The Future Scholars Program:

Preparing Future Scholars for Rutgers & Readying Rutgers for Future Scholars

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Research Report

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Contents

I. Introduction to Research Project

a. Context

The Center for Institutional and Social Change at Columbia Law School (www.groundshift.org) identified the Rutgers Future Scholars program as a new and innovative approach to advancing the participation and success of low-income, minority students in higher education.   Rutgers University established the Future Scholars program with the goal of "reaching minority and low-income students who might otherwise never consider college within their grasp."[1] Future Scholars targets promising middle school students from the urban communities surrounding its three main campuses of Newark, Camden, and New Brunswick/Piscataway. These communities face challenges of social marginalization and poverty. Despite their proximity to the

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[1] Statement by University President Richard McCormick announcing the inauguration of the Future Scholars Program during his Annual Address to the Rutgers University Community on September 28, 2007.

Rutgers campuses, high school students from these cities are underrepresented in the University's student body. The Future Scholars program selects 50 seventh graders from each community each year to "become part of a unique pre-college culture of university programming, events, support, and mentoring that will continue through their high school years."[2] Students who successfully complete the program and gain admission to Rutgers receive a scholarship covering the cost of their tuition for four years.

As of December 2009, the program was in its second year and so far has a ninth grade and an eighth grade cohort on each campus. Future Scholars is just completing its start-up phase, and as a result, many of the programming details—particularly the exact activities that will be offered as each cohort advances and new cohorts are added—are still under development. However, the key components in terms of participant selection, the overall structure of programming, and the powerful incentive of the scholarship are in place.

Compared with other pre-college programs targeting similar populations, Future Scholars has a unique institutional vantage point based on its direct affiliation with Rutgers University. This connection offers a potentially significant advantage because the program is in a position to engage deeply with the university that its participants are likely to ultimately attend. The value of this engagement lies in the reality that college environments often pose structural and cultural barriers–independent from the preparedness of students—that impede the success of students from underrepresented minority and/or economically disadvantaged backgrounds. Drawing from what it learns from developing the Future Scholars program and engaging with the scholars along their paths to college, the larger Rutgers community has the opportunity to identify and address potential institutional barriers that may impact the success of underrepresented student groups on campus, beyond the scholars themselves. Understanding these barriers may also help guide Future Scholars programming. In short, by thoughtfully harnessing their relationship, Future Scholars and Rutgers can prepare the university to receive these students and simultaneously prepare these students to attend the university.

Our study is based on research suggesting that the higher education context itself poses barriers to the access and success of minority and low income students, and that consideration of the transitions and supports Future Scholars will have once they reach Rutgers will be important to the program's ultimate goal of helping these students graduate from college. In particular, we draw upon two theoretical frameworks: Nan Lin's Social Networking Theory and Susan Sturm's article on the *Architecture of Inclusion*. Nan Lin's theory is discussed in terms of the ways Future Scholars connects students to the resources and "capital" embedded in social networks, and the ways that program leaders and stakeholders on campus have invested their social capital to drive the program's success. Susan Sturm's *Architecture of Inclusion* article uses the example of the catalytic role played by NSF ADVANCE—a program focused on increasing the participation of women in the sciences—to illustrate a multi-level approach to institutional transformation aimed at advancing the progressive concept of "institutional citizenship".

With this context in mind, our research explores the relationship between Future Scholars and other parts of the university. It was designed to provide a framework for understanding the network of actors who are currently or could potentially be involved in the issue of increasing access and opportunities for underrepresented groups, and for exploring the program's full potential to advance full participation at Rutgers.

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[2] Taken from the Rutgers Future Scholars' website:
http://em.rutgers.edu/programs/futurescholars/program/overview.html

b. Methods

The research methods consisted of interviews and document review. Initially, we began by interviewing staff members most directly involved in Future Scholars in order to 1) understand how the program is currently conceptualized and implemented, and 2) identify additional individuals, departments, or offices within the university with whom the Future Scholars staff was already working or with whom they expressed an interest in working. From this information and referrals by program leadership and staff, additional interview candidates emerged, some of whom we were able to interview (i.e., a "snowball sampling" approach). Reviewed documents include media coverage, press releases, the program's website, and prior academic research related to the Future Scholars program.

The current staff of the Future Scholars program on both the Newark and Piscataway/New Brunswick campuses were all interviewed in depth. Beyond this core group, we also interviewed people who had been involved with Future Scholars through their official roles at the university. Many of these individuals had participated in the early planning and implementation stages. These interviews indicated that several high-level administrators had also played important roles, and we interviewed as many of these individuals as possible within the focused timeframe of our research.

Our research revealed insights concerning the relationship among various offices, departments, and individuals during the early development of Future Scholars, but these insights should be understood with several caveats. First, our research focused on the Newark campus even though Future Scholars operates on all three of Rutgers main campuses. In the future, comparative study about the evolution of the program on all three campuses will yield further valuable insights. Second, our interviews did not by any means exhaust the field of potential candidates. There is certainly an opportunity to gain additional perspectives and identify additional key actors at different levels of leadership within the Rutgers community in order to more fully understand the program's formal and informal leadership structure and ecosystem. Third, this research occurred in the late spring and early summer of 2009, a time when the Future Scholars program was completing its first year and preparing to double in size as it welcomed its second cohort to campus. This post-research growth is likely to have prompted the staff to modify various aspects of the program's design and potentially to shift some of relationships we discuss in this research.

While all of these limitations must be kept in mind, our research presents information from individuals who have been significantly involved in the start-up phase of Future Scholars.   It contains findings and analysis about the existing relationships between the program and the rest of the university as perceived by the people most directly responsible for the ongoing development of the program. These individuals seem to share a collective aspiration that Future Scholars become a well-integrated member of the campus community and not just a stand-alone program. They also seem to agree that the Newark campus has a substantial amount of institutional experience serving underrepresented student groups. The findings and analysis that follow suggest opportunities for further leveraging and building out from these experiences in order to advance this shared aspiration.

II. Findings

- *Participant Selection*

When describing the students targeted for participation, the literature published by Future Scholars typically refers to "academically talented middle school students from our four Rutgers home communities."[3] This description seems fairly simple, but our findings indicate that in actuality the institution has a specific and nuanced picture of the students targeted by Future Scholars.

  o Student Background

Our findings show that Future Scholars takes pains to ensure that it admits participants who come from truly low-income circumstances and have the potential to succeed at Rutgers but who would be unlikely to realize that potential without the program. Though the host communities have a high concentration of poverty, Future Scholars recognizes that not every student from the community individually qualifies as low-income. Future Scholars has established clear income criteria: eligibility for the federal lunch program, eligibility for public housing or other forms of public assistance, or enrollment in the foster care system. These criteria seem to reflect related concerns, as outlined by interviewees. One is that the lure of free tuition might encourage families to apply even though they do not meet the income requirements. Another concern is that the program might "skim" students who are already likely to succeed.

When asked to elaborate on why the program targets impoverished students, interviewees typically responded with a litany of social problems that interfere with these students' academic success as they get older and expressed that the program aspires to help students overcome these problems.[4] One senior leader explained, "There is so much in the communities that pull the kids back." Cited social problems include familiar issues like drugs, crime, and violence that plague impoverished urban communities. Another commonly identified obstacle was "family pressures" such as mobility, parental health problems, and students with significant responsibilities caring for younger siblings. Interviewees also mention that the peer group can stigmatize academic success and that this social pressure can lead to a sharp drop off in individual achievement at the end of middle school and beginning of high school. Given these problems, many interview subjects expressed a feeling that if Future Scholars does not intervene before that happens, it will be "too late" for many kids.

The findings also reveal a consensus that the middle and high schools students attend do not adequately prepare them for college. Interviewees note that overcoming this disadvantage is a central objective of the program. The findings also show a belief that the targeted students do not receive adequate early exposure to college and what they need to do to prepare for it. Because participants are likely to be the first person in their family to attend college, they are likely not to fully consider college as an option. This "first generation" phenomenon is seen as a core rationale for bringing students to campus while still in middle school and providing repeated exposure to the resources of the campus.

The interview data indicate that the struggles these students have in reaching and graduating from college are primarily perceived to be rooted in problems external to the university. They mentioned financial constraints making it difficult to afford tuition or forcing students to spend substantial time working while trying to attend school. They cited ongoing

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[3] See, e.g., http://em.rutgers.edu/programs/futurescholars/program/overview.html
[4] See, e.g., McAnuff at 22; Sachs at 21, 27; Howard at 2; Gutierrez at 12; Butterfield at 26-27.

family pressures as a possible distraction.   They also cited difficulty keeping up academically both because of poor preparation and having inadequate time to devote to school (because of the financial and family pressures).

        o   <u>Drawing from the Rutgers Home Communities</u>

Many cities around New Jersey contain populations that fall into the inner-city poverty framework, but Future Scholars has made a conscious decision to limit the program to the cities in which Rutgers' campuses are located. The comments of interviewees suggest that the rationale for this decision is a mix of philosophical and practical concerns.

The philosophical reason is that Rutgers has a special obligation to the communities to which it belongs. On the practical side, program leaders explained that limiting the cities simply allowed for a manageable pilot program that could be relatively easily administered by each of the campuses.   Participants are drawn from only four school districts, and the Rutgers staff had at least some preexisting relationships with these school districts because of their close proximity. Staff felt that this would facilitate student identification and provision of ongoing support. Another practical reason is that it was easy to justify limiting the program in this way in the event that other towns began inquiring why their students were precluded from participation.

Based on these rationales, it is worth noting that many interviewees suggested that these four communities are a "pilot" and that perhaps eventually the university would have the capacity to extend the program to additional communities. As a partnership between Rutgers and its surrounding communities, Future Scholars represents a unique opportunity to build and strengthen local institutions, particularly the school system, as well as the ties between the campuses and host communities. Were Future Scholars to expand to communities that are not geographically proximate, this aspect of the program would change. If Newark, New Brunswick/Piscataway, and Camden have been chosen simply because of the administrative convenience of selecting targeted students who happen to live there, then there would be little reason not to expand to other communities if it were logistically and financially possible. On the other hand, if these communities have been chosen because of their connection to the campuses or the potential for spill-over benefits to local partner schools, then going to other communities may undermine the overall purpose of the program. The program's future growth strategy was not explicitly probed in the interviews, but its approach to geographic expansion, network development, and community partnerships will be critical considerations going forward.

-   *<u>Leadership Support</u>*

The importance of Rutgers leadership support at the highest levels was cited again and again as an important factor explaining the initial success of Future Scholars. While there is inadequate space here to recount the career paths and personal interests of key senior leaders of Rutgers, including the senior leadership of the Newark campus, our findings indicate that without exception, these individuals possess strong personal and professional commitments to the social issues addressed through Future Scholars.

The origins of Future Scholars provide a window into this commitment. Future Scholars is often referred to as "the president's program" because it was first announced by President McCormick in his Annual Address to the University Community in September of 2007.[5]   The behind-the-scenes activities that led this announcement underscore the deep involvement of many

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[5] http://www.president.rutgers.edu/address07.shtml

senior leaders. Interview subjects frequently referenced a provocative question from Dr. William Howard, the president of the Board of Governors, as triggering the process that ultimately led to Future Scholars. He observed at a board meeting that while diversity was increasing across Rutgers by many measures, the enrollment remained low for low-income, inner city minority students from communities such as the host cities of Camden, Newark, and New Brunswick. He asked what Rutgers was doing about that. Dr. Howard's leadership position surely lent weight to this question, but our findings show that the question itself also resonated with the personal commitments of many of Rutgers' senior administrators and their image of Rutgers as an institution with a public service mission.

President McCormick repeated Dr. Howard's question to Courtney McAnuff, Rutgers' Vice-President for Enrollment Management, who explained that the simple answer was that these students were not currently meeting the academic requirements to earn admissions. At McCormick's suggestion, McAnuff formed a committee to explore the problem, and this committee eventually proposed—and then developed and launched—Future Scholars.

Throughout this process, the engagement of key constituencies from across the Rutgers' campuses was sought. When seeking a statewide director for the program, the hiring committee comprised a senior administrator from each school, someone from Financial Aid, someone from Admissions, and representatives from various existing pre-college programs such as Upward Bound and the Educational Opportunity Fund. In particular, the program's early developers recognized that Rutgers already had a variety of programs targeting students from similar backgrounds, and the leaders of these programs were deliberately tapped to support Future Scholars. From the Newark campus, the administrators who participated in that committee have continued to be integral players in Future Scholars on that campus.

In addition to helping develop programming components, senior-level administrators have consistently been high-profile advocates for Future Scholars. Those senior leaders interviewed were cognizant of the value of their support. One commented that he believed his most important contribution was to "talk openly, publicly both on campus and in the community about what our values and what our goals are [related to Future Scholars]." During internal and public speeches including their annual addresses to faculty, national conferences, awards banquets, and many other venues, the president of the board, the president of the university, and the chancellor of Newark's campus have all highlighted Future Scholars. As one staff member put it, "They don't miss an opportunity." Interviewees credit this public support for bringing many resources to the program. One senior leader noted that faculty members have been more willing to participate, outside partners—particularly the school districts—have been more receptive to the program, and fundraising has been easier.

Mission Fit

Future Scholars' initial success has been driven in large part by framing the program as an expression of Rutgers-Newark's public service mission. Our findings show that this framing is credible and powerful not only because key campus leaders consistently speak of it in these terms but because these leaders have consistently put the public service aspect of the university's mission at the core of their leadership. Future Scholars exists in a web of initiatives aimed at increasing overall diversity, better serving disadvantaged students, and building stronger relationships to the host community. These leaders have been consciously selected in part because of their commitments to and track record in advancing these goals, so it is no accident that many significant positions on both in Newark and statewide are held by individuals with strong commitments in this area.

Compared to the campuses in New Brunswick and Camden, the Newark campus is the urban school in the Rutgers network. Newark is the most populous city in New Jersey, and many of the state's major corporations are located there, but many of the city's residents continue to experience significant socioeconomic challenges and marginalization. Rather than downplaying the city's problems or isolating the university from them, the leadership of Rutgers-Newark has embraced the city, promoting its resources and the opportunities its social issues present for research, scholarship and leadership.

The interviews also revealed a collective belief that the university is in a position to contribute to the solution of some of these problems and that as a public institution, Rutgers has an obligation to serve the community. This public service mission is seen as core to its history and identity. Many interviewees spoke in particular of a state university's responsibility to provide the opportunity to attend college to individuals who might not automatically have it.

Many also spoke of the specific racial history of Rutgers-Newark. While the campus has from its founding served first generation college students, those students did not originally include minorities (and especially African-Americans) from the surrounding city. One interviewee noted that not only did the local black population feel excluded from the university, but a largely black residential area was also knocked down to accommodate the original campus. In 1969, the few black students who were on campus staged a take-over of the main administration building on campus. Their demands included the hiring of more black faculty and the admission of more black students. This protest coincided with racial riots in Newark, Camden, and many other urban areas of the state. Many interviewees credit these actions as the impetus for the state legislature's creation of the Educational Opportunity Fund (discussed in greater detail below), which in turn is seen as connected to the mission and development of Future Scholars.

- *Program Structure*

  o Situating Future Scholars at Rutgers-Newark

An early decision that seems to have significantly impacted the operation of Future Scholars on Newark's campus was deciding to house the program in the Academic Foundations Center. This decision was made upon the advice of the Newark-based administrators who were engaged early on to participate in planning the program. The Academic Foundations Center is a unique feature of Rutgers-Newark not found on the other campuses. This center is, as one interviewee explained, the place on campus that "concerns itself with creating opportunities and access" for underrepresented student groups. It does so by providing financial aid, mentoring, tutoring, and other services to current students from disadvantaged groups. Program leaders explained that this Center has developed a strong set of core knowledge about how to increase the success of these populations, and as such it was the logical place to put Future Scholars.

One employee of the Center described its mission as "helping students kindergarten through college realize academic and personal success" by providing them with meaningful, relevant programming. The Center houses various pre-college programs and also administers a New Jersey state program called the Educational Opportunity Fund (EOF) for the Newark campus. Interviewees brought up EOF repeatedly, both as a turning point in the history of college access in New Jersey and as a program upon which Future Scholars directly builds. Its mission and portfolio of activities made the Center an ideal place to house Future Scholars. One Program leader described Future Scholars as "not so radically different from the work of EOF"; it just starts earlier. Moreover, several members of the Center's staff were responsible for the program in its

first year, and they cited the existing expertise and resources of the Center as crucial to the successful launch of the program. In particular the Center has a strong set of relationships with other parts of the university and with external organizations, and this pre-existing network seems to have been crucial in securing support for Future Scholars.

- o Utilizing Newark's existing resources

The findings clearly indicate that the staff at each campus has had broad discretion to develop the specifics of its Future Scholars programming. One reason for this is a belief that experimentation will enable the most effective approaches to emerge over time. A second reason is to allow each campus to emphasize its unique strengths. One staff member explained, "I think it is difficult for all of us to have one model because we want to emphasize the resources that we have on each campus." This is desirable both because it is practical and because the intention is that Future Scholars is a recruiting tool for each campus. While students will not be restricted to the campus where they attended Future Scholars, each campus does hope to excite students about the unique offerings and resources of its location.

Many examples of the differences between the campuses emerged in various interviews. One leader explained that New Brunswick already ran a well-regarded program called the Summer Program at Rutgers for Kids (SPARK), and that, "At least here in New Brunswick we didn't have to create a summer program, and we could sort of sub-contract." This campus plans to do the same for the second cohort in the summer of 2009. Another leader mentions that the New Brunwick/Piscataway program has sent undergraduates into the classrooms of Future Scholars participants during the school year to provide individual tutoring and generally assist in those classrooms. This practice has not been logistically possible in Camden and Newark because the districts are larger and further from campus.

No one from the Camden campus was interviewed during the pilot phase of this research, but an interviewee explained that Newark-Camden had no summer programming for middle school students prior to Future Scholars. They had to do much more of their own planning, and an interviewee mentioned that they focused heavily on the arts because they have a strong undergraduate program in that area.

The Newark program was able to draw upon several different existing pre-college summer programs, the academic strengths of the university, and the city's geography. The findings indicate that housing Future Scholars in the Academic Foundations Center has provided crucial access in this regard. The Center has contacts in various academic departments and community organizations. Senior program leadership was able to coordinate with the law school, the criminal justice department, the nursing department, and several others departments to create hands-on activities for the participants. In addition, Newark's summer program was able to take advantage of the campus's proximity to New York City by taking the students both to a museum and a Broadway play.

Interpretations and Analysis

The research findings reveal much about how key players in the start-up phase of Future Scholars understand the goals of the program and its relationship to the broader institution. One way to understand these findings is an illustration of various aspects of social capital theory, as developed by Nan Lin. An alternate way to understand them is through Susan Sturm's *Architecture of Inclusion* theory.

- *Social Capital and Networking*

Our findings show that the goals and strategies of Future Scholars can be understood through the sociological concept of "social capital" and "networking" which is associated with the foundational work of Nan Lin.[6] The essential insight of this theory is that many individual accomplishments (such as graduation from college) require resources that are embedded within "social networks" rather than resources that are under the control of any individual person. College graduation requires resources such as information about college, strong academic preparation, economic and social support, and many other social resources. The theory posits that society is made up of various social networks where individuals have strong internal ties and natural access to the resources within that network. The ties between networks are not as naturally strong as the ties within each network. Some of these networks contain many of the resources necessary for college graduation, making this goal much more readily attainable for its members. Social networking theory posits that this inequality can be overcome through "social bridges" that intentionally connect individuals to other networks which contain resources that individual needs to accomplish a goal like college graduation.

Rutgers University and the communities from which Future Scholars draws its participants can be thought of as distinct networks within a larger single social frame. By insisting that the students enrolled in Future Scholars come from low-income circumstances in marginalized communities, the program assembles a group whose current social capital does not make them likely candidates for college graduation. Future Scholars provides a bridge to those resources, which exist in abundance within the Rutgers community. The university was repeatedly described as a historical provider of opportunity to first generation and low-income students. This description recognizes a college degree itself as a form of social capital that derives its value from the increased network of resources it provides to those who access it. In this sense, Future Scholars can be seen as forging a connection between its participants and the resource of college.

The interview subjects' understanding of the barriers to college for the program participants supports this application of social networking theory. In describing why participants are currently unlikely to make it to college, interviewees spoke of resource deficits in participants' existing networks. They identified problems such as overcrowded and underfunded schools where a rigorous pre-college curriculum is not the norm, family issues associated with poverty, and lack of awareness of the opportunities available through college. They spoke about how Future Scholars hoped to address all of these problems by providing academic support, exposure to college offerings, and connections with other services in the community. This suggests that Future Scholars operates as a social bridge to the college experience and everything that experience can ultimately provides in terms of further access to embedded resources.

Social networking theory also provides a framework for understanding the value of the ties created between participants, Future Scholars, and Rutgers. Social networking theory posits that

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[6] Nan Lin, Social Capital: A Theory of Social Structure and Action (2001).

repeated, frequent, intimate interactions lead to stronger ties and easier access to the resources embedded in those networks. This helps explain why individuals tend to resort to the resources of their personal networks (where they naturally have strong ties) rather than attempting to access another network, even if that network may have more of the resources the person needs.

This basic insight confirms many interviewees' claim that a great strength of Future Scholars is its sustained relationship with participants over many pre-college years. This was regularly identified as a key difference between Future Scholars and other pre-college programs Rutgers offers. The identified advantage of this difference is that it permits the development of powerful ties between the staff and participants to support participants on their paths to college. In this sense, the rationale for Future Scholars is very similar to pre-college programs such as I Have a Dream (IHAD).[7] IHAD emphasizes the transformative potential that exists by selecting participants who are still in middle school and working with them continually throughout high school. By intentionally fostering a strong relationship between staff and participants, participants become more likely to utilize the staff's social capital for their own advantage. In addition to developing strong ties between program staff and participants, Future Scholars has an opportunity to develop strong ties between participants and the specific university they are likely to attend.

Social networking theory also provides a framework for understanding Future Scholars' relationship to other programs, offices, and individuals within Rutgers. Just as society is composed of various discrete, internal networks, so is the Rutgers community. Just as resources are unevenly distributed in society as a whole, certain individuals and offices within the university have greater access to resources such as authority, financial resources, and reputation. Viewed in this light, social networking helps explain the importance of the support of top leadership in the early success of the Future Scholars program. The President of the Board of Governors, the University President, and the Rutgers-Newark Chancellor have all willingly used their positions and authority on behalf of Future Scholars, allowing the program to utilize their social capital. One effect of doing this is that other individuals perceive Future Scholars as a bridge to top leadership's social network. This affiliation between the program and the highest levels of the university helps explain why the staff of Future Scholars reports such a strong positive response both within and beyond the university. It also suggests that as the program evolves, it should continue to engage leaders at all levels of the university in order to maximize the social bridges and the strength of those bridges.

- *Institutional Transformation*

The *Architecture of Inclusion* identifies factors that help explain the successful evolution of an NSF initiative intended to increase the access and success of an underrepresented group (in this case, women scientists) and to advance a concept of "institutional citizenship" at the University of Michigan. The findings of this study indicate that Rutgers Future Scholars represents a partial but not full evolution in relation to this model.

   o *The Evolution of Rutgers' Pre-College Interventions*

In the context that Susan Sturm examines in her article, the evolution in the NSF's approach to address underrepresentation of women among science faculties at the University of

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[7] Joseph Kahne & Kim Bailey, The Role of Social Capital in Youth Development: The Case of "I Have a Dream" Programs, *Educational Evaluation and Policy Analysis*, Fall 1999.

Michigan was driven by a changing perspective regarding the underlying causes of that underrepresentation. Originally the issue was perceived as a pipeline problem, but over time it came to be recognized as a structural and cultural problem within the university itself. The original diagnosis produced a focus on building the pool by advancing individual scientists. This strategy did provide meaningful assistance to individual female scientists. However, overall it was found to be an ineffective approach to the large-scale problem of underrepresentation. Attention turned to transforming the climate of the institution so that women would find it to be a place where they could engage as full citizens. Over time, the NSF recognized that a "pipeline shortage" was not the whole story and that the institutional environment contributed to this group's lack of success.

The NSF ADVANCE example could be instructive for Future Scholars in several important respects, including how leaders conceive of and frame the program's potential. In describing the need for the Future Scholars program, the leaders interviewed generally focused on the students' disadvantaged circumstances and the opportunity for Future Scholars to broaden their perspectives, networks, and capabilities. They cited barriers to students' future success that were exclusively external to the university and mentioned obstacles within the university environment only when directly prompted by the interviewers. That said, when probed about the university's internal environment, two interviewees suggested that some faculty might be insensitive to these students' needs, and another said that it might be "lonely" for such students in some areas of the college. At this stage, as in the early stages of NSF's intervention at the University of Michigan, the Future Scholars program has not explicitly examined its potential to influence and even to help transform the institutional environment at Rutgers.

Building on the initial observations of interviewees regarding potential barriers to full participation *within* the institutional environment, the Future Scholars program offers the opportunity to examine cultural and structural obstacles within the university that operate to the detriment of the targeted group. This sentiment is also reflected in the "miner's canary" metaphor, developed by Lani Guinier and Gerald Torres. The routine failure to thrive of a given group in a given environment can be an indication of "toxicity" within the environment, not an indication of a deficit within the group. At the University of Michigan, the reason female scientists were not succeeding in large numbers was not simply because an insufficient number of them were qualified to pass through the gate. It was also because the institutional environment created barriers to success that affected a broader group as well.

In the context of Rutgers-Newark, it is important to acknowledge the barriers faced by many underrepresented minority students living below the poverty line, and the "pipeline problem" that results from these external circumstances. As interviewees underscored, the children in Newark are not receiving adequate pre-college educations in the same numbers as children in more affluent communities. The opportunity gap and its impact on college readiness of students from impoverished schools and communities are too well documented to ignore. Therefore, the choice is not necessarily either to improve the pathways to college or the institutional environment that awaits those who successfully navigate them. It may the case that interventions are needed in both areas, and a mindfulness of both opportunities will be required to realize the program's full potential.

Furthermore, though Future Scholars is still very new, it is built on a host of established programs that share the goal of increasing the presence of urban, minority students on campus. In this way, Future Scholars is comparable to ADVANCE as an evolutionary step in the institutional approach to correcting underrepresentation and under-participation. The pre-college programs that predate Future Scholars on the Rutgers campus largely consist of "one off" experiences where students spend a single Saturday exploring a particular career path or at most

come to a week-long summer program. Student selection and participation appears to be less systematic than the Future Scholars model, and there is little or no structured follow up. These programs also tend to target older students such as rising eleventh and twelfth graders. While there is still value in such offerings, the consensus among interviewees was that the systemic impact of these discrete interactions is limited. These programs have been offered for a number of years, but the yield of students from communities like Newark remains disproportionately low. Because such programs provide a much narrower range of services, there is less opportunity for widespread engagement by different areas of the university or for sustained impact on the students' educational paths. By contrast, Future Scholars is designed to work with the same group of students from middle school to college, and it offers the important incentive of full tuition for those who gain admission. Like NSF ADVANCE, Future Scholars has evolved through reflectively improving upon identified deficits in earlier pre-college interventions with similar aims.

Though there is this broad similarity, there are still differences in the fullness of the two evolutions that are worth noting.   It seems that ADVANCE has more fully transformed its approach from supporting the individuals to transforming the institution. As discussed above, Future Scholars has not yet tapped into the potential of Future Scholars as a catalyst for improving Rutgers' capacity to create an environment that can fully realize the potential of its diverse student population. Its emphasis is on ensuring that participants attain the traditional qualifications necessary to attend Rutgers as the institution currently exists. Without losing that goal, the leadership of Future Scholars may want to also consider how the program can simultaneously stimulate a critical analysis of the institution and help develop strategies that would address structural barriers revealed by that process.

Future Scholars is probably at an ideal point in its own programmatic development to engage in this sort of institution-level reflection. The concept for the program was announced publicly only within the last two years, and the program has been operating for a little over a year. In terms of timing, it is much closer to where ADVANCE was when the NSF was still engaging in preliminary exploration of the issue than to where ADVANCE was at the time *The Architecture of Inclusion* was published. Currently, Rutgers' emphasis is on students' experience in junior high and high school, because the first cohort of Future Scholars will not actually enroll at Rutgers for another three years. Without attention to the institutional environment at Rutgers, however, the risk is that Future Scholars would experience problems analogous to the structural and cultural barriers the NSF program was developed to remedy. Because of the lead time built into the Future Scholars design, Rutgers has the opportunity to explore strategies for institutional readiness before the students arrive. This is a potential focus for future planning, research and/or collaborative inquiry.

o   *Organizational Catalysts*

Interviews revealed many individuals who fit Sturm's role of "organizational catalysts" to whom the success of the start-up phase of Future Scholars can be partially attributed. As defined in the *Architecture of Inclusion,* organizational catalysts have the capacity to operate at multiple levels within an institution and have the credibility necessary to mobilize others around their chosen issues. Certainly the senior leaders of the university have played pivotal hybrid roles. They are ultimately responsible for every area of the university, but they have consistently and forcefully made Future Scholars a top priority. The program began because these leaders posed the question regarding the underrepresentation of students from the host communities and mobilized a committee to understand the problem and seek a solution. This origin story was told

again and again in our interviews. It is clearly symbolic of the institutional support people perceive for the goals of this program.

These leaders have also showed their support in substantive ways. Chancellor Diner has provided additional funding to augment the salaries of Newark's staff, he has attended Future Scholars events, and he continues to speak regularly about the program in highly public forums. In addition to continuing to provide public and fundraising support, Dr. McAnuff also illustrates the role of an institutional catalyst who rolls up his sleeves and does the legwork necessary to get ideas moving. In the early months of Future Scholars, Dr. McAnuff was the staff. He did this work on top of his significant official responsibilities because of his passion for the goals of the program. His position gave this work both credibility and ready access to many areas of the university.

Beyond catalyzing Future Scholars specifically, the findings also suggest that the top leadership on the Newark campus has been instrumental in energizing the institution more generally on issues related to diversity and engagement with the surrounding community. This is evidenced by the chancellor's selection of Marcia Brown and Sheri Ann Butterfield for key positions in his administration and by the work they have done in those positions. Both of these individuals have strong personal commitments to the issues of diversity and expanding opportunities for underrepresented student groups. Both have extensive connections within different areas of the university and larger communities. Both have the credibility and authority necessary to move an agenda forward. Without necessarily using the term, the chancellor recognized these individuals as organizational catalysts and deliberately placed them at pivotal points in the university's administrative structure.

The catalyzing role played by the staff of Futures Scholars is also suggested by the research findings. On the Newark campus, Dean Deborah Walker-McCall in particular has been a long-term actor in the domain of expanding opportunities for underrepresented students. She administered the EOF program first for the nursing school and now administers it for the entire campus. In addition, as the Dean of the Academic Foundation Center, she supervises all of the pre-college programs.   She is also a native of Newark with extensive connections within the community. On the New Brunswick/Piscataway campus, Dr. Sachs was tapped to help with the initial development of Future Scholars because of her longstanding activities on that campus and the broader community. Dr. Sachs and Dean Walker-McCall were chosen to oversee Future Scholars because their experiences and connections provided credibility to the program as it was establishing itself. These choices again reflect an intuitive appreciation for the importance of organizational catalysts in this process.

o   *Goal of Institutional Citizenship*

As defined in the *Architecture of Inclusion,* "Institutional Citizenship" represents a dual aspiration: all members have opportunity to participate fully in the life of an institution, and the institution fully takes up its role as citizen within the communities it serves and within a broader polity. This aspect of the *Architecture of Inclusion* is less explicit in the research findings than organization catalysts, but the underpinnings of the goal of institutional citizenship are present. When responding to questions about why Rutgers embraces the goal of increasing representation of students from the host communities, a recurrent theme was the particular historical role of Rutgers and the inherent mission of public universities to provide opportunities. Rutgers-Newark has always been a place where first generation and low-income students could get a college education. There is also institutional pride in the university's response to the race riots and black

student protests of the 1970s. Since then, Rutgers-Newark has made increasing efforts to be welcoming to the larger Newark community and to find ways to contribute to civic renewal.

Recognizing a responsibility to bring these students to campus is a precursor to taking responsibility for promoting full institutional citizenship after enrollment. As the *Architecture of Inclusion* discusses, framing the goal in this light helps institutional actors understand the purpose of having these students on campus and the contributions they can make to the university. Articulating the goal as institutional citizenship also stimulates introspection about the barriers that currently inhibit this goal. Various aspects of Future Scholars programming already invite this process. By involving faculty and administrators in program design and implementation, Future Scholars provides an opportunity for these institutional actors to consider the current needs of the students but also the environment these students—and others like them—will enter. It also provides the students with sustained exposure to that environment, which it is hoped will improve their experiences once they enroll in the college. In this sense, Future Scholars could itself become an organizational catalyst of precisely the type of institutional change that will ultimately facilitate the participants' success and more broadly the success of all students at Rutgers.

Conclusion

This project explores the experiences of individuals who have been instrumental in the start-up phase of Future Scholars. Interviewed individuals have participated in vision setting, program design, building institutional and public support, and service delivery. The findings suggest that the program is primarily understood as a way to increase the number of students from economically and racially marginalized backgrounds who are qualified to attend Rutgers University. These students do not have ready access to the resources necessary to succeed in college, and Rutgers has set out to provide these resources. This understanding illustrates Lin's concept of a social bridge wherein a new tie is created between two previously separate networks within the structure so that one area can gain access to the superior resources embedded in the other area. Though it is too early to tell how successful this goal will be, the energy, commitment, and knowledge of the individuals interviewed certainly bode well for the program's future.

By creating Future Scholars, Rutgers has embraced its institutional capacity to facilitate college access for a marginalized group. This is clear from the findings. In addition, the university has an opportunity to tap into the program's broader potential to advance full participation within the Rutgers environment; what Rutgers learns from and through the engagement with Future Scholars might provide opportunity to identify and address institutional obstacles—as well as broader societal obstacles—to students' ability to thrive and participate fully in the life of the university. There may be dynamics within the university's culture and structure that could be rethought so that students from (and beyond) the Future Scholars program have the opportunity for truly transformative educational experiences—and are positioned to assume transformative leadership roles within the university—once they enroll at Rutgers-Newark. Without sacrificing the program's important emphasis on the participants' preparation for college, Future Scholars program leaders are now poised to consider the ways in which the college needs to be prepared for the participants.