



U.S.–SOUTH AFRICAN RESEARCH AND TRAINING COLLABORATIONS

Beth Elise Whitaker

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Contents

Executive Summary	i
Introduction	ii
Study Scope and Methodology	1
Analysis and Findings	7
Beyond Collaboration: Other Capacity Building Efforts	22
Reforming the South African Higher Education System	26
Conclusion and Recommendations	28
Tables and Charts	32
Appendix	40
About the Author	43

Executive Summary

This report, the most recent of several SSRC projects related to knowledge production, research networks and capacity building in sub-Saharan Africa, concerns the state of collaboration between U.S. and South African higher education institutions around social science research and other areas linked to the extraordinary changes that have (and are) taking place in post-apartheid South Africa's higher education system. Conducted and written by Beth Whitaker, an assistant professor of political science at the University of North Carolina, Charlotte and former program associate at the American Council on Education's Association Liaison Office for University Cooperation in Development, the study inventories recent partnerships with an eye toward the future. Political transformations in South Africa catalyzed a flood of student exchange programs, individual research partnerships between U.S. and South African scholars, and broader efforts in establishing institutional linkages around research, advanced training, and in addressing the extreme inequities of a higher education system bifurcated along racial lines (an issue far from unfamiliar in the U.S. context). In focusing on these broader institutional connections, the study demonstrates some overlaps and some significant gaps (especially the paucity of cross-national institutional collaborations on HIV/AIDS). It also calls attention to the unevenly distributed participation in partnerships—with historically black and disadvantaged institutions in both countries less able to establish networks internationally for mutual benefit. It should be an important resource for those institutions planning future collaborations, which will hopefully address some of the gaps that have been identified in the study. While the research for the study was primarily conducted in 2002-3 with the support of the National Science Foundation, Prof. Whitaker updated the results for the purposes of this publication in the Spring of 2004.

The study follows a series of SSRC projects that have sought to draw lessons from the networking activities of African researchers and research

organizations, both nationally and internationally, in a context that is intellectually rich, resource poor and, at times, politically precarious. As a strategy for knowledge production and dissemination, training new cohorts of researchers, and asserting a voice and a place for African intellectual perspectives in the global arena, networks have helped direct attention and scarce resources towards research on key social issues in the region—agendas shaped, and sometimes struggled over, by scholars, and others within and beyond the region. Based on workshops and commissioned reports, the following SSRC publications have emerged:

Networks in International Capacity Building: Cases from Sub-Saharan Africa, Kenneth Prewitt (ed.), SSRC Working Paper Series on Building Intellectual Capacity for the 21st Century, Vol. 2, 1998.

Investing in Return: Rates of Return of African Ph.D.'s Trained in North America, Mark Pires, Ronald Kassimir and Mesky Brhane, 1999.

The Social Sciences in Africa: Trends, Issues Capacities and Constraints, Ebrima Sall, SSRC Working Paper Series on Building Intellectual Capacity for the 21st Century, Vol. 8, 2003.

Ron Kassimir

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Introduction

Since the end of apartheid in 1994, linkages between U.S. and South African higher education institutions and research organizations have proliferated. Many are study abroad programs designed primarily to enhance the educational experiences of American undergraduates. While South African universities may benefit from these programs, they are clearly not the focus of such activities. A growing number of initiatives, however, involve denser connections between U.S. and South African institutions and emphasize research and capacity building for the latter. Most of these linkages are established and implemented autonomously by the participating institutions with support from a diverse set of public and private funding sources. Despite recent attempts to foster such capacity-building programs, there has been little effort to examine the cumulative impact among existing partnerships, the extent of duplication, or the degree to which these activities reflect U.S. or South African national or sectoral priorities.

Recent changes within the South African landscape present new opportunities and challenges to identifying gaps and priorities in research and training. The higher education sector is undergoing major reforms that seek to address issues of access, resource allocation, diversification, and quality assurance. On the research side, the government has consolidated disparate research funding and agenda-setting bodies into a single institution: the National Research Foundation. At the same time, the streamlining process has been complicated by the emergence of a range of non-governmental research organizations and private higher education institutions. Possibilities thus exist for more coherent aggregate planning for mutually determined priorities between the U.S. and South Africa, but serious challenges remain. There are significant differences between the higher education and research systems in the two countries—especially the decentralized nature of the American system—and the situation in South Africa is complex and fluid.

This study represents an effort to better understand the existing terrain

of research and training collaboration between the two countries. It was commissioned by the Social Science Research Council with funding from the National Science Foundation. The goal of the inventory is to identify existing gaps in U.S.-South African collaborations and to contribute to the development of priorities for future collaborative activities. It focuses on collaborations in social science research, capacity building and training in all fields, and activities designed to strengthen historically disadvantaged institutions and extend access to previously excluded populations in South Africa. It is hoped that this study will serve as an important resource for academic institutions in both countries in identifying potential partners and activities and for donor agencies in determining funding priorities.

Study Scope and Methodology

SELECTION CRITERIA

This study explores the range and scale of collaboration between U.S. and South African higher education and research institutions in order to identify gaps and inform future funding decisions. It focuses on partnerships that seek to build research and training capacity at South African institutions, among other priorities. The scope of the study includes all collaborations that meet one or more of the following criteria:

- activities that produce new social, economic, or behavioral knowledge or analysis of South African realities;
- activities devoted to building advanced (i.e., post-baccalaureate) research and training capacity at South African institutions in all fields; and
- activities focused on strengthening historically disadvantaged institutions and extending access to higher education to previously excluded groups.

The inventory thus covers initiatives such as social science research collaborations, faculty exchanges, curriculum development, information technology development, and graduate and staff training for South Africans at U.S. universities and in South African institutions with U.S. participation. It also includes collaborations focused on sharing experiences and lessons learned regarding higher education reform, historically disadvantaged institutions, and improving access for marginalized groups. The inventory specifically excludes study abroad programs, research collaborations in the natural sciences and engineering, and other partnerships that do not meet the above criteria.

SOUTH AFRICA-U.S. HIGHER EDUCATION PARTNERSHIPS PROJECT DATABASE

In conducting an inventory of U.S.-South African research and training collaborations, we were fortunate to be able to build upon an existing database of university partnerships between the two countries. The database was compiled and is maintained by the African Studies Center of Michigan State University (MSU), with funding from the W.K. Kellogg Foundation (through the American Council on Education) and the university itself. It is one component of the broader South Africa-U.S. Higher Education Partnerships Project, an initiative of the Higher Education Forum of the U.S.-South Africa Binational Commission. The forum was created by the departments of education of the governments of South Africa and the United States.

Information for the database was collected during 2000-2001 from U.S. higher education institutions using a two-page questionnaire and from U.S. government funding sources using information available in the public domain. MSU undertook extensive research to compile the distribution list for the questionnaire. This included identifying administrators of relevant programs at U.S. colleges and universities, searching websites of U.S. government agencies that fund individual or institutional scholarly work in South Africa, searching websites of all South African higher education institutions and 50 U.S. colleges and universities, and locating previous partnership records.¹ The resulting database includes 198 U.S.-South African higher education partnerships. It can be searched by U.S. institution, South African institution, academic field, type of linkage activity, and funding source.²

A majority of partnerships in the database are relevant to the present study of U.S.-South African research and training collaborations.

¹ An earlier survey by the Institute of International Education generated a directory of 233 higher education linkages between the two countries. See Ann McKinstry Micou, *Linkages at the Tertiary Level Between U.S. & South African Institutions: A Directory & a Handbook*, South African Information Exchange Working Paper Number 28, December 1994.

² We would like to express our sincere gratitude to Christine Root of Michigan State University, who provided information about the process of compiling the database and ensured that the necessary data were available for this study.

Nevertheless, 80 partnerships in the database were excluded from this analysis because they do not meet the criteria listed above. Specifically, 24 were excluded because they are essentially study abroad programs for American undergraduates. Another 34 partnerships were eliminated because they focus on collaborative research in science or engineering and do not involve significant capacity building activities. Often, these are co-authoring arrangements rather than broader institutional linkages. Although once very active, 10 partnerships were cut from the database because they have recently ceased activities due to project completion and/or exhaustion of funding (discussed further below). An additional 7 projects were excluded for other reasons, including the cessation of ties between partners and the limited extent of institutional involvement. The South Africa-U.S. Higher Education Partnerships Project itself was also excluded because it focuses on documenting other collaborations. In addition to these exclusions, 4 partnerships were eliminated from the database because they were seen as duplicate entries. In total, therefore, 118 partnerships from the MSU database were included in the current inventory.

COLLECTION OF ADDITIONAL DATA

In an effort to ensure that the inventory database was as thorough as possible, further research was conducted between January and May 2002 and again in May 2004 to identify additional U.S.-South African collaborations. The research focused on three groups of institutions: U.S. historically black colleges and universities (HBCUs), non-university research institutions, and funding agencies. Information was also solicited from U.S. institutions that were known to have been involved previously in South African partnerships and from projects that recently received U.S. government funding. An electronic version of the MSU questionnaire was distributed to international programs representatives and project directors in 2002. In addition, information was gathered about U.S.-South African collaborations through Internet searches and phone interviews (See Appendix). In total, through this research, 34 collaborations were added to the inventory database.

Initial assessments of the database of higher education partnerships maintained by MSU suggested that HBCUs may be under-represented. The director of the MSU African Studies Center reported that the survey response rate from HBCUs was low and our early content analysis of the database found that just 7.5 percent of the relevant collaborations involved minority institutions. In an effort to gain a more informed picture of the extent and range of their activities in South Africa, questionnaires were sent to relevant staff of 24 HBCUs known to be involved in international activities. Because many HBCUs have not yet entered into this domain, extensive research was conducted via the Internet and through interviews to identify likely institutions. Responses were received from 16 of the institutions and yielded an additional 5 collaborations.

The research also targeted non-university research institutions that were not included in the initial database but may be involved in research and training collaborations with South African counterparts. Representatives were consulted from the following institutions: the Africa-America Institute, the American Association for the Advancement of Science, the American Council on Education, the Council for the International Exchange of Scholars, and the Institute for International Education. Websites were also explored for a number of think tanks, including the Center for Strategic and International Studies and the Brookings Institution. This process led to the identification of 3 additional collaborations in South Africa and provided information about several fellowship programs involving South African faculty and graduate students.

In the effort to identify additional U.S.-South African collaborations, information was also collected from donor agencies that may support such projects. These include programs sponsored with U.S. government funds, e.g., the Association Liaison Office for University Cooperation in Development, the United Negro College Fund, and the U.S. Department of State Bureau of Education and Cultural Affairs. Information was also gathered from several charitable foundations, including the Andrew W. Mellon Foundation, the Carnegie Corporation of New York, the Ford Foundation, the MacArthur Foundation, the Rockefeller Foundation, and the W.K.

Kellogg Foundation. This research generated another 18 entries in the database of U.S.-South African collaborations. It also provided significant information about the efforts of several U.S.-based foundations to work directly with higher education institutions in South Africa. These initiatives are described in greater detail later in this report.

Questionnaires were sent to 35 additional U.S. higher education institutions that were believed to be involved in partnerships in South Africa based on preliminary research. Responses were received from 27 of these institutions and 8 collaborations were added to the database. In total, therefore, the research yielded information on another 34 U.S.-South African research and training collaborations to include in the inventory database. Completed questionnaires were not received for all of these partnerships, but Internet resources often provided sufficient information.³

DATA QUALITY AND LIMITATIONS

The database developed for this study thus includes a total of 152 research and training collaborations between U.S. and South African institutions. With respect to the three criteria listed above, a large majority of the projects (115) involve building research and training capacity at the South African institution. A smaller portion (44) focus on strengthening historically disadvantaged institutions or expanding access to previously excluded groups. Still fewer (40) include collaborative research in the social sciences, broadly defined. Many projects involve more than one of these three components. Every effort has been made to ensure that the database is as thorough as possible, both during the initial survey by MSU and the subsequent research conducted for this study. Although some linkages were inevitably missed, we operate under the assumption that the composite inventory is fairly representative of the broad terrain of research and training collaboration between academic institutions in the two countries.

³ The research also identified eight other collaborations for possible inclusion, but ample data could not be obtained and questionnaires were not received in time to include in this report.

As with any database, there are clear limitations that should be mentioned. First, the database is set up as a series of partnerships involving one U.S. lead institution and one South African lead institution. There are fields for secondary partners in each country, but the extent of their involvement is often unclear. For this reason, collaborations that involve a consortium of institutions at either end are generally listed as a series of bilateral relationships. For example, the linkage between the University of Durban-Westville and a consortium of schools in Pennsylvania is listed as three separate partnerships—one each with Pennsylvania State University, the University of Pittsburgh, and Lincoln University. Similarly, Oregon State University is listed as having separate linkages with the University of Fort Hare and the Fort Cox College of Agriculture, though both are part of a single project. The main exception to this pattern is in cases where the consortium is an independent legal body such as the Mississippi Consortium for International Development or the eastern seaboard Association of Tertiary Institutions; collaborations with these are each listed only once. Because of this focus on bilateral linkages, some multilateral collaborations are listed more than once. Further analysis of the data suggests that the 152 partnerships in the inventory represent about 142 distinct projects or activities.

Second, the data for this inventory have been collected almost exclusively from U.S. sources, including partner institutions involved in the collaborations and U.S. government funding programs. A survey of linkages from the South African side would serve as a useful cross-check on the data contained in the inventory and may reveal previously unrecorded collaborations. Such a survey would also provide information about the degree and impact on South African institutions of their U.S. collaborations and their perceived priority areas. Time and resources did not allow for a survey of South African institutions for the current study, although MSU has plans to solicit information from South African institutions through a questionnaire similar to the one distributed to U.S. higher education institutions.

Analysis and Findings

Our analysis of the data focused on understanding the spread of U.S. and South African institutions involved in research and training collaborations, the topics and fields receiving the greatest attention (and those receiving the least), the kinds of capacity building activities that predominate in these collaborations, and the principal sources of financial support. Summary findings are presented below.

INSTITUTIONAL INVOLVEMENT

U.S.-South African research and training collaborations involve a wide range of higher education and research institutions in both countries. This is not surprising given the number and diversity of institutions interested in collaborative initiatives and the decentralized nature of the U.S. higher education system. For the purposes of this analysis, an institution was identified as being involved in a particular collaboration if it was listed as *either* the lead institution or a secondary partner. This allows us to gain a better understanding of the full range of involvement in these collaborations, including the participation of smaller higher education institutions and non-university bodies that are more likely to be secondary rather than lead partners. The problem with this approach, though, is that it may overestimate the extent of involvement of secondary partner institutions in certain collaborations. Some may participate actively in capacity building activities, while others may be less integrated into the overall project. One-third of the linkages (52) involve multiple partner institutions in either or both countries.

On the United States side, the 152 collaborations in the database involve a total of 122 institutions as primary and secondary partners, including 104 higher education institutions (colleges, universities, and community colleges) and 18 non-university institutions. The majority (94) are involved in

only one South African partnership, while 28 U.S. institutions are involved in multiple South Africa collaborations (see Table 1). Michigan State University participates in the largest number of collaborations (16),⁴ Pennsylvania State University is involved in 6, and the University of Kentucky is involved in 5 such linkages.

The majority (77) of U.S. institutions participating in research and training collaborations with South African counterparts are public higher education institutions. This includes 31 universities designated by their state legislatures as land-grant institutions. Although representing less than half of the public institutions, land-grant universities are involved in 66 of the U.S.-South African research and training collaborations, or 43.4 percent of the total (see Table 2). This predominance of land-grant universities reflects their tradition of agricultural extension and outreach and broadening that mission to the international context. There are 27 private U.S. colleges and universities involved in a total of 34 partnerships, representing 22.4 percent of the total. Of the 28 U.S. institutions that are involved in multiple collaborations in South Africa, eight are private universities. Eight community colleges are involved in nine collaborations. Just three non-higher education institutions serve as the lead U.S. partner on collaborations in South Africa.

In terms of institutional diversity, 15 HBCUs are involved in 15 South African collaborations, or 9.9 percent of the projects. This includes a partnership led by the Mississippi Consortium for International Development, a joint initiative of three HBCUs (Jackson State University, Alcorn State University, and Tougaloo College). All but two of the collaborations in which HBCUs are involved focus on capacity building efforts with historically disadvantaged institutions (HDIs) in South Africa (see Table 3). One exception is Albany State University, which is a secondary partner in a large-scale collaboration between Georgia State University and the University of Pretoria to establish an institute for business and entrepreneurship training in Southern Africa.

⁴ The high number of collaborations for Michigan State may reflect the fact that its African Studies Center compiled and maintains the initial database. Reporting about its collaborations in South Africa was likely more thorough than that of other U.S. institutions.

The other exception is the new partnership between Spelman College and the Durban Institute of Technology (DIT). As explained below, DIT is the result of a recent merger between two existing technikons, one of which (M.L. Sultan Technikon) was historically disadvantaged while the other (Technikon Natal) was historically advantaged.

The relatively small number of collaborations involving HBCUs belies the efforts made by some institutions to develop such linkages. Interviews with international program representatives from several HBCUs revealed that many have been frustrated in their discussions with South African colleagues about possible collaboration. Compared to larger U.S. universities with bigger budgets and better-known names, HBCUs are perceived as having less to offer potential collaborators in South Africa. Therefore, many South African institutions choose to link up with American universities that bring their own resources to collaborative projects. One possible approach to this dilemma is for HBCUs to team up with non-HBCUs that have strong international programs, such as the collaboration between Georgia State and Albany State. Similarly, Lincoln University of Pennsylvania is involved in two South African collaborations as part of a consortium with Pennsylvania State University and the University of Pittsburgh.

On the South African side, 82 institutions are involved in U.S. research and training collaborations, including 38 higher education institutions (universities, technikons, and colleges⁵) and 44 non-university bodies. More than half (53) are involved in just one partnership with a U.S. counterpart. Most of the 152 collaborations are thus concentrated among the remaining 29 institutions. These are primarily the public universities—both historically advantaged and historically disadvantaged—that form the core of the South African higher education system. The University of Cape Town participates in the most partnerships with U.S. institutions (23), and five other universities are involved in ten or more such collaborations (see Table 4). Significantly,

⁵ For purposes of this analysis, the definition of higher education institutions in South Africa has been expanded to include Further Education and Training institutions such as agricultural and technical colleges.

five of the six South African universities that are involved in the most linkages with U.S. counterparts are historically advantaged institutions.

Historically disadvantaged institutions (HDIs) in South Africa include universities, technikons, and colleges that served non-white populations during the apartheid era. According to the database, 19 HDIs are involved as primary or secondary partners in 72 U.S.-South African research and training collaborations, or 47.4 percent of the total (see Table 5). In addition, 14 collaborations are led on the South African side by non-higher education institutions, including museums, archives, and research institutes. Two higher education consortia (eastern seaboard Association of Tertiary Institutions, esATI and the National Access Consortium Western Cape, NACWC) are involved in a total of six collaborations with U.S. colleagues.

Technikons have been under-represented among the South African partners in U.S. research and training collaborations. Ten technikons are involved in a total of 15 linkages with U.S. institutions, or 9.9 percent of the total. Interestingly, partnerships in this category focus more clearly on historically disadvantaged institutions. Of the ten technikons involved in these collaborations, just three (Cape Technikon, Port Elizabeth Technikon, and Technikon Pretoria) are historically all-white. In addition, four formerly all-white technikons and a distance education technikon are not involved in any U.S. partnerships according to the available data. Although U.S. community colleges may seem to be logical partners for South African technikons, just two collaborations link these two types of institutions (Technikon Northern Gauteng/Middlesex Community College and Cape Technikon/Highline Community College). Five current technikons and two former technikons (now merged into the Durban Institute of Technology) are collaborating with American HBCUs.

Overall, institutional involvement in U.S.-South African research and training collaborations is broad but not especially deep, particularly on the U.S. side. More than 72 percent of the 204 total U.S. and South African partners involved in these collaborations are active in just one linkage. There is somewhat greater concentration on the South African side, primarily because there are fewer available collaborators. About 53 percent of the institutions on

both sides are public higher education institutions, reflecting both the strong international mission of U.S. land grant universities and the heavy predominance of public universities in South Africa's higher education system.

Perhaps most notably, just 16.7 percent of the institutions involved in these collaborations are historically disadvantaged (HDIs in South Africa and HBCUs in the U.S.). At the same time, these institutions generally have the greatest need for research and capacity building programs. Because of this limited capacity, many historically disadvantaged institutions in both countries face greater challenges than their more privileged counterparts in developing the relationships necessary for collaboration, identifying and securing funding, and maintaining ties with overseas partners. Given the importance of travel and electronic communication to these collaborations, for example, institutions with fewer resources for overseas trips or limited access to the Internet participate less in networks that can lead to more formal collaborations. Thus, they are sometimes seen as less than ideal partners. This suggests that engaging in international research and training collaborations requires at least a minimal level of institutional capacity at the outset.

SUBSTANTIVE AREAS OF FOCUS

U.S.-South African research and training collaborations cover the full range of academic fields—from science and engineering to arts and humanities. Some cover multiple fields, while others have relatively specific areas of focus.⁶ For the present analysis, an effort has been made to identify the primary area(s) of

⁶ The questionnaire asked respondents to identify the program areas or fields of their partnerships. Of the 152 collaborations, 39 were said to be institution-wide, involving multiple academic fields. The numbers of projects reporting collaborative work in particular program areas are as follows: social science (45), education (37), information technology (33), humanities (31), health (25), business (24), physical and natural sciences (23), agriculture and natural resources (19), communications (15), arts (14), international studies (12), public administration (11), and law (7). While this information gives some idea of the areas of focus of the collaborations, the categories are fairly broad and often overlapping. The nature of the “check all that apply” approach on the questionnaire means that many respondents quickly ticked off several fields rather than focusing on the core area of collaborative activities.

focus of each partnership based on information provided through the questionnaire about its purpose and outcomes. The fields are fairly broad and are grouped into categories for purposes of this discussion (see Table 6). Of the 152 collaborations in the database, 17 have multiple areas of focus, meaning that they emphasize equally more than one of the substantive disciplines. As a result, the numbers in the table total more than the number of collaborations.

The largest portion (30.9 percent) of U.S.-South African research and training collaborations focuses on the substantive areas of health and education. For these purposes, health includes both medicine and public health. Projects in this category include training in epidemiology, optometry, and bio-statistics, as well as research on HIV/AIDS prevention and fetal alcohol syndrome. Several partnerships involve the development of public health interventions. Higher education administration here refers primarily to projects that are working to build institutional and administrative capacity at historically disadvantaged institutions in South Africa. The other collaborations under education focus more specifically in the primary or basic education area, often developing outreach programs to improve student skills and thus increased access to higher education.

Many of the 29.6 percent of collaborations in professional fields are related to academic work in the social sciences. The category of business and workforce development includes business degree programs, entrepreneurship training, and courses designed to upgrade the skills of local workers. The public administration and law field covers activities focused on human rights, legislative drafting, public management programs, and a survey on land transfers in KwaZulu-Natal. Development studies include professional programs in community economic development as well as projects geared toward local development activities. There are two training programs in journalism, one of which focuses on the production of science-related stories for radio, and a single collaboration in library sciences.

One quarter (25 percent) of the U.S.-South African collaborations focus on building research and training capacity in the social sciences.⁷ Within this

⁷ This overstates the overall portion of U.S.-South Africa collaborations in the social sciences because the study criteria specifically exclude research collaborations in the physical and natural sciences.

category, the highest number of collaborations concentrates on history, which includes cultural heritage, archives, and museum work. This predominance reflects in part the high number of South African partners involved with Michigan State University in the South African National Cultural Heritage Program, which emphasizes research and training to maintain archives and develop museum exhibits. Collaborations in the field of economics center around academic research and graduate training related to micro-enterprise development, economics and demography, and international trade. The partnerships in political science include research about political culture, democratic values, and civil society. The three archaeological collaborations all focus on using scientific research methods to learn more about ancient history. The activity in psychology involves research on the distribution of mental health problems in South Africa, while the project in sociology is a comparative examination of the attainment of social status.

Among the social science projects, just four involve explicit comparisons between South Africa and the U.S. or other countries. One is the sociology project on social status between the University of California, Los Angeles and the University of South Africa (UNISA). In addition, Boston University and UNISA are involved in collaborative research about the expansion of African-led Christianity in South Africa, Zimbabwe, and Malawi. Michigan State University is working with Idasa on the Afrobarometer, a dataset of public attitudes on democracy, markets, and civil society in twelve African countries. New York University and the University of Cape Town are developing a joint master's degree program in diversity studies that will focus on the politics of difference across American and southern African cultures.

Less than a quarter of the collaborations (23.7 percent) are in science-related fields, including natural sciences, engineering, agriculture, information technology, and natural resources. Because of the selection criteria for this inventory, many collaborations outside of the social sciences center on training and capacity building rather than research. This is true particularly for collaborations in science and engineering since research-focused projects without capacity building components in those fields were excluded.

For the numbers listed in Table 6, agriculture includes veterinary sciences, while the natural resources field includes forestry and the environment. Information technology collaborations often involve the development of distance education courses or training in computer sciences. The general science and engineering category includes projects dealing with training in climate modeling, biology, geology, and a telescope project discussed below.

Relatively few U.S.-South African research and training collaborations (7.9 percent) concentrate in the humanities, including arts, English, and religious ethics. Finally, eleven projects (7.2 percent) have general areas of focus in that they involve faculty and graduate student exchanges in fields that are not predetermined.

Overall, the most obvious area of omission in terms of substantive areas of focus is HIV/AIDS. Despite the high number of collaborative activities in the health field, just four of the 152 collaborations involve research or training related to HIV/AIDS. Even among the scientific research partnerships in the initial MSU database that were excluded from the current analysis, none specifically identifies HIV/AIDS as its focus and just one mentions the objective of pharmaceutical development. Given the overwhelming extent of the pandemic in South Africa and its widespread social and political implications, the shortage of training and research collaborations in this area from both the science and social science perspectives is striking. In terms of the effects of the pandemic on higher education campuses themselves, one partnership should be highlighted in this respect: Howard University and the University of the Western Cape recently started a project to develop a comprehensive campus-wide HIV/AIDS policy that can be used as a model at other institutions.

Within the professional fields, there is a heavy emphasis among U.S.-South African research and training collaborations on business and workforce development, public administration and law. This may reflect development priorities on the ground and the strategic objectives of donor agencies working in consultation with government officials. Nevertheless, the limited attention to other fields seems noteworthy, particularly social work and journalism. In an AIDS-affected society such as South Africa, the need for trained counselors and social workers is very high. Similarly, the

strengthening of a free and independent media is especially important in a transitional democracy and universities have a role to play. Collaboration in these areas would allow South African partners to benefit from U.S. strengths in these fields and U.S. partners to gain a better understanding of their work in a cross-cultural context.

Finally, within the social sciences, there are relatively few collaborative research projects in the fields of political science (including international relations), sociology, and anthropology. This is especially true if one considers the range of potential topics related to the ongoing process of political and social change in South Africa. In addition, as mentioned above, few activities make explicit comparisons between South Africa and other countries. This situation may be a symptom of disciplinary approaches and incentives that often make social science research more of a solitary enterprise rather than a collaborative venture. No doubt there are countless scholars currently engaged in individual research about transition politics and class divisions in South Africa. Even so, there would seem to be room for more collaborative research between U.S. and South African institutions in the social sciences if such linkages could be fostered.

RANGE OF TRAINING ACTIVITIES

U.S.-South African collaborations are engaged in a broad range of activities. The questionnaire asked respondents to identify their linkage activities from a list of choices, including faculty exchange, collaborative research, curriculum development, institutional management, and materials donation (see Table 7). Respondents were encouraged to select all of the categories in which their partnerships are conducting activities. Of the 152 projects examined here, 90 identified collaborative research as a linkage activity. The research topics cover the full range of substantive areas discussed in the previous section. Again, it should be mentioned that the study criteria specifically excluded research collaborations in the natural sciences.

In the area of graduate training and faculty development, 93 collaborations involve a faculty exchange component and 55 involve graduate

student exchange. These include both U.S. to South Africa and South Africa to U.S. exchanges. Although many respondents did not provide data on travel between the two countries, available responses show that U.S. partners have made more than 1,000 trips to South Africa and South Africans have visited the U.S. a similar number of times as part of these collaborations. Although these numbers include the undergraduate and administrator exchanges discussed below, they still provide an indication of the relative frequency of visits between the two countries. In addition to faculty and graduate student exchanges, 56 collaborations have held conferences, seminars, or academic meetings that often include some element of staff development. Although training was not an option on the questionnaire, 21 respondents wrote in training or workshops as another area of activity.

Many U.S.-South African collaborations also focus on curriculum and information technology development. More than 44 percent (67) of the linkages identified curriculum development as an area of activity, and nearly 16 percent (24) mentioned distance education. The latter often involves the co-development of online classes between two partner institutions to be offered to both American and South African students. In addition, 56 linkages indicated teaching courses as an area of activity in South Africa.

A significant portion of the partnerships emphasize institutional capacity building, especially for historically disadvantaged institutions in South Africa. This includes 35 collaborations involving an administrator exchange component, 21 dealing with institutional management, 15 addressing student development and student services, and 20 through which books, equipment, and other materials have been donated to the South African partner. In addition, one linkage involves facilities improvements and another includes laboratory development at the South African institution.

Beyond these research and training activities, many U.S.-South African collaborations also seek to transform or expand the traditional mission of higher education. These efforts focus on developing ties between higher education institutions and their surrounding communities and building institutional capacity to deliver relevant extension and training programs.

Along these lines, 58 of the collaborations are conducting outreach and community service and 20 have developed internship programs. Such activities are increasingly seen as an important component of higher education institution capacity building.

SOURCES OF FINANCIAL SUPPORT

Research and training collaborations between U.S. and South African institutions receive financial support from a variety of public and private sources. Unfortunately, information about funding is relatively limited in the database as compared to the other dimensions examined in this study. Of the 152 collaborations, just 94 reported receiving funding from U.S. or South African government agencies, private foundations, or corporations. Far fewer (68) reported the actual amount of funding or the level of matching funds provided by the institutional partners. It is unclear whether this situation reflects hesitancy on the part of questionnaire respondents to provide information about funding or an actual lack of funding from external sources; it is likely a combination of these factors. Information about U.S. government funding is the most thorough, primarily because the data are available from public websites.

Based on the available information, the U.S. government is the most significant funding source for research and training collaborations involving American and South African institutions (see Table 8). In sum, 73 collaborations have received funding from U.S. government sources, as compared to 30 from private foundations, and 10 from South African government agencies. Several partnerships have received funding from more than one source. In addition, two partnerships reported receiving funds from UNESCO, one from the Flemish government, and another from the Swedish International Development Agency (SIDA).

The predominance of U.S. government funding in this tally reflects data that is skewed in two important ways. First, information about U.S. government funding is most thorough because it is publicly available. Funding amounts from other sources frequently were not reported by the respon-

dents and are not readily available on the Internet. The figures for those sources are thus underestimated. Second, the U.S. government total includes a \$10 million award reported by the University of Texas, Austin from the National Research Council for the Southern African Large Telescope (SALT) project.⁸ This single award makes the U.S. government funding total seem particularly large. In addition, the figures on South African government funding do not include more than \$8 million that the National Research Foundation reportedly earmarked for the same SALT project.

Despite these biases in the data, U.S. government agencies are clearly the primary source of funding for U.S.-South African research and training collaborations. The U.S. Agency for International Development (USAID) is a particularly important donor, having provided support to 48 collaborations in this inventory. The National Science Foundation gave funds to 13 partnerships, while the U.S. Department of State (including the former U.S. Information Agency, USIA) provided funding for 8. Four partnerships received funding from the National Institutes of Health, including the Fogarty International Center for Advanced Study in the Health Sciences, the National Institute on Alcohol Abuse and Alcoholism, and the National Institute of Mental Health. Finally, the Department of Education provided funding to a single collaborative project.

There are three main competitive grants programs through which American and South African higher education partners have received U.S. government funding in recent years. The *Tertiary Education Linkages Project (TELP)* was sponsored by USAID and administered by the United Negro College Fund. It supported multi-year partnerships between U.S. higher education institutions and 17 historically disadvantaged institutions in South Africa. The linkages were designed to strengthen the institutional and management capacity of the HDIs by drawing on the expertise of U.S. partners. Through competitions conducted in 1999 and 2000, a total of 18 linkage grants in amounts up to \$460,000 were awarded to U.S. higher edu-

⁸ Although the National Research Council itself is a non-governmental body, the partner reported the grant as U.S. government funding, suggesting that the money initially came from a government agency.

education institutions for partnership activities with South African HDIs. Several of these projects involved multiple U.S. partners.

According to USAID-South Africa, TELP is scheduled to end in September 2004. Most of its linkages finished project activities in early 2003. The completion of this program has left U.S. and South African partners scrambling for other sources of funding to continue their collaborative efforts. A few have won grants from other U.S.-government funded programs, including Texas Southern University for its work with Eastern Cape Technikon and Spelman College for its work with Mangosuthu Technikon. Many more would like to continue partnership activities but have been unable to secure additional funding. For example, partners at the University of Massachusetts, Amherst, and the Medical University of Southern Africa have been discussing ideas for the continuation and expansion of their linkage but lack the resources to implement these plans. TELP successfully formed and fostered U.S.-South African partnerships, but is no longer a source of funding available to these projects.

The *Association Liaison Office for University Cooperation in Development (ALO)* is a USAID-funded project of six U.S. higher education associations led by the American Council on Education. It conducts an annual competition for \$100,000 to \$125,000 awards to U.S. colleges and universities to support partnerships with higher education institutions in developing countries. Since the first grant cycle in 1998, 25 partnerships between U.S. and South African higher education institutions have received funding through this program; 17 of these projects are still active while 8 have completed their activities. Three current projects have received funding through both ALO and TELP.

Finally, the U.S. Department of State also conducts an annual grants competition for international higher education partnerships through its Bureau for Educational and Cultural Affairs (the former U.S. Information Agency). Previously known as the *College and University Affiliations Program (CUAP)*, the *Educational Partnerships Program* fosters linkages in the humanities and social sciences between American and foreign higher education institutions. This program has provided support to six U.S.-South African research and training collaborations in the current invento-

ry. Over the years, one partnership (University of Missouri with the University of the Western Cape) has received funding from all three of these U.S.-government funded programs.

On the South African side, eight partnerships reported receiving funding from the National Research Foundation (including the Foundation for Research Development and the Center for Science Development), while the Department of Arts, Culture, Science and Technology and the Medical Research Council were each identified as sources of funding for one project. Several of these bodies are also listed as important partners in the collaborative research and training activities themselves. The levels of funding from these sources are not reported here; they are underestimated in the database because information was obtained only from U.S. collaborators. As mentioned above, there is at least one large award by the South African government that has not been reported. Other material, in-kind, and non-material contributions also have not been included, though their importance in achieving project objectives should not be underestimated.

The range of private foundations and corporations that have provided funding to U.S.-South African research and training collaborations is quite broad. The Andrew W. Mellon Foundation, the Ford Foundation, and the W.K. Kellogg Foundation have funded the most partnerships, while 15 other foundations and corporations have each provided support for one such linkage. Many are smaller bodies that support activities in specific substantive areas of focus. This suggests that securing funding from these sources depends primarily on matching collaborative research and training activities to institutional missions and priorities.

The relatively small amount of foundation funding for U.S.-South African collaborations should not be mistaken for a lack of interest in building capacity at South African universities. In fact, four foundations—Ford, Rockefeller, Carnegie, and MacArthur—have formed a partnership to provide \$100 million to African higher education over five years. As discussed below, the foundations have made a strategic decision to work directly with African higher education institutions (including those in South Africa) rather than through U.S. partners. African institutions are encouraged by

the foundations to develop their own strategic plans and submit funding proposals. A few projects may involve international collaboration, but most do not. U.S. government agencies, on the other hand, have shown a preference for working through partnerships with American universities to build higher education capacity in developing countries. These contrasting approaches are reflected in the respective levels of funding provided to U.S.-South African research and training collaborations by foundations and government agencies.

Perhaps most noteworthy with respect to funding sources is the near total absence of the U.S. and South African business communities from the list of donors. Despite their presumed interest in educational and capacity building efforts in South Africa—particularly those geared toward workforce development—large companies and multinational corporations have not provided significant levels of funding to these collaborative projects. Given recent U.S. interest in promoting trade as a path toward African development, the private sector is a largely untapped resource in the search for funding for U.S.-South African research and training collaborations.

Finally, there is some evidence to suggest that the availability of grants increases the likelihood of institutional collaboration. Of the 136 linkages for which a project start date is available, nearly two-thirds (89) began their project activities since 1998. This compares to 37 collaborations that started earlier in the 1990s, nine that started in the 1980s, and one that started in 1966. Thus, the number of U.S.-South African collaborations increased just as U.S. government funding for such programs rose; ALO conducted its first competition for international higher education partnership awards in 1998 and the TELP activity started its first cycle of grants in 1999. Questions remain, however, as to the sustainability of these partnerships beyond the initial grant.

Beyond Collaboration: Other Capacity Building Efforts

Collaborations between U.S. and South African institutions are just one of many approaches to building research and training capacity in South Africa. There are also several fellowship and grants programs whose aims generally complement those of U.S.-South African partnerships. It is useful to consider briefly the cumulative impact of these programs in South Africa and the extent to which they strengthen the collaborative projects under examination here.

Several fellowship programs have allowed thousands of South Africans to receive graduate education and training in the United States over the years. These programs were particularly important during the apartheid era when black South Africans had limited access to higher education in their own country. Administered by the Institute for International Education (IIE), the *Fulbright Junior Staff Development Program* seeks to develop African higher education institutions by bringing grantees to the U.S. to pursue master's and doctoral training. Until the mid 1990s, the fellowships generally funded full graduate study. Because of budget cuts to the Fulbright program by the U.S. Congress in 1995-96, however, grantees are now funded for a maximum of two years. In early 2002, there were 50 South African students in the U.S. on these fellowships—77 percent pursuing master's degrees and 23 percent working on PhDs. In 1998, the South Africa-U.S. Fulbright Binational Commission was established to manage the Fulbright family of programs in South Africa. Over the lifetime of the pre-doctoral program, about 725 South Africans have received graduate training in the United States.

The *Fulbright Faculty Program* provides fellowships for South African faculty to conduct research in the U.S. and U.S. faculty to teach in South Africa. The program is administered by the Council for the International Exchange of Scholars (CIES), again in collaboration with the Binational Commission. Since 1998, the program has provided fellowships to approximately 12 U.S. faculty per year to teach at South African universities. Although many U.S. scholars want to conduct research in South Africa,

Fulbright fellowships are no longer available for this purpose. In contrast, the program provides only research grants to South African faculty coming to the U.S.; approximately 6 South Africans receive these fellowships each year. CIES argues that Fulbright fellowships can be leveraged for broader institutional initiatives, a point discussed below. To that end, it has piloted the Alumni Initiatives Awards program to provide up to \$20,000 for a return scholar from the past five years to do a collaborative project with the host institution. Many of these awards support curriculum development activities.

Beyond the Fulbright family of fellowships, the Africa-America Institute and the Council of Graduate Schools administer the *Advanced Training for Leadership and Skills (ATLAS)* Project with funding from USAID. ATLAS provides fellowships to Africans from throughout the continent to pursue graduate and post-graduate degrees at American universities. Specific data on the number of South Africans participating in this program were unavailable. Through a more focused approach, the University of Michigan's Population Studies Center (PSC) offers short-term training opportunities for international scholars in statistics and social science research methods. Scholars from around the world visit Michigan for one to eight months and receive advanced training while conducting collaborative work with PSC researchers. Since 1999, approximately twenty South Africans have participated in the program, which receives funding from the Fogarty International Center and the Andrew W. Mellon Foundation.

In addition to these global programs, several initiatives have focused specifically on South Africa and the disparities in higher education created by apartheid. From 1979 to 2001, IIE's *South African Education Program (SAEP)* provided fellowships for South Africans to pursue graduate training at universities in the United States. The program was started with private funding but eventually received more than \$58 million from USAID. In total, approximately 1,600 South Africans obtained U.S. master's and doctoral degrees through the program. SAEP ended in 2001 in part because the perceived need for such fellowships declined after South African higher education institutions were opened to all groups. Harvard University has its own *Harvard South Africa Fellowship Program*, established in 1979 to address the needs of South Africans denied access to advanced education. Over 100 South

Africans have received fellowships for a year of study at Harvard through this initiative, which continues to target previously disadvantaged groups.

While these fellowship programs focus primarily on individual grantees, they nevertheless contribute to building the capacity of South African higher education institutions. South Africans who receive advanced training in the United States return to their home institutions with new skills and competencies to share with their colleagues. Perhaps more importantly here, however, individual exchanges frequently serve as the basis for broader institutional partnerships. South Africans develop contacts with American academics while studying or conducting research in the U.S., and U.S. faculty do the same while teaching in South Africa. Although specific data are not available, it is likely that a large number of the U.S.-South African research and training collaborations in the current inventory grew out of such individual exchanges and relationships. In addition, at least two collaborations in the database identified Fulbright fellowships among the funding sources for their projects.

In 2000, a major initiative known as the *Partnership to Strengthen African Universities* was launched by four foundations: the Carnegie Corporation of New York, the Ford Foundation, the MacArthur Foundation, and the Rockefeller Foundation. Working as equal partners with African universities and academic associations, the four foundations are investing more than \$100 million over five years in strengthening individual African universities and fostering continent-wide learning networks. The Partnership focuses on specific countries, of which South Africa is one; the MacArthur Foundation does not work in South Africa, but the other three foundations have significant programs there. The Partnership initially commissioned case studies of higher education in each of the target countries and is now making grants to relevant institutions and associations.

As mentioned previously, the foundations made a strategic decision to work directly with African institutions rather than through U.S. collaborations. Institutions of higher education in target countries are encouraged to develop their own plans and funding proposals based on institutional priorities. According to one representative of the Carnegie Corporation, many African institutions are unfamiliar with the idea of having a blank slate on

which to develop their programs. In the past, many have entered into programs and partnerships because funds were available, but not necessarily based on their own priorities. Under the current initiative, African institutions submit proposals to the individual foundations, and the Partnership facilitates information sharing among them. The Partnership is also looking toward co-funding some activities.

In the first two years of the program, these foundations granted more than \$9 million to higher education institutions and academic organizations in South Africa. According to its 2000 annual report, the Ford Foundation gave more than \$4.2 million in grants to South African research, training, and higher education institutions that year. The Rockefeller Foundation provided more than \$1.3 million and the Carnegie Corporation awarded approximately \$275,000 to similar institutions, also based on their 2000 annual reports. In August 2001, Carnegie announced an additional \$8.4 million investment in education in South Africa, of which \$3.3 million was targeted to universities and higher education associations. This included two grants related to the HIV/AIDS epidemic—one for a networking center at the University of Natal, Durban and another for a research institute at the University of the Witwatersrand. Awards continue to be made to South African universities and academic organizations by all three foundations.

In many ways, like the individual fellowship programs, the foundations' initiative to support higher education in Africa complements the efforts of U.S.-South African research and training collaborations. It builds capacity at South African institutions so that they can be more equal partners in collaborative projects. It also provides South African universities with the resources necessary for activities that may increase the effectiveness of international linkages. At the same time, the foundations' initiative suggests a possible opportunity for additional collaboration with U.S. institutions. The program is premised on the idea that African universities should develop proposals to support their own priorities, but many South African institutions have limited experience formulating strategic plans and writing grant proposals. Given the wealth of expertise that some U.S. universities have in these areas, it may be desirable to foster linkages to help South African institutions develop their capacities for institutional planning.

Reforming the South African Higher Education System

Since the transition to multi-racial democracy in 1994, South Africa has been undergoing dramatic social, economic, and political changes. The country's public higher education system has certainly not been exempt from this process. Under apartheid, universities and technikons were segregated by race, with specific institutions designated for whites, coloreds, Indians, and Africans. In the post-apartheid era, all institutions have been desegregated, creating new opportunities for previously disadvantaged groups. The legacy of apartheid, however, is a higher education system full of duplication, unequal access, and inefficient outcomes. The new government's vision of developing a single, nationally-coordinated higher education system was laid out in its *Education White Paper 3: A Programme for the Transformation of Higher Education* (1997).

After a lengthy consultative process about how to reach this goal, the Ministry of Education published its *National Plan for Higher Education* (2001) and subsequently has released more detailed restructuring proposals. These plans call for a reduction of the number of higher education institutions from 36 to 21, including 11 universities, 4 "comprehensive" institutions, and 6 technikons. This reduction is to be achieved by merging existing institutions and incorporating remote campuses of some universities into others. The aim is to provide increased access to the full range of higher education options (undergraduate, graduate, doctoral, professional, technical, etc.) while taking into account unavoidable administrative, financial, and human capacity constraints.

The first step of the restructuring process took place in April 2002, when M.L. Sultan Technikon merged with Technikon Natal to form the Durban Institute of Technology (see Table 9).⁹ The second round of the restructur-

⁹ There are rumors that Mangosuthu Technikon will also be incorporated into DIT, but final plans will not be announced until 2005.

ing process went into effect in January 2004. This included the debundling of Vista University, with its distance education campus being merged into a single online university and its physical campuses being absorbed by other institutions. Other mergers at that time led to the creation of North West University, Tshwane University of Technology, and the University of KwaZulu-Natal. The next round of mergers will take place in January 2005, resulting in four new institutions: Cape Peninsula University of Technology, Eastern Cape University of Technology, Nelson Mandela Metropolitan University, and the University of Limpopo.

It is not yet clear exactly how the restructuring of higher education in South Africa will affect institutional partnerships with U.S. colleges and universities. In many cases, American partners are likely to continue their collaborative efforts with the new institutions into which their South African partners have been merged. In situations where programs are being streamlined or eliminated (or full institutions broken up, as with Vista University), however, the continuation of such partnerships may not be possible. In the long run, the restructuring process may very well create more opportunities for collaboration among institutions in the two countries. As higher education institutions in South Africa concentrate their administrative and financial resources, their capacity to form and manage such partnerships is likely to increase. While the near future for U.S.-South African collaboration is somewhat cloudy, therefore, the prospects down the road appear to hold much potential.

Conclusion and Recommendations

This report represents an effort to better understand the range of collaborative research and training activities between higher education institutions and research organizations in the United States and South Africa. The analysis is based on a database of 152 such partnerships that emphasize social science research, training in all fields, and/or capacity building for historically disadvantaged institutions in South Africa. More than 200 U.S. and South African institutions are involved in these collaborations, the majority being public research universities. In the United States, historically black colleges and universities and community colleges are underrepresented among the partners, though they both have clear skills and areas of expertise to offer. Similarly, on the South African side, historically disadvantaged institutions and technikons are engaged in fewer international linkages than one might expect given their relative needs.

U.S.-South African partnerships cover the full range of academic fields. Within the social sciences specifically, there are fewer projects in political science, international relations, sociology, anthropology, and psychology than there are in history and economics, though many address social science broadly. Given recent political and social changes in South Africa, there is a surprising lack of collaborative research in political science and sociology. Particularly troublesome, however, is the insufficient attention being given by U.S. and South African partners to the problems and implications of the HIV/AIDS pandemic. Tackling this problem requires colleges and universities to address HIV/AIDS-related issues in their own institutions. This process has begun in South Africa and will perhaps lead to the initiation of new collaborative initiatives in this area.

The range of activities in which these collaborations are engaged is quite broad, covering everything from faculty and graduate student exchanges to curriculum development and outreach. Given the historical disadvantage facing many South African institutions and the ongoing process of higher educa-

tion reform, there is room to provide additional support to collaborative activities that seek to build broad institutional capacity. Finally, with respect to funding, the predominance of U.S. government sources is particularly obvious.

These findings about the broad terrain of U.S.-South African research and training collaborations lead to the following recommendations.

In order for HBCUs, community colleges, and smaller higher education institutions in the United States to develop partnerships with South African institutions, they must be able to compete with their more experienced counterparts for the attention of potential partners and funding agencies. Because of the unique missions of these institutions, there is much to be gained from increasing their participation in such collaborations. Like South African institutions themselves, however, many of these schools have only recently started focusing on international collaboration and do not have experience developing projects and designing grant proposals. Targeted funding programs for these institutions are one approach. In many cases, though, it may be better to provide program development grants to these institutions during the planning stage so that they can compete effectively for funding. A broader initiative to build program development capacity at these institutions would increase their ability to access funding resources for a full range of projects.

Another approach to increasing the range of institutions involved in U.S.-South African collaborations would be to develop some sort of clearinghouse or database through which institutions in both countries could identify partners that most meet their needs. The U.S. higher education system in particular is extremely decentralized, making it very difficult for South African partners to know which institutions to target. This may partly explain their preference for linkages with better-known universities in the U.S., even when those institutions do not necessarily have the desired areas of expertise. The Association Liaison Office for University Cooperation in Development has initiated a pilot project in this direction. Its Colleges and Universities Partnering for International Development (CUPID) web page allows higher education institutions in the U.S. and developing countries to post information about their institutional strengths and needs and to advertise for an international partner. This approach only

works when institutions submit information and consult the listings; it does not actually do any match-making. It may be useful to consider a more thorough program that would bring together potential collaborators in both countries based on specific institutional strengths and priorities.

There is a need for collaborative projects that build the capacity of South African institutions for strategic planning and program development. This was the underlying goal of a recent project led by the American Council on Education and the South African Centre for Higher Education Transformation. The project enlisted more than 25 U.S. college and university presidents and senior administrators as mentors to vice chancellors and administrators of 13 historically disadvantaged universities and technikons in South Africa. Although the formal project funded by the Ford Foundation finished in 2001, many of the mentoring relationships continue informally. Similar collaborations with U.S. institutions—either individually or collectively—could strengthen the capacity of South African institutions to develop strategic plans, determine institutional priorities, design appropriate projects, and write competitive grant proposals. This would allow them to take full advantage of the four foundations' current *Partnership to Strengthen African Universities* and other funding opportunities in the future.

Targeted funding programs should be developed to foster collaborative projects in specific substantive areas that are not currently receiving sufficient attention. This would seem particularly appropriate as a means toward addressing the HIV/AIDS pandemic in South Africa. There is a need for South African institutions of higher education both to produce knowledge on prevention, coping strategies, and broader social impacts of the pandemic and to meet the training needs of an HIV-affected society. U.S. higher education institutions have significant experience in areas such as public health, community outreach, and designing demand-driven training programs. Research capacity must also be improved in order to better understand the political and social implications of the pandemic. In addition to HIV/AIDS, targeted funding programs may also be useful to promote collaborative research projects in the social sciences, particularly those that seek to build new knowledge about South African realities based on comparisons with other countries and in the context of globalization.

Current U.S.-South African research and training collaborations depend heavily on the U.S. government for funding. In the current political and economic context, however, it would be beneficial to diversify funding sources and seek out new opportunities. South African institutions can approach foundations directly with proposals that may include collaborative components. In addition, the World Bank has recently expressed renewed interest in higher education. In the long term, these partnerships may also need to find ways to tap into private sector resources. In order for institutions to be aware of the range of funding opportunities for such collaborations, it may be useful to develop a directory of grants programs and contacts.

In conclusion, there are perhaps more gaps than overlaps when it comes to U.S.-South African research and training collaborations. It is fairly easy to suggest institutions, areas, and activities that should receive greater attention, but nearly impossible to identify any which receive more attention than they deserve. More than anything else, this may speak to the vast array of needs and opportunities for collaborative projects between higher education institutions and research organizations in the two countries. This in itself is an important finding as U.S. and South African institutions seek to determine priority areas for future collaboration.

Tables and Charts

TABLE 1: U.S. Institutions Involved in Multiple South Africa Collaborations

U.S. INSTITUTION	LINKAGES	PRIVATE	LAND-GRANT	HBCU
Michigan State University	16		√	
Pennsylvania State University	6		√	
University of Kentucky	5		√	
Georgia State University	4			
Oregon State University	4		√	
University of Michigan	4			
Boston University	3	√		
Harvard University	3	√		
Highline Community College	3			
Ohio State University	3		√	
Stanford University	3	√		
University of California, Berkeley	3		√	
University of Illinois, Urbana-Champaign	3		√	
University of Pennsylvania	3	√		
University of Texas, Austin	3			
University of Washington	3			
Bronx Community College	2			
Columbia University	2	√		
Indiana University	2			
Iowa State University	2		√	
Emory University	2	√		
Lincoln University of Pennsylvania	2			√
Spelman College	2	√		√
University of California, Santa Barbara	2			
University of Connecticut	2		√	
University of Massachusetts, Amherst	2		√	
University of Notre Dame	2	√		
University of Pittsburgh	2			

TABLE 2: Percent of U.S.–South African Collaborations Involving Various Types of U.S. Institutions

INSTITUTIONAL INVOLVEMENT	PERCENT OF TOTAL (152)
Collaborations involving U.S. land-grant universities	43.4
Collaborations involving U.S. private higher education institutions	22.4
Collaborations involving historically black colleges and universities (HBCUs)	9.9
Collaborations involving U.S. community colleges	5.9

TABLE 3: Collaborations involving Historically Black Colleges and Universities

HBCU	SOUTH AFRICAN PARTNER	AREA OF FOCUS
Albany State University	University of Pretoria	Business & workforce development
Florida A&M University	University of Zululand	Public administration
Howard University	University of the Western Cape	Health
Lincoln University of Missouri	University of the Western Cape	General
Lincoln University of Pennsylvania	University of Durban-Westville	Higher education administration
Lincoln University of Pennsylvania	University of the North	Higher education administration
Mississippi Consortium for International Development	University of Zululand	Higher education administration
Savannah State University	M. L. Sultan Technikon	Science and engineering
Spelman College	Durban Institute of Technology	Technology & social science research
Spelman College	Mangosuthu Technikon	Natural resources
Tennessee State University	Northwest Technikon	Higher education administration
Texas Southern University	Eastern Cape Technikon	Business & workforce development
Tuskegee University	University of Fort Hare	Development
University of Arkansas, Pine Bluff	University of the North	Agriculture
University of Maryland, Eastern Shore	Border Technikon	Higher education administration

TABLE 4: South African Institutions Involved in Multiple U.S. Collaborations

SOUTH AFRICAN UNIVERSITY	COLLABORATIONS	HDI
University of Cape Town	23	
University of the Witwatersrand	15	
University of the Western Cape	14	√
University of Pretoria	12	
University of Natal-Durban	10	
University of Natal-Pietermaritzburg	10	
University of the North	9	√
University of Stellenbosch	8	
University of Durban-Westville	7	√
University of Fort Hare	7	√
Medical University of Southern Africa	6	√
eastern seaboard Association of Tertiary Institutions (esATI)	5	
University of the Free State	5	
University of Zululand	5	√
University of Port Elizabeth	4	
University of South Africa (UNISA)	4	√
University of Transkei	4	√
Rhodes University	3	
University of North-West	3	√
University of Venda	3	√
African National Congress	2	
Eastern Cape Technikon	2	√
Fort Cox College of Agriculture	2	√
Mangosuthu Technikon	2	√
Medical Research Council	2	
M.L. Sultan Technikon	2	√
Peninsula Technikon	2	√
Robben Island Museum	2	
Technikon Northern Gauteng	2	√

TABLE 5: Percent of U.S.–South African Collaborations Involving Various Types of South African Institutions

INSTITUTIONAL INVOLVEMENT	PERCENT OF TOTAL (152)
Collaborations involving historically disadvantaged institutions (HDIs)	47.4
Collaborations involving technikons	9.9
Collaborations led by non-higher education institutions	9.2
Collaborations involving higher education consortia	3.9

TABLE 6: Substantive Areas of Focus of U.S.–South African Research and Training Collaborations

SUBSTANTIVE AREA OF FOCUS	NUMBER OF COLLABORATIONS*	PERCENT OF COLLABORATIONS
HEALTH AND EDUCATION		30.9
Health	15	
Higher education administration	19	
Education	13	
PROFESSIONAL FIELDS		29.6
Business and workforce development	18	
Public administration and law	12	
Development studies	9	
Social work	3	
Journalism	2	
Library sciences	1	
SOCIAL SCIENCES		25.0
History	14	
Social science (broadly)	9	
Economics	6	
Political science	4	
Archaeology	3	
Psychology	1	
Sociology	1	
SCIENCES		23.7
Science and engineering (broadly)	14	
Agriculture	12	
Information technology	5	
Natural resources	5	
ARTS & HUMANITIES		7.9
Humanities (broadly)	12	
GENERAL		7.2
General institutional linkage	11	

* Of the 152 collaborations in the database, 17 have multiple areas of focus, meaning that they emphasize equally more than one of the substantive disciplines. As a result, the numbers in the table total more than the number of collaborations.

TABLE 7: Activities of U.S.–South African Partnerships

TYPE OF LINKAGE ACTIVITY	NUMBER OF COLLABORATIONS
FACULTY RESEARCH COLLABORATIONS Collaborative research	90
GRADUATE TRAINING AND FACULTY DEVELOPMENT Faculty exchange Graduate student exchange Conference/seminar/academic meeting(s) Training*	93 55 56 21
CURRICULUM AND INFORMATION TECHNOLOGY DEVELOPMENT Curriculum development Teaching courses in South Africa Distance education	67 56 24
INSTITUTIONAL CAPACITY BUILDING Administrator exchange Institutional management Materials donation (books, equipment, etc.) Student development/student services Other (facilities improvements, lab development)	35 21 20 15 2
EXPANDING THE MISSION OF HIGHER EDUCATION Outreach & community service Internship program	58 20

* Although training was not an option on the questionnaire, many respondents wrote it in under “other.”

TABLE 8: Funding Sources for U.S.–South African Collaborations ^a

FUNDING SOURCE	94 LINKAGES REPORTING	68 LINKAGES REPORTING
U.S. GOVERNMENT		\$32,702,678
USAID ^b	48	\$16,138,406
National Science Foundation	13	\$2,733,087
Department of State/USIA	8	\$810,197
National Institutes of Health	4	\$2,915,988
Department of Education	1	\$105,000
National Research Council ^c	1	\$10,000,000
PRIVATE FOUNDATIONS		\$1,210,300
Andrew W. Mellon Foundation	7	\$910,000
Ford Foundation	4	\$20,000
W.K. Kellogg Foundation	2	\$122,300
15 other organizations ^d	1 each	\$158,000
OTHER DONORS		\$26,667
UNESCO	2	\$25,000
Flemish government	1	\$1,667
SIDA	1	

^a Respondents reported funding sources for their collaborative projects since their initiation. It is therefore difficult to assess the time period covered by the information in this table.

^b This includes programs funded by USAID and administered by the Association Liaison Office for University Cooperation in Development and the United Negro College Fund, as well as grants administered directly by USAID.

^c Although the National Research Council itself is a non-governmental body, the respondent reported the grant as U.S. government funding, suggesting that the money came initially from a government agency.

^d Anglo-American De Beers Chairman's Fund Educational Trust, Bradlow Foundation, Calumet Photographic, Ecumenical Foundation of Southern Africa, Foundation for Alcohol Related Research- UCT, Institute for International Education, Joint Education Trust, Louis Leakey Foundation, National Resource Center for African Studies, Open Society Institute, Pew Charitable Trusts, Rockefeller Foundation, Spencer Foundation, Society for Developmental Biology, World Meteorological Organization.

TABLE 9: Selected Reforms to the South African Higher Education System

EFFECTIVE DATE	NEW INSTITUTION	MERGED INSTITUTIONS
April 2002	Durban Institute of Technology	M.L. Sultan Technikon* Technikon Natal
January 2004	North West University	Potchefstroom University University of North West* Vista University's Sebokeng campus
	Tshwane University of Technology	Northwest Technikon* Pretoria Technikon Technikon Northern Gauteng*
	University of KwaZulu-Natal	University of Durban-Westville* University of Natal
	University of South Africa (online university)	Technikon South Africa Vista University's Distance Education Centre University of South Africa
January 2005	Cape Peninsula University of Technology	Cape Technikon Peninsula Technikon*
	Eastern Cape University of Technology	Border Technikon* Eastern Cape Technikon* University of Transkei*
	Nelson Mandela Metropolitan University	Port Elizabeth Technikon University of Port Elizabeth Vista University's Port Elizabeth campus
	University of Johannesburg	Rand Afrikaans University Technikon Witwatersrand Vista University's Soweto and East Rand campuses
	University of Limpopo	Medical University of Southern Africa* University of the North*

* Institutions designated with an asterisk are historically disadvantaged (HDIs).

Appendix

INDIVIDUALS CONSULTED FOR THIS REPORT

The following individuals provided information for this inventory of U.S.–South African research and training collaborations. Their assistance is gratefully acknowledged.

NAME	INSTITUTION
Maurianne Adams	University of Massachusetts, Amherst
Laurie Arnston	Association Liaison Office for University Cooperation in Development
Michael Bacon	Thiel College
Timothy Barnes	University of Illinois, Urbana-Champaign
Peggy Blumenthal	Institute for International Education
Alan Bornbusch	American Association for the Advancement of Science
Gloria Braxton	United Negro College Fund
Martin Carnoy	Stanford University
Marianna Tax-Choldin	University of Illinois, Urbana-Champaign
Ikbal Chowdhury	Lincoln University of Missouri
Winfrey Clarke	Virginia State University
Valerie Colas	Rockefeller Foundation
Rhonda Collins	Texas A&M University
Sam Comer	Tennessee State University
Edwin Conner	Kentucky State University
Denise Connerty	Temple University
Jonathan Cook	University of the Witwatersrand
John Cunningham	University of Massachusetts, Amherst
Fiona Dunne	Africa-America Institute
Debra Egan	Council for the International Exchange of Scholars
Mark Erbaugh	The Ohio State University
David Fenner	University of Washington
Sandra Flash	University at Buffalo (SUNY)
DeWayne Frazier	University of Louisville
Adrienne Graham	Mississippi Consortium for International Development

NAME	INSTITUTION
Brett Hagen	University of Washington
Peter Helm	Rockefeller Foundation
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John Heyl	Old Dominion University
John Holm	Cleveland State University
Stephen Howard	Ohio University
Galen Hull	Tennessee State University
Sarah Ilchman	Institute for International Education
Mamadou Jallow	Africa-America Institute
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W. Kaczynski	University of Washington
Piyushi Kotecha	South African Universities Vice Chancellors Association (SAUVCA)
Richard Kuehl	Southern Illinois University at Carbondale
Heidi Laino	University of Southern Colorado
Lisbeth Levey	Four Foundations' <i>Partnership to Strengthen African Universities</i>
George Lies	West Virginia University
Holden MacRae	Pepperdine University
Ruth Mendum	The Pennsylvania State University
Roger Merkel	Langston University
Ann McKinstry-Micou	Institute for International Education (retired)
Robert Millette	Lincoln University of Pennsylvania
Mbali Mkhize	Mangosuthu Technikon
William Nance	Institute for International Education
Johnson Niba	Association Liaison Office for University Cooperation in Development
Thomas Nygren	Andrew W. Mellon Foundation
Mildred Ofosu	Delaware State University
Shadrach Okiror	University of Arkansas, Pine Bluff
Olasope Oyelaran	Winston-Salem State University
Wayne Patterson	Howard University
Maura Porcelli	American Council on Education
Robert Prince	University of Cape Town
Marilyn Pugh	Prince George's Community College
Christine Root	Michigan State University
Joel Samoff	Stanford University

NAME	INSTITUTION
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Mirosław- Skibniewski	Purdue University
Courtenay Sprague	Carnegie Corporation of New York
George Subotzky	University of the Western Cape
Orlando Taylor	Howard University
Cherian Thachenkary	Georgia State University
Isai Urasa	Hampton University
Anne Walker	Emory University
John Weting	Northern Michigan University
David Wiley	Michigan State University
George Williams	Savannah State University

About the Author

Beth Elise Whitaker is assistant professor of political science at the University of North Carolina, Charlotte. Her research focuses on refugee and security issues in Africa. She worked previously for a USAID-funded project of the American Council on Education and has conducted research projects for the Brookings Institution, the United Nations Foundation, Save the Children Fund, CARE, and the U.S. Institute of Peace.