1994, the Committee on Educational Policy (CEP) approved the following establishing legislation allowing for the adoption and implementation of undergraduate minors for the UCLA campus. Departments/programs currently offering specializations (defined as "Supplemental Programs" on page 82 of the 1993-94 UCLA General Catalog) should, where appropriate, revise their curriculum to institute a minor in place of the specialization. When a minor is proposed to replace an existing specialization, the proposal for the minor must include a provision for discontinuing the specialization.
MULTIDISCIPLINARY STUDIES
TASK FORCE REPORT

Claudia Mitchell-Kernan, Chair
Vice-Chancellor Academic Affairs
Brian Copenhaver, Provost, L&S
Nancy Henley, Psychology
Guillermo Hernandez, Chicano Studies
David Kaplan, Philosophy
Archie Kleingartner, SPPSR
Wendy Macklin, Psychiatry
Carol Peterson, Vice Provost, L&S
Peter Reill, History
Ross Shideler, Comparative Literature
Scott Waugh, Dean, Social Sciences
Pauline Yu, Dean, Humanities
David Unruh, Staff
Norm Abrams, Vice-Chancellor, Academic Personnel

*The Committee gratefully acknowledges the valuable assistance provided by Robert Cox, Academic Planning and Budget, who developed and provided descriptive analyses for the figures included, and David Unruh, Graduate Division, who did much of the archival work and served as staff to the Task Force.
ways of doing business may offer great promise for innovation and renewal."

Her instructions to the committee encompassed several procedural recommendations:

- begin with an examination of the role of interdepartmental programs (IDPs on this campus).
- explore recent efforts by departments to move forward in new programmatic directions. ... We ... have much to gain by having a clear understanding of the kinds of problems that well established units have encountered and whether alternative structures can provide an appropriate way of addressing these problems and achieving stability for multidisciplinary studies.
- undertake at the outset to develop draft policies and procedures to guide the successful development of the Chavez Center and any future CII's that are proposed for establishment at UCLA.

The Task Force pursued instructions one and three, and the related recommendations accompanied by their rationales follow:

**POLICIES AND PROCEDURES FOR CENTERS FOR INTERDISCIPLINARY INSTRUCTION**

The charter for a new academic unit, the Center for Interdisciplinary Instruction (CII) was developed in an effort to provide for greater autonomy and stability of an interdisciplinary area of studies. The principal provisions of the CII, as set forth in a June 2, 1993, letter from Academic Senate Chair Archie Kleingartner to Chancellor Young, are:

1. A CII receives an allocation of permanent and temporary FTE.
2. For the purpose of determining voting rights, the faculty of a CII are those who hold permanent appointments in the CII.

3. Joint appointments of faculty whose academic homes are in other departments, and the use of faculty from other departments on temporary appointment, will be encouraged and will constitute the majority of faculty.

4. The percentage of time for permanent appointees to a CII may run to 100% for a group of core faculty to ensure stability of structure and leadership.

5. Existing faculty could be approved to move their appointments to the CII either temporarily or permanently for up to 100% time.

6. A CII has the same responsibilities for academic personnel actions, i.e., appointments, promotions, advancements, and terminations, as does a department, namely, full responsibility for those who hold full appointments within the CII and joint responsibility for those who hold joint appointments.
The Task Force's first set of recommendations dealt principally with the academic personnel status of Caesar Chavez CII faculty who do not also have a departmental appointment. The recommendations were based on a regental policy expressed in the Academic Personnel Manual, which states: "Appointments in the professor series are for duty in departments of Instruction and Research, or in equivalent administrative units (e.g. colleges and divisions) with combined instruction and research functions."

In light of this regental policy and because the CII was intended to be only an instructional unit, the following recommendations were sent forward:

1. It is recommended that faculty who have a 100% appointment in the CII and do not have a departmental appointment also have a 0% appointment in a Division of the College of Letters and Science. In most instances, either the Division of Social Sciences or the Division of Humanities would be the appropriate locus of such pro forma appointments.

For purposes of academic personnel reviews of such individuals, including oversight over the 0% appointment in the Division, the CII Advisory Committee would function as the initiating unit and carry all the responsibilities that a department would have in the process.

Since faculty from a broad range of fields, often with interdisciplinary interests, may be appointed to the CII, the CII Advisory Committee might not include faculty with expertise relevant to the field of a candidate for appointment or promotion. The same problem can arise in a department, and departments have the authority to adopt appropriate approaches to find the expertise needed for academic personnel reviews. For example, a department might appoint faculty from outside of the department to a departmental ad hoc committee. The CII may use similar devices.
In normal course, a CII appointment or promotion will be reviewed in the usual manner by the Dean of the Division in which the academic unit is located, in this instance, the Division of Social Sciences. It is the responsibility of the Dean to ensure the adequacy of the review being conducted. Where the Division locus of the appointment is in another Division, the Dean of that Division may also participate in the review insofar as cross-Divisional expertise is needed. For academic personnel reviews in which the Dean's decision is not final, the case will then follow the normal path of review by the other campus reviewing agencies.

The additional appointment of such faculty in a Division of the College will not only meet the requirements of regental policy but will supply an additional source of academic strength and reassurance to the faculty involved.

Consistent with the Senate's intention to provide for greater autonomy and stability of an interdisciplinary area of study:

2. It is recommended that the CII be treated similarly to a department for the following purposes:

   a. For making nominations for Distinguished Teaching Awards;

   b. For determining representation in the Legislative Assembly;

   c. For determining participation in elections for Faculty Executive Committees;

   d. In determining the voting rights of joint appointees.
3. It is recommended that the CII be treated as all other academic programs for purposes of program review, subject to the policies the Academic Senate and its Committee on Undergraduate Courses and Curricula and Graduate Council.

In late May of 1994, additional recommendations regarding the academic personnel process, as it relates to the Caesar Chavez Center, were forwarded to Executive Vice-Chancellor Rich. The recommendations sought to support the ongoing faculty recruitment of the Center:

1. The Chancellor should appoint the members of the Implementation Committee as the Interim Faculty Advisory Committee of the Center, authorizing that Committee to exercise the functions of the Center in the appointment process.

2. The appointment letter should specify that the Interim Committee's authority to exercise that role will terminate at such time as the Chancellor determines that the authority should be transferred to the Center's faculty. Presumably the transfer of authority will occur when the Chancellor determines that there exists a critical mass of faculty who hold permanent appointments in the Center, both those who hold 100% appointments in the Center and those with joint appointments.

3. It is further recommended that once a newly appointed faculty member term of appointment has begun, such newly appointed faculty should be added to the Interim Advisory Committee and participate in subsequent appointment actions.

4. The Interim Faculty Advisory Committee, once appointed, be advised to adopt the bylaws of an existing department (the choice of which would depend on their review of the bylaws of several departments) to govern its internal process leading to recommendations for faculty appointments.
Years of Service for IDP Chairs and Heads

The notion of a regular fixed term for IDP chairs and heads, either three or five years, which can be extended by renewal term, should be implemented.

Creation of CIIs

The creation of the first CII arose out of special circumstances, and, as we have discussed, the CII form creates certain problems in conforming to regental policy that requires professorial appointments to be made in departments of instruction and research or equivalent academic units. The fact, too, that a CII has many of the characteristics of a department should raise the question, "why not make it a department?" when CII status is proposed for an academic unit.

The Task Force adopted the following recommendations with regarding to the staffing and administration of IDPs. A complete summary of the recommendations, including revisions and votes, is presented in Appendix G.

1. We recommend that the campus not permit 100% FTE appointments in an IDP.

2. We recommend that joint appointments not involving a splitting of the FTE should be permitted between an IDP and a department.

3. We recommend that split appointments be permitted between an IDP and a department, although joint appointments should be the primary form of faculty participation in an IDP.

4. Split appointments, however, will ordinarily not be allowed at the time of appointment.
5. We recommend that split FTE appointments, when otherwise permissible between an IDP and a department, will ordinarily be restricted to instances where the faculty member involved is tenured.

6. We recommend that where a split FTE appointment is proposed, it should be reviewed by both of the concerned academic units, and should require review by the appropriate dean(s), the Council on Academic Personnel, and the approval of the Vice Chancellor of Academic Personnel.

7. We recommend that--where a department has been provided with an FTE under an arrangement with an IDP; a joint appointment has been entered into as part of the arrangement, with expectations that the faculty member will have certain teaching obligations in the IDP; and subsequently, the faculty member decides to return full time to the department--the Dean(s) should negotiate a resolution of the question whether the FTE position should be returned to the IDP and under what conditions, taking into account, inter alia, the length of time that the faculty member taught in the IDP. Where a similar situation arises involving a split FTE appointment (a circumstance in which the faculty member does not have a right to return full time to the department), the Dean should facilitate discussions between the faculty member, the IDP, and the department aimed at arriving at a resolution that best meets the needs of all of the parties.

9. Where a faculty member holds a joint or split appointment with a department and an IDP, the IDP should have the same role in the academic personnel process as the role of either of two departments in a situation where a faculty member holds a joint or split appointment in two departments.

10. We recommend that an IDP should only be able to conduct searches in conjunction with a department.
11. We recommend that IDPs should receive an annual budgetary item for buying faculty teaching time designed to meet its program goals.

12. We recommend that the Chancellor should establish a uniform campus approach (e.g. replacement cost) for buying out teaching time.

13. We recommend that the heads of IDPs should serve for regular fixed but renewable terms--three or five years--and should be reviewed in the year preceding the end of the term.

14. We recommend that when a proposal is made to create a CII or to give CII status to an existing academic unit, the proposer should be required to affirmatively justify why either IDP or departmental status is not a more appropriate outcome.

SUMMARY AND CONCLUSIONS

The Task Force shares the campus consensus that interdisciplinary and multidisciplinary teaching and research represent a significant element of UCLA's future. We have sought to build on the foundation created by previous groups focused on similar matters, and the adoption and implementation of our recommendations would be a step in the direction of further facilitating continued innovation and interdisciplinarity.

There is a wealth of evidence that interdisciplinarity has moved forward on the campus, although perhaps not at the accelerated pace many hoped for. The promotion of interdisciplinary research, as opposed to interdisciplinary teaching, appears to be advancing more smoothly. By way of updates, a new Center for Modern and Contemporary Studies consolidated the Critical Theory Focused Research Unit under a single director. The recently established School of Public Policy and Social
APPENDIX 6

CSG Bylaws
UCLA CENTER FOR SOCIETY AND GENETICS
BYLAWS
Administrative Home: College of Letters & Science
Graduate Council Approval Date: __________________
Undergraduate Council Approval Date: _______________

ARTICLE I: GOALS AND OBJECTIVES

A. Degree(s) offered as a Center for Interdisciplinary Instruction (CII)
   • Undergraduate minor in Society and Genetics
   • Plans to develop a new major in Biology and Society leading to a Bachelor’s degree

B. Goals and objectives
   • To engage faculty from across campus in research, teaching and discussions at the
     interface between society and genetics, and to consider the tensions between the
     interests of the individual and society regarding genetic information
   • To embody a perspective that encompasses the ethical, legal and social implications
     of genetics (ELSIs) with a broader exploration of the co-evolution of society and
     genetics
   • To simultaneously engage the biological and social dimensions of complex issues
     including (but not limited to) stem cell research, diabetes and obesity, race and
     pharmacogenomics, gender and genetics, and genetic discrimination
   • To serve as a resource locally, nationally and internationally to anticipate and to begin
     to address the ways in which genetic knowledge interacts with social forms,
     reshaping behaviors and conceptions of self

ARTICLE II: MEMBERSHIP

A. Core Faculty
   1. Who: Members of the Academic Senate who hold permanent appointments (joint,
      split or full; 0-100%) and have not waived their right to review in the Center are
      considered Core Faculty. Core Faculty members are appointed for an indefinite term
      as long as the criteria for membership (defined below) are met, and the individual
      remains in good standing within the University.

   2. Roles and Responsibilities
      a. Attend scheduled meetings of the Center
      b. Sit on and execute the business of Center committees
      c. Develop and teach Center courses
      d. Lead or participate in research activities of the Center
      e. Organize and/or participate in fund raising and outreach events benefiting the
         Center
      f. Represent the Center in public forums
      g. Be included on list of official participants in the Center
3. Rights
   a. Independent of rank, vote on all matters including bylaws and academic personnel issues such as promotion and tenure
   b. Retain voting privileges while on leave
   c. Guide graduate and postdoctoral fellows of the Center
   d. Submit funding proposals related to the goals, interests or mission of the Center; have grants managed by Center staff
   e. Be granted access to Center resources including staff and facilities for purposes related to teaching and research activities in the Center

B. Affiliated Faculty
   1. Who: Members of the Academic Senate who hold joint appointments (0%, without salary) and have waived their right to review in the Center are considered Affiliated Faculty.

   2. Roles and Responsibilities: same as Core Faculty

   3. Rights: Affiliated Faculty have the same rights as Core Faculty except they may not vote on matters pertaining to academic personnel and the bylaws.

C. Center Associates
   1. Who: Individuals who are or are not members of the Academic Senate but who hold teaching, research, or administrative appointments are considered Center Associates. Center Associates are appointed by a vote of the Core Faculty for a term of three years, with renewal to be considered upon request of the appointee.

   2. Roles and Responsibilities: Same as Core Faculty for all matters not restricted to members of the Academic Senate.

   3. Rights
      a. Center Associates may vote on matters not pertaining to academic personnel and the bylaws.
      b. All other rights are the same as Affiliated Faculty except Center Associates may not guide graduate and postdoctoral fellows of the Center.

**ARTICLE III: ADMINISTRATION: OFFICERS AND COMMITTEES**

A. Administrative structure and oversight
   - The Center will be based on the guidelines for a CII
   - It will also be a small “c” center for research
   - The program will include instruction, research and outreach activities

B. Directorship
   1. The officers of the Center shall consist of two co-directors (one representing the human sciences (humanities and social sciences), and one representing the natural sciences). The co-directors will be appointed by the dean to whom the Center
reports. The usual term will be five years, renewable upon a favorable performance review.

2. Duties and responsibilities
   a. Jointly oversee Center staff and operations
   b. Assume same responsibilities as department chair as indicated in The CALL
   c. Serve as Principal Investigator for such initiatives when appropriate
   d. Act as Center contacts with other campus academic and administrative entities
   e. Initiate and support outreach activities
   f. Interface with the general public for community relations and fund raising

ARTICLE IV: MEETINGS, QUORUM, AND BALOTTING

A. Meetings
   1. The Faculty and Associates of the Center shall meet when necessary and at least once quarterly after a call by the co-directors, with a minimum of one week’s notice prior to the meeting. The co-directors shall preside at all meetings or may assign a member of the Center to preside over the meeting.

   2. Special meetings of the Core and Affiliated Faculty may be held at other times upon written request for a meeting signed by at least three voting members of the Core and Affiliated Faculty. The meeting must take place within one week of receipt of the request. Meetings scheduled in response to such a written request shall be limited to consideration of the matters of business specified in the request.

   3. Merriam Webster’s Rules of Order (current edition) shall govern Faculty meetings in all instances not covered by the bylaws.

B. A quorum consists of at least half plus one of the eligible members.

C. When a quorum is present, voting is by secret ballot only for matters pertaining to academic personnel and bylaws, or when requested by a member of the Core Faculty. A decisive vote consists of a vote made by the majority of the voting members present.

ARTICLE V: STUDENT REPRESENTATIVES

Students will be represented on committees and allowed to vote in accordance with Academic Senate rules.

ARTICLE VI: STUDENT ADVISING

For graduate advising, the Dean of the Graduate Division acting under delegated authority from the Graduate Council has final authority to appoint thesis and doctoral committees.
ARTICLE VII: ORDER OF BUSINESS

All meetings of the Faculty shall be governed by procedures specified in Senate Bylaw 55.

ARTICLE VIII: AMENDMENT OF RULES

Amendment to these bylaws may be proposed by any voting member at any Center meeting, and then referred to the co-directors, or a written request of any voting member may be forwarded to the co-directors. If, in their opinion, the proposed amendment constitutes a serious revision of Center organization or procedures, the co-directors will appoint a special committee to make recommendations, which will then be brought to a full Center meeting for a majority vote. Procedural changes only, without far-reaching implications, may be brought directly to the Center for a vote at any meeting.

Bylaws approved on May 16, 2007 by:

Soraya de Chadarevian
Wayne Grody
Barbara Herman
Russell Korobkin
Ed McCabe
Christina Palmer
Aaron Panofsky
Mark Peterson
Joan Silk
Janet Sinsheimer
Victoria Sork
Stefan Timmermans
Eric Vilain
Norton Wise
APPENDIX 7

List of Other Institutions with Related Centers or Programs
### INSTITUTIONS WITH INTERDISCIPLINARY CENTERS: GENETICS AND SOCIETY, BIOETHICS

<table>
<thead>
<tr>
<th>Institution</th>
<th>Center/Department</th>
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<tr>
<td><strong>Albany Medical College</strong>&lt;br&gt;Alden March Bioethics Institute</td>
<td>The Alden March Bioethics Institute (AMBI) is a multi-institutional bioethics research institute based at the Albany Medical College and its Medical Center. AMBI was founded in 2005 to conduct state-of-the-art research, teaching and outreach concerning ethical issues in the health sciences. AMBI conducts a comprehensive and innovative bioethics research and education program through Faculty and Fellows representing the unique educational, research and government institutions in New York's capital district. The Institute offers a unique online masters program in bioethics as well joint degree programs in law, medicine, pastoral care, public health and social work.</td>
</tr>
<tr>
<td><strong>Arizona State University</strong>&lt;br&gt;Bioethics, Policy and Law</td>
<td>This program examines ethical aspects of the life sciences, including biological, medical, environmental, and social impacts and implications. Issues of politics and policy, law, and justice are central to this exploration. In addition, the program works closely with the university research and legal offices to promote ethical conduct of research. This program offers undergraduate and graduate courses, and activities for the university community and works closely with the Center for Law, Science, and Technology and the Consortium for Science, Policy, and Outcomes.</td>
</tr>
<tr>
<td><strong>Arizona State University</strong>&lt;br&gt;Center for Biology and Society</td>
<td>The Center for Biology and Society explores conceptual foundations of the biosciences and their diverse interactions with society through Bioethics, Policy, and Law. By bringing together dispersed activities, the Center expands opportunities for intellectual ferment and increased impact by creating synergistic collaborations and communication.</td>
</tr>
<tr>
<td><strong>Baylor College of Medicine</strong>&lt;br&gt;Center for Medical Ethics and Health Policy</td>
<td>The Center for Medical Ethics and Health Policy was created in July, 1982, as a joint project of Baylor College of Medicine and Rice University. While Baylor is primarily responsible for administering the program, the joint sponsorship of the program enables the center to draw on the rich intellectual resources of both institutions. The impetus for founding the center was in recognition that the ever-increasing abilities of medicine raise fundamental value questions of how society should use these abilities and how much of them society can afford to use. The very success of medicine has made its practice morally complex. The mandate of the center is to develop teaching and research programs that address the moral, legal and public policy questions raised by health care and the biomedical sciences.</td>
</tr>
<tr>
<td><strong>Case Western Reserve University</strong>&lt;br&gt;Department of Bioethics&lt;br&gt;The Center for Genetic Research, Ethics and Law&lt;br&gt;The Law-Medicine Center&lt;br&gt;Clinical Ethics Program at Metrohealth</td>
<td>Advances in medical science have created new and difficult moral choices for individuals, their families, and the health professionals who work with them. The Department of Bioethics is dedicated to helping all concerned--patients, clinicians, researchers, policymakers and the public--meet the challenge of health care choices faced in today's society. The mission of the Center for Genetic Research, Ethics, and Law (CGREAL) is to foster sustained interdisciplinary research on the ethical, legal, and social issues involved in the design and conduct of human genetic research with families, communities, and populations. The new research collaborations generated by the CGREAL will be harnessed in the first five years to pursue four Center-Wide research aims, which we believe reflect the highest priority needs in genetic research ethics and policy making. Founded in 1953, the Law-Medicine Center is the oldest law school-based center</td>
</tr>
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for the study of legal medicine and health law in the United States. Established within the law school, the Center offered classes in the forensic sciences to law and medical students, police officers, coroners, prosecutors, judges and practicing attorneys. Students could earn a graduate degree, making this the first LL.M. program in the U.S. in law and medicine. Since those beginnings, the Center has shifted its focus away from the strictly forensic. The mission is now professional education—the training of law and medical students.

The mission of the Clinical Ethics Program is to provide education, service and research regarding the ethical dimensions of the delivery and practice of health care in support of the MetroHealth System and the broader health care community.

**Cornell University**  
*Science and Technology Studies*

Cornell University offers both undergraduate and graduate education designed to promote and deepen understanding of science and technology. Drawing on faculty and courses in history, philosophy, sociology, and politics of science and technology, the Department of Science & Technology Studies provides an integrated approach to addressing issues that we must engage today and in the future.

**Duke University**  
*Institute for Genome Sciences and Policy*

The Institute for Genome Sciences and Policy is Duke University’s Response to the Genome Revolution, with global, comprehensive approaches to the study of life. What distinguishes IGSP is its breadth and its purposeful focus on health and social policy. They bring together scientists, engineers, physicians, lawyers, policymakers, business leaders, economists, ethicists, humanists, and students to explore the genome, embrace its potential, and enrich the human condition.

**Georgetown University**  
*Kennedy Institute of Ethics*

The Joseph P. and Rose F. Kennedy Institute of Ethics is the world’s oldest and most comprehensive academic bioethics center. The Kennedy Institute is home to a group of scholars who engage in research, teaching, and public service on issues that include protection of research subjects, reproductive and feminist bioethics, end of life care, health care justice, intellectual disability, cloning, gene therapy, eugenics, and other major issues in bioethics. Institute scholars figure prominently among the pioneers of the discipline. They are extending the boundaries of the field to incorporate emerging issues of racial and gender equality, international justice and peace, and other policies affecting the world’s most vulnerable populations.

**Harvard University**  
*Center for Ethics and the Professions*

The Edmond J. Safra Foundation Center for Ethics encourages teaching and research about ethical issues in public and professional life; helps meet the growing need for teachers and scholars who address questions of moral choice in business, education, government, law, medicine, and public policy; brings together those with competence in philosophical thought and those with experience in professional education; and promotes a perspective on ethics informed by both theory and practice.

**Harvard University**  
*Science, Technology, and Public Policy Program*

The Science, Technology, and Public Policy Program (STPP) applies methods drawn from technology assessment, political science, economics, management, and law to study problems where science, technology, and policy intersect. Our goal is to develop and promote policies that expand the contribution of science and technology to human welfare.

**Harvard University**  
*Massachusetts Institute of Technology*  
*Broad Institute*

With complete knowledge of the human genome, scientists can now systematically discover the molecular basis of human disease. This fundamental understanding holds the promise of new and effective therapies for cancer, diabetes, mental illness and many other diseases. The Broad Institute's mission is...
to fulfill this promise by empowering creative scientists to construct new powerful tools for genomic medicine, to make them accessible to the global scientific community, and to apply them to the understanding and treatment of disease. The Institute is a research collaboration involving faculty, professional staff and students from throughout the MIT and Harvard academic and medical communities and is governed jointly by the two universities.

<table>
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<th>Institution</th>
<th>Description</th>
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</table>
| Johns Hopkins University  
The Genetics and Public Policy Center, Berman Bioethics Institute | The Genetics and Public Policy Center works to help policy leaders, decision makers, and the public better understand the rapidly evolving field of human genetics and its application to healthcare. Studying the human genome will lead to a clearer picture of the role of genetics in health and disease, which in turn will help drive the development of new diagnostic tools and treatments. But, the same technologies raise a host of ethical, legal and social concerns. To inform genetic policy decisions, the Center surveys public attitudes about genetics issues, conducts analyses of the existing regulatory landscape, monitors the transition of genetic applications into clinical practice, and posits options and likely outcomes of key genetics policies. The Center’s first effort – the Reproductive Genetics Initiative - focused on moving the discussion surrounding the ethical, social, legal, religious and policy concerns about reproductive genetics toward a sustained constructive conversation that will help shape the development, regulation, and use of these and future technologies. This initiative has focused on the broad area of reproductive genetic testing, human germline genetic modification, and cloning. The Center launched in 2005 a new initiative to assure the safety and quality of genetic tests. Despite the increasingly central role of genetic testing in health care, a key finding from the Center’s analysis is that the future of genetic testing – both within the reproductive context and more broadly – is on shaky footing. The Center’s assessment of public attitudes shows that the public widely believes that the government regulates genetic tests to ensure their quality and, moreover, that the government should play this role. In fact, however, genetic tests are subject to very little governmental oversight when compared to other health care products. |
| Lawrence Berkeley National Laboratory  
ELSI in Science Program | The ELSI in Science Program is a pilot project designed to stimulate discussions on the implications of selected areas of scientific research. These modules probably will be most useful to educators and students at the middle school through high school level. |
| Massachusetts Institute of Technology  
Program in Science, Technology and Society | The Program in Science, Technology, and Society (STS) at the Massachusetts Institute of Technology attempts to increase understanding of the human-built world. In this world, science and technology have broken through the walls of industry and of the laboratory to become an inextricable and determining element of nature, culture, and history. The STS Program was founded at MIT in 1976 to address this unprecedented and momentous integration of science, technology, and society. Faculty and students in the Program address two basic, interrelated questions: how did science and technology evolve as human activities, and what role do they play in the larger civilization? The STS perspective is crucial to understanding major events of our time (war and conflict, the economy, health, the environment) and to addressing these and other major public issues (privacy, democracy, education). |
| Medical College of Wisconsin  
Center for the Study of Bioethics | Since its establishment in 1982, the Center for the Study of Bioethics has been committed to helping health care professionals, students, policy makers and community members explore the challenging ethical questions that have |
accompanied scientific advances and changes in our health care delivery system. Issues include many that surround the beginning of life and many that surround its end, questions about conducting human subjects research and reaping the benefits of its success, and concerns relating to transformations of relationships between doctors and their patients, progenitors and their offspring, and individuals and their communities.

| Pennsylvania State University  
| Population Research Institute |
| --- | --- |
| The Population Research Institute (PRI) encourages, organizes, and supports innovative research and training in the population sciences. Drawing on the talents of over sixty outstanding scholars, PRI provides a supportive and collegial intellectual environment to stimulate collaborative, externally funded research. PRI also is the home of Penn State's Graduate Program in Demography and a postdoctoral training program in the demography of aging. |

| Stanford Center for Biomedical Ethics, Stanford University |
| The Stanford Program in Genomics, Ethics, and Society  
| Center for Integration of Research on Genetics and Ethics (CIRGE) |
| --- | --- |
| The Stanford Program in Genomics, Ethics, and Society (PGES) addresses a broad range of social, ethical, legal, and political implications of advances in human genetics from multiple perspectives, creating at Stanford an internationally renowned center for scholarship on genomics, ethics, and society. Housed within the Stanford University Center for Biomedical Ethics, PGES was launched in 1995.  

The Center for the Integration of Research on Genetics and Ethics (CIRGE) is one of four interdisciplinary Centers of Excellence in Ethical, Legal, and Social Implications (ELSI) research created by the National Human Genome Research Institute of the U.S. National Institutes of Health, to proactively identify and deliberate ethical, legal, and social issues in current and emerging genetic research. With a focus in behavioral genetics, CIRGE programs explore how such considerations relate to individual and group identity and what policies and education are necessary to address those issues. CIRGE is based at the Stanford Center for Biomedical Ethics, but includes over thirty Stanford University faculty in the fields of genetics, neuroscience, law, history, medicine, radiology, psychiatry, anthropology, and philosophy, among others. |

| Stanford University  
| Bio-X |
| --- | --- |
| The Stanford University Bio-X program supports, organizes, and facilitates interdisciplinary research connected to biology and medicine. Ideas and methods embodied in engineering, computer science, physics, chemistry, and other fields are being brought to bear upon important challenges in bioscience. In turn, bioscience creates new opportunities in other fields. Significant discoveries and creative inventions are accelerated through formation of new collaborative teams. |

| State University of New York  
| Upstate Medical University  
| Center for Bioethics and Humanities |
| --- | --- |
| The Center for Bioethics and Humanities' mission is to advance the scholarly and professional understanding of bioethics and the medical humanities, and thereby promote clinical health care and health policy that is patient-centered, compassionate, and just. |

| University of California, Berkeley  
| The Office for History of Science and Technology |
| --- | --- |
| OHST promotes research and discussion in the history of science and technology through international exchanges, conferences, colloquia, research facilities, and administrative assistance. It produces *Historical studies in the physical and biological sciences*, a leading journal in the field, and other publications, including the *Berkeley papers* monograph series. Although formally independent, the Office cooperates with the Department of History and serves as a home for graduate students in history of science and related fields in other programs. It also welcomes postdoctoral fellows and other visiting scholars from all over the world. Through its faculty and students, OHST is connected to a diverse group of scholars interested in studies of science and technology. |
| University of California, San Diego | The UCSD Research Ethics Program was begun in 1997 to promote awareness, discussion and analysis of the ethical dimensions of research. Although most functions of the Program are centered in the School of Medicine, the intended audience for courses, seminars, and workshops is campus-wide. The Program serves as a resource for the School of Medicine, the UCSD campus, and the San Diego community. The Program is jointly sponsored by the Office of Graduate Studies and Research and the School of Medicine. |
| University of Colorado Health Sciences Center | The Center for Bioethics and Humanities at The University of Colorado at Denver and Health Sciences Center engages today’s and tomorrow’s health professionals and the community in substantive, interdisciplinary dialogue about the ethical issues surrounding contemporary healthcare. |
| University of Florida | The Mission of the Interdisciplinary Center for Biotechnology Research is to support the growth of the Life Science Research Program at the University of Florida and at universities throughout the state, by making widely available the needed facilities, technologies, training, and competent personnel. |
| University of Louisville | The Institute for Bioethics, Health Policy and Law was established in 2001 at the University of Louisville. The purpose of the Institute is to conduct interdisciplinary research, teaching, and service at the highest levels in emerging areas of bioethics, health sciences, public health, law, and related fields. Research activities in fields such as genetics, research on human subjects, public health policy, health privacy and confidentiality, assisted reproductive technologies, access to health care, and new medical technologies are carried out at the local, state, national, and international levels. This combination of bioethics, health policy, and law provides a valuable and unique academic resource. Research activities at the Institute focus on analyzing the ethical, legal, and social implications of biomedical technology and health services, with special consideration given to relevant legislative and regulatory policy issues. The Institute serves as an intellectual link between the Belknap and Health Sciences campuses, while its independent and discrete nature facilitates high quality interdisciplinary research and furthers its commitment to collaborative and interdisciplinary research activities beyond the University. The ability to bridge ethical and public policy analysis of emerging problems to concrete legal interventions makes the Institute a significant resource to the state and the nation. |
| University of Minnesota | The mission of the Center is to advance and disseminate knowledge concerning ethical issues in health care and the life sciences. The Center carries out this mission by conducting original interdisciplinary research, offering educational programs and courses, fostering public discussion and debate through community outreach activities, and assisting in the formulation of public policy. The Center provides education in bioethics for University students, faculty, and staff; professionals in health care and related fields; and interested members of the general public. The University of Minnesota's Center for Bioethics is a nationally prominent, yet locally focused, resource that conducts important research and provides educational programs and services to help students, professionals, policy makers, and the public confront the complex ethical issues emerging in health care and the life sciences. Faculty from the schools of medicine, dentistry, pharmacy, nursing, public health, law, and the College of Liberal Arts have developed a curriculum that is both theoretical and applied; both focused and broad; and the |
Deans of these schools serve as the Center's Board of Directors.

The Center is a member of the Consortium on Law and Values. The Consortium links sixteen leading centers and programs at the University of Minnesota to address legal, ethical, and policy implications of the life sciences. The mission of the Consortium is to support work on the legal, ethical, and policy implications of problems in health, environment, and the life sciences.

**University of North Carolina**
*Carolina Center for Genome Sciences*
CCGS encompasses an impressive array of faculty members, facilities, training programs and outreach efforts. UNC-Chapel Hill is dedicated to making significant advances in basic genomic research, as well as translating these discoveries to improving healthcare, education and society.

**University of Pennsylvania**
*Center for Bioethics*
The Center for Bioethics is a leader in bioethics research and its deployment in the ethical, efficient, and compassionate practice of the life sciences and medicine. The Center has become a world-renowned educational and research enterprise that employs over 20 full and part-time faculty with appointments in a number of University of Pennsylvania schools and departments including medicine, law, nursing, business, education, philosophy, psychology, sociology, religious studies, public policy and public health.

**University of Pittsburgh**
*Center for Bioethics and Health Law*
The University of Pittsburgh Center for Bioethics and Health Law is committed to bringing together scholars and researchers from a variety of disciplines to cooperate in addressing issues in bioethics and law from both theoretical and clinical perspectives. The Center is founded on the premise that the questions posed by contemporary healthcare dilemmas are not the province of any single discipline but require the collaborative integration of insights garnered from history, law, medicine, philosophy, and the social sciences. The Center is not a policy-making or advisory body. Rather, it is committed to in-depth analysis of the complex legal and ethical issues surrounding the health care process.

**University of Toronto**
*Joint Centre for Bioethics*
The University of Toronto Joint Centre for Bioethics (JCB) is a partnership between the University of Toronto and affiliated healthcare organizations. The JCB studies important ethical, health-related topics through research and clinical activities. The JCB is a network of over 180 multidisciplinary professionals seeking to improve health care standards at both national and international levels.

**University of Virginia**
*Center for Biomedical Ethics*
The mission of the Center for Biomedical Ethics is to advance education, research, and service concerning moral values in health care. The faculty works both individually and in research teams on problems in clinical ethics, the ethics of research involving human subjects, ethics and genetics, health care organization ethics, and the history of bioethics.

**University of Washington**
*Center for Genomics and Public Health*
The University of Washington Center for Genomics and Public Health (UW CGPH) aims to integrate advances in genetic technology into public health practice and offer research and educational opportunities for public health students and professionals. Three priorities for the asthma, diabetes, and familial hypercholesterolemia working groups are to: 1) Contribute to the knowledge base on genomics and public health in these selected disease areas, with attention to identifying practical applications of this knowledge to public health practice; 2) Provide technical assistance to local, state, and regional public health organizations; and 3) Develop and provide training for the current and future public health workforce.

**University of Washington**
Rapid progress in genomics, including sequencing of the human genome, has
| Institute for Public Health Genetics | generated high hopes of finding new ways to prevent and treat diseases, but has also raised concerns about the application of such technologies and knowledge. The aim of the University of Washington program in Public Health Genetics is to bring together the public health sciences of epidemiology, environmental health, biostatistics, pathobiology, and health services with health economics, outcomes research, cost-effectiveness research, genomics, ethics, law, and social sciences to provide students with the necessary knowledge and skills to apply genetic advances to public health. The IPHG curriculum focuses on phenotypic disease prevention in communities and populations, not only individual patients and their families. |
APPENDIX 8

Course Listings
ANTHROPOLOGY

- 191, *Kinship, Personhood and Commodification in the Age of New Reproductive Technologies* (S06)
  Suzanne Pelka

GENERAL EDUCATION CLUSTER

- 71ABC, *Biotechnology & Society* (F06; W07; S07)
  Sally Gibbons, Jean Perry, Ralph Robinson
- 72ABC, *Sex: From Biology to Gendered Society* (F06; W07; S07)
  Arthur Arnold, Martie Haselton, Abigail Saguy, Eric Vilain

HISTORY/PHILOSOPHY

- 191, *Genetics and Society: Historical and Philosophical Perspectives* (W07)
  Soraya de Chadarevian, Sally Gibbons

HONORS COLLEGIUM

- 14, *The Interaction of Science and Society* (W07)
  Jeffrey Miller
- 70A, *Genetic Engineering in Medicine, Agriculture, and Law* (W07)
  Robert Goldberg
- 80, *Genomics and the Boundaries of the Self* (S07)
  Edward McCabe, Linda McCabe
- 103, *Scientific Knowledge, Industrial Growth, and Social Policy* (F06)
  Lynne Zucker

HUMAN GENETICS

- 19, *Genetic Counseling: Making Genetics Real* (W06)
  Christina Palmer, Michelle Fox
- 19, Seminar 2, *Nature, Nurture – Is it Genes or Upbringing that Defines Us?* (W06)
  Janet Sinsheimer
- C220, *Ethical Issues in Human Genetics* (S07)
  Linda McCabe

MOLECULAR, CELLULAR, AND DEVELOPMENTAL BIOLOGY

- 19, Seminar 4, *Utopian Visions of Human Biology* (F06)
  John R. Merriam

PEDIATRICS

  Edward McCabe, Linda McCabe

PSYCHOLOGY

  Tyrone Cannon
PUBLIC POLICY

- 19, Speculative Fiction and the Future of Human Genetics (S05)
  Andy Sabl
- 191A, Politics of International Health from Small Pox to Stem Cells (S04)
  Shobita Parthasarathy

STATISTICS

- 19, Seminar 2, Morality and Science of Genetics (F06)
  Chiara Sabatti
APPENDIX 9

Minor Proposal
(body of proposal without appendices)
PROPOSAL FOR A MINOR IN SOCIETY AND GENETICS

Submitted by M. Norton Wise, Chair, Faculty Advisory Committee
and Sally Gibbons, Associate Director, Center for Society and Genetics

Proposed effective date: Winter 2008

Faculty Advisory Committee: M. Norton Wise (History; Co-Director, Center for Society and Genetics), Soraya de Chadarevian (History; Center for Society and Genetics), Sally Gibbons (Philosophy; Center for Society and Genetics), Bob Goldberg (MCDB), Barbara Herman (Philosophy), Edward McCabe (Pediatrics; Human Genetics; Co-Director, Center for Society and Genetics) Linda McCabe (Human Genetics), Aaron Panofsky (Public Policy; Center for Society and Genetics, upon arrival in January 2008), Joan Silk (Anthropology), Victoria Sork (EEB), Heather Tarleton (MCDB), Stefan Timmermans (Sociology)

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Appendix 2: Syllabus for Society and Genetics 102W: DNA: Promise and Peril
Appendix 3: Syllabus for Society and Genetics 191A-Z: Perspectives in Society and Genetics
Appendix 4: Syllabi for Society and Genetics 190 and 199
Appendix 5: Sample Syllabus for Society and Genetics 188
Appendix 6: Course Descriptions for Elective Courses
Appendix 7: Letters of Support
Section 1: Rationale

One need only open the nearest newspaper or website to read about dramatic developments in the genetic sciences—from new genetic evidence for the common ancestry of the peoples of the British Isles, to new genetic tests for hundreds of conditions or predispositions, to advances shaping (or claiming to shape) almost every aspect of human life, from medicine to agriculture and criminal law, not to mention human reproduction, nutrition and aging.

Of course, not everyone sees promise in this extension of our insight into and control over biology, both within and without. The scope of our capacity to affect and understand life forms and their evolution reveals more clearly than ever before the need to integrate social thought with biological research. At every level, biology is inherently social: genes, gene expression, genetic research and medical therapies all co-evolve with society. New insight into this complex reality brings with it the opportunity and need to educate students about topics that sit at the intersection of the biological and social sciences. The minor in Society and Genetics, housed in the Center for Society and Genetics, seeks to provide students with the knowledge necessary to understand and ultimately help shape the interactions between the genetic sciences and the social world—a world that not only affects and is affected by gene science but is also ultimately responsible for directing it.

With the sequencing of numerous whole genomes—from microbial genomes to the human, the rice, and the dog genome—the era of studying and understanding the genetic basis of life on the level of single genes and on the assumption that genotype can predict phenotype has ended. It has given way to the fields of genomics, bioinformatics, and systems biology—approaches that reflect the intricacy of gene expression and regulation, as well as the relation of genes and proteins in interactive systems. These new approaches are the product not only of new abilities to observe and understand genes, proteins and their interactions, but also of our increasing appreciation of the centrality of gene-environment interactions at every level, from the molecular to the social. The insight that biology is inherently social is one that informs the work of the Center and the curricular goals of its minor.

For example, the more we learn about the relation between genes and behavior, the more we appreciate the plasticity of these relations. Researchers now know it is impossible to separate out nature and nurture as two opposed determinants of who we are. Further, investigators are increasingly appreciating the way in which the genetic and cultural components of human life co-evolve. From an evolutionary perspective, the human genome has co-evolved with language, tools, and the domestication of plants and animals. Originally unable to tolerate lactose beyond childhood, for example, many of us who are descended from social groups who domesticated cattle now carry one of a handful of genetic mutations that allow us to drink and digest cow’s milk as adults. Co-evolutionary processes have simultaneously shaped our genome and our capacity to live in complex societies. These processes may even help explain such things as the tendency to respond violently to insults in some cultures, to honor informal contracts, or to establish close relations with animals and pets.

This brief account of some of the developments at the intersection of the life and human sciences underscores the demand for a multidisciplinary approach to research and education in this area, an approach that foregrounds the interaction between genetics and society. Given that all of us will be increasingly affected by developments in genetics—whether as consumers, citizens, entrepreneurs, policymakers, educators, or researchers—the Center believes that undergraduates need to be provided with the opportunity to study the co-evolution of genetics and society at every level.
Section 2: Scope and Objectives

The proposed minor in Society and Genetics will provide undergraduates throughout the College and other schools at UCLA with opportunities to understand and probe the nuanced problems and possibilities presented by genetics, with special attention to their social context and content. Given the dynamic interaction between genetics and the social world in which it is embedded, this minor will be necessarily and robustly multidisciplinary.

The minor will be the primary curricular contribution of the Center for Society and Genetics for the immediate future. There are already, however, a number of outstanding lower division courses taught by Center-affiliated faculty, including the freshman clusters Biotechnology and Society and Sex: From Biology to Gendered Society. These courses expose a large number of undergraduates to the social dimensions of genetics and biology more generally. The minor will allow those who wish to pursue these issues further to do so.

The Center’s emphasis on multidisciplinary scholarship will be reflected in the collaborative, cross-disciplinary approach to instruction in the core courses of the minor as well as in the wide range of elective courses in such areas as history, philosophy, sociology, anthropology, public policy and biology available to students in the minor.

The Society and Genetics minor will supplement a range of majors: life science majors will have the opportunity to engage in an in-depth exploration of the social content and implications of the science they already study, while humanities and social science majors will have the chance to use the tools of their disciplines to explore one of the most significant areas of science and medicine shaping our world today.

Section 3: Requirements for the Minor

Admission
To enter the minor, students must have an overall grade-point average of 2.5 or better. Interested students should file a petition in the Center. They are encouraged to declare the minor as early as possible and to discuss their proposed course of study with the program’s undergraduate advisor.

Grade Requirements
All courses for the minor must be taken for a letter grade. Only one upper division course satisfying a minor requirement may also be used to satisfy a major requirement. Successful completion of the minor will be indicated on the transcript and diploma.

Minor Requirements
As stated above, the Center and UCLA more broadly already offer a number of relevant lower division courses in the area of society and genetics, many of which are taught by faculty affiliated with the minor. We will not explicitly incorporate these course offerings into the minor, but we anticipate that they will stimulate students to seek a more sustained upper division curriculum, which this minor provides.

Three new courses will provide the foundation for the minor—these include a pair of lecture courses and a capstone seminar:

- Genetic Concepts for the Human Sciences (SG 101; lecture, 4 units) will be an upper division genetics course giving a serious grounding in those aspects of genetics necessary to in-depth
study in the minor. This course provides a focused treatment of selected complex genetic concepts, with an emphasis on gene-environment interaction at various levels, culminating in an exploration of the notion of the co-evolution of genetics and society. Life science majors, given the scope of their biology coursework overall, will substitute an additional upper division elective from the approved list in lieu of taking this course. (See syllabus in Appendix 1.)

- **DNA: Promise and Peril** (SG 102W; lecture, 5 units) is the other upper division lecture course for the minor. It explores the notion of co-evolution from a different perspective by considering the way new knowledge of genetics shapes self-understandings, social institutions, practices and outcomes. By addressing a wide range of problems and possibilities opened up by genetics, and by investigating the assumptions of genetic determinism, students are prepared to select electives in the minor that best suit their own area of interest in this broad field. (See syllabus in Appendix 2.)

- **Perspectives in Society and Genetics** (SG 191A-Z; seminar, 5 units) is a capstone seminar exploring how scholars in different disciplines study the field of genetics. Students in the minor will be required to take SG 101 (or the elective substituted for it by life science majors) and SG 102W prior to enrolling in this seminar. SG 191 will help students develop and integrate the material covered in these core lecture courses and in their other electives. Importantly, it will provide them with an opportunity to learn from each other’s courses of study in the minor, with their different disciplinary orientations. Students will then write a culminating paper exploring a problem that emerges where the life and human sciences cross paths, informed by their own interests and expertise as developed through prior coursework. SG 191 may be repeated once (on a different topic) for credit as an elective. (See sample syllabus in Appendix 3.)

Taken together, these three courses guide the students’ learning about the intersection and co-evolution of genetics and society: SG 101 gives students a strong grounding for thinking about genetics in a co-evolutionary framework by emphasizing the role of environment, including the social environment, in gene expression, regulation and natural selection. SG 102W exposes students to a broad array of challenges and opportunities associated with developments in genetics, informing their path through the minor. Finally, the capstone seminar (SG 191A-Z), as the culmination of the minor, allows students to explore the way different disciplines approach issues in genetics while drawing on their prior coursework to develop a paper topic at the crossroads of genetics and society, using the disciplinary tools developed in the seminar.

For students who wish to do research in this area, two new courses will be created allowing them to enroll in a supervised individual research tutorial (SG 199) in conjunction with a research colloquium (SG 190). SG 190 will bring students together to discuss their work under the guidance of an affiliated faculty member. (See syllabi in Appendix 4.) Students may earn credit in the minor for up to two paired SG 199 and SG 190 courses.

We also intend to establish temporary variable topics seminars in Society and Genetics using the SG 188 course number. Given the steady stream of postdoctoral fellows and visiting faculty in the Center, we expect to have a handful of different seminars to offer each year. (See Appendix 5 for a sample SG 188 syllabus.)

We are requesting that the subject heading “Society and Genetics” be created for the minor. Initially this will be a freestanding minor under the aegis of Dean of Social Sciences. Ultimately, the minor will be housed in the Center, when it is approved as a Center for Interdisciplinary Instruction (CII). Among the new courses created under the subject heading will be the core courses (SG 101 and 102W), the temporary variable topics seminars (SG 188), the capstone seminar (SG 191A-Z), and the paired research
tutorial and colloquium (SG 199 and 190). Elective courses will also be offered through the departments of participating faculty, and with the approval of the faculty advisory committee.

In summary, the Society and Genetics curricular requirements include four elements:

- One required upper division genetics course emphasizing gene-environment interaction and co-evolution (SG 101 or, for life science majors, an upper division elective from the approved list).
- One required upper division course exploring the social dimensions of genetics and the genetic dimensions of social issues (SG 102W).
- One required capstone seminar (SG 191A-Z).
- Four upper division electives.

These requirements and units are summarized in the table below, followed by the catalog copy for the minor:

<table>
<thead>
<tr>
<th>Course Title/Description</th>
<th>Units</th>
<th>Capacity</th>
<th>Freq</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG 101, Genetic Concepts for the Human Sciences*</td>
<td>4/5</td>
<td>40</td>
<td>once/yr</td>
</tr>
<tr>
<td>SG 102W, DNA: Promise and Peril</td>
<td>5</td>
<td>100</td>
<td>once/yr</td>
</tr>
<tr>
<td>SG 191A-Z, Perspectives in Society and Genetics</td>
<td>5</td>
<td>20</td>
<td>once/yr</td>
</tr>
<tr>
<td>At least 4 UD electives for a minimum of 16 units (see elective course menu)</td>
<td>16-20</td>
<td>varies</td>
<td>varies</td>
</tr>
<tr>
<td><strong>7 Courses</strong></td>
<td></td>
<td><strong>30-35 units</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Life Science majors will substitute an additional upper division elective (4/5) from the approved list in lieu of taking this course.

Catalog copy:

**Scope and Objectives**

The minor in Society and Genetics provides undergraduates with the opportunity to understand and probe the complex problems and possibilities presented by genetics, with special attention to their social context and content. Given the dynamic interaction between genetics and the social world in which it is embedded, the minor is robustly multidisciplinary.

The emphasis on multidisciplinary scholarship is reflected in the collaborative, cross-disciplinary approach to instruction in the core courses of the minor, as well as in the wide range of elective courses available in such areas as history, philosophy, sociology, anthropology, public policy and biology.

**Undergraduate Study**

**Society and Genetics Minor**

To enter the minor, students must (1) have an overall grade-point average of 2.5 or better and (2) file a petition in 1323 Rolfe Hall no later than three terms before graduation. They are encouraged to declare the minor as early as possible and to discuss their proposed course of study with the undergraduate adviser.
**Required Upper Division Courses (30 to 34 units):** (1) Society and Genetics 101 (4 units) or for life science majors, an upper division elective from the approved list (4 or 5 units); (2) Society and Genetics 102W (5 units); (3) Society and Genetics 191A-Z (5 units); and (4) at least four upper division elective courses (for a minimum of 16 units) from the approved list of courses issued each term by the program. One individual research tutorial and corequisite research seminar (190 and 199) may be applied; enrollment in additional 190/199 courses may be considered by petition.

Students may petition to have a course not on the approved list applied toward the four-course elective requirement.

Only one upper division course may be applied toward both this minor and a major or minor in another department or program. All courses for the minor must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

**Section 4: Summary of Upper Division Electives**

Students must take at least four upper division electives from the following list (for a minimum of 16 units). These courses were selected to capture the range of topics and perspectives relevant to the broad field of genetics and society—anthropological, philosophical, historical, biological and sociological, among others. Students will work with the Center’s SAO to ensure that their selection of electives provides a coherent and focused path through the minor.

An approved list of courses will be issued each quarter reflecting available courses for the current term. (Course descriptions are provided in Appendix 6 and letters of support from department chairs and administrators in Appendix 7.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title (units)</th>
<th>Offering Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHRO 111</td>
<td>Theory of Anthropological Archeology (4)</td>
<td>W annually</td>
</tr>
<tr>
<td>ANTHRO 112</td>
<td>Old Stone Age Archeology (4)</td>
<td>S bi-annually</td>
</tr>
<tr>
<td>ANTHRO 124</td>
<td>Evolution and Biology of Human Behavior (4)</td>
<td>annually</td>
</tr>
<tr>
<td>ANTHRO 128A</td>
<td>Primate Behavior Nonhuman to Human (4)</td>
<td>F, W annually</td>
</tr>
<tr>
<td>ANTHRO 131;</td>
<td>Culture: What Makes It All Work (4)</td>
<td>S annually</td>
</tr>
<tr>
<td>AP&amp;TESL M161;</td>
<td>Language in Culture (5)</td>
<td>annually</td>
</tr>
<tr>
<td>COMM ST M123</td>
<td>Evolution of Human Societies (4)</td>
<td>S, bi-annually</td>
</tr>
<tr>
<td>ANTHRO 153</td>
<td>Models of Cultural Evolution (4)</td>
<td>annually or bi-</td>
</tr>
<tr>
<td>HNRS M150</td>
<td></td>
<td>annually</td>
</tr>
<tr>
<td>Course</td>
<td>Course Title (units)</td>
<td>Offering Frequency</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>EE BIOL 120</td>
<td>Evolution (4)</td>
<td>annually</td>
</tr>
<tr>
<td>EE BIOL 121</td>
<td>Molecular Evolution (4)</td>
<td>annually</td>
</tr>
<tr>
<td>EE BIOL 180</td>
<td>Biology and Society (2)</td>
<td>annually</td>
</tr>
<tr>
<td>GRNTLGY M140; PSYCH M140; SOC WLF M140</td>
<td>Introduction to Study of Aging (4)</td>
<td>F annually</td>
</tr>
<tr>
<td>HIST 179B</td>
<td>History of Medicine: Foundations of Modern Medicine (4)</td>
<td>annually</td>
</tr>
<tr>
<td>HIST M180B; WOM STD M180B</td>
<td>Historical Perspectives on Gender and Science (4)</td>
<td>bi-annually</td>
</tr>
<tr>
<td>HIST 180C</td>
<td>Science and Technology in the 20th Century (4)</td>
<td>annually</td>
</tr>
<tr>
<td>HNRS M152; GEOG M153</td>
<td>Collapses of Past Societies and Their Lessons for Our Own Future (5)</td>
<td>W annually</td>
</tr>
<tr>
<td>HUM GEN C144</td>
<td>Genomic Technology (4)</td>
<td>F annually</td>
</tr>
<tr>
<td>HUM GEN CM156; MCD BIO CM156; MIMG CM156</td>
<td>Human Genetics (4)</td>
<td>W annually</td>
</tr>
<tr>
<td>HUM GEN 220*</td>
<td>Ethical Issues in Human Genetics (2)</td>
<td>S annually</td>
</tr>
<tr>
<td>LGBTS M114; WOM STD M114</td>
<td>Introduction to Lesbian, Gay, Bisexual, and Transgender Studies (5)</td>
<td>F annually</td>
</tr>
<tr>
<td>PHILOS 153A</td>
<td>Topics in Ethical Theory: Normative Ethics (4)</td>
<td>annually</td>
</tr>
<tr>
<td>PHILOS 154B</td>
<td>Topics in Value Theory: Moral Responsibility and Free Will (4)</td>
<td>F annually</td>
</tr>
<tr>
<td>PHILOS 155</td>
<td>Medical Ethics (4)</td>
<td>regularly</td>
</tr>
<tr>
<td>PHILOS 156C</td>
<td>Topics in Political Philosophy (4)</td>
<td>annually</td>
</tr>
<tr>
<td>PUB PLC 103</td>
<td>Ethics, Morality, and Public Life: Contemporary Controversies (4)</td>
<td>W annually</td>
</tr>
<tr>
<td>SOC &amp; GEN 188 (Sample syllabus in Appendix 5)</td>
<td>Variable Topics Seminars (4-5)</td>
<td>three/year</td>
</tr>
<tr>
<td>SOC &amp; GEN 190 (See Appendix 4)</td>
<td>Research Colloquium (2)</td>
<td>annually</td>
</tr>
<tr>
<td>SOC &amp; GEN 199 (See Appendix 4)</td>
<td>Supervised Individual Research (4-5)</td>
<td>annually</td>
</tr>
<tr>
<td>SOCIOL 143</td>
<td>Human Health and Society (4)</td>
<td>annually</td>
</tr>
<tr>
<td>SOCIOL M162; WOM STD M162</td>
<td>Sociology of Gender (4)</td>
<td>two/year and SU</td>
</tr>
<tr>
<td>SOCIOL 170</td>
<td>Medical Sociology (4)</td>
<td>bi-annually</td>
</tr>
<tr>
<td>WOM STD 134</td>
<td>Gender, Science, and Theory (4)</td>
<td>F bi-annually</td>
</tr>
</tbody>
</table>

* HUM GEN 220 to be concurrently scheduled as HUM GEN C120

**Section 5: Student Interest**

Based on our experience with existing courses on this topic, we anticipate healthy interest in this minor. As medical schools increasingly emphasize the ethical dimensions of medicine and expect applicants to have studied bioethics, we expect that many life science majors (and other pre-meds) will want to avail themselves of this minor. In addition, many students who aspire to careers in law, business, or politics will be excited to delve into the political, legal, commercial, and policy issues associated with new genetic technologies. Finally, students of history, literature, anthropology, philosophy and other more
traditional fields of scholarship in the humanities and social sciences who are also intrigued by developments in genetics are likely to welcome this minor, given that no department on campus provides undergraduates an opportunity to explore this field in a sustained manner.

These expectations are supported by the success of a number of related lower division courses, including the freshman cluster Biotechnology and Society, and the Honors Collegium courses, Genomics and the Boundaries of the Self (HC 80) and Genetic Engineering in Medicine, Agriculture and Law (HC 70A). Over the last five years, Biotechnology and Society has enrolled more than 600 students. Each year, a number of students inquire about how they can continue their study in this area. This inquiry is echoed by the students in the Honors Collegium courses as well. To date, there has been little to offer those who would like to pursue upper division work in this area.

Section 6: Resources and Enrollment

Resources
The Center for Society and Genetics anticipates hiring a part-time student affairs officer to help advise students interested in the minor. No new library materials, equipment, or office space will be required. The Perspectives in Society and Genetics course will be taught by Center faculty as part of their regular course load.

Expected Enrollment
We expect to enroll 20-30 students in the minor during the first year it is offered.

Section 7: Affiliated Faculty

Faculty Advisory Committee
The faculty advisory committee is responsible for developing the curricular requirements for the minor, proposing the initial structure for Academic Senate approval and overseeing changes in both policy and curricula over time. Members will teach courses in the minor, particularly contributing to a core course either as the faculty of record or as a guest lecturer on a topic of expertise. They will also encourage colleagues to teach existing courses and develop new courses for the minor. In addition, members of the advisory committee will approve student applications for participation in the minor.

The faculty advisory committee for the Society and Genetics minor is listed below. Letters indicating each advisory committee member’s willingness to serve are included in Appendix 7.

M. Norton Wise, CHAIR
Professor of History, College of Letters and Science
Co-Director, UCLA Center for Society and Genetics, College of Letters and Science

Soraya de Chadarevian
Professor of History, College of Letters and Science

Sally Gibbons
Adjunct Assistant Professor of Philosophy, College of Letters and Science
Instructional Coordinator for the Freshmen Cluster Program, College of Letters and Science
Associate Director, UCLA Center for Society and Genetics, College of Letters and Science

**Robert Goldberg**  
Professor of Molecular, Cell, and Developmental Biology, College of Letters and Science

**Barbara Herman**  
Professor of Philosophy, College of Letters and Science

**Edward McCabe**  
Physician-in-Chief, Mattel Children’s Hospital UCLA  
Mattel Executive Endowed Chair, Pediatrics, David Geffen School of Medicine  
Professor of Pediatrics and Human Genetics, David Geffen School of Medicine  
Professor of Bioengineering, Henry Samueli School of Engineering and Applied Science  
Co-Director, UCLA Center for Society and Genetics, College of Letters and Science

**Linda McCabe**  
Adjunct Associate Professor of Human Genetics, David Geffen School of Medicine

**Aaron Panofsky**  
Assistant Professor of Public Policy, School of Public Affairs (arriving January 2008)

**Joan Silk**  
Professor of Anthropology, College of Letters and Science

**Victoria Sork**  
Professor and Chair of Ecology and Evolutionary Biology, College of Letters and Science  
Professor of Institute of the Environment, College of Letters and Science

**Heather Tarleton**  
Lecturer of Molecular, Cellular and Developmental Biology, College of Letters and Science

**Stefan Timmermans**  
Professor of Sociology, College of Letters and Science

**Affiliated Faculty**

Affiliated faculty have agreed to support the minor in various ways such as mentoring students working on independent research projects, designing and teaching elective courses for the minor, contributing guest lectures to the core course, and contributing to the intellectual development of the minor as it evolves over time. See Appendix 7 for a compilation of e-mail commitments from the faculty members below who have agreed to participate as an affiliated faculty member.

**Robert Boyd**  
Professor of Anthropology, College of Letters and Science

**Carole Browner**  
Professor in Residence of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine

**Tyrone Cannon**  
Professor of Neuroscience and Psychiatry, David Geffen School of Medicine  
Professor of Psychology, College of Letters and Science
Section 8: Changes in Senate Regulations

No changes to Senate Regulations are required. The minor complies with all current regulations.
APPENDIX 10

Vision Statement and Curriculum Heuristics for Major
A Vision for a Biology and Society Major at UCLA

Any widening of the borders of our knowledge imposes an increased responsibility on individuals and nations through the possibilities it gives for shaping the conditions of human life.

--Niels Bohr to the United Nations regarding the development of the hydrogen bomb

Niels Bohr reminded the world of the duties imposed by new knowledge at a time when physics was the master science. Since then, physics has been eclipsed by biology, and many of the decisive problems and possibilities of the 21st century are located at the intersection of the biological and human sciences. Thus, Bohr’s insight again rings true: in learning about and manipulating the molecules of life, we raise (and re-raise) profound questions about our humanity—our identities, duties, aspirations and limitations as individuals, as families, as societies and as a species. As educators of tomorrow’s leaders and citizens, we must also assist our undergraduates in thinking deeply about these questions. The new Biology and Society major proposes to do just that.

Building a Bridge

Modern universities, in their current configuration of independent departments and schools that resemble more a collection of walled-off silos than an integrated learning community, are generally ill-equipped to help students grapple with the problems and possibilities that emerge at the intersection of natural and human sciences. Only a university-wide major that fundamentally bridges the discrete cultures of lab scientists, social scientists, scholars of the humanities, law, and policy can equip our students to think through problems at the boundaries of the natural and human sciences.

UCLA, given its range of outstanding departments in the College of Letters and Science, as well as its top-ranked professional schools, is ideally positioned to take on this bridge-building activity. The Biology and Society major will be a signature curriculum at UCLA—unique in its scope and in its sustained demand for a multidisciplinary approach to education regarding the co-evolution of science and society.

Co-evolution of natural and human sciences.

Because human biology embodies the dynamic nexus between the natural and human sciences, it invites an understanding of these domains not as poles but as a mutually interacting and co-evolving system. By thinking of human biology in this way, we are pressed to reexamine such basic conceptions as what it is to be human and in so doing, help our students to do the same. This enterprise requires developing the tools to re-express our understanding of ourselves simultaneously with our development of the tools to remake our biological nature.

By creating a major that foregrounds the central place of human biology at the intersection of the natural and human sciences, we will make explicit and thereby open to reflection not only the ethical and social content of biological developments but also the biological content of social and cultural life, and we will begin to think and speak about them as a single evolving sphere. The challenge, however, is great, just because these domains have been so long separated. We may usefully approach their intersection by considering the kinds of changes required to reconceptualize the two existing “sides” of scholarship regarding biology and society.
A. Constructing the Human Dimensions of Biology.

The study of biology needs to be broadened to include explicit consideration of the social dimensions it incorporates, in part because the choices we make regarding which scientific developments to pursue (and which not to pursue) are based not merely on technical know-how, but also on broadly ethical conceptions of what constitutes a good human life. Further, the very molecules of life themselves record the history of human beings socially, culturally, and individually, and so human biology cannot be fully understood without accounting for its social dimensions.

Several areas of biology already invite and require this broader approach:

1. **Complexity of gene expression.** Not so long ago a one-to-one relation was thought to exist between genotype and phenotype, with the conceptual consequence that genotype would predict phenotype. We have learned, however, that genotype does not always predict phenotype: individuals, even family members, with identical gene sequences may have different phenotypes, suggesting the involvement of modifying interactions with other genes and the environment. The situation is further complicated by the plasticity of gene expression. Nutritional status in the womb, for example, can affect the expression of genes and the risk of diseases throughout the adult life of the individual. Many of the social dimensions of biology make their appearance through this complexity of gene expression.

2. **The evolving human/environment interface.** The gene-environment interaction that is so basic to a full understanding of biological mechanisms is not itself static, but rather evolves over time. Work on the evolution of disease (e.g., avian flu), the environmental effects of the evolution of proteomes, mosquito-malaria interactions, and the interaction between global climate change and rapid evolutionary change all illuminate the dynamic nature of this interface.

3. **What is “normal”?** Many individuals with deafness consider themselves to be members of a cultural group they refer to as “Deaf culture” distinct from that of the hearing community. Occasionally members of this community will utilize prenatal diagnosis along with molecular genetic testing to have a child who will be deaf, terminating a pregnancy if the child would hear. And many in the disabled community object to the medical terminology that its members feel implies that they are abnormal, including referring to the particular genetic variation they carry as a mutation. Similarly, the genetics of sex determination is highly complex, and sex or gender is not dichotomous – male or female – but is continuous, with many individuals having intersex conditions. The more one knows about such variation—and the more one can intervene in it—the more the concept of the normal becomes open to question, both biologically and socially.

4. **Chimeras.** Although monsters that cross the species boundary have long been the stuff of horror films, chimeras have now become tools of medicine. For example, to replace patients’ diseased valves, cardiac surgeons have used heart valves from pigs, so that humans now have animal “parts.” And, as stem cell research progresses,
investigators anticipate the need to study human stem cells in animal models, which could involve, for example, introducing human neural stem cells into chimpanzee brains, thereby creating animals with human “parts.” To some, such blending of the human and non-human violates human dignity. To others, there is nothing human or non-human about the chemical sequence constituting a gene. In either case, potential advances in biology provoke reconsideration of the concept of what it means to be human.

**B. Constructing the Biological Dimensions of the Human.**

Just as our choices regarding research agendas in the lab and the material changes we choose to effect are bound up with our views about what we believe to be desirable and appropriate, so are our changing self-conceptions and our basic categories of social understanding bound up with the biological possibilities. A wide range of concerns traditionally addressed by the humanities and social sciences are implicated. These include but are not limited to:

1. **Race.** Race is a fraught concept of current social life, partly because we possess no clear idea of what it is, either culturally or biologically. There is a crying need for informed dialogue about the biological and cultural markers of race and about the ways in which they affect each other.

2. **Families.** A host of new—and sometimes surprising—family forms are now possible, given advances in reproductive technologies. Debates about whether these new families enhance or pervert the proper form of kinship structures require us to reflect on just what we take the “purpose” of these structures to be, biologically and culturally.

3. **Literature.** *Brave New World* and *Frankenstein* continue to offer classic literary frameworks for exploring humanity’s powers to manipulate nature and ourselves. But a growing body of fiction (and non-fiction) develops narratives based on entirely new biological capacities of the present and future. We need to understand more deeply how these narratives collectively reflect and shape our understanding of ourselves and our social life.

4. **Art.** Just as art and science were closely bound together in the emergence of “perspective vision” in the Renaissance, so we are beginning to see similar synergisms of “biological vision” today. Frank Gehry’s organic architecture (Disney Hall) is one example. But deeper interactions are developing between artistic practices and the imaging technologies so prominent in the biological sciences today, suggesting a renewed and revitalized relationship between art and science.

5. **Justice.** Debates about how to distribute the benefits and burdens of social life are hardly new. What is new is the way in which our increasing power to intervene in our own biology is allowing us to shape and therefore distribute the biological potential of individuals. The debate about whether to let the market determine who receives the rewards of the “genomic revolution” possesses special urgency since choosing to accept a “biologized” or “geneticized” underclass is to choose a fundamental biologic inequity.
6. Religion and Science. Recent calls to teach intelligent design as an alternative to evolution; the publication of books by such authors as Richard Dawkins and Daniel Dennett denying the existence of God; the sense of many that modern medicine encourages us to “play God” through various interventions that alter basic features of our humanity—such diverse aspects of our contemporary intellectual life reflect the complex interplay between modern science, medicine and religion.

The Curricular Challenges and Opportunities. As is apparent from the preceding examples, the profound issues arising at the intersection of the biological and human sciences have no ready home in our existing curriculum. Courses in epigenetics and evolution, on the one side, and in ethics and the sociology of the family, on the other, can certainly contribute valuable perspective, but as presently constituted they do not bridge the biology/society gap, nor grapple with the complexities of co-evolution. One major exception is the work of the BEC group (Biology, Evolution, and Culture) in anthropology.

Our challenge in developing a curriculum for the Biology and Society major will be to construct a coherent network of courses that operate at this interface. Most immediately that means identifying the faculty who will have real enthusiasm for developing such courses and thinking systematically about building a new curriculum.

Ultimately, we hope that this faculty group will design a curriculum that gives students a deep understanding of the interface between biology and society—from the complexity of gene expression and the co-evolution of biology and culture, on the one hand, to the significance of biology to our (changing) conceptions of self and society on the other. In so doing, students will be prepared to enter a wide variety of post-graduate training programs and careers with the ability to understand and make informed choices about the complex interactions between biology and the social world—a world that is not only profoundly affected by the science but also is ultimately responsible for directing it.
HEURISTICS FOR CURRICULUM DEVELOPMENT—
BIOLOGY AND SOCIETY MAJOR

Our challenge is to develop a curriculum whose object is neither the biological nor the human sciences but their intersection. It should teach students to understand this intersection from diverse perspectives, to refrain from parsing its properties into nature/nurture dichotomies, and to analyze it with tools drawn from a variety of disciplines. The following examples may be useful heuristically, in thinking about how to meet the challenge, even though they are nothing like comprehensive. (One obvious void lies in the areas of complexity: e.g., multi-gene interactions, epigenetics, and gene/environment interactions.)

First, at least three different Freshman Clusters introduce first-year students to issues at the intersection of biology and society, providing a sustained interdisciplinary approach through the contributions of a team of instructors over the course of three quarters:

**GE Cluster 71A,B,CW**  
**Biotechnology And Society**  
Sally Gibbons, Center for Society and Genetics and Freshman Cluster Program  
Ralph Robinson, Microbiology, Immunology & Molecular Genetics  
Jeanne Perry, Molecular, Cell & Developmental Biology

Surely in the early days of genetic engineering, few would have predicted that we would already be cloning sheep, cats, dogs and mules, engineering crops to produce pharmaceuticals, and decoding the entire human genome. As the pace of advances in molecular biology continues to accelerate, we must ask and answer hard questions, including, who should be the recipients of the benefits of this new science, and on what basis? How do we determine what modifications of human and other life forms are safe and appropriate? And, most broadly, how does the new genetics affect our understanding of ourselves and our relationship to each other and the rest of nature?

The complexity of these issues demands that we approach this new science in its social context. "Biotechnology and Society" provides such an approach through the analysis and exploration of biological, ethical, and socio-political dimensions of biotechnology. Students gain an understanding of the molecular biology underpinning the advances in biotechnology not only through lecture, but also through hands-on lab experience using some of the cutting-edge techniques of genetic engineering. At the same time, they build a vocabulary and set of intellectual tools with which to explore and debate the ethical implications of gene science. Through case studies, roundtable discussions, noted guest speakers, and films, students are equipped to continue to learn about this complex and rapidly evolving field even after they complete the course.

**GE Cluster 72A,B,CW**  
**Sex: From Biology to Gendered Society**  
Arthur Arnold, Behavioral Neuroscience and Genetics  
Martie Haselton, Evolutionary Psychology
From the moment of our conception, each of us has a sex. Our individual sex has a major role in determining the physical attributes of our bodies, the structure of our brains, our behavioral tendencies, [the environment in which we grow up, the laws that govern our behavior, our place in society, the attitudes of others towards us, and our self-concept]. Although sex may be considered to be determined primarily biologically, it is our gender (e.g., the social implications of our sex) that is arguably most important for our lives. Sex and gender can only be understood from a mixture of different perspectives. In this course we investigate some of those perspectives from the disciplines of anthropology, biology, sociology, psychology, and medicine.

The overarching goal of the course is to encourage students to think and write critically about the interaction of biological, psychological, and social factors that influence our behavior and experience as human beings. We expect that many undergraduates will find the specific subject matter interesting, even fascinating. We hope, however, that by studying sex and gender, student will learn generalizable skills suitable for the analysis of complex interactions of diverse factors that influence our lives. We will deal explicitly with questions such as the following:

- How is sex determined biologically at many different levels in the body?
- How are gender differences and gender inequality "socially constructed"?
- Which human traits are products of natural selection over millennia?
- How does the law define the sex of an individual?
- How does our physical and social environment influence how our genes work? How do our genes shape our experiences?
- How do gendered stereotypes inform scientific knowledge about biological sex differences?
- What determines our sexual orientation and sexual desires?
- What do typical responses of parents and doctors to intersex babies reveal about social assumptions of gender?
- How does our gender influence the diseases we get, and how we are treated by physicians?

GE Cluster 80A,B,CW

**Frontiers in Human Aging: Biomedical, Social and Policy Perspectives**
JoAnn Damron-Rodriguez, Ph.D., School of Public Policy & Social Research
Rita B. Effros, Ph.D., School of Medicine
Roberta Malmgren, Ph.D., School of Public Health

This course explores the phenomenal increase in life expectancy, known as the "Longevity Revolution", by viewing the lifelong process of aging from a variety of perspectives. Students study biological and biomedical aging, with an emphasis on how scientific breakthroughs relate to health and increased independence. In parallel, the course also integrates psychological, sociological, and policy perspectives, addressing
issues such as how gender, race, ethnicity, social environment, and economic factors interact with aging, the role of stress in aging, and how health habits established during youth can affect both the quality of life in later years and lifespan itself. Historical perspectives on cohorts as they age over time are applied to analyze the impact of the social and political environment on the aging experience. Controversies and ethical questions related to genetic engineering, stem cell use for regenerative medicine, forced retirement and end-of-life issues are explored, as are other relevant topics such as economic opportunities based on the aging market and cultural differences in intergenerational dynamics.

A considerable number of other courses are available that reach across the biological and human sciences to issues of self understanding and social policy. Here are two in the Honors Collegium.

**HC 80 - Genomics and the Boundaries of Self**
Directors: Edward McCabe, Pediatrics and Linda McCabe, Human Genetics and Pediatrics

The era is upon us when we will have the sequence of the entire human genome available to us. In this course, we will consider the impact that the knowledge of this genomic sequence will have on our concepts of ourselves as individuals and of our place in the biological universe. We will explore how this information will influence concepts of race/ethnicity and gender. The ability of DNA-based forensics to identify specific individuals will be considered. As genes become commodities with value in the marketplace, we may find that someone else owns our genes. The cloning of humans for reproductive and therapeutic purposes will also be discussed. Much has been made of the medical implications of the Human Genome Project, but we will look at the influence of this information on our concepts of self and identity.

**HC 48 - The Politics of Reproduction**
Director: Gail Kligman, Sociology

Human reproduction and its regulation are contemporary policy issues around the world. Government efforts to influence fertility behavior call attention to an important feature of the modern state: political intervention into private life, intimacy, and sexuality. Technological developments have facilitated the bureaucratic regulation of the body as well as of medical practice— with positive and negative consequences. The expansion of the state into the bodies and lives of citizens has blurred the boundaries between public and private interests.

In this course, we shall explore diverse aspects of the politics of reproduction. "Politics of reproduction" refers to the intersection between politics and the life cycle, or between the public sphere and private lives. We shall discuss the complex relations between individual, local, and global interests as they shape and reflect reproductive practices, public policy, and the exercise of power. Diverse topics covered by our course include the social construction of gender and reproductive practices, the relationship between nationalism and embodied politics, abortion, the politicization of motherhood and
mothering, and new technologies as they impact social and biological reproduction and experience. The readings for this seminar are drawn from interdisciplinary perspectives.

Moving to another paradigmatically intersectional topic—human evolution—Chuck Taylor has proposed the following discussion seminar for Winter 2007.

EEB 263 -- Topics in Population Genetics (2 units)
“(Lewontin/Gould) v (Wilson/Dawkins): What tis the matter?”
http://taylor0.biology.ucla.edu/~taylor/EEB263/

Since the 1970's at least there has been an acrimonious debate among some of the leading evolutionists. The best known of these have concerned "the adaptationist paradigm", sociobiology and evolutionary psychology, but the battlefield has extended across a number of topics, most recently cultural evolution. At one level the dispute can be seen as a mere disagreement on scientific theories. At another level it can be seen as a dispute about the role of political influences in science. It seems likely to me that the dispute is even deeper. In this seminar we will read and discuss some of the leading papers or selections from books by Dawkins, Wilson, Gould and Lewontin, with an effort to understand what really is at issue and assess how our own evolutionary studies might be affected.

Although the seminar is intended at this point for graduate students and faculty, it could easily be mounted for undergraduates. The difficulty would be that they would need some serious education in the theory and explanatory practices of evolution in order to be able to evaluate the positions adequately. As it happens, one of the main contributors to the theory of cultural evolution, the anthropologist Rob Boyd, has proposed a basic sequence that would fulfill needs of this kind. It would provide two quarters on human biological and cultural evolution from a unifying perspective.

- **Quarter 1** would begin with modern evolutionary theory and the role of learning and culture in evolution. It would move on to the evolutionary history of humans with attention to language and to gene-culture coevolution, concluding with human genetic variation within and between groups, its causes and some of its outcomes, both physiologically (e.g., disease) and psychologically (e.g., social categories and groups).

- **Quarter 2** would take up evolutionary anthropology directly, with the following foci. Family systems: universals and cross-cultural variation; psychology of mating and parenting; variation in fertility and population change. Social systems: universals and cross-cultural variation; game theory of kinship, reciprocity, and cooperation; experimental work; political complexity; money, property, and markets. Human ecology: subsistence and social organization; effects of humans on their environments; effect of ecology on long-term economic growth and well-being. Religion: variation in religious belief and practice; competing theories of the evolution of religion; cognitive factors; signaling theories and functionalist theories.

More advanced courses in evolutionary anthropology are also available, taught by Joan Silk, Dan Fessler, and others. Here are two.
Anthropology 128A: Primate Behavior, Nonhuman to human

This course provides an introduction to the study of primate behavior and ecology. Primates are an extremely diverse order, ranging from tiny mouse lemurs of Madagascar that forage alone at night and sleep in tree holes during the day, to howler monkeys of the forests of Central and South America that live in small one-male groups and spend most of their days munching on leaves, to the macaques of Asia that are among the most enterprising and adaptable of all primates, to gregarious chimpanzees that form male-bonded communities in the tropics of central Africa. This diversity is the product of natural selection, which has shaped the social organization, life histories, reproductive strategies, social behavior, and cognitive abilities of these species. As one of the most successful species on the planet and one of the most unusual, it is important to understand similarities and differences between ourselves and our closest living relatives.

Anthropology M151/Women’s Studies M151: Marriage, Family, and Kinship/Biocultural Perspectives on Human Kinship Systems

This course explores social relationships that are based on what anthropologists term kinship, or what many Americans describe as family ties. We will examine how people think about their relatives, how their ideas affect their interpersonal relationships in their marriages and families, how forms of kinship organization affect other aspects of belief and social behavior, gender systems in particular, how people manage reproduction based on cultural ideologies, and the sorts of changes ideas about kinship and kin relationships have undergone in recent years. We also will consider how evolution may have shaped people’s ideas about their relatives and their behavior toward their mates, offspring, family members, and others. Certain elements of kinship experience appear to be universal, in that they are found in all known societies, and are similar to the kinds of behavior we see in other primates, while other features vary among different societies around the world. In order to explain why some patterns of behavior are found in all human cultures while other patterns differ, this course will take both a cross-cultural and biosocial focus.

Finally, a number of our colleagues from the human sciences are looking at biology from a broad social perspective. Jared Diamond, in Geography, offers a number of relevant courses, including HC 152/Geog 153/Anthro 158: "Past Societies and Their Lessons for Our Own Future." Another is the following:

Geography 6: World Region Geography

One of the most important single factors influencing a person’s life is the place where he or she was born and spends his or her life. For instance, American, Haitians, Swiss, Rwandans, Iraqis, and South Koreans differ greatly, on the average, in their annual incomes, life expectancies, daily caloric intakes, and access to medical care and education. The reasons for these differing outcomes are fascinating, complex, debated,
and vitally important to us as individuals and to world politics. World geography examines the differing environments and histories of different regions of the world, in order to understand why geography has such a big impact on our lives.

Somewhat similarly, a course offered this winter by Soraya de Chadarevian and Sally Gibbons in the Center for Society and Genetics offers historical and philosophical perspectives on genetics.

**History 191 I/Philosophy 191**  
**Genetics and Society: Historical and Philosophical Perspectives**  
[http://www.sscnet.ucla.edu/07W/hist191i-1/chadarevian@socgen.ucla.edu](http://www.sscnet.ucla.edu/07W/hist191i-1/chadarevian@socgen.ucla.edu)

The ethical, legal and social implications of what is often called the 'new genetics' are widely discussed. In this seminar we want to broaden discussions regarding the relations of genetics and society, firstly, by adopting a historical perspective and, secondly, by reflecting on the very distinction between society and genetics and the ways this distinction has been conceptualized and used. Building on current approaches in the history of science and technology we will aim at understanding the degree to which the science of genetics itself is deeply social. We will study how biologists and anthropologists have conceptualized the relations of genes and (social) environment. We will then read works in philosophy that present accounts of human nature, human flourishing and dignity that seem to privilege “nature” as something that can guide ethical thought and action. We will ask whether these accounts would encourage or discourage us from manipulating our genetic inheritance. More generally, we will consider what is new in the 'new genetics' in order to gain a deeper understanding of current discussions of the promises and perils of genetics in their relation to society.

Soraya de Chadarevian also proposes the following lecture course focusing on the history of genetics, again underscoring its social dimensions.

- **The making of genetics.** Genetics is a rather young science; its beginnings go back to around 1900. How did people think about heredity before then? What led to the formation of the discipline? Why has its history been so controversial? And how can we explain the central place of genetics today in questions extending from who we are to the economy? To answer these questions this combined lecture and reading course will look at the practices of geneticists, their tools and theories, as well as at the different value attached to genetic knowledge at various times by various people. Throughout we will highlight the ways in which genetic knowledge is embedded in cultural practices. A basic knowledge of genetics will be assumed.

And Kate Hayles proposes the following way to bring literature into such a major:

- **Literature Interrogating Biology** - Literary texts offer a wealth of material that seeks to interrogate biological issues, ranging from such classics as Mary Shelley’s *Frankenstein* in the nineteenth century and Aldous Huxley’s *Brave New World* in the early twentieth century to Bruce Sterling’s *Distraction* in the contemporary era. As Gillian Beer, among others, has brilliantly shown in *Darwin’s Plots*, biological theories, discoveries,
speculations and arguments are not separate from the languages and narratives forms of literature but deeply enmeshed in them. This complex engagement cannot adequately be accounted for by traditional “influence” models that assume biology is the source to which other fields, such as literature, react. Rather than simply respond to what biology proposes, literary texts use the full resources of narrative, imagination, and language to interrogate biology across a spectrum of issues. For example, literary narratives engage biology by such techniques as imagining future developments, either in the near or far term, and dramatizing how these developments will affect the structures, dynamics, and meanings of human life; proposing modifications and adaptations of current theories that take them in new directions; re-staging past events and discoveries to re-interpret their significance and historical trajectories; and developing “what-if” scenarios that explore the interactions of life-as-it-is (on earth) with life-as-it-might-be (elsewhere than earth). Involved in these explorations are such complex questions as what can, and cannot, be said in a given culture’s language; the interactions between emotion and affect and intellectual issues; the shapes that stories must have to be recognized within a given culture as stories; and the entanglement of narrative form with scientific discovery, discourse, and explanation. A course dealing with these issues would have literally hundreds, if not thousands, of high-quality literary texts from which to choose, so it could best be structured according to sub-themes that would vary for different years, perhaps in coordination with themes that would be emphasized within the major as a whole.
APPENDIX 11

List of Previous Colloquium Speakers
2006-07 COLLOQUIUM SERIES

10/12/06  Professor Charles Taylor, UCLA Department of Ecology and Evolutionary Biology
10/26/06  Katie Buck, Associate Director of Corporate Affairs and Ethics, Affymetrix
11/9/06   Professor Jeffrey Kahn, Director, Center for Bioethics, University of Minnesota
11/14/06  Professor Sarah Franklin, London School of Economics and Political Science
11/30/06  Professor Margaret Little, Georgetown University
1/11/07   Professor Stefan Timmermans, UCLA Department of Sociology
2/1/07    Professor Russell Korobkin, UCLA School of Law
2/8/07    Professor Jeremy Freese, University of Wisconsin
2/15/07   Dr. Katrina Dipple, UCLA Departments of Pediatrics and Human Genetics
3/5/07    Professor Nikolas Rose, Director of BIOS Research Centre, London School of Economics and Political Science
3/13/07   Baroness Helena Kennedy, Chair, Human Genetics Commission, Great Britain
3/15/07   Professor Alice Dreger, Northwestern University
4/12/07   Aaron Panofsky, RWJ Fellow, UC Berkeley
4/26/07   Professor Stephen Munzer, UCLA School of Law
5/10/07   Professor Kaushik Sunder Rajan, UC Irvine
5/24/07   Professor Charis Thompson, UC Berkeley

2005-06 COLLOQUIUM SERIES

10/27/05  Professor Margaret Lock, McGill University
11/3/05   Professor Lynne Zucker, UCLA Departments of Sociology and Public Policy; and Professor Michael Darby, UCLA Anderson School of Management
11/17/05  Daniel Callahan, Director of International Programs, The Hastings Center
12/01/05  Dr. Harley Kornblum, UCLA Departments of Pediatrics and Medical Pharmacology
12/08/05  Professor John Evans, UC San Diego
01/19/06  Professor Angela Creager, Princeton University
01/26/06  Professor Hans-Joerg Rheinberger, Director, Max Planck Institute for the History of Science, Berlin
02/16/06  Professor Sahotra Sarkar, University of Texas, Austin
03/02/06  Dr. Eric Vilain, UCLA Department of Human Genetics
03/09/06  Suzanne Pelka, Postdoctoral Scholar, UCLA Center for Society and Genetics
03/16/06  Dr. Ed McCabe, Co-Director, UCLA Center for Society and Genetics
04/06/06  Professor Manfred Laubichler, Arizona State University
04/13/06  Professor Sheila Jasanoff, Harvard University
05/05/06  Professor Frances Kamm, Harvard University
05/11/06  Angela Nonaka, Graduate Student Fellow, UCLA Center for Society and Genetics
06/01/06  Dr. Ed McCabe, Co-Director, UCLA Center for Society and Genetics; and Professor Linda McCabe, UCLA Department of Human Genetics
06/08/06  Professor Stephen Hilgartner, Cornell University

2004-05 COLLOQUIUM SERIES

09/30/04  Professor Mark Rothstein, University of Louisville
10/14/04  Professor Paul Rabinow, UC Berkeley
10/20/04  Professor Joel Hirschhorn, Harvard University
10/28/04  Professor Allen Buchanan, Duke University
11/04/04  UCLA Panel: Professor Katherine Hayles, Department of English; Professor Barbara Herman, Department of Philosophy; Dr. Ed McCabe, Department of Pediatrics; Professor David Sears, Department of Psychology
11/08/04  Shobita Parthasarathy, Postdoctoral Fellow, UCLA Center for Society and Genetics
12/09/04  Professor Martha McClintock, University of Chicago
01/13/05  Professor Rayna Rapp, New York University
01/27/05  Professor Gary Marcus, New York University
05/05/05  Professor Mike Wade, Indiana University
05/19/05  Professor William Provine, Cornell University
06/09/05  UCLA Institute for Stem Cell Biology and Medicine Panel: Dr. Judith Gasson, ISCBM Co-Director; Steve Peckman, ISCBM Associate Director; Dr. Owen Witte, ISCBM Co-Director
APPENDIX 12

Correspondence from Chancellor’s Office regarding Center Budget
September 9, 2004

Dean Barbara Nelson  
Executive Dean Patricia O'Brien  
Dean Gabrielle Spiegel  
Dean Scott Waugh

Dear Colleagues

The Chancellor has agreed to support the emerging Center for Society and Genetics with four institutional FTEs. The initial allocation of these resources will fund two appointments in 04/05, anticipating July 1, 2005 start dates. The Center will be searching for outstanding cross-disciplinary candidates and has proposed that this year’s searches be conducted in conjunction with the following departments: Anthropology, History, Philosophy, and Public Policy. Dr. McCabe and Professor Wise have been in contact with these departments to determine their interest in pursuing these searches.

I am writing to confirm that the FTE for these positions will be provided by the Chancellor as institutional FTE. Thus, these resources will be provided to the Center to support actual faculty positions to be housed in a department. For the duration of the faculty appointment, the FTE will be counted as regular allocated FTE in the given department. Additionally, the Center will receive funding to negotiate the recruitment and set-up costs for these positions, so as to ensure that this responsibility will not fall to the department. A search process has been developed to allow the department to conduct the search, but both the department and the Center will approve the interview schedule, short list and final appointee.

Appointments made with these two FTE will not reduce the number of appointments that I previously authorized to become effective 7/1/05 - 6/30/06. As with all searches for regular faculty, the interested department chairs will submit a request to search, which in turn needs to be approved by the dean (and the Executive Dean if it is a College search), and then sent to my office for signature. In this case, that form will also need to be co-signed by either Dr. McCabe or Professor Wise.

I hope this letter clarifies the process and commitments associated with these interdisciplinary positions.

Sincerely

[Signature]

Daniel Neuman  
Executive Vice Chancellor and Provost
MEMORANDUM

November 18, 2005

Edward McCabe, M.D., Ph.D.
Professor, Pediatrics
Co-Director, Center for Society and Genetics

M. Norton Wise, Ph.D.
Professor, History
Co-Director, Center for Society and Genetics

Dear Ed and Norton:

I am writing to provide the following commitments to the Center for Society and Genetics.

**Permanent Budget**

I am approving a total permanent budget for the Center in the amount of $730,000. All prior commitments are included in this amount. These resources are provided in the following budget categories:

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Total: $730,000

I am also providing annual release funding of .20 FTE to support the Director of the Center.

It is understood that the Center will be in a state of transition over the next several years. Thus, I am asking that the Office of Academic Planning and Budget conduct a review of the budgetary needs of the Center, recommending adjustments to this allocation when appropriate, on an annual basis for the next three years.

**FTE**

I have previously committed four institutional FTE to the Center. The initial allocation of these resources was to fund two appointments in 04/05, anticipating July 1, 2005 start dates. Both of
these appointments have been delayed with start dates now projected for July 1, 2006. The second allocation of two FTE will follow these successful hires. I am now expanding this commitment to a total of 5.5 institutional FTE, or an additional 1.5 FTE, to enable a third phase of hires to be coordinated by the Center. As is true of the original allocation of FTE, these resources will be provided to the Center to support actual faculty positions to be housed in a department.

Recruitment Allocation

I previously committed $100,000 per 1.0 FTE for recruitment and set-up costs associated with each of the two Society and Genetics faculty recruitments in last year’s planning. It was understood that the $100,000 figures were placeholders, to be revised (assuredly upward) based on the requirements of the two new faculty members. At the time, I did not want to encumber higher figures for three reasons: they could very well be inaccurate; a large amount might raise expectations; and the length of the recruitment process was uncertain.

I am committing to a similar placeholder allocation of $100,000 per 1.0 FTE for the remaining 3.5 FTE noted above.

I would also like to confirm the commitment to your efforts to recruit Soraya de Chadarevian and Joanna Mountain. EVCProvost Neuman has offered an institutional FTE for de Chadarevian’s spouse. This FTE will return to the general academic salary pool when vacated. In regard to Mountain, I will fund the following costs (as outlined in the draft offer letter prepared for Mountain dated October 29, 2005): 1) transitional summer ninths ($31,600); 2) general laboratory set up ($375,000); and 3) renovations to laboratory space ($10,000).

Space

The Center for Society and Genetics will relocate to appropriate space in Rolfe Hall during summer, 2006.

Finally, I encourage you to continue discussions with Executive Dean Pat O’Brien regarding moving the Center within the UCLA College. Both EVC/Provost Neuman and I will work with the Center’s leadership and Pat as we consider the best structure and location for Society and Genetics within the College with a goal of confirming our future plans by April 1, 2006.

Sincerely,

Albert Carnesale
Chancellor
APPENDIX 13

Correspondence from Executive Dean O’Brien regarding Indirect Cost Returns
Dear Sally,

What you propose is fine with me, since the center reports to me. We can revisit this and other issues when it comes time to move into a division.

Pat

From: Gibbons, Sally
Sent: Monday, October 30, 2006 4:37 PM
To: O'Brien, Pat
Cc: Hernandez, Nick; Brown, Carlene J.
Subject: question re CII proposal for Center

Dear Pat-

I am putting the finishing touches on the Center’s proposal to become a CII, which we intend to submit for consideration by the College FEC at its meeting on Nov 17.

We have suggested in the proposal what we think is a rational approach to distributing indirect cost allocations from grants awarded to Center faculty, but Robin Garrell asked that I have you, as the cognizant dean, formally approve this arrangement. A very short email in reply to this one should suffice.

The following bullets describe the arrangement we have in mind:

- For CSG-initiated proposals, 100% of the indirect costs normally awarded to an academic unit will be allocated solely to CSG.
- For faculty-initiated proposals, indirect cost allocations to both CSG and the faculty’s affiliated academic unit will be decided on a case-by-case basis.

If this seems acceptable to you, please let me know. If you’d like to discuss it further, I’m happy to do that, as well.

Thanks in advance for your help.

Best,

Sally

Associate Director
UCLA Center for Society and Genetics
310-206-1889
APPENDIX 14

Statements of Support
December 18, 2006

Dr Ed McCabe
Professor Norton Wise
Co-Directors
Center for Society and Genetics
1323 Rolfe Hall
Mail Code 722102

Dear Ed and Norton:

I am writing in support of your proposal for the Center for Society and Genetics to become a Center for Interdisciplinary Instruction (CII).

As you know, I believe that the University is well served by developing creative cross-disciplinary research and teaching. UCLA can take a leadership role in shaping the challenges and opportunities generated by the complex realities of the contemporary world only if it creates and supports academic units that bridge the cultures of discrete departments and schools. The Center is just such a unit.

The Center's aims will be most effectively advanced by becoming a CII, since this administrative structure will provide the stability needed to achieve the unit's research, teaching, and service missions in an integrated way. Being a CII will help you not only recruit and hire outstanding faculty in what is a newly emerging field but also create an environment in which the activities of teaching and research can fundamentally inform each other.

In short, I strongly support the Center's becoming a CII. By having an integrated administrative structure for research and teaching and a core faculty committed to both these functions, I am confident you will create a dynamic environment for work in this cutting-edge field.

Sincerely,

[Signature]
Daniel Neuman
Executive Vice Chancellor and Provost

Cc: Norman Abrams, Acting Chancellor
    Maryann Gray, Assistant Provost
    Patricia O'Brien, Executive Dean, College of Letters and Science
September 26, 2006

Dr. Ed McCabe
Professor Norton Wise
Co-Directors
Center for Society and Genetics
1323 Rolfe Hall
MC 722102

Dear Ed and Norton:

I am writing as Executive Dean of the College of Letters and Science in support of your proposal for the Center for Society and Genetics to become a Center for Interdisciplinary Instruction (CII).

As you know, I strongly believe that the future of the College and indeed of the University depends on developing creative cross-disciplinary research and teaching of the kind that the Center produces. Many of the key problems and possibilities of the contemporary world do not fit within the disciplinary boxes of the university, and academic units that bridge the cultures of discrete departments and schools are in a strong position to take hold of these challenges and opportunities.

I agree that the best structure for the Center would be that of a CII, since this will provide the most stable environment in which to achieve your research, teaching and service missions. I appreciate the fact that vigorous interactions across departments and disciplines are best fostered by creating the appropriate administrative structure for the unit. Given the multidisciplinary mission of the Center, being a CII will confer sufficient flexibility for you to recruit and hire outstanding faculty in this newly emerging field and to keep the Center running smoothly. Beyond administrative advantages, the CII structure will promote the
all-important synergies of teaching and research at the university. Faculty involved in co-teaching undergraduates and graduate students in a cross-disciplinary curriculum are likely also to develop innovative research collaborations, which then reflect back on the curriculum.

In sum, I enthusiastically support the Center’s becoming a CII to foster cross-disciplinary activity on a campus-wide level. By having an integrated administrative structure for research and teaching and a core faculty committed to both these functions, I know you will create an environment in which research and teaching will fundamentally inform each other and shape the direction of work in this field. I can affirm that Society and Genetics has sufficient operating funds to sustain such a vision and CII structure.

Sincerely,

[Signature]

Patricia O’Brien
Executive Dean
College of Letters & Science
October 19, 2006

Professor Norton Wise
Dr. Ed McCabe
Directors
Center for Society and Genetics
1323 Rolfe Hall
MC 722102

Dear Norton and Ed:

Thank you for the opportunity to review the proposal to establish the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). The Anthropology Department has met and discussed the proposal, and we have voted unanimously to support it.

The department has had a number of fruitful interactions with the Center, which we expect will continue in the future. As you know, we collaborated with the Center in a joint faculty search which resulted in an offer to a geneticist from Stanford. Although this offer was regrettably declined, we look forward to other such collaborations in the future.

We are pleased that a number of our current faculty members and students have participated in a range of Center activities, and we anticipate that they will continue to do so. Joan Silk was a faculty fellow in 2005-06 and now serves on the faculty advisory committee for the minor and as a mentor for one of the Center’s graduate student fellows. Elinor Ochs is currently serving on the Center search committee for a new co-director. And Angela Nonaka—a graduate student in our department who graduated in 2006—has been a fellow in the Center for two years (2004-05 and 2005-06). Because of her association with the Center, Nonaka was able to explore the genetic implications of her research, substantially enriching her dissertation with a new disciplinary perspective. Subsequent discussions with Ed McCabe have led to further collaborations between Nonaka and geneticists, and these collaborations promise to yield exciting new cross-disciplinary scholarship.
The department recognizes that the Center is admirably suited to promote and pursue innovative cross-disciplinary scholarship such as this, and our department is pleased to be a part of it. We consider the Center a vital intellectual partner in developing knowledge in a range of subfields in anthropology, from biological anthropology to cultural and medical anthropology.

We look forward to developing our ties to the Center even more fully in the future, and we are pleased to support your effort to become a CII.

Sincerely,

[Signature]

Doug Hollan
Chair/Professor
Anthropology Department
13 September 2006

Dr. Ed McCabe
Professor Norton Wise
Co-Directors
Center for Society and Genetics
1319 Rolfe Hall
MC 722102

Dear Ed and Norton:

As Chair of the Department of Ecology and Evolutionary Biology, I want to express our support for the Center for Society and Genetics’ proposal to become a Center for Interdisciplinary Instruction (CII). Given the mission of the Center, it seems logical for the Center to become a CII, and we are happy to endorse this proposal. Because our department interacts with the Institute of the Environment, which is a CII, we are familiar with this organizational structure. It is the best one for the Center for Society and Genetics, which is cross-disciplinary in both teaching and research.

As you know, Ecology & Evolutionary Biology has collaborated with the Center in a variety of activities. In 2004-05, we were happy, for example, to sponsor joint colloquium sessions with two speakers—Mike Wade and Will Provine. We believe joint colloquia such as these are a valuable way to foster interactions between the department and the Center, and we look forward to arranging more of these in the future. We were also involved in the attempt to recruit an anthropology faculty member to be affiliated with the Center by loaning the Center space. It is unfortunate that this recruitment did not occur for many reasons, but, from our standpoint, we were looking forward to association.

Further, we support the continued involvement of our faculty in a range of Center roles and activities. Professor Charles Taylor is collaborating with the Center to look at the complex ethical issues involved in his large-scale research on genetically engineering mosquitoes to prevent them from transmitting malaria. I expect he will become a faculty fellow in the Center in 2007-08, and I hope other Ecology and Evolutionary Biology faculty members will also do so in the future. Of course, I have also been involved in the Center from its inception as Special Assistant to the Chancellor, and I intend to maintain my involvement, whether as a member of its Board or as a fellow.
The Department of Ecology and Evolutionary Biology sees the Center as a valuable partner in developing cutting-edge knowledge in the new biology, and we look forward to developing our ties to the Center even more fully in the future.

We are happy to assure the Center of our long-range support.

Sincerely,

[Signature]

Victoria L. Sork
Professor and Chair, Department of Ecology and Evolutionary Biology
Professor, Institute of the Environment
December 6, 2006

Professor Norton Wise
Dr. Ed McCabe
Co-Directors
Center for Society and Genetics
1319 Rolfe Hall
MC 722102

Dear Norton and Ed:

Thank you for the opportunity to review the proposal to establish the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). The History Department believes that the intellectual and academic mission of your Center will be well served by its being a CII, and, after discussing the matter in a departmental meeting, we are happy to endorse this proposal.

The History Department collaborated with the Center in a joint faculty search that led to the successful hire of Soraya de Chadarevian. Currently, one hundred percent of her appointment is in the History Department, with institutional FTE loaned from the Center. Fifty percent of her teaching and 75% of her service is going to the Center. We understand that when the Center becomes a CII, this appointment may become a split appointment, 50% in the History Department, and 50% in the Center. Given the original intent of the hire, we do not expect any problem with the split appointment.

Further, we support the continued involvement of our faculty in a range of Center roles and activities, including cross-listing of courses and Norton Wise’s role as Co-Director of the Center. Wise intends to accept a WOS appointment in the Center but this also is unlikely to pose a problem.

One concern of the department that I would like to share with you is that we would like to encourage the Center to include the deeper historical, as well as more contemporary, aspects of society and genetics in its research and teaching. For example, genetic research is of increasing significance among early historians in tracing migrations and population history.
We believe the Center represents the best in interdisciplinary programs: led by faculty, it fosters and integrates vital research and teaching opportunities. We want to congratulate the Center for realizing its mission thus far and want to assure our long-range support.

Sincerely,

Edward A. Alpers
Professor and Chair
June 15, 2006

Dr. Ed McCabe
Professor Norton Wise
Co-Directors
Center for Society and Genetics
1319 Rolfe Hall
MC 722102

Dear Ed and Norton:

I am writing as Chair of the Department of Human Genetics regarding the Center for Society and Genetics’ proposal to become a Center for Interdisciplinary Instruction (CII). Human Genetics is pleased to endorse this proposal.

Of course, our primary involvement with the Center comes through the sustained commitment of Ed McCabe to developing the Center, from 2001 in its earlier incarnation as the Center for Society, the Individual and Genetics to the present in its current broad cross-campus form. Dr. McCabe’s interest in broadening approaches to human genetics and increasing conversations about its implications is consonant with the aims of the department. We are pleased at his success in building the Center for these purposes.

As you know, a number of our other faculty have been involved in the Center in a variety of ways. Eric Vilain has been a faculty fellow in the Center for three years, while Janet Sinsheimer served in this capacity in 2005-06. These fellowships have been productive ones for our faculty. In addition to supporting fellowships such as these, I encourage my faculty to develop courses in genetics and issues in genetics for undergraduates. Linda and Ed McCabe have developed both a Fiat Lux and an Honors Collegium course, while Linda McCabe enrolls undergraduates in her Human Genetics 220 course on ethical issues. As a result of their involvement with the Center, Janet Sinsheimer and Christina Palmer both developed Fiat Lux courses that were listed through the Human Genetics Department. I understand that the Center intends to develop an undergraduate minor, and these and other courses would certainly be directly relevant to that curriculum. We are happy to contribute in thinking about new courses for that minor, as well.
Human Genetics considers the Center to be a vital academic unit in developing knowledge about society and genetics. We look forward to working closely with the Center in the future. We understand that becoming a CII is important for the Center to fulfill its aims, and we are happy to assure the Center of our support.

Sincerely,

Kenneth Lange
Chair, Department of Human Genetics
Rosenfeld Chair of Computational Genetics
June 12, 2006

Professor Norton Wise
Co-Director
Center for Society and Genetics
1319 Rolfe Hall
MC 722102

Dear Norton:

I am writing in my capacity as Chair of Pediatrics regarding the Center for Society and Genetics’ proposal to become a Center for Interdisciplinary Instruction (CII). My department believes that the intellectual and academic mission of the Center will be well served by its being a CII, and we are happy to endorse this proposal.

As you know, the Department of Pediatrics has collaborated with the Center in a variety of activities. We were happy, for example, to provide financial support for the 2005-06 academic conference and public symposium, Stem Cells: Promise and Peril in Regenerative Medicine. We also are happy to have our Director of Communications, Don Ponturo, contribute 15% of his time to this annual symposium and other Center activities. We expect to continue his role in the Center for the indefinite future.

Further, we support the continued involvement of our faculty in a range of Center roles and activities. Dr. Eric Vilain has been a faculty fellow in the Center for three years, and I hope other Pediatrics faculty members will avail themselves of this opportunity in the future. And of course, I intend to maintain my role as Co-Director of the Center.

The Department of Pediatrics understands the importance of interdisciplinary centers such as this one: without educating our students about advances in biomedicine, we risk creating an unnecessary backlash against it. We value the Center’s role not only in preventing this but also in developing and disseminating cutting-edge cross-disciplinary knowledge regarding the new genetics.

We want to thank the Center for pursuing its mission thus far and want to assure our long-range support.

Sincerely,

Edward R. B. McCabe, M.D., Ph.D.

Improving the Health of Today’s and Tomorrow’s Children
August 21, 2006

Professor Norton Wise
Dr. Ed McCabe
Directors
Center for Society and Genetics
1323 Rolfe Hall
MC 722102

Dear Norton and Ed:

I have now had the opportunity to review the proposal to establish the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). The Philosophy Department is pleased to endorse this proposal.

As you know, the Philosophy Department has collaborated with the Center in joint faculty searches in the areas of bioethics and the philosophy of biology. We anticipate continuing with these searches until a successful hire in one of these areas is made. We believe that recruiting philosophers in these areas is of great value to both the department and the Center.

Further, we support the continued involvement of our faculty in a range of Center roles and activities. Professor Barbara Herman currently serves as a member of the Center’s faculty advisory committees for both the minor and the director’s search. She and Seana Shiffrin serve as Center associates and have graduate students who work in areas relevant to the Center. A number of these students have received graduate student fellowships during the past three years, including three in the current year. We see these interactions as providing excellent opportunities for intellectual engagement, and we appreciate the financial support for our students.

We believe the Center is a strong interdisciplinary program fostering valuable research and teaching opportunities. We are pleased to assure the Center of our long-range support.

Sincerely,

[Signature]

Donald A. Martin
Chair
Philosophy Department
June 8, 2006

Professor Norton Wise  
Dr Ed McCabe 
Directors 
Center for Society and Genetics 
1319 Rolfe Hall 
MC 722102 

Dear Norton and Ed:

Thank you for the opportunity to review the proposal to establish the Center for Society and Genetics as a Center for Interdisciplinary Instruction (CII). The Department of Public Policy believes that the intellectual and academic mission of your Center will be well served by its being a CII, and we are happy to endorse this proposal.

As you know, the Department of Public Policy collaborated with the Center in a faculty search that led to the successful hire of Aaron Panofsky. One hundred percent of his appointment is in the Department of Public Policy, with institutional FTE loaned from the Center. Fifty percent of his teaching and 75% of his service is going to the Center. We are very pleased to have been able to hire Panofsky, and we anticipate that he will be highly productive in his contributions to both the department and the Center.

Further, we support the continued involvement of our faculty in a range of Center roles and activities — including being faculty fellows in the Center — Andy Sabl served as a faculty fellow in the Center in 2004-05 and Lynne Zucker did so in 2005-06. These were rewarding experiences for them, and I hope more of our faculty will avail themselves of the opportunity in the future.

We believe the Center represents the best in interdisciplinary programs: led by faculty, it fosters and integrates vital research and teaching opportunities. We want to thank the Center for pursuing its mission thus far and want to assure our long-range support.

Sincerely,

Arleen Leibowitz 
Chair 
Public Policy Department
June 20, 2006

Dr. Ed McCabe  
Professor Norton Wise  
Co-Directors  
Center for Society and Genetics  
1319 Rolfe Hall  
MC 722102

Dear Ed and Norton:

I am writing in my capacity as Chair of the Department of Sociology regarding the Center for Society and Genetics’ proposal to become a Center for Interdisciplinary Instruction (CII). Having discussed this matter with the department’s Executive Committee, I am happy to report that the Department of Sociology is pleased to endorse this proposal.

Sociology has collaborated with the Center in a variety of activities and we look forward to increased cooperation in the future. We were involved in recruiting Aaron Panofsky to the Center and Public Policy. We understand that Aaron may be interested in a 0% appointment in our Department, and I can assure you that there is already considerable support for this appointment. We are also eager to work with the Center in their effort to appoint a new Co-Director in cases in which the candidates are sociologists of interest to the department, and when the time comes we will definitely have some suggestions.

We also support the involvement of Sociology faculty and graduate students as Center fellows, and hope that these mutually beneficial relations will continue in the future. Lynne Zucker served as a faculty fellow during the 2005-06 academic year, and Rene Almeling was a graduate student fellow in the Center during that period, as well. These have been fruitful relationships, and we hope more of our students and faculty members will have an opportunity to engage in them.

The Department of Sociology considers the Center to be a crucial partner in developing knowledge about the social content and context of the new genetics, and we look forward to developing our ties to the Center even more fully in the future.

We understand that the mission of the Center is best fulfilled by its becoming a CII, and we are happy to assure the Center of our support.

Sincerely,

David Lopez  
Professor and Chair