

# Social and Behavioral Sciences Interdisciplinary Working Group

University of Illinois at Urbana-Champaign

# FINAL REPORT 2013-2015

# Social and Behavioral Sciences Interdisciplinary Working Group

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#### Time-line and Process

The Social and Behavioral Sciences Interdisciplinary Working Group (SBSIWG) was convened in the fall of 2013 to address both pressing needs in the areas of social sciences that resulted from the Visioning Future Excellence report at the University of Illinois as well as to respond to the call to create a Social Science Institute by the Provost. In the first six months the committee met, deliberated, and produced a set of hiring recommendations consistent with the Visioning Future Excellence report. Upon completing this first task, the committee turned to the creation of a potential Institute for the Social and Behavioral Sciences at the University of Illinois. Existing Center and Institute directors were interviewed, competing institutes were researched, and several proposals for institutes were discussed within the committee and with the OVCRs office. The SBSIWG reached a consensus to propose the Social and Behavioral Sciences Research Incubator (SBSRI), which would be dedicated to fostering more and greater interdisciplinary social science from top to bottom across the many units in which the social sciences are housed at the University of Illinois. The proposal for the SBSRI is attached.

# **Executive Summary**

The social and behavioral sciences are, collectively, one of the primary strengths of the University of Illinois at Urbana-Champaign. While impressive in their scholarship and scope, the social and behavioral sciences lack the infrastructure and resources necessary to optimally address the most pressing interdisciplinary issues facing modern society such as poverty, health behavior change, globalization, food insecurity, lost human capital, and fast paced technological innovation which are at their core social and behavioral issues. To begin to address these pressing interdisciplinary issues, the SBSIWG proposes the creation of the Social and Behavioral Sciences Research Incubator at the Illinois designed to foster and build the social and behavioral science research portfolio in order to better study critical problems facing individuals, communities, and societies.

The SBSRI will be organized around 4 major goals:

- 1. To seek to provide infrastructure and mentoring to help new and existing faculty to apply for and successfully land external funding for their research;
- 2. To provide incentives to new and existing social and behavioral scientists to pursue external funding;
- 3. To pursue truly large-scale interdisciplinary projects that transcend the typical center structure to place the social and behavioral sciences on par with the top programs of this kind across the country; And
- 4. To provide support for existing and new programs in the social and behavioral sciences by better communicating and disseminating existing strengths, ongoing research accomplishments, and intellectual synergies across units at the University.

# Proposal for the Social and Behavioral Sciences Research Incubator

Many of the most pressing issues facing modern society concern social and behavioral problems. Poverty, health behavior change, globalization, food insecurity, lost human capital, and fast paced technological innovation are examples of challenges that are at their core social and behavioral issues. These complex, multidimensional challenges will increasingly require broad interdisciplinary engagement from across the social sciences. University of Illinois at Urbana-Champaign boasts a variety of strong social science units. However the infrastructure and research support that would enable the university to leverage this base of disciplinary excellence to promote state-of-the-art interdisciplinary research in the social sciences is not yet in place. The modern university, like the University of Illinois, typically engages these issues from within the confines of existing units and departments. However, the infrastructure and research support for this type of research at the University of Illinois is inconsistent across these units and therefore the ability of the social and behavioral sciences to address these pressing issues is less than optimal. We believe that the University of Illinois could enhance, if not transform its social and behavioral science research profile with a strategic initiative to support and nurture new, ongoing, and especially large scale interdisciplinary research projects.

In order to better meet the social and behavioral challenges that society faces in the 21<sup>st</sup> century, we propose the creation of a research incubator at the University of Illinois designed to foster and build the social and behavioral science research portfolio in order to better study critical problems facing individuals, communities, and societies. The incubator will serve the social and behavioral sciences across the University of Illinois in multiple ways. The primary goals of the incubator will be:

- 1. To provide infrastructure and mentoring to help new and existing faculty to apply for and successfully land external funding for their research.
- 2. To provide incentives to new and existing social and behavioral scientists to pursue external funding.
- 3. To seed new large-scale interdisciplinary projects and/or center ideas that could leverage existing and new areas of expertise in the social and behavioral sciences at the University of Illinois.
- 4. To pursue truly large-scale interdisciplinary projects that transcend the typical center structure to place the social and behavioral sciences on par with the top programs of this kind across the country.
- 5. To provide support for existing and new programs in the social and behavioral sciences by better communicating and disseminating existing strengths, ongoing research accomplishments, and intellectual synergies across units at the University.

Presently, the social and behavioral sciences at the University of Illinois are fragmented, and failing to realize their full potential. The fragmentation inhibits individual researchers from leveraging shared areas of expertise across campus and also inhibits integrative, cutting edge interdisciplinary efforts. There is no

organizational structure wherein researchers with diverse interests in social and behavioral sciences can draw on resources to support and enhance both focused and interdisciplinary research. Thus, the existing organization of the social and behavioral sciences hinders, rather than promotes, the pursuit of the monumental research challenges facing society that are desperately in need of attention and that cut across typical academic units. Finally, many faculty pursuing social and behavioral science research are housed in units that lack research infrastructures, such as a functioning grant management and development offices, to facilitate even basic research, let alone interdisciplinary research. To address these challenges and pro-actively pursue the large research agendas intrinsic to a major research University, we recommend the creation of the Social and Behavioral Science Research Incubator (SBSRI).

# Proposed Goals of the SBSRI

The prime purpose of the SBSRI will be to address existing, emerging, and new challenges facing individuals, communities, and societies through cutting edge, interdisciplinary research. To fulfill this purpose the SBSRI will foster and enhance the research portfolio of the social and behavioral sciences across units and colleges at the University of Illinois.

The first function of the SBSRI will be to provide the necessary infrastructure to support social and behavioral research proposals and efforts from junior faculty and faculty that have not traditionally received external funding. We envision the creation of a grants office that provides pre- and post-award services as well as grant development support. We also propose that the SBSRI develop mentoring programs in which experienced social and behavioral science faculty provide guidance to less experienced faculty in developing and writing grant proposals. Concretely, this program can work with new faculty, as well as mentor faculty who have written and received funding from the Research Board, to build on their initial efforts to write a proposal to federal funding agencies or private foundations. Finally, we propose the development of new grant-related incentive systems, such as providing funds equal to a typical research board grant for junior faculty who submit a proposal to an external funding agency.

The second function of the SBSRI will be to seed new research efforts to increase the quantity and quality of interdisciplinary social science research at the University. We envision several potential mechanisms and levels of support to be administered by the incubator. We propose that the SBSRI manage several grant mechanisms intended to cultivate interdisciplinary research teams at all levels of effort. For example, resources could be provided for team development to support initial efforts to bring together interdisciplinary research teams. One possibility would be to provide summer support or teaching release time for faculty to foster ideas that would result in an initial funding proposal. A second possibility would be to provide funding to interdisciplinary teams that successfully develop and submit funding proposals to federal or private agencies. These monies would be designed to enhance the possibility of securing extramural funding for existing teams of interdisciplinary researchers, such as by collecting pilot data or

creating research infrastructures among the many groups often needed to conduct interdisciplinary social and behavioral science research (e.g., social organizations, schools, state agencies, etc.).

The third function of the SBSRI will be to proactively pursue large scale interdisciplinary projects that require collaborations from across the social and behavioral sciences, as well as other units on campus such as life science and engineering. Through the efforts of the SBSRI leadership, we envision the pursuit of large-scale projects, such as the Health and Retirement Study found at the University of Michigan, which entails large numbers of researchers, research teams, and both university and federal support. These efforts will leverage existing strengths in the social and behavioral sciences at the University of Illinois and help establish the social and behavioral sciences as one of the top focal areas of research for this University as well as the country. Some preliminary Center ideas that could be pursued with the existing social science faculty on campus include:

#### 1. The Center for the Study of Behavior Change

Many of the factors that ail both individuals and society are rooted in basic behavior patterns exhibited by individuals and communities. Changing behaviors linked to these factors involves biological factors such as genetics and epigenetics; personal factors such as motivation, economics and life stress; social factors such as peer pressure and societal culture; and environmental factors such as the built environment and media. Illinois is already poised to create a Center for the Study of Behavior change because a focus on social behavior change linked to disease prevention is at the core of several units on campus, such Agricultural Consumer, and Environmental Sciences (Food Science and Human Nutrition; Human and Community Development; The Division of Nutritional Sciences), Applied Health Sciences (Kinesiology and Community Health; Recreation, Sport and Tourism), College of Media, Engineering (Civil and Environmental; Electrical and Computer), Liberal Arts and Studies (African American Studies; Cell and Developmental Biology; Economics; Gender and Women's Studies; Integrative Biology; Molecular and Cellular Biology; Neuroscience Program; Psychology; Sociology) and The School of Social Work. The focus on the science of behavior change is also ideal because federal funding agencies have made it a top priority. In 2009, in conjunction with OppNet, the National Institute of Health (NIH) announced a collection of trans-institute funding initiatives revolving around the 'science of behavior change' with the focus on linking basic science approaches to studying mechanisms and processes of behavior change to applied science and behavior change interventions. As such, there exists considerable funding opportunities in this area for faculty on our campus to pursue well into the future.

#### 2. The Center for Human Sociogenomics (CHS)

Recent developments in genetics has brought us to a critical point, where a deep synthesis can finally be attempted to understand social behavior from a perspective that truly integrates both biological and social sciences. Specifically, with the introduction of the dynamic genome a better synthesis of social and life sciences is possible. In the dynamic genome, the traditional evolutionary time line manifest in differences in DNA derived through natural selection, is complemented with multiple evolutionarily relevant systems that traverse shorter

evolutionary time lines and that are reflected in epigenetic changes to the way DNA is expressed, both within an individual's life and across several generations. The dynamic genome affords social scientists with a clear mechanism for how environments and the experiences contained therein "get under the skin" to affect social behavior. Several social scientists on campus have already teamed up with life scientists to propose a center focused on these issues. A center such as the Center for Human Sociogenomics would leverage these efforts to examine the underlying gene expression patterns associated with multiple forms of social behavior, such as social affiliation, social challenge, and self-regulation. The Center would also serve as a resource to train a new generation of scientists that uses systems biology to integrate the social and life sciences. A proposal is already under review at the Templeton Foundation that would fund three social scientists (Ruby Mendenhall, Monica Uddin, & Brent Roberts) to work with the resources provided by the IGB to examine the genomics of social behavior. Future plans include expanding the number of social scientists involved in the Center as well as including animal scientists.

#### 3. Social Science and Technology Center

The impact of scientific discoveries and technological innovation on society is influenced by a wide range of psychological, sociological, political and cultural factors. Social scientists bring key insights into the understanding of how technology innovations are received by society and shaped by human psychology. A Social Science and Technology Center would capitalize on existing interest across campus, not just in social sciences but also in science and engineering units where researchers are confronting the social scientific dimensions of their work. Interested units will include Agricultural Consumer, and Environmental Sciences (Agricultural Engineering), Applied Health Sciences (Kinesiology and Community Health), College of Media, Engineering (Civil and Environmental; Electrical and Computer), and Liberal Arts and Studies (Anthropology; Communication; Gender and Women's Studies; History; Molecular and Cellular Biology; Neuroscience Program; Political Science; Sociology). The focus of this center responds to the growing number of RFP's from the NIH, the NSF, and other major funding agencies that require social scientific research as a component of the research project. By offering opportunities to scholars across campus to share expertise, this Center will strengthen our campus's profile in attracting such grants.

#### 4. The Center for Rehabilitation in Multiple Sclerosis

There is strong recognition that rehabilitation is the only effective approach for improving function, relationships, employment, and quality of life in multiple sclerosis (MS). Such rehabilitation can involve exercise or cognitive training, nutritional or psychological counseling, social services and medical therapies, vocational skills training, and adaptive equipment, devices, and environments. Our campus is already poised to create a Center for Rehabilitation in MS because a focus on rehabilitation is present within several units on campus, such Agricultural Consumer, and Environmental Sciences (Food Science and Human Nutrition; Human and Community Development; The Division of Nutritional Sciences), Applied Health Sciences (Kinesiology and Community Health; Recreation, Sport and Tourism), College of Media, Engineering (Civil and Environmental; Electrical and Computer), Fine and Applied Arts (Architecture; Music; Urban and Regional Planning), Liberal Arts and Studies (African American Studies; Communication; Economics; Gender

and Women's Studies; Neuroscience Program; Psychology; Religion; Sociology) and The School of Social Work. The focus on rehabilitation is ideal because federal funding agencies and foundations have made it a priority, and there are ongoing calls for center grants. Overall, there exists considerable, yet possibly unrecognized potential for strengthening rehabilitation research in MS on our campus that will be competitive for center-based funding opportunities.

#### 5. DREAM Center: Developing Responses to Poverty through Education And Meaning

The intersection of poverty, race, and resiliency represents not only important social phenomena for our society but also a tremendous opportunity to realize the benefits of interdisciplinary research. Through the leadership of Ruby Mendenhall (UI Sociology) and Christy Lleras (Human and Community Development), the outlines of the DREAM Center have already been sketched. The DREAM Center would develop an innovative interdisciplinary program of research, community education and outreach for African American mothers and their adolescent daughters living in chronic poverty in the Englewood neighborhood located on the south side of Chicago. The DREAM Center would rely on an interdisciplinary teams of social scientists from units such as Sociology, Social Work, Human and Community Development, Psychology, and Communication to a) foster resiliency and individual and family coping skills among this at-risk population and b) to increase our understanding of the biological responses to stress. The main goals of the DREAM project to work with low-income African American mothers and daughters is related to funding goals at NIH, and has already shown to have strong appeal to private benefactors.

#### 6. Center for Research on Violence Prevention & School Safety

Interpersonal violence is all too common in US K-12 and higher education settings. Research has documented high rates of bullying among school-age children and the emergence of sexual and dating violence among adolescents, and college campuses are witnessing the high rates of sexual assault since the early 1990s. National attention has turned to the development and evaluation of prevention programs that address the violence in a comprehensive climate improvement process. Illinois has a long history of conducting both basic and applied research in the area of social development, bullying, peer aggression, and bias-based violence, including preeminent scholars in Education, Psychology, and Social Work. Increasingly, prevention efforts in K-16 settings are employing innovative technologies to prevent violence in order to minimize disruption to precious instructional time in K-12 settings and to promote bystander interventions on college campuses. Thus, the Urbana campus is in a good position to address this need with collaborations between social scientists and computer scientists on campus, many of which have partnered with National Science Foundation funding to develop better ways of assessing violence and the development of prevention tools for teachers, parents, etc. The focus on violence prevention with an eye on promoting school safety is ideal because of the wealth of federal funding focused on these public health issues. Federal agencies have formed a partnership to support violence prevention and to promote school safety, including National Institutes of Health, Centers for Disease Control & Prevention, National Institute of Justice, and the Institute of Educational Sciences. As such, there exists considerable funding opportunities in this area for faculty on our campus to pursue well into the future.

#### 7. Center for the Study of International Food Security

Hundreds of millions of people across the world are food insecure, and many more are at risk of being food insecure. Alleviating this food insecurity and the resulting health problems and other consequences is the most important challenge facing the world today, and it will be even more daunting as the population increases to 9 billion by 2050. To help respond to this monumental challenge, the College of ACES has established the International Food Security at Illinois initiative. The University of Illinois is an ideal place to create an interdisciplinary center focused on food security as the University has been at the forefront of research addressing food security topics at every step along the food system. Although, much of the research has been centered in ACES, many other departments across campus either would make key contributions to a center focused on these issues. In particular, scholars from Engineering (Civil and Environmental; Mechanical), Liberal Arts and Studies (Anthropology; Economics; Psychology; Sociology), Business (Finance), and the new College of Medicine would be able to make immediate contributions to this effort. As befits a global challenge such as alleviating food insecurity, a great deal of funding has emerged in this area. This includes funding from foundations (e.g., Howard Buffett Foundation; the Bill and Melinda Gates Foundation); corporations (e.g., Elanco; Monsanto); and government agencies (e.g., USAID; USDA). As such, there exists considerable funding opportunities in this area for faculty across campus to pursue well into the future.

#### 8. Center for Lifespan Engagement and Resilience (CLEAR)

Aging brings normative declines in a number of key abilities and neurocognitive functions -but with tremendous interindividual variability in change. It has long been recognized that crystallized abilities and knowledge-based processes can grow as a function of experience; currently, there is increasing interest in the extent to which fluid abilities (the capacity for encoding and transforming novel information) can also show plasticity in function as a product of experience. The University of Illinois is well-positioned to be a leader in the development and validation of theoretically principled, evidence-based interventions that improve cognition, brain function, and well-being in adulthood. Through the Center for Lifespan Engagement and Resilience, faculty from psychology, education, neuroscience, kinesiology and community health, speech and hearing science, human factors, and engineering, many of whom have a history of collaboration, can come together to pursue research on theoretically based, cost-effective, and life-integrated interventions that translate findings from basic research in psychology, cognitive neuroscience, education, and the health sciences into accessible programs that enhance cognitive effectiveness, productivity, and wellbeing through the adult life span. The Center would leverage the university's breadth and strength in aging research to make us more competitive for current and emerging age-related funding opportunities, such as NIH or Roybal Centers.

The fourth function of the SBSRI would be to become the face of social and behavioral sciences at the University of Illinois. We believe the SBSRI could provide an unparalleled platform on which to focus and identify the excellent research in the social and behavioral sciences that already exists at the University of Illinois and that we envision being enhanced through the creation of the SBSRI. The Incubator would achieve this goal by:

- 1. Supporting a high profile speaker series focused on the social and behavioral sciences,
- 2. Organizing meetings of the numerous centers in the social and behavioral sciences that already exist at the University, in order to facilitate the exchange of research ideas, and
- 3. Managing the public face of the social and behavioral sciences through a high profile web presence.

We envision an office for managing external relations for the social and behavioral sciences that will handle issues ranging from web site design, information dissemination, press releases, to managing the public profile of the SBSRI participants.

# Administrative Structure of the SBSRI

To be successful, the SBSRI will need strong leadership and adequate staffing. At a minimum we see the need for:

- A Director who is a full time faculty member who devotes 25% to 50% of her time to the Incubator
- An Executive Assistant
- A Research Development Specialist
- A pre- and post-award grant specialists

The SBSRI would an active advisory board that would be best served with faculty representatives from social and behavioral sciences across the University.

# Planned Roll-Out of the Incubator and Corresponding Goals

In the first year, the primary tasks would be to appoint a Director and hire one Research Development Specialist and an Executive Assistant. The main goals for the Director and Research Development Specialist would be to:

1. Identify several potential center proposal ideas and the individuals most well suited to create these centers.

- 2. Work with these individuals to generate proposals or provisional white papers to be circulated to funding organizations or benefactors to evaluate the viability of the proposals.
- 3. Create the SBSRI advisory board and grant advisory panel.
- 4. Create a web portal for the social and behavioral sciences.

In the second year, the primary tasks will be to:

- 1. Continue fostering new Center proposals and moving existing ideas to be submitted to federal agencies or find benefactors in the private sector.
- 2. Begin to identify ways to support and increase the external funding portfolio of existing social scientists, especially early career faculty.
- 3. Hire a post-award grant specialist to the extent that this person would be needed.
- 4. Implement the public face of the SBSRI and the social sciences at Illinois in general through setting up, maintaining, and enhancing the social sciences web portal and through the implementation of high profile speaker invitations preferably linked to proposed Center ideas.

Subsequent years would be focused on fostering successful Center applications and the continued enhancement of the Social and Behavioral Sciences at the University.

# Potential 5-Year Benchmarks for Success

- 1. An increase in the number of new social and behavioral scientists not previously funded, who get a first grant of any kind.
- 2. An increase in the number of social and behavioral scientists who move from intramural to extramural support.
- 3. An increase in the number of funded grants that span multiple social and behavioral science departments/disciplines.
- 4. The creation of at least 3 new interdisciplinary social and behavioral science research centers.
- 5. The creation of a steering committee of 10 faculty that have obtained substantial funding through grants over their careers and/or are full professors; this steering committee will actively mentor the junior faculty, as well as advise the director on the allocation of resources to support the acquisition of interdisciplinary grants and the creation of interdisciplinary centers.
- 6. Creation of a clear, highly visible web portal, and public presence used to highlight the activities of social and behavioral scientists across the University. Also, an increase in activities aimed at bringing social and behavioral scientists together, such as a high-level speaker series, annual conferences, or reading groups.

We would propose that the charter of the SBSRI would include the following stipulations in relation to the 5-year goals. If the SBSRI fails to achieve its mission, the SBSRI should be disbanded. We propose that this determination be made by an independent review committee, commissioned by the administration from outside departments and/or researchers from other institutions. However, if the SBSRI were deemed successful at achieving its mission after 5 years, we would propose discussions to increase the scope and funding of SBSRI.

# Resource Needs of the SBSRI

To establish the proper infrastructure, the SBSRI will require recurring funds to hire staff to facilitate grant development and acquisition, create a proper web presence, and to conduct activities like a sponsored speaker series.

To achieve its goal to create interdisciplinary centers, the SBSRI must also be given adequate funds to incubate large grant-related activities. One of the primary challenges for interdisciplinary teams is to provide evidence to funding agencies that the team members have already worked together in a constructive fashion. To this end, we believe it would be ideal if the Incubator could provide resources to:

- 1. Provide buy outs from courses so that faculty could develop and write the proposals and papers together, and
- 2. Monetary resources to seed collaborations that establish both pilot data and evidence, if necessary, that the teams can work together to achieve the goals of the various centers. If the stated goal of the Incubator is to create 3 to 5 successful centers in five years, we see the need for these resources to be provided to 10 to 15 research teams under the assumption that 25 to 33% of the projects will be successful.

Because the SBSRI does not currently exist and because the director and research community at University of Illinois at Urbana-Champaign may have important input into how these goals are achieved, we would leave the amount and nature of this support to the administration and whoever becomes the director of the SBSRI.

# Appendix A: Charge Letter

I am writing to ask you to serve on the Interdisciplinary Working Group for the Social and Behavioral Sciences, which will be chaired by Prof. Brent Roberts. This Working Group will continue the work of the Provost's Committee on Social and Behavioral Sciences, and is jointly sponsored by both the Office of the Provost and the Office of the Vice Chancellor for Research. The primary goal of this Working Group is to advise campus administration on how best to support the growth, strength, and visibility of the campus's interdisciplinary research in the social and behavioral sciences. The goals of this Group will include:

- Advising campus administration on how best to support research in the Social and Behavioral Sciences, including consideration of a social sciences research institute
- Building on the process of Visioning Future Excellence, connecting individuals and groups of researchers in these areas to enable creative new scholarship
- Working with OVCR staff to create strong coherent communications that present Illinois as a world leader in social and behavioral science research
- Preparing the campus for more effective pursuit of large funding opportunities in these areas by identifying them early and suggesting possible proposal teams
- Assessing the needs on campus for research infrastructure to support research in the social and behavioral sciences
- Establishing regular communication and collaboration with the Interdisciplinary Health Sciences Working Group

I look forward to working with the Social and Behavioral Sciences Working Group to establish milestones and timelines that will help guide its activities, while also allowing for flexibility in response to new developments. It is my hope that by the end of 2014, this Working Group will be broadly recognized for providing greatly improved communications on campus for activities in its area and for serving faculty research programs. I will be particularly interested in the Working Group's recommendations for how we can institutionally provide better support so that our social and behavioral scientists can maximize their potential for exciting interdisciplinary, collaborative work that will both distinguish the University of Illinois and contribute to "finding solutions to the grand challenges of the century," as Chancellor Wise and Provost Adesida charged in the letter accompanying the 2013-2016 Strategic Plan.

I expect that the Working Group will begin to meet within the next several weeks. Please confirm your willingness to serve to D'Anne Winston in OVCR at <a href="mailto:dwinston@illinois.edu">dwinston@illinois.edu</a>, and feel free to contact me or Prof. Roberts with any questions you may have.

Best regards,

Peter

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