

**DEMOGRAPHIC DIVERSITY AUDIT
FINAL REPORT**

Prepared for:

THE AMERICAN INSTITUTE OF ARCHITECTS

Prepared by:

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I. INTRODUCTION

According to U.S. Census data, ethnic minority groups comprise nearly 29% of our nation's population. In law and medicine, women have more than doubled their representation during the past two decades. They account for more than 25% of lawyers and doctors, and by some predictions will account for 40% of physicians in another decade. During the 1990s, minorities made significant gains in some of the prestigious professions. However, minorities and women did not experience comparable growth in architecture. In December 2004, the American Institute of Architects ("AIA") retained the Holland & Knight Corporate Diversity Counseling Group ("Group") to conduct an audit of existing demographic data concerning the architecture profession, perform additional data collection on the demographics of the profession, prepare a report of summary findings, and develop a comprehensive data collection and analysis system to prospectively track the diversity of the profession ("Audit").

The Audit was divided into four phases. Phase I was an assessment of the quantity and quality of existing demographic data residing within the AIA and its "collateral organizations" (*i.e.*, the National Council of Architectural Registration Boards ("NCARB"), the American Institute of Architecture Students ("AIAS"), the Association of Collegiate Schools of Architecture ("ACSA"), and the National Architectural Accrediting Board ("NAAB")), related professional organizations, and other stakeholders that had collected data on the profession or had an interest in such information. Phase II involved collecting, synthesizing, and analyzing additional demographic data on the profession using a variety of data collection methods, including surveys, interviews, and focus groups. Phase III involved designing a non-proprietary, comprehensive data collection and analysis systems to track the diversity of the profession. Phase IV involved an "environmental scan" of the profession by gathering facts and perceptions from wide-ranging sources about the future business, social and economic environment that design professionals will face over the next 20 years. This Final Report covers Phases I through IV.

During the first several months of this Audit, the Group conducted a comprehensive review of existing demographic data on the architecture profession. Additionally, over several months time, the Group conducted interviews and focus groups, and administered a web-based survey to help fill in some of the gaps identified from the existing demographic data on the profession. Our recommendations for ongoing data collection are based on our interviews, focus groups, and web-based survey with students, interns, and architects,¹ as well as existing demographic research, "Best Practices" in other professions, and our experiences with numerous clients. Finally, we scanned numerous sources and solicited opinions on the projected future conditions within which architects will practice to ascertain the likely impact those changed circumstances will have on the profession.

Overall, approximately 11,500 individuals participated in the Audit and overwhelmingly endorsed the concept that diversity is of critical concern to the future of the architecture profession. Many participants were pleased that the AIA had authorized this diversity Audit, saw it as a tangible expression of the AIA's commitment to diversity and one of the most important first steps to enhance diversity and inclusion within the profession.

¹ Throughout this Report, we use the term "architect" to refer to individuals who are registered.

The Group benefited from support, cooperation, and goodwill throughout the interview, focus group, and survey sessions from a broad range of individuals from the AIA, the four collateral organizations, and various interested groups and individuals. We would like to express our appreciation to all those who gave of their time to participate, whether by interview, focus group, or survey. We would particularly like to express our gratitude to our assistant, Nichole Rudd, whose dedicated support was essential, and to Helene Combs Dreiling, Elizabeth Casqueiro, Catherine M. Roussel, Bridgette Waldron, Andrea Rutledge and the AIA Diversity Committee.

II. METHODOLOGY

To meet the objectives of this Audit, we utilized many data collection methods, including interviews, focus groups, surveys, and analysis of existing research on diversity in the architecture profession both in the United States and abroad. To encourage honesty and candor from all participants in the Audit, we offered confidentiality and non-attribution. Therefore, we do not use the names of any participant in this Report, nor do we disclose any information that might reveal any individual's identity.

A. Preliminary Interviews

The Group conducted preliminary interviews with representatives from the AIA, the four collateral organizations, and related professional organizations to determine their existing diversity data sources, capabilities, and analysis, as well as to solicit their input on additional diversity data sources and suggested diversity data collection methods. The purpose of the preliminary interviews was to guide the Group in identifying key issues as we structured the survey tools for independent information gathering from a broad cross-section of the architecture profession.

B. Individual Interviews

The Group conducted one-on-one in-person and telephone interviews with fifty-five (55) demographically diverse individuals (*i.e.*, White, Black, Hispanic, Asian, American Indian, disabled, and Gay, Lesbian, and Bi-sexual) at all levels of the architecture profession, including architects, architecture faculty, interns, students, and non-licensed design professionals. Most interviews lasted approximately thirty minutes to one hour.

Each interview included 15 specific and open-ended questions aimed at collecting basic demographic data on each participant, reasons for entering the profession and influences on that decision, personal experiences with discrimination, racism, or sexism within the profession, whether there are barriers to the progress of minorities and women in the profession, diversity issues, and recommendations for enhancing diversity and inclusion within the profession. Flexibility was retained to probe each participant's replies and to pursue additional issues related to the focus of the Audit that were not included in the interview questionnaire. The interviewees were primarily individuals who completed the web-based survey and agreed to participate further in interviews or focus groups. However, we also interviewed some individuals who were recommended to us by the AIA or other interviewees, or who we identified independently.

C. Focus Groups

We conducted 23 focus groups in four locations: the AIA 2005 National Convention in Las Vegas, New York City, Chicago, and Washington, D.C. Each focus group was made up of between 4-20 participants who were homogeneous in terms of race/ethnicity, gender, sexual orientation, or level (*i.e.* architect, intern, non-licensed design professionals). The focus groups were asked eight open-ended questions, which focused on understanding the reasons for the

under-representation of women and minorities in architecture, and advancing recommendations for the enhancement of diversity within the architecture profession. The focus group participants were primarily individuals who completed the web-based survey and agreed to participate further in interviews or focus groups. However, in Las Vegas, New York, and Washington D.C. there were a few participants who had not completed the survey but were invited by a colleague to attend the focus group.

D. Web-based Survey

To ensure maximum participation of the broadest range of persons within the architecture profession in the independent data collection, the Group administered a web-based survey. The survey was launched on April 8, 2005 and remained open for over 3 months. The target audiences of the survey were architects, architecture students, interns, and non-licensed architecture professionals. The survey was sent either directly to the following organizations or to a contact person within the organizations' membership:

1. Adaptive Environments
2. American Indian Council of Architects and Engineers (AICAE)
3. American Institute of Architects (AIA)
4. American Institute of Architecture Students (AIAS)
5. Arab American Association of Engineers and Architects
6. Arch Voices
7. Arquitectos
8. Association of Collegiate Schools of Architecture (ACSA)
9. Boston Gay and Lesbian Architects and Designers (BGLAD)
10. Boston Society of Architects - Black Architects Forum (BSA)
11. Cornell University
12. Howard University
13. Mississippi State University
14. National Organization of Minority Architects (NOMA)
15. National Organization of Minority Architecture Students (NOMAS)
16. Organization of Black Designers (OBD)

17. Organization of Lesbian and Gay Architects and Designers (OLGAD)
18. Pennsylvania State University
19. Personal architect contacts
20. Registered Black Architects identified from the Directory of Black Architects
21. Society of American Registered Architects (SARA)
22. Southern Polytechnic State University
23. Tuskegee University
24. University of Cincinnati
25. University of Hawaii
26. University of Kansas
27. University of Minnesota
28. University of North Carolina
29. University of Waterloo
30. Women in Architecture

The survey included 35 multiple choice questions, but participants were also given the opportunity to provide open-ended comments. Over 14,500 people accessed the survey, over 1,000 partially completed the survey, and 10,379 completed the entire survey.² The Group provided a hardcopy version to individuals who requested the survey. The survey results discussed in Section IV of this Report are based on the Group's analyses of only the completed surveys.

² The response rate to the survey was lower than expected using standard protocols partly due to concerns raised by members of the AIA and budgetary constraints. While, generally, 20-30% of all respondents to e-mail surveys will complete the survey after receiving a reminder message; due to concerns raised by some AIA members to the survey, the AIA decided not to send a reminder message. Additionally, due to reluctance to share membership contact information, the Group had to rely on the collateral organizations and many other interested organizations to notify their members of the survey, and are unable to verify (except in the instances in which we were copied on the e-mail) whether an initial or reminder message was sent. Nevertheless, the overall response rate was high and the process constitutes by far the broadest assessment of the profession ever conducted, thereby making the process the most informative and reliable data collection effort to date.

E. Review of Existing Demographic Research

The Group reviewed and analyzed thousands of pages of existing research on diversity in the architecture profession in the United States and abroad, and demographic data from many sources including the United States Census Bureau, the Department of Labor, Bureau of Labor Statistics, and the AIA. A discussion of some of the existing demographic data research is included in Sections III and IV below.³

F. Environmental Scan

In order to understand and project the future social, business and economic conditions within which architects will practice in the coming years, the Group surveyed numerous sources, ranging from projections published by the Bureau of Labor Statistics to the Hudson Institute's widely acclaimed publication "Workforce 2020." Additionally, we solicited the thoughts and ideas of numerous participants, through both interviews and focus groups, on the subject. The projections contained in Phase IV represent the collective data reviewed and received from all of these sources, synthesized and summarized with a view towards the underlying objective of this Audit – to better understand the demographics of the profession, the reasons underlying the under-representation of women and minorities in the profession, and the ways in which these demographics can or will be impacted prospectively.

³ A listing of most of the materials we reviewed was provided as "Attachment 1" to the March 7, 2005 Status Report to the AIA.

III. PHASE I – SURVEY AND ANALYSIS OF EXISTING DEMOGRAPHIC DATA ON THE PROFESSION

In Phase I, the first task was to collect and assess existing research and demographic data on the architecture profession. We performed an exhaustive literature search, and conducted interviews with representatives from the AIA, the four "collateral organizations," and other relevant "stakeholder" organizations to determine what demographic information, if any, they collected or maintained. We discovered that, although there is great interest in and support for collecting and maintaining accurate demographic data on the architecture profession, there is no comprehensive demographic data on the profession in terms of race/ethnicity, gender, and age, and no information on sexual orientation and disability that is maintained by any of these organizations, or any other source that we surveyed, except to the extent the Census and Bureau of Labor Statistics data purports to be reflective and comprehensive of the architecture profession. Additionally, a lot of the existing demographic data is unreliable and/or unverifiable.

Notwithstanding the dearth of available information on the demographics of the profession, the AIA, as well as the collaterals and stakeholder organizations that we engaged throughout this process, did provide access or referral to numerous sources of information and data on the profession that were unrelated to the demographics of the profession, which was the primary focus of this audit. These resources and data were reviewed for their utility in understanding the demographics of the profession and/or the causes underlying the lack of diversity within the profession. Although these sources and data are not cited in this report, they contributed to an overall understanding of the architecture profession on which this report, including its findings, conclusions and recommendations are based.

A. Demographic Information on Registered Architects

According to the National Council of Architectural Registration Boards ("NCARB") 2004 survey, there are 101,179 architects living in the 55 reporting jurisdictions, which include all 50 states, the District of Columbia, Guam, the northern Mariana Islands, Puerto Rico, and the Virgin Islands. Because architects are registered in more than one state, and not all architects have NCARB records, NCARB is unable to use its registration records to determine the exact number of architects. NCARB maintains broad-based information on each of its registrants, but does not collect or maintain any demographic information on its registrants. Below are some of the organizations that collect demographic information on architects and an analysis of the data they collect including the comprehensiveness and reliability of the data.

1. Demographic Information Collected and Maintained by the United States Census Bureau and the Department of Labor, Bureau of Labor Statistics

The United States Census Bureau collects and maintains demographic data on architects, including information regarding sex, race/ethnicity, and salary. According to the Census 2000 Special Tabulation, there are 192,860 architects in the United States. Of that number, 20.3% are

women, 2.7% are Black, 5.6% are Hispanic, 6.3% are Asian, and .3% are American Indian.⁴ Thus, according to the data from the Census Bureau, minorities constitute roughly 15% of all architects in the United States, which far exceeds England where only 2% of all architects are minorities. Additionally, architects compare very favorably to lawyers in that, according to the Census 2000 data, minorities constitute only 10% of all lawyers in the United States.

When taken as a sub-group, Black architects compare favorably to lawyers, doctors, and engineers in that Blacks constitute 3.9% of lawyers, 4.4% of physicians and surgeons, 2.6% of engineers,⁵ and 2.7% of architects. Furthermore, as of July 1, 2004, Blacks, Hispanics, and American Indians combined account for 7.4% of lawyers, 9.7% of practicing physicians and surgeons, 6.4% of engineers, and 8.6% of architects.

According to the U.S. Census Bureau, Statistical Abstract of the United States: 2004-2005,⁶ there are approximately 180,000 architects employed in the United States. Of that number, 22.1% are women, 0.3%⁷ are Black, 6.2% are Hispanic, and 6.3% are Asian American. The major limitation to the value of the data collected by the Census Bureau is that the Census Bureau relies on self-identification in determining whether a person is an architect, and given the 192,860 figure compared to NCARB's 2004 figure of roughly 101,179 architects, the Census numbers are grossly inflated. The inflated numbers are likely due to unregistered and unlicensed design professionals identifying themselves as architects.

2. Demographic Information Maintained by the AIA

The AIA collects, manages, and stores basic professional and demographic data on architects, interns, and other non-licensed architecture professionals. The AIA's membership includes approximately half (52,000) of all registered architects in the United States⁸, and the AIA collects and maintains demographic information on most of them. As of December 2004, the AIA maintained race/ethnicity information on 75% of its architect members, and continually collects data on the remaining 25%. Of its architect members, approximately 2% are Hispanic/Latino, 3% are Asians, and 1% are Blacks. The AIA currently maintains gender information on appropriately 95% of its architect members. As of December 2004, approximately 12% of all of the AIA's architect members were female. The AIA does not collect information on disability or sexual orientation.

⁴ The main ethnic groups referred to in this Report are: (1) Black, including African American, Caribbean, and African; (2) Hispanic; (3) Asian, including individuals from India, Pakistan, China, and other Asian countries; Pacific Islands, (4) American Indian; and (5) White.

⁵ The Engineering Workforce Commission, 2000.

⁶ <http://www.census.gov/prod/www/statistical-abstract-04.html>.

⁷ The significant difference in the percentage of Blacks in the 2003 Census Report may be attributed to the fact that beginning in 2000 respondents were permitted to select more than one race/ethnicity, but the 2003 analysis for Blacks includes only those respondents who chose Black as their *only* race/ethnicity.

⁸ This penetration is based on NCARB's 2004 survey of registered architects.

3. Demographic Information on Black Architects: Online Directory of Black Architects and NOMA

Two professors (Professors Mann and Grant) from the University of Cincinnati's College of Design, Architecture, Art and Planning ("UC") have compiled an online directory that purports to include almost every licensed Black architect in the United States. The Directory currently lists *1,519 Black architects of whom 174 are women.*⁹ Professors Mann and Grant have tracked the number of Black architects for over 10 years through the Center for the Study of Practice at UC, and they report that their list includes approximately 98% of all registered Black architects in the United States. *Given the number of Black architects listed in the directory and assuming that NCARB's estimate of roughly 101,000 architects is accurate, Blacks constitute roughly 1.5% of all registered architects, and 35% of all Black architects are AIA members.* According to Professors Mann and Grant, the number of African-American women who are licensed architects has more than tripled since 1991. Professors Mann and Grant approximate that 40 Black architects become licensed each year. Assuming the Directory is as comprehensive as its purports to be, one notable fact regarding Black architects is their relative concentration in about a dozen states. Eighteen (18) states have fewer than 10 licensed Black architects in practice and 9 have none (Idaho, Iowa, Maine, Montana, New Hampshire, South Dakota, Vermont, West Virginia and Wyoming). Professors Mann and Grant do not collect information on Black interns or students.

The National Organization of Minority Architects ("NOMA"), a voluntary membership organization of minority architects, does not collect demographic information on Black or other minority architects. Its membership includes appropriately 500 individuals (who are predominately Black), including both architects and other design professionals. NOMA has a student counterpart, NOMAS, which has more than two dozen chapters at U.S. and foreign schools of architecture.

4. Demographic Information on Female Architects: Research conducted by Kathryn H. Anthony

There is no national organization of female architects. There is a California organization of female architects, Women in Architecture, but it does not maintain any data on women in the profession. There is also no online database that, similar to the Black architect database maintained by Professors Mann and Grant, lists female architects. As mentioned above, *according to data from the U.S. Census 2000 Special Tabulation, 20% of all architects are women. According to the AIA, women constitute 12% of its architect members.*¹⁰ The percentage of female architects lags behind physicians (26.8%) and lawyers (27.5%). However, the percentage of female engineers in the workforce lags behind female architects, regardless of whether the AIA or Census figures are used. Among practicing engineers, approximately 8% - 10% are women, according to statistics from the National Science Foundation and the Women in

⁹ <http://Blackarch.uc.edu/>

¹⁰ Interestingly, relying on Census data, the AIA stated in the RFP that authorized this study that women constitute 20% of all architects, but it did not similarly quote the Census figure of 2.7% for Black architects and instead relied on the AIA membership figure of roughly 1%.

Engineering Program Advocates Network, a non-profit educational organization. As discussed below, women now constitute roughly 40% of all architecture students. Even without any further increase in the proportion of women entering practice, the gradual retirement of older architects will result in continuing growth in the overall proportion of female architects.

There are several studies regarding the status of women in the architecture profession, including several in the last few years. One of the most comprehensive studies regarding women in architecture in the United States was conducted by Kathryn H. Anthony. In 2001, Ms. Anthony published a book titled, “Designing for Diversity,” based on surveys and interviews with 400 architects. In her work, she discusses glass ceilings, salary differences, gender and race discrimination and unfair treatment of women, people of color and trainees in architectural practice. Using narrative selections from her interviews and questionnaires, Ms. Anthony sketches some of the experiences of professionals, especially women and people of color, in internships, exams and first jobs, revealing dramatic gender differences.

B. Demographic Data on Architecture Faculty

The ACSA compiles gender information on the nation’s architecture faculty, but it does not collect race/ethnicity or any other demographic information. The NAAB collects both gender and race/ethnicity information on the architecture faculty. *According to the NAAB’s 2002-2003 data, approximately 16% of full-time architecture faculty are women, and 10% are people of color.* More specifically, in 2002-2003, according to NAAB data Professors and Associate Professors in accredited schools of architecture were 16.6% women, 3.5% Black, 4.8% Hispanic, 3.0% Asian, and 0.5% American Indian.

C. Demographic Data on Interns

Demographic data on the intern population is very sparse. The AIA has recently begun collecting demographic information on architecture interns when they register for its free “Emerging Professional Companion” resource. However, it does not yet have a very large penetration into the intern population. The most comprehensive demographic information on the intern population was collected in the 2003 Internship and Career Survey, which was conducted jointly by the AIA and Arch Voices. Of the 1,000 surveys analyzed, approximately 78% of the interns self-identified as White, 4% as Black, 7% as Hispanic, and 7% as Asian. Given the limited number of respondents, it is unclear whether the numbers are reflective of the larger intern population. However, it is expected that within the next five years, the AIA will have fairly comprehensive and reliable demographic information on a large segment of the intern population. The information on the intern population will allow the AIA to better track the demographics of the profession over time.

D. Demographic Data on the Student Population

Annually, the NAAB requires that all 114 accredited architecture schools report aggregate demographic data on their student population, including gender, race/ethnicity, part-time/full-time status, graduation rates, total degrees awarded, number of applicants, number of applicants accepted, and enrollment targets. However, according to the NAAB Executive Director, the

demographic data the NAAB receives from the schools may be unreliable. The NAAB reportedly relies on two designated contacts at each school to provide the demographic information and sometimes the demographic information comes not from the Dean, Provost, or Admissions office, but from the "best guess" of the NAAB's contacts. The NAAB has deemed the information it collects so unreliable that last year it did not analyze or report on the data it received from the schools.

Nonetheless, the information collected by the NAAB is the most comprehensive data available about the demographics of architecture students and faculty. According to the 2004 data collected by the NAAB, which is not comprehensive because several schools did not provide demographic information, there were 33,869 full and part-time students in the 5-year and 4-year pre-professional bachelor programs.¹¹ According to the 2004 NAAB data, *women comprise approximately 38% of the student population nationwide*, and nearly half of the students in many architecture schools. In comparison, according to the Engineering Workforce Commission, women make up approximately 20% of students enrolled in engineering. In 2003, 20% of all engineering bachelor's degrees were awarded to women.

Of the architecture schools reporting, *minorities comprise 27.6% of the architecture student body*. More specifically, according to the 2004 data, Blacks were approximately 6%, Hispanics 13%, Asians 8%, and American Indians .6% of the student population. In comparison, in 2003, Blacks were awarded 5% of all engineering bachelor's degrees, Hispanics 6%, and Asians 13%. The percentage of minority students in architecture schools has increased steadily over the past eight years, but Hispanics have experienced the most dramatic growth. Hispanic students accounted for 7.4% of the national total in 1997-98, and now account for 13%, an increase of almost 100% in eight years. Additionally, although Blacks have made some gains in recent years, 45% of all black architecture students in the United States attend a historically black college or university. The demographics of the student population reflects that there is greater diversity among young and emerging professionals than among the profession as a whole, which is indicative of a more diverse profession in the next 10 years. Indeed, in 2000, Census data reflected that minorities constituted 27% of the population age 18-34, the age group that reflects the population entering the workforce. By 2020, minorities will constitute 45% of the age 18-34 population. As minority representation expands among the population from which new architects are drawn, minority representation in the architect workforce should naturally rise.

The ACSA publishes a "Guide to Architecture Schools" that contains broad demographic information on the student population at each accredited school, including the percentages of women and all minorities, without regard to individual racial/ethnic groups. Comparisons of the 2003 ACSA Guide to Architecture Schools student demographic data with the 2004 NAAB data yields inconclusive results regarding the reliability of either set of data. However, both confirm that the architecture student population is significantly more diverse, across race and gender, than the professional population.

¹¹ Please note that 3 of the 7 accredited historically Black colleges and universities were among the schools that did not report their data to the NAAB in 2004, which would likely impact the overall percentage of black students.

E. Demographic Information and Existing Research on Women and Minority Architects in the United Kingdom, Canada and Australia

The representation of minorities and women in architecture in the United States is largely under-researched. However, there is a plethora of available resources and existing research on diversity in the architecture profession in other Western countries. In the United Kingdom, Canada and Australia, there have been several studies conducted within the last five years that provide some guidance for future studies in the United States. Additionally, many of the causes identified in the foreign studies for the under-representation of women and minorities are supported by the research results from our Audit. We provide a brief summary of some of the existing research from other countries below.

1. "Why Do Women Leave Architecture"?

In May 2003, the Royal Institute of British Architects ("RIBA") published a report on the drop-out rate of women from architectural practice titled, "Why Do Women Leave Architecture." According to the RIBA research, women constitute 38% of the architecture student body but only 13% of the architecture profession in Britain. This is in contrast to law and medicine in Britain where women constitute almost half of the active profession. *Interestingly, the percentage of female architects in Britain is almost identical to the figures from the United States, which were discussed above.*

The study, which was largely qualitative and surveyed less than 200 women through a web-based questionnaire and individual interviews, revealed that a combination of factors, including poor employment practices, difficulties in maintaining skills and professional networks during career breaks, and paternalistic attitudes, cause women to leave the architecture profession. *As will be discussed in Section IV of this Report, many of the reasons why British women leave architecture practice are similar to the reasons why American women leave or choose not to enter architecture practice.*

2. Going Places: The Career Progression of Women in the Architectural Profession in Australia

In 2005, the Royal Australian Institute of Architects ("RAIA") published a study on the career progression of women in the architectural practice in Australia. The premise of the study was to understand why women comprise 43% of architecture students, but they are less than 1% of company directors of architectural practices in Australia. The study was based on 550 survey responses from female members of RAIA. The major findings from the study were:

- For women, personal satisfaction and client satisfaction are the most meaningful measures of career progression.
- A majority of women would sacrifice career progression for the sake of achieving "balance" in their lives.

- Offers of career advancement within existing practices are often rejected by women as they question the capacity of the advancement to satisfy their career aspirations.
- The most important career goals for women include building their own practices and taking on new project types and professional challenges.
- Women reject the scale of a project, practice size, awards and journal coverage as measures of their personal success, but believe that the profession generally value these factors as indicators of career progression.

3. **"Architecture and Race: A Study of Black and Minority Ethnic Students in the Profession."**

In 2002, the Commission for Architecture and the Built Environment ("CABE") in the United Kingdom published a study titled, "Architecture and Race: A Study of Black and Minority Ethnic ("BME") Students in the Profession." The research was both quantitative and qualitative. The study found that in 2002, *only 2% of registered architects in the United Kingdom were non-white*. The study also found that BME students are now well represented in architecture schools in the United Kingdom, making up around 18% of all architecture undergraduates (compared to 16% of all undergraduates), and that some communities (for example, Chinese) are over represented compared to their presence in the population as a whole at the first degree level (*i.e.* undergraduate). The following findings resulted from the study:

- There are some differences in student profiles, both between white and BME students, and within BME categories. For example, at first degree level (*i.e.* undergraduate), Black African and Black Caribbean students are older, are more likely to have held non-traditional qualifications at entry, and are more likely to study part-time.
- Architecture continues to be predominantly a male profession. Even at entry level, the percentage of women is unrepresentative of the population as a whole – and it is particularly low in comparison with other comparable professions such as law and medicine.
- There are few ethnic minority role models within the profession, and it therefore does not occur to young people from such backgrounds (or their parents and teachers) as a career choice.
- Experiences of architectural education lead to higher drop-out rates among Black and ethnic minority students.
- The predominance of the private sector, and the interaction with the construction industry, create an employment environment in which both direct and indirect race and sex discrimination may arise.
- Widening access to the profession requires changes to teaching methods and challenges to deeply held culture and values.

There were a number of reasons given for the higher dropout rates for BME students compared to their white counterparts. These included, the restrictive costs of a seven-year training period, the difficulty of finding and working in an architecture practice, and for some, the isolating effect of being the sole or one of only a few students from a BME background. Some people had experienced direct discrimination on the grounds of race or gender at a university or in the workplace, while others had undergone a more subtle process of isolation and undermining, but both could lead to withdrawal from the profession or failure to realize early potential.¹²

The study included a number of recommendations. Among the recommendations were raising the profile of architecture to make the profession more diverse and attractive, implementing better data collection methods, and improving communications between students and institutions.

4. Royal Architecture Institute of Canada

In 2003, the Royal Architectural Institute of Canada ("RAIC") commissioned a report titled, "Women in Architecture in Canada." *According to the report, women represent at least 50% of all architecture students in Canada, but only 13% of practicing architects, which is virtually identical to the data from the United States.* The research notes that somewhere between school and professional practice, women either dropout of sight or move into other opportunities or professions. The researchers concluded:

women entering an architectural practice after completing their degree are not afforded the same opportunities as their male counterparts. They are typically given the more menial work and very often not included in site visits, client meetings or discussions in the same way or at the same level as their male peers. This results in an inequity in the experience gained by male and female architects at similar stages in their career, limiting for women the opportunities and timeframe for advancement in the profession.¹³

F. Summary of Existing Demographic Data on the Profession

As demonstrated by the foregoing, comprehensive data on the demographics of the architecture profession in the U.S. is simply not available, and what discrete data is available is in many instances unreliable. However, the available data suggests that while the diversity of architects currently lags somewhat behind other professions such as law and medicine, it exceeds others such as engineering. Additionally, current demographic data on the architecture student population predicts a significant improvement in the diversity of the profession in the coming years.

Although the demographic data on the US architecture population is relatively sparse, there are multiple diversity studies that have been conducted of the professional abroad. However, this demographic data audit will become by far, the most comprehensive and far-reaching study of

¹² A copy of the study is available from the following link http://www.cabe.org.uk/data/pdfs/Mesa_full.pdf

¹³ RAIC Consultations and Roundtables on Women in Architecture in Canada, pp. 17-18.

diversity within the architecture profession ever conducted. It will, therefore, establish a formidable baseline from which to assess future research and with which to measure the demographics of the profession over time.

IV. PHASE II – FINDINGS AND ANALYSIS OF INDEPENDENT RESEARCH ON THE DEMOGRAPHICS OF THE PROFESSION

A. Introduction

1. Data Collection Tools & Processes

The first step of Phase II was the development of data collection tools. The RFP expressly anticipated that Phase II would include data collection in the form of "surveys, questionnaires, focus groups, and interviews." Accordingly, in conjunction with the AIA, and with input from the collaterals, we custom-designed a web-based diversity survey. After finalizing the design and content of the web-based survey, with approval by the AIA, we formulated focus group and one-on-one interview questions to parallel the web-based survey, but also to allow for expanded qualitative data collection.

The web-based survey was launched on April 6, 2005 and was held open until July 19, 2005. Both demographically diverse and homogeneous focus groups were conducted at the AIA National Convention in Las Vegas, as well as in Chicago, New York, and Washington, D.C. These locations were chosen for their high concentration of diverse architecture professionals. Fifty-five (55) one-on-one interviews were conducted with a broad demographic cross-section of architecture students and professionals, both traditional and non-traditional.

The following analysis is based exclusively on the data collected from these three tools. However, there is some cross-reference, where appropriate, to the existing data sources collected and reviewed in Phase I. The analysis of the survey data is strictly quantitative. This quantitative analysis is supplemented and otherwise clarified through the analysis of the qualitative data collected through the focus groups and interviews. Due to budgetary constraints, and at the request of the AIA, the Group did not analyze the more than 3,000 written comments from the survey.

2. Data Limitations

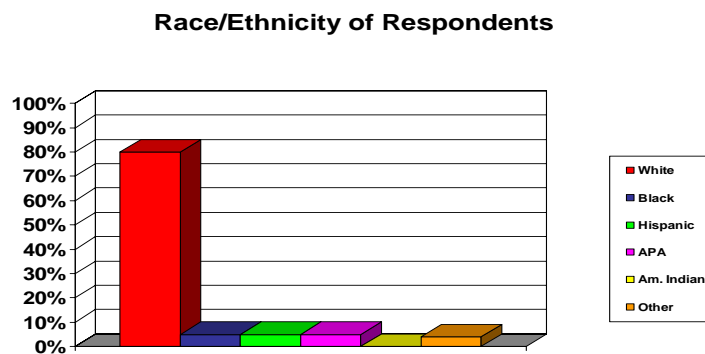
The limitations of the data collected in Phase II are confined to the quantitative data collected in the web-based survey. This data contains known inconsistencies and/or inaccuracies. It is apparent from a review and analysis of the web-based survey responses that some respondents, whether through misunderstanding or inattention, failed to provide consistent responses to numerous survey questions, thereby creating inaccuracies and inconsistencies in the data. The extent of this phenomenon cannot be defined to any certainty.

One example of the inconsistencies that we have noted in the survey data is reflected in questions 8, 13, 14, and 15. Each of these questions relates to employment status and each offers the respondent the option of identifying as a student or retired. The survey data from question 8 reflects an 11% representation of student/retired respondents, while question 13 reflects an 8% representation of student/retired respondents, and questions 14 and 15 reflect a 10% representation of student/retired respondents.

Although these inconsistencies have some impact on the reliability of the data, given the overall sample size of the survey population, the impact is not substantial. We believe that despite these data limitations, the overall findings and conclusions that are contained in this Report provide valuable insight into the demographics of the architecture profession on a scale not previously available, as well as the reasons underlying the demographics of the profession. The data and the attendant analysis should, therefore, be viewed in this light.

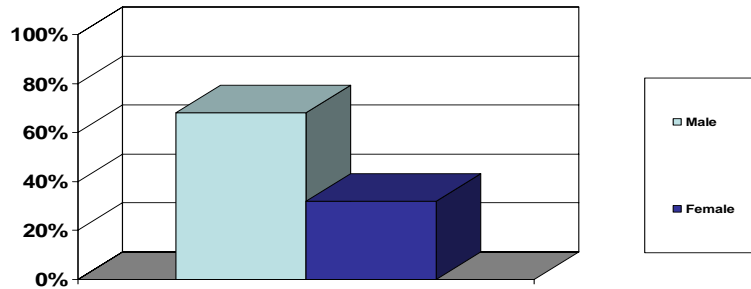
B. Qualitative Data Analysis: Web-Based Survey Results

1. Demographics of the Architecture Profession (Q. 1 – 6, 16, 29)



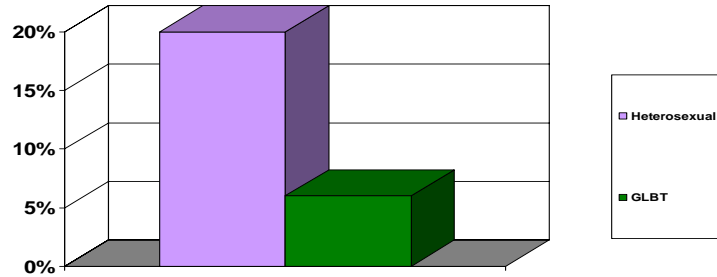
The survey respondents were slightly more demographically diverse in certain respects and slightly less so in others than the available data on the architecture profession. Eighty percent (80%) of respondents identified as White, 5% each identified as Black, Hispanic, and Asian, 4% identified as Other, and .45% identified as American Indian, versus the demographics of the profession based on 2000 Census data, which are 85.1% White, 2.7% Black, 5.6% Hispanic, 6.3% Asian, and .3% American Indian. The relatively higher percentage of Black and American Indian respondents (versus architects in the 2000 Census) is likely attributable to the direct solicitation of Black and American Indian architects, designers, and students to participate in the web-based survey through organizations like NOMA, OBD, NOMAS, and AICAE.

Gender of Respondents



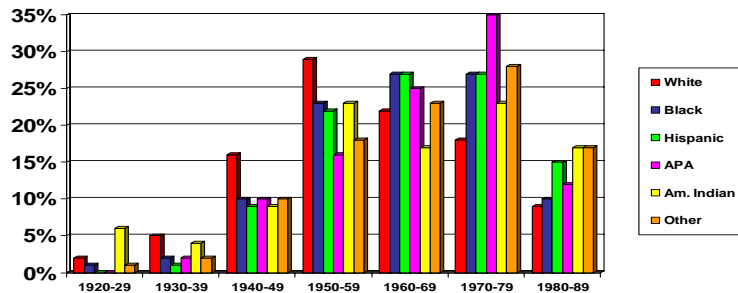
Females had a significantly higher representation among the survey respondents (32% vs. 68% males) than their current representation in the architecture profession based on 2000 Census data (20.3% vs. 79.7% males). There were no significant differences in the rates at which females were represented among the various racial/ethnic groups, except that Asian females represented nearly half (46%) of Asian survey respondents. The discrepancy between the higher rate of women in the survey population and the lower rate in the Census data is likely explained by the participation of students in the survey, who are not similarly counted in the 2000 Census data on the profession. Over 60% of the student respondents were female, which is a significantly higher rate than among overall female respondents.

Sexual Orientation of Respondents



Six percent (6%) of survey respondents were GLBT, which is below the estimate of GLBT persons in the overall population (10%).¹⁴

Age of Respondents

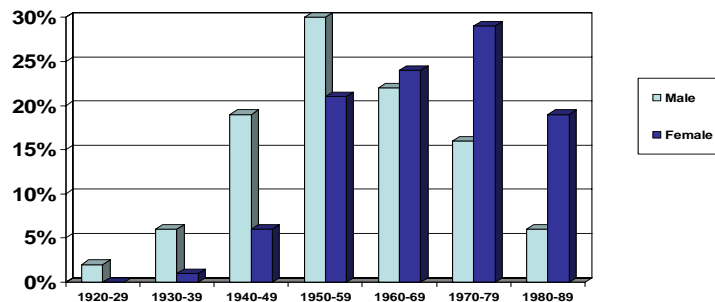


Overall, nearly a third of survey respondents (64%) were between the ages of 36 and 65. Twenty percent (20%) of survey respondents were between the ages of 26 and 35, 10% of survey respondents were 25 or under, and only 5% of survey respondents were over the age of 65. However, the relative demographic distribution of respondents within these age groups is quite interesting. White respondents had a higher representation rate between the ages of 36 and 65 (67% vs. 64% overall) and those over the age of 65 (7% vs. 5% overall) than the minority groups. However, White respondents had a lower representation rate between the ages of 26 and 35 (18% vs. 20% overall) and those ages 25 and under (9% vs. 10% overall) than the minority groups. American Indians were significantly overrepresented among survey respondents over the age of 65 at twice the overall rate (10% vs. 5% overall).

¹⁴ According to *Sexual Behavior in the Human Male*, published by Alfred Kinsey, roughly 10% of the U.S. population is homosexual.

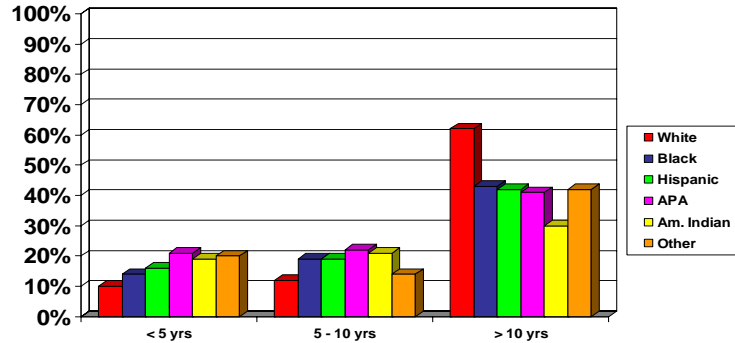
Although all minority groups had lower representation rates among those respondents between the ages of 36 and 65 than did White respondents (Blacks 60%, Hispanics 58%, Asians 51%, American Indians 49%, and Other 51% vs. 64% overall), all minority groups had higher representation rates than White respondents among those age 25 – 36 (Blacks 27%, Hispanics 27%, Asians 35% American Indians 23% and Other 28% vs. 20% overall) and all minorities, except Blacks (10%) had higher representation rates than White respondents among those respondents age 25 and under (Hispanics 15%, Asians 12%, American Indians 17%, and Other 17% vs. 10% overall). These numbers are consistent with the other survey findings, particularly the positive correlation between the overrepresentation of minority respondents age 25 and under and the high representation of minority student respondents. However, according to the anecdotal data gathered, this relative increase in minority architectural students (vs. those currently in the profession) is not visible to or perceived by the vast majority of respondents. Based on the Group's experience conducting diversity assessments in other contexts, this kind of perceptual discrepancy is common on issues of minority representation.

Age of Respondents

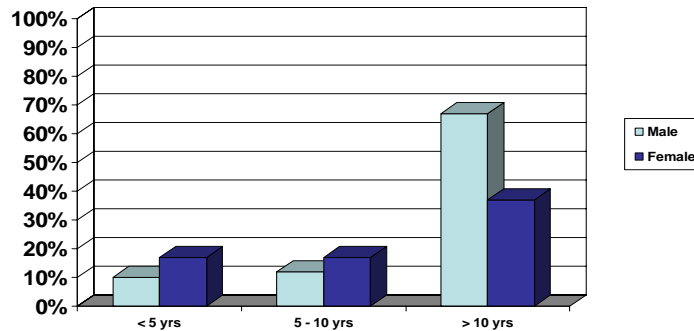


Compared to the overall distribution of survey respondents among age groups, female respondents had a significantly lower representation rate among those respondents between the ages of 36 and 65 (51% vs. 64% overall) than did male respondents, while male respondents were significantly overrepresented among that group (71% vs. 64% overall). Female respondents were also significantly underrepresented among those respondents over the age of 66 (1% vs. 5% overall) while their male counterparts were significantly overrepresented in that age group (8% vs. 5%). Not surprising, given these statistics, female respondents were notably overrepresented among respondents age 35 – 26 (29% vs. 20% overall) and respondents 25 and under (19% vs. 10% overall). Conversely male respondents were underrepresented in these same age groups (age 35 – 26 (16% vs. 20% overall), age 25 and under (6% vs. 10% overall)). Again, this quantitative data is consistent with the quantitative data regarding the increased representation of females among architecture students (60% of student respondents were female) and the anecdotal data regarding the visible increase of females in the architecture profession, particularly among student and young professionals.

Tenure as Practicing Architect

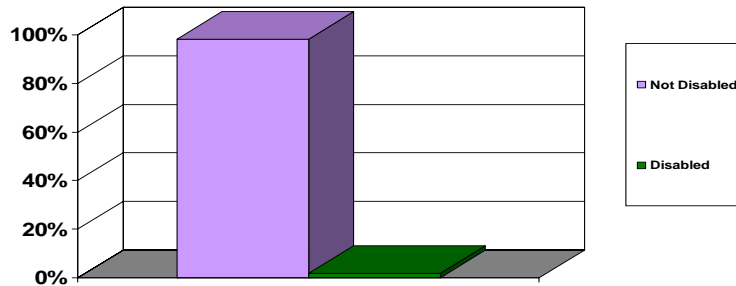


Tenure as Practicing Architect



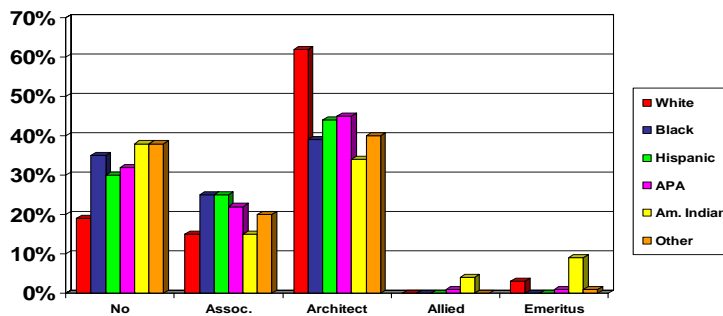
Overall 58% of survey respondents had over 10 years of architectural practice experience, 13% had 5 – 10 years of experience, and 12% had fewer than 5 years of experience, while 17% have never practiced architecture. Half of these respondents were students. The relative distribution of minorities and women among these various tenure periods is consistent with the relative age distribution of minorities and women within the profession – that is a greater percentage of tenured architects are White and male, while conversely a relatively larger percentage of students and new architects and respondents with on experience (*e.g.*, students) are women and minorities.

Disabled



Only 2% of survey respondents identified as having a physical handicap or any physical or mental disability that requires an accommodation. This is substantially lower than the 2000 Census data indicating that 13.4% of the labor force has some form of disability. This underrepresentation of disabled persons within the profession may be attributable to the rigorous physical and mental demands of architectural education and practice, as expressed by many participants in the qualitative data.

AIA Membership

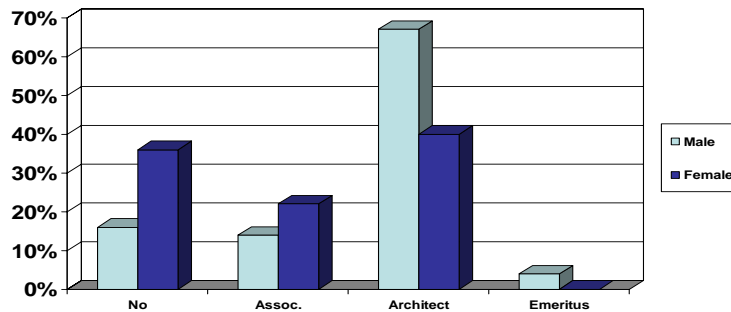


Overall, 78% of survey respondents were members of AIA. Of that number, 58% were Architect members, 16% were Associate members, 3% were Emeritus members, and less than .5% were Allied and Honorary members combined. Twenty-two percent (22%) of survey respondents were not members of the AIA. One third (33%) of those respondents were students or retired, another 17% were interns, and 9% were not practicing architects.

Demographically, there were notable differences in the rates of AIA membership between the various racial/ethnic groups and across gender. Although only 19% of White respondents were

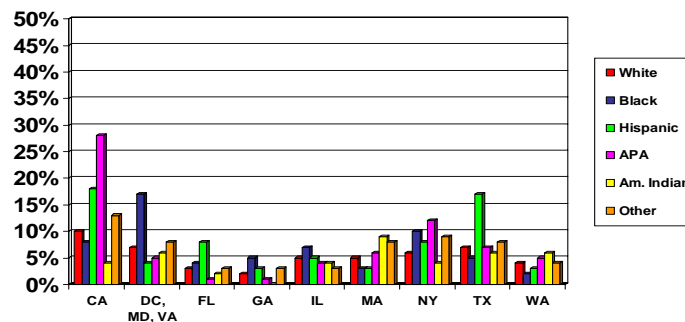
not members of the AIA, among minority respondents 35% of Blacks, 30% of Hispanics, 32% of Asians, 38% of American Indians, and 39% of Others were not members of the AIA.

AIA Membership



Similarly, although only 15.9% of male respondents were not members of the AIA, 36% of female respondents were not members of the AIA. Among the AIA members, there was also a significant discrepancy in the Architect members across gender. Whereas over two-thirds (67%) of male respondents were Architect members of the AIA, only 40% of women respondents were Architect members of the AIA. Conversely, women respondents were overrepresented among Associate members of the AIA (22% vs. 14% of male respondents).

State of Practice



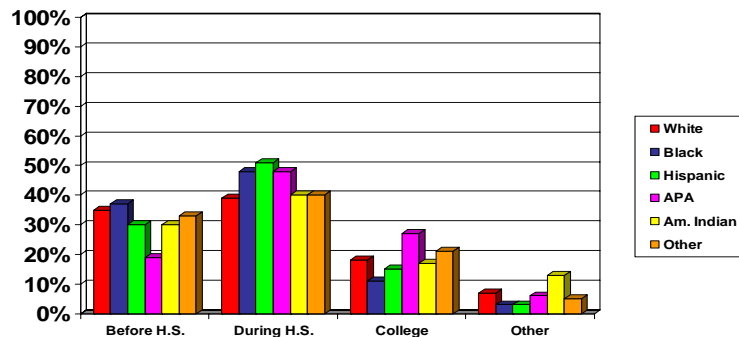
The states with the highest overall representation of practicing architects based on survey respondents were California (12%), Texas (8%), the D.C. metropolitan area (encompassing the District of Columbia, Maryland and Virginia) (8%), New York (7%), Illinois (5%), and Massachusetts (5%). This geographic distribution is consistent with the geographic distribution of architects generally according to the 2003 NCARB Survey of Registered Architects, which also reflects California (16.6%), New York (8.6%), Texas (6.8%), Illinois (5.2%), the D.C.

metropolitan area (5%), and Massachusetts (4.3%) as the geographic areas with the highest concentrations of registered architects.

Beyond these general geographic distributions, it is not surprising that there are high concentrations of minorities within these states, all of which have significant urban areas. For instance, Black respondents were concentrated largely in the D.C. metropolitan area (17%) and New York (10%), while Hispanic respondents were concentrated largely in California (18%) and Texas (17%). Asian respondents were overwhelmingly concentrated in California (28%) with New York (12%) a distant second; American Indian respondents were equally concentrated in Colorado, Massachusetts, and Oklahoma (9% each), and respondents identifying as Other were most heavily represented in California (13%) and New York (9%). These diversity distributions mirror the geographic concentration of minorities generally in the United States according to the 2000 U.S. Census, which also ranks each of these states, except Massachusetts and Colorado, as among the most diverse in the nation.

2. The Path to Practice (Q. 7, 19 – 22)

First Consider Architecture as Career

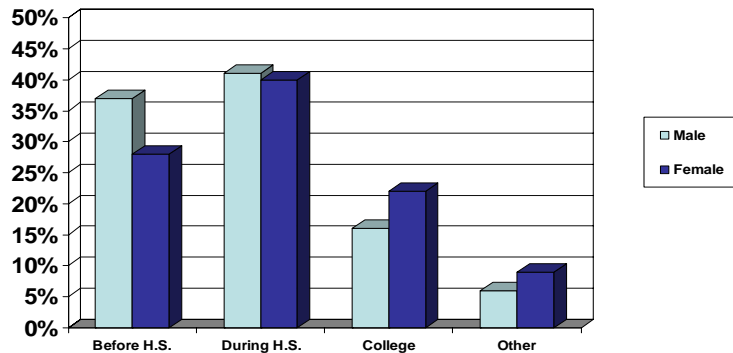


Overall three quarters of all respondents (75%) first considered architecture as a career during or before high school (34% before H.S. and 41% during H.S.). Only 18% of respondents overall first considered architecture as a career in college and only 7% first considered it at some other time in their career.

Respondents of all races/ethnicities were most likely to have first considered architecture as a career during high school, but Hispanics (51%), Blacks (48%) and Asians (48%) had the highest rates for this response. Respondents of all races/ethnicities, except Asians, had the second highest response rate for having first considered architecture as a career before high school, with Blacks (37%) and Whites (35%) having the highest rates for this response. Asians had the lowest rate for this response and were more likely to have first considered architecture as a career during college (27%) than during high school (19%). American Indians had by far the highest

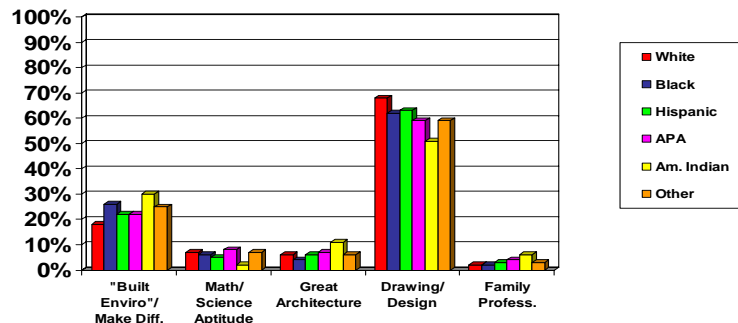
response rate for having first considered architecture as a career at some "other" time in life (11%).

First Consider Architecture as Career



Male and female respondents were equally likely to have first considered architecture as a career during high school (41% vs. 40%). However, male respondents were significantly more likely than female respondents (37% vs. 28%) to have first considered architecture as a career before high school. Conversely, females were nearly 40% more likely than males to have first considered architecture as a career in college (22% vs. 16%) and were 60% more likely than males to have first considered architecture as a career at some "other" time (8% vs. 5%).

Primary Reason for Becoming an Architect



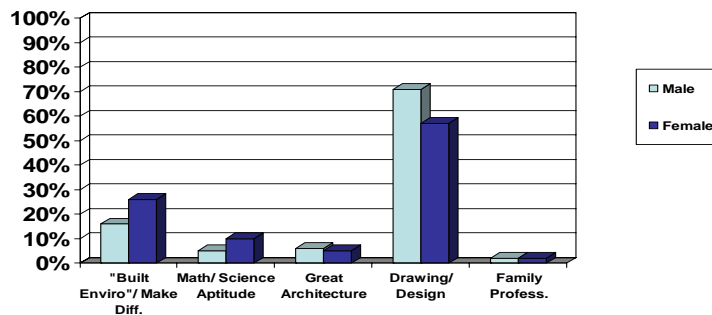
Overall just over two-thirds (67%) of respondents said that "love of drawing, building and design" was their primary reason for becoming an architect. Eleven percent (11%) said "making a difference in the community/environment" was the primary reason. Respondents were relatively evenly divided between "Social/historical contribution to the built environment/community," an "aptitude for math and science," and the "inspiration of great

architects" as a primary reason for becoming an architect at 8%, 7% and 6% respectively. Identifying with architecture as a "family profession" was the least commonly cited reason for becoming an architect, with only 2% of respondents selecting this response.

American Indians were more influenced by the work of great architects (11%) and architecture as a family profession (6%) in their choice of becoming an architect than respondents of other racial/ethnic groups. Rates for these responses among the other racial/ethnic groups ranged from 4% - 7% and from 2% - 4% respectively. Although all racial/ethnic groups were most influenced by a love of drawing and design in their decision to become an architect, White respondents had the highest rate for this response (69%) and American Indians had the lowest (51%). The remaining groups' rate for this response ranged from 59% - 63%.

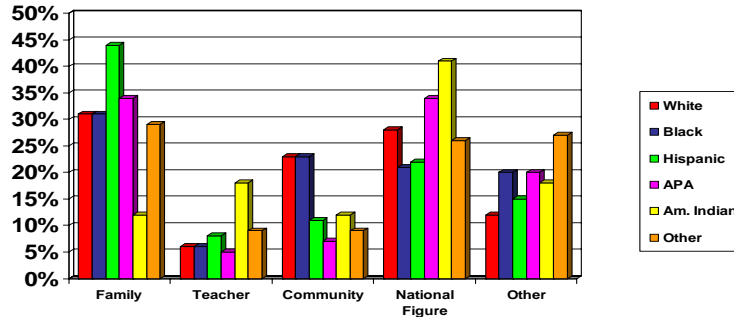
Each of the minority group respondents had a higher rate of response for "social/historical contribution to the built environment/community" as the primary reason for becoming an architect than White respondents (18%), with Black (26%) and American Indian (30%) respondents having the highest rate for this response. Respondents of every racial/ethnic group had a relatively low rate of response for "aptitude for math/science" as the primary reason for becoming an architect; however, Asians had the highest rate for this response (8%), and American Indians had the lowest (2%).

Primary Reason for Becoming an Architect



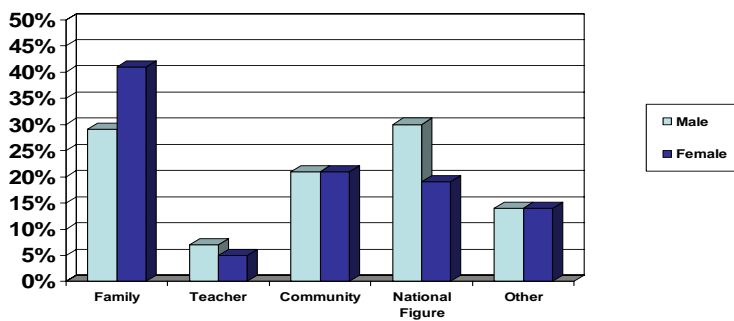
There were significant differences across gender in the rate of response for this question in several respects. Female respondents selected "social/historical contribution to the built environment/community" as the primary reason for becoming an architect at a rate nearly double the male rate (26% vs. 16%), and female respondents selected "aptitude for math/science" as the primary reason for becoming an architect at a rate double the male rate (10% vs. 5%). Finally, male respondents selected "love of drawing/design" as the primary reason for becoming an architect at a rate significantly higher than female respondents (71% vs. 57%).

Architecture Role Models



Overall nearly three quarters of respondents (74%) did not have any architect role model(s) while growing up. American Indians were most likely among respondents to have had a role model (36%) which is consistent with the prior findings regarding the significant representation of American Indians among architects age 65 and older (10% vs. 5% overall). Black respondents were least likely (25%) to have had a role model, although only slightly less so than White respondents (26%). Of those who did have architect role models, the role models were most often family members (32%) or national figures (27%). American Indian respondents, who were most likely to identify an architect role model, were also most likely to identify a national figure as a role model (41%). Hispanics were by far the most likely to identify a family member as a role model (44%). The ability of Hispanics to identify family members as architect role models may account for why Hispanics are by far the fastest growing minority group with the architecture profession.

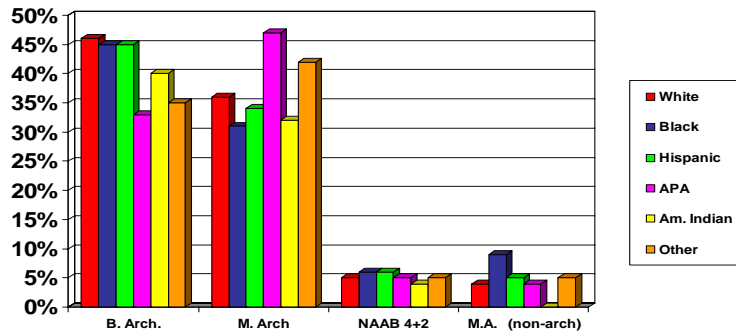
Architecture Role Models



Male respondents were more likely to have had an architect role model while growing up than female respondents (29% vs. 21%). Female respondents were far more likely to identify a

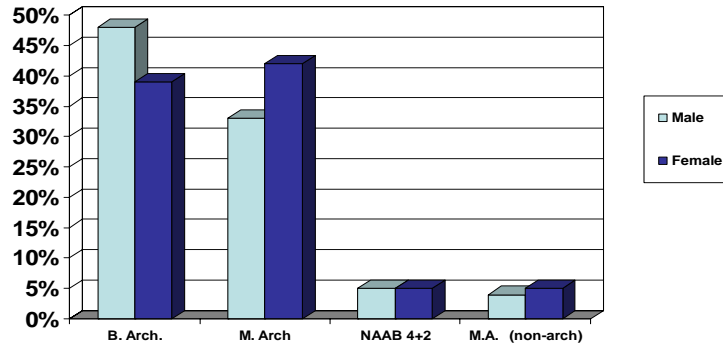
family member as a role model than male respondents (41% vs. 29%). Although male respondents were significantly more likely than female respondents to identify a national figure as a role model (30% vs. 19%), male and female respondents were equally likely to identify a community member (21% each) or someone else ("other") (14% each) as a role model. Respondents of both genders were least likely to identify a teacher as an architect role model, but male respondents were more likely to do so than female respondents (7% vs. 5%).

Highest Degree Attained



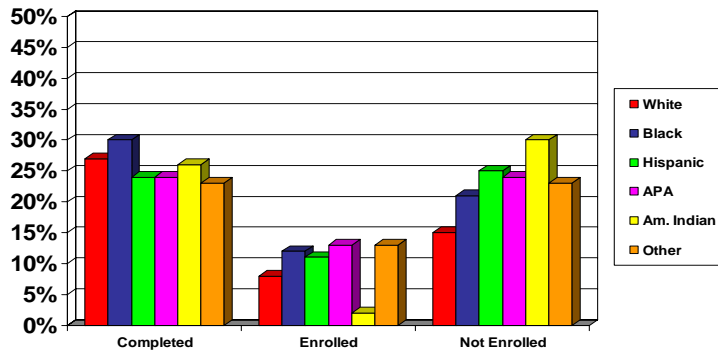
The vast majority of respondents had either a B. Arch. (45%) or M. Arch. (36%) as their highest degree attained. Only 5% of respondents had an accredited pre-professional architecture degree as their highest degree attained and 4% had a graduate degree in another field of study. More Asian respondents had a M. Arch. (47%) than any other racial/ethnic group. Nearly 50% of White (46%), Black (45%) and Hispanic (45%) respondents had a B. Arch. Black respondents (9%) were nearly twice as likely as any other racial/ethnic group to hold a graduate degree in a field of study other than architecture.

Highest Degree Attained



Female respondents (42%) were most likely to hold a M. Arch. as their highest degree attained, while male respondents (48%) were most likely to hold only a B. Arch. Male and female respondents were equally likely (5% each) to hold an accredited pre-professional architecture degree as their highest degree attained, and females were slightly more likely than males (5% vs. 4%) to hold a masters degree in a field of study other than architecture.

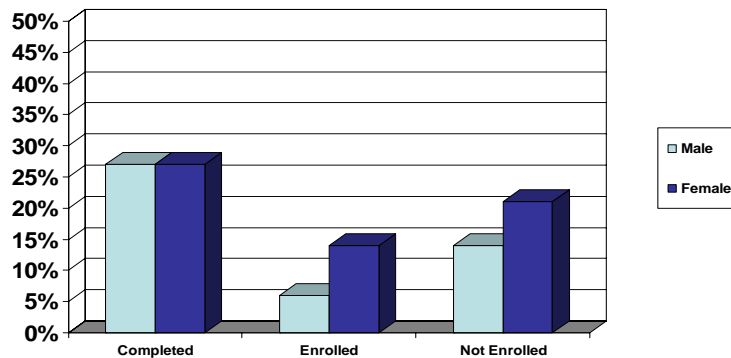
IDP Status



Overall, nearly 50% of respondents (48%) identified the IDP as inapplicable to them. These responses are not further defined by any additional data, but it is presumed that included among these respondents were students, persons not practicing architecture, and those architects whose licensure and practice preceded the establishment of the IDP by NCARB. Twenty-seven percent (27%) of respondents had completed the IDP and 9% of respondents were enrolled in IDP at the time of the survey.

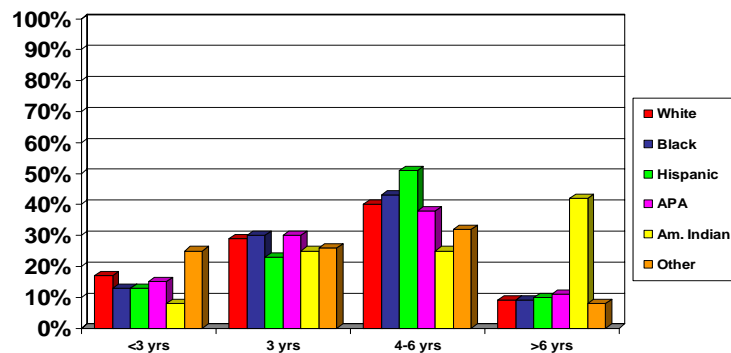
Black respondents had the highest IDP completion rate (30%), while American Indians and Whites had the lowest IDP enrollment rates (2% and 8% respectively).

IDP Status



Male and female respondents had equal IDP completion rates (27% each). Female respondents had a significantly higher enrollment rate than male respondents (14% vs. 6%). However, of those eligible for enrollment, female respondents also had a higher rate of non-enrollment than male respondents (21% vs. 14%).

Time to Complete IDP

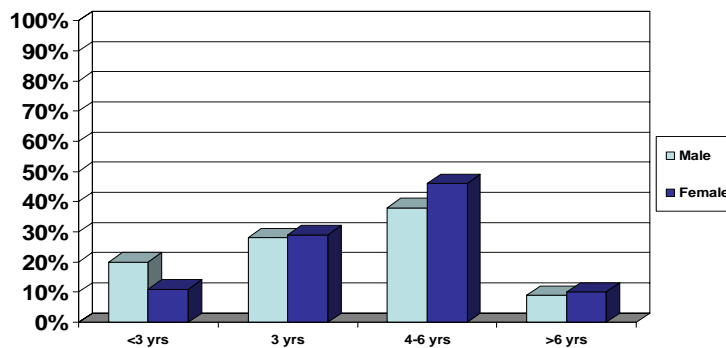


In terms of the amount of time it took respondents to complete the IDP, overall more than two thirds of respondents (67%) completed the IDP in 4 years or less. However 14% of respondents took 5 years to complete the IDP and 6% of respondents overall took more than 6 years to complete the IDP.

Respondents identifying as Other had the highest rate of completion of the IDP in less than 3 years (25%), American Indians had the lowest rate of completion in less than 3 years (8%). The

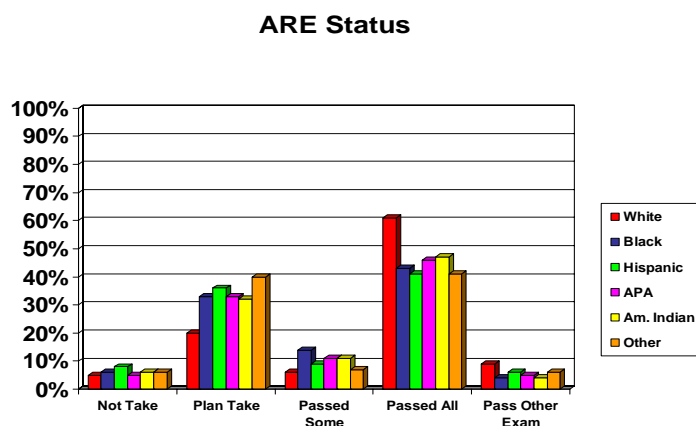
remaining racial and ethnic groups had completion rates in less than 3 years ranging from a high of 17% (Whites) to a low of 13% (Blacks and Hispanics). Twenty-three (23%) to 30% of respondents in each racial/ethnic group completed the IDP in the three years that NCARB allots for the internship process. However, the majority of respondents in each racial/ethnic group, except American Indians, took 4 – 6 years to complete the IDP. Substantially more American Indians (42%) took more than 6 years to complete the IDP than any other racial/ethnic group.

Time to Complete IDP



Male and female respondents had roughly equivalent IDP completion rates in 3 years (28% males vs. 29% females) and more than 6 years (9% males vs. 10% females). However, nearly twice as many males completed the IDP in less than three years than females (20% vs. 11%) and slightly more females than males completed the IDP in 4-6 years (46% females vs. 38% males).

3. Licensure Rates and Attrition (Q. 9-11, 17-18, 23-28)

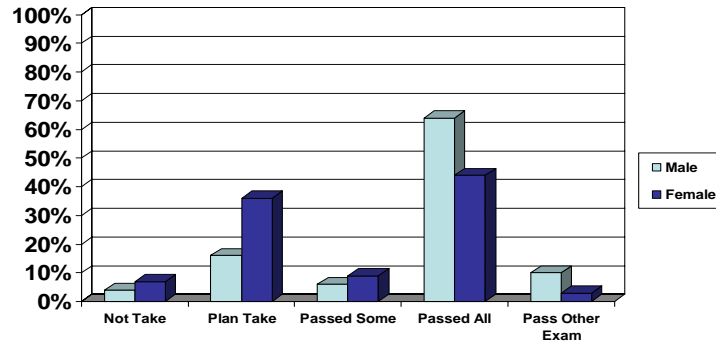


Overall, 58% of respondents have completed and passed all divisions of the ARE, while 8% have passed some other qualifying exam.¹⁵ Seven percent (7%) of overall respondents were in the process of taking the ARE during the survey, 23% of respondents indicated that they have not yet taken the ARE, but intend to take it, while 5% of respondents do not intend to take the ARE.

The overwhelming majority of White respondents (70%) had passed the ARE or some other qualifying exam at the time of the survey, versus only 47% of Black, Hispanic, and Other respondents and 51% of Asian and American Indian respondents. Only 6% of White respondents were in the process of taking the ARE during the survey, versus 7% of respondents identifying as Other, 9% of Hispanics, 11% each of Asians and American Indians, and 14% of Blacks. Respondents identifying as Other had the highest response rate for those intending to take the ARE (40%) and Whites had the lowest response rate (20%). Hispanic respondents had the highest response rate for those not intending to take the ARE (8%). This suggests that the projected increase of Hispanic architects based on student demographics may not be fully realized. Both Whites and Asians (5% each) had the lowest response rate for those not intending to take the ARE.

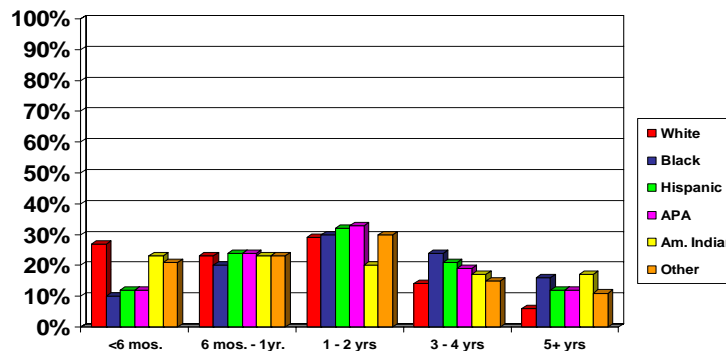
¹⁵ This suggests a total of 66% of respondents who are licensed or registered architects. However, only 64% of respondents identified as licensed or registered in the U.S. or Canada. This 2% discrepancy is only partially explained by the 1% of respondents who identified as Canadian or international. It is presumed that, based on these responses, approximately 1% of respondents either have allowed their license to lapse (*e.g.*, retired) or have completed and passed the ARE but have not yet finalized their licensure/registration with NCARB.

ARE Status



Seventy-four percent (74%) of male respondents have passed the ARE or some other qualifying exam, while only 47% of female respondents have passed the ARE or some other qualifying exam. Six percent (6%) of males and 9% of females were in the process of taking the ARE at the time of the survey, while 16% of males and 36% of females planned to take the ARE at the time of the survey. Nearly twice as many females (7%) as males (4%) do not intend to take the ARE. This suggests that the projected increase in female architects based on student demographics may not be fully realized.

Time to Complete ARE



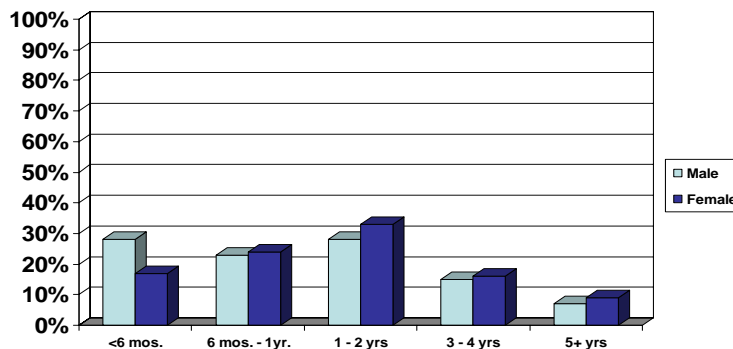
Of those respondents who did complete the ARE, overall nearly half (48%) completed the ARE in a year or less. Thirty percent (30%) of respondents overall completed the ARE in 1 – 2 years, 15% completed the ARE in 3-4 years and only 7% took 5 years or more to complete the ARE.

There were not significant differences among most of the racial/ethnic groups in the ARE completion rates between 6 months and 2 years. Twenty-nine (29%) to 33% of respondents in

every racial/ethnic group, except American Indians, completed the ARE in 1-2 years. Only 20% of American Indians completed the ARE in 1-2 years. Twenty (20%) to 24% of respondents in every racial/ethnic group completed the ARE in 6 months–1 year.

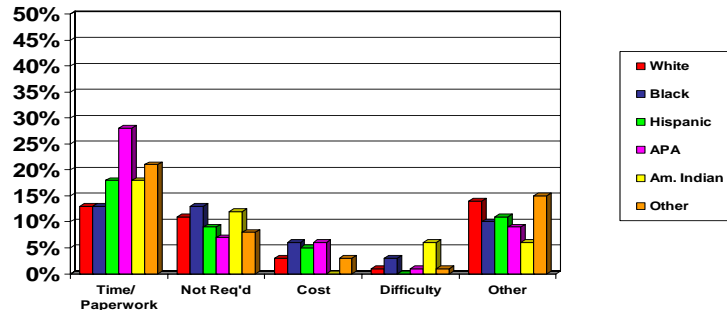
However, there are significant differences among the racial/ethnic groups in the ARE completion rates in less than 6 months and in 3 or more years. For instance, White respondents completed the ARE in less than 6 months at a rate (27%) more than twice that of Blacks (10%), Hispanics and Asians (12% each) and even notably higher than the rate of American Indians (23%) and those identifying as Other (21%). On the other hand, Black respondents had a higher rate of completion of the ARE in 3-4 years (24%) than other groups, and Blacks and American Indians had a significantly higher rate of completion of the ARE in 5 or more years (16% and 17% respectively) than other groups.

Time to Complete ARE



There were not significant differences in the rates at which male and female respondents completed the ARE, except that male respondents completed the ARE in less than 6 months at a rate nearly two-thirds higher than females (28% vs. 17%).

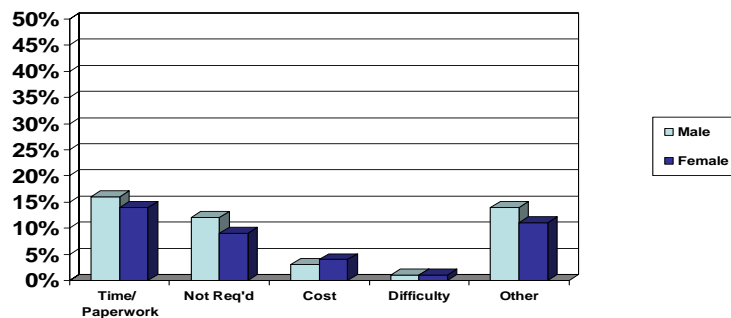
Reason for Not Taking ARE



More than half of respondents (57%) identified "ineligibility" as the primary reason for not having taken the ARE. However 10% of respondents identified "inadequate time to prepare" and another 10% identified the fact that the ARE is "not a prerequisite for their career" as the primary reason for not taking the exam. Only 1% of respondents cited the "difficulty" of the exam as the primary reason for not taking it, but 9% of respondents cited either the "cost" or the difficulty of "paperwork/scheduling" as their primary reason for not taking the ARE.

"Time and paperwork" were cited far more often as the reasons Asians (28%) chose not to take the ARE than any other reason cited by any other racial/ethnic group. However, Black and American Indian respondents (13% and 12% respectively) cited the fact that the ARE was "not a prerequisite for their current or anticipated career" as the primary reason for not taking the exam more often than any other group.

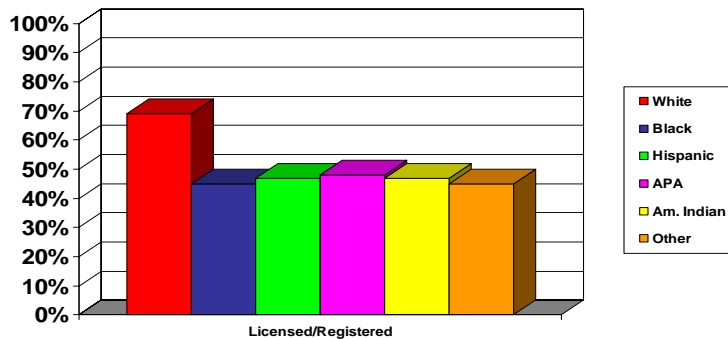
Reason for Not Taking ARE



The only significant differences in the response rates of males and females regarding the reasons for not taking the ARE were that males indicated that the ARE was "not a prerequisite for their

current or anticipated career" a third more often than females (12% vs. 9%) and males cited "other" reasons nearly a third more often than females did (14% vs. 11%).

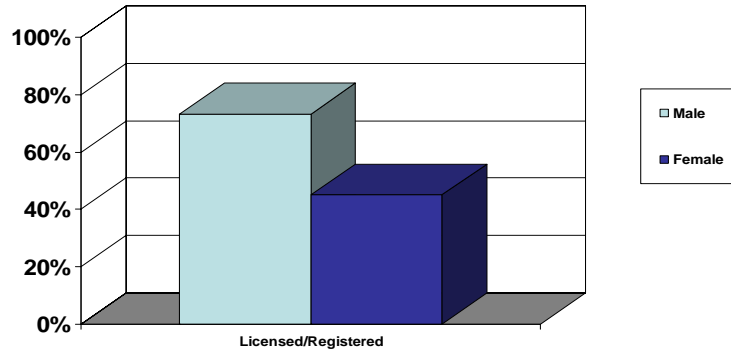
Licensure/Registration



Overall, nearly two-thirds of respondents (64%) were licensed/registered.¹⁶ Of those survey respondents who were not licensed/registered (36%), 84% said they intended to seek licensure/registration. However, whereas 69% of White respondents were licensed/registered, only 45% – 48% of respondents of every other racial/ethnic group were licensed/registered, with no appreciable difference among the various racial/ethnic groups.

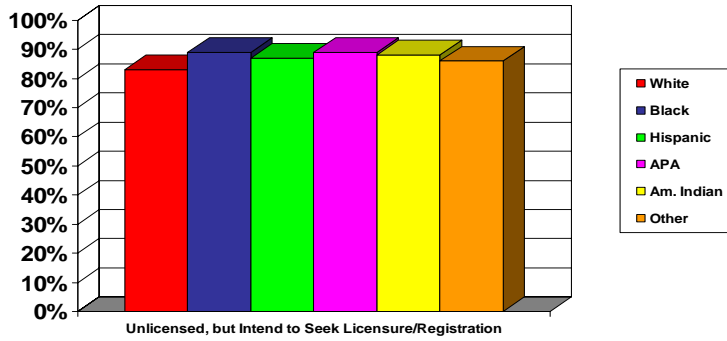
¹⁶ Licensed or registered in the survey and in this Report refers only to those persons licensed or registered in the U.S., any U.S. territory, or Canada.

Licensure/Registration

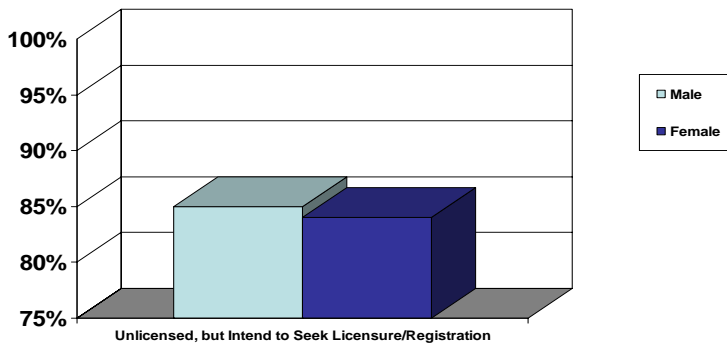


There was also a significant difference in the licensure/registration rates among male and female respondents. Although 73% of male respondents were licensed/registered, only 45% of female respondents were licensed/registered.

Licensure/Registration

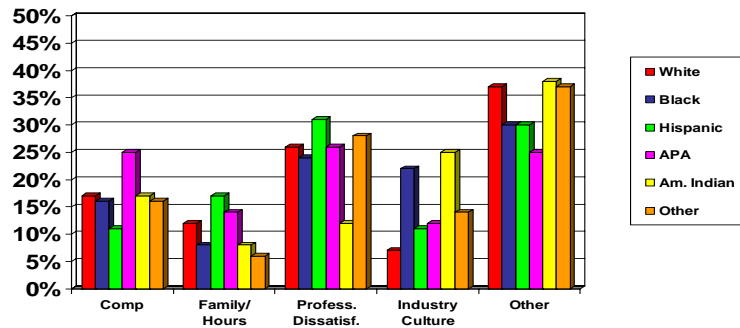


Licensure/Registration



There were no appreciable differences among the various racial/ethnic groups, or across gender, in the rates at which unlicensed/unregistered respondents indicated their intent to seek licensure, with each group and both genders having an affirmative response rate of 83% – 89%.

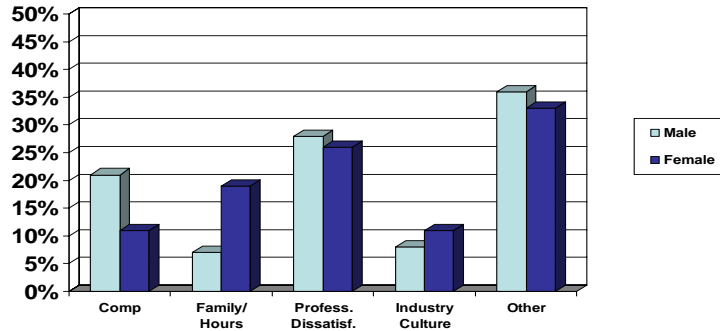
Primary Reason for Not Practicing



Over one third of overall respondents (35%) not practicing or not intending to practice architecture as a career identified "other" as their primary reason for not practicing. This was the most cited reason for not practicing. The second most commonly cited reason for not practicing was "professional dissatisfaction" (20%) – including "lack of job satisfaction" and "erosion of the architect's role in the building industry" – followed closely by "compensation" (18%).

There were fairly significant variances in the response rates to this question among racial/ethnic groups and between the sexes. For instance, 25% of Asians cited "compensation" as the primary reason for not practicing architecture, versus only 11% of Hispanics and 16% – 17% of the remaining racial/ethnic groups. On the other hand, 17% of Hispanics cited "personal/family circumstances" and "inflexible schedule" as the primary reason for not practicing, versus only 6% of those identifying as Other and only 8% of Blacks and American Indians. Blacks and American Indians cited "industry culture" – including "barriers to advancement," "office culture," and "lack of diversity within the profession" – as their primary reason for not practicing at a rate of 22% and 25% respectively. All racial ethnic groups, except American Indians, cited "professional dissatisfaction" as their primary reason for not practicing at a fairly high rate (26% – 31%). However, American Indians only cited this as their primary reason for not practicing at a rate of 12%.

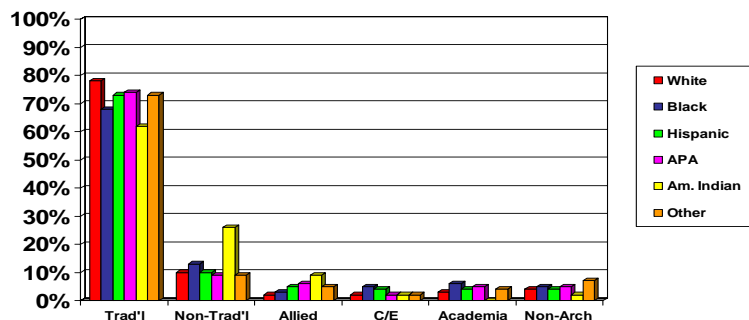
Primary Reason for Not Practicing



Across gender there were two significant differences in the response rates to this question. Nearly twice as many male respondents cited "compensation" as their primary reason for not practicing as female respondents (21% versus 11%). Conversely, female respondents cited "personal/family circumstances" and "inflexible hours" as their primary reason for not practicing at a rate nearly three times the rate of male respondents (19% versus 7%). This response rate, as well as the anecdotal evidence, suggests that a lack of work-life balance within the profession is a significant factor contributing to the underrepresentation of women in the profession.

4. Areas of Practice (Traditional vs. Non-Traditional) within the Profession (Q. 8, 12-15)

Current/Anticipated Career Path

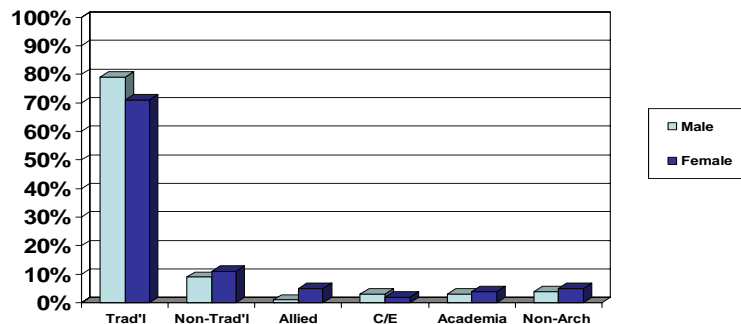


Overall, 77% of respondents identified their current or anticipated career path as "traditional architecture." Another 10% of respondents identified their current or anticipated career path as "non-traditional architecture," which was defined as not-for-profit architecture organizations,

associations, facilities management, and consulting. The remaining respondents were split between "non-architecture related careers" (4%), "academia/teaching" (4%), "allied fields" (3%), defined as including interior, industrial, or graphic design, and "construction/engineering" (2%). The most commonly cited "non-architecture related careers" were real estate and development. Only .3% of respondents identified as "landscape architects."

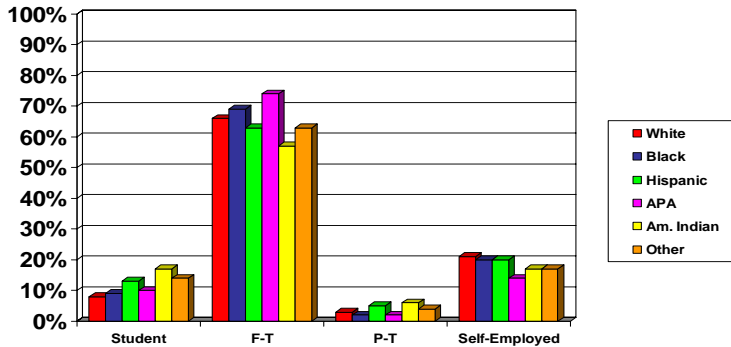
There were few significant differences among the racial/ethnic groups in their current or anticipated careers. However, Black and American Indian respondents were slightly underrepresented in traditional architecture practice (68% and 62% respectively vs. 77% overall). Additionally, American Indians were significantly overrepresented in non-traditional architecture practice (26% versus 9% - 13% for the other demographic groups).

Current/Anticipated Career Path



The only significant difference between the genders in choice of current or anticipated career is that female respondents identified their current or anticipated career as an "allied" profession at a much higher rate than male respondents (5% vs. 1%). This discrepancy could be explained by the anecdotal evidence regarding the disproportionate representation of women in interior design.

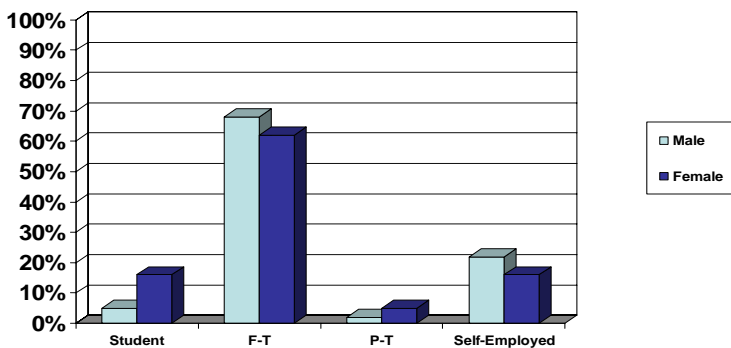
Employment Status



Two thirds (66%) of all respondents were employed full-time and 20% were self-employed. Another 9% of respondents were students and only 3% of respondents were employed part-time. The remaining 2% were retired.

Although Hispanic, American Indian, and those identifying as Other had the lowest representation of full-time respondents (63%, 57%, and 63% respectively), these groups had the highest representation of students (13%, 17%, and 14% respectively). These same racial/ethnic groups also had a slightly higher representation of part-time respondents (5%, 6%, and 4% respectively) than other demographic groups. Asians had the lowest representation of self-employed respondents (14% vs. 17% - 21% in the remaining demographic groups).

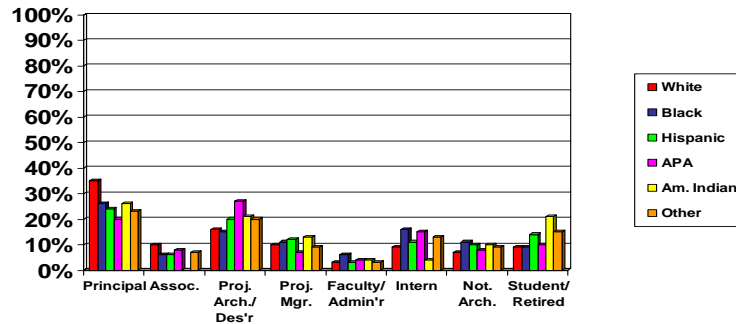
Employment Status



There were also some significant differences in employment status between the genders. Female respondents were employed part-time at a rate two and a half times the male rate (5% vs. 2%). Conversely, male respondents were self-employed at a rate more than a third higher than the

female rate (22% vs. 16%). As well, the representation of female respondents who were students was more than three times the rate of male respondents (16% vs. 5%).

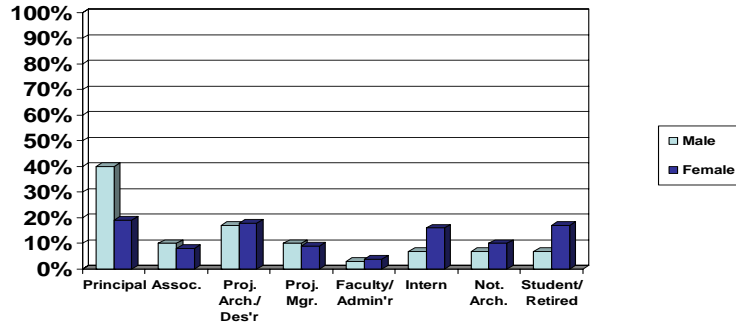
Employment Position/Title



One third (33%) of all survey respondents were Principals/Senior Partners in an architecture or other firm. Another 40% of respondents were evenly distributed among the following positions/titles: Junior Partner/Associate (10%), Project Manager (10%), Intern (10%), and Student/Retired (10%). Twelve percent (12%) of respondents identified as Project Architects, 6% as "Not a Practicing Architect," and the remaining respondents were roughly divided among Project Designer (4%), Faculty/Administrator (3%), and Technical/Administrative (2%).

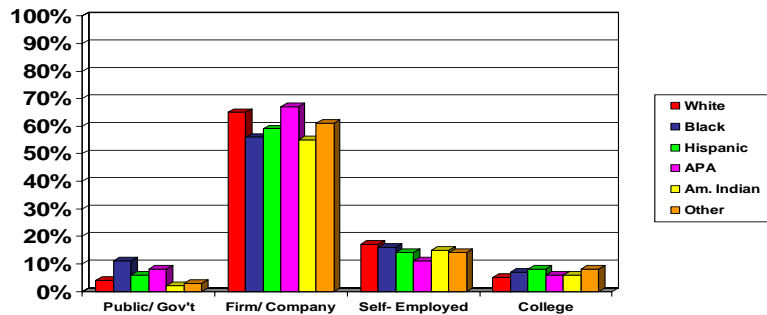
White respondents had by far the highest representation of Principals/Senior Partners (35%), which is consistent with White respondents generally being more tenured than overall respondents, and Asians had the lowest (20%). Conversely, Asians had a significantly higher representation of Project Architects/Designers (27%) than the other demographic groups, which ranged from 15% - 21%. American Indians had the lowest representation of Interns (4%) which is consistent with the prior response rate regarding IDP enrollment, and White respondents had a slightly lower representation of Interns (9%) than respondents of the remaining demographic groups, which ranged from 11% for Hispanics to 16% for Blacks. As previously noted, Hispanics, American Indians, and respondents identifying as Other had the highest representation of Students.

Employment Position/Title



There were twice as many male respondents who were Principals/Senior Partners as there were female respondents in that category (40% vs. 19%). Conversely, there were more than twice as many female respondents who were Interns than male respondents (16% vs. 7%) and more than twice as many female respondents as male who were Student/Retired (17% vs. 7%).

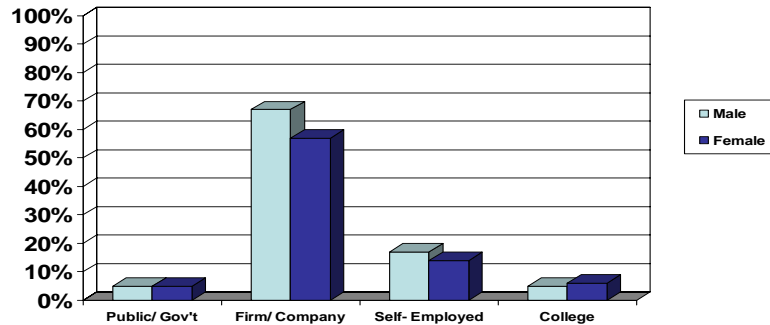
Type of Employer



Nearly two-thirds (64%) of respondents overall were employed in a private firm/company. Sixteen percent (16%) were self-employed, and the remaining employed respondents were distributed roughly between public employers (5%), colleges and universities (5%) and non-profits (1%). Eight percent (8%) of respondents were retired or students, therefore unemployed.

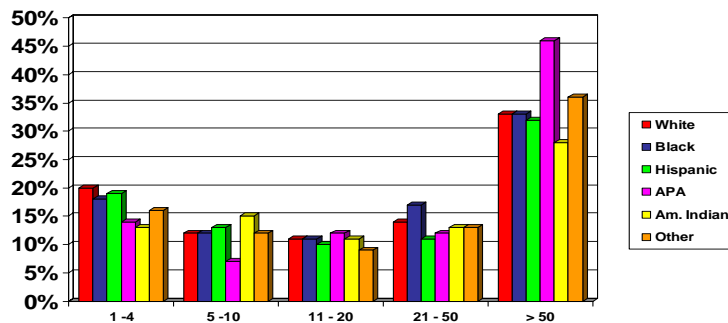
Black respondents had the highest representation of public/government employees (11%), but the second to lowest (56% just behind American Indians at 55%) representation of private firm/company employees. Asian respondents had the highest representation (67%) of private firm/company employees, but the lowest representation of respondents who were self-employed (11%).

Type of Employer



There were not significant differences in the type of employer across gender. However, there were slight differences in the rates of representation of male and female respondents employed by private firms/companies (67% vs. 57% respectively) and self-employed (17% vs. 14% respectively) – males were employed at a slightly higher rate than females in both instances.

Size of Employer

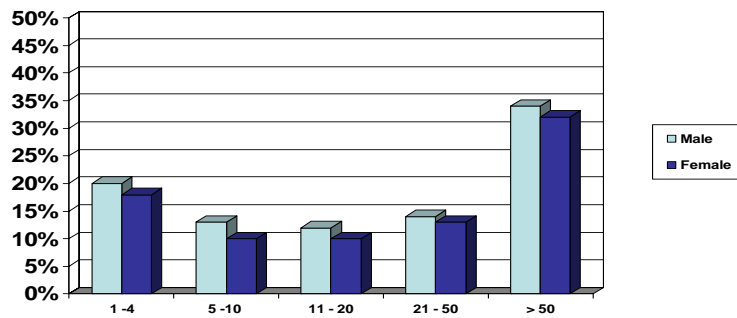


Slightly more than a third (34%) of respondents overall were employed by large employers (51+ employees). Another 19% of respondents were employed by small employers (1-4 employees). The remaining respondents were roughly distributed among employers of varying sizes with 14% being employed by employers with 21-50 employees, 12% being employed by employers with 5-10 employees, and 11% being employed by employers with 11-20 employees. Ten percent (10%) of respondents identified as student or retired.¹⁷

¹⁷ This response is inconsistent with the previous question response where only 8% of respondents identified as student/retired. This is among the inconsistencies in the data previously identified in the "Data Limitations" section.

Asians had a significantly lower percentage of respondents employed by smaller (5-10 employees) employers (7%) than the respondents of other demographic groups, which ranged in representation from 12% - 15%. However, Asians had a significantly higher percentage of respondents employed by large (50+ employees) employers (46%) than the respondents of other demographic groups, which ranged in representation from 28% - 36%. Blacks had a slightly higher percentage of respondents employed by medium-size (21-50 employees) employers (17%) than the respondents of other demographic groups, which ranged in representation from 11% - 14%.

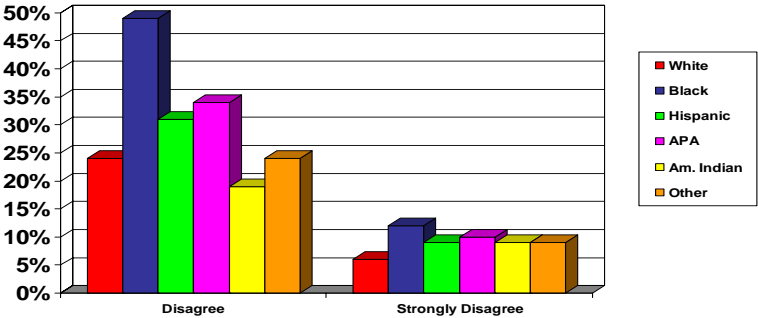
Size of Employer



There were only slight differences in the distribution of male and female respondents among the employers of various sizes. For each employer size, male respondents had only a slightly higher representation rate than female respondents. However, as demonstrated by prior response data, females had a representation rate more than twice the male rate among Student/Retired respondents for this question (17% vs. 7%), largely comprised of students.

5. Equal Opportunities in the Profession (Q. 30-36)

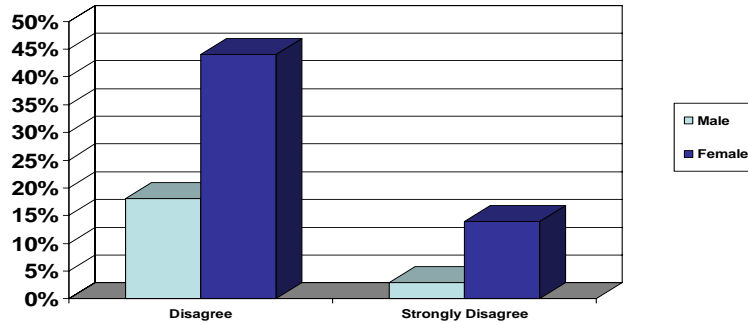
Equal Opportunities for Women



Overall, 7% of respondents strongly disagreed and 26% disagreed (a total negative response rate of 33%) that women have equal opportunities to succeed or advance in the architecture profession as their male counterparts. However, there were notable differences in the response rates between the various racial/ethnic groups and stark differences in the response rates across gender.

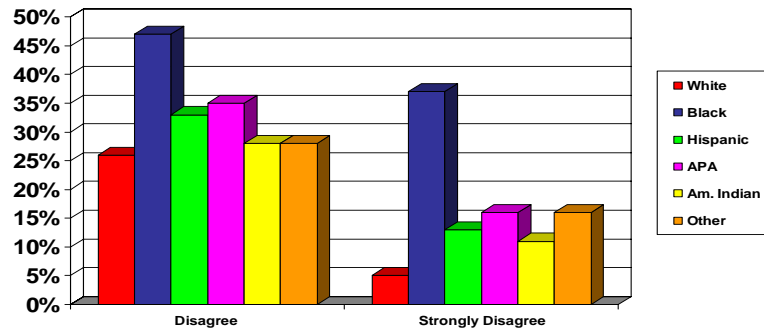
Blacks disagreed that women have equal opportunities in the profession at a significantly higher rate than any other demographic group (49% as compared to a low of 19% for American Indians and a high of 34% for Asians). This is not surprising given the fact that Blacks, as a group, generally have the most negative view of workplace equality of any racial/ethnic group in every industry and profession the Group has surveyed or reviewed. Black respondents also strongly disagreed with this statement at a rate *slightly* higher than other demographic groups (12% vs. 9% - 10% for the remaining demographic groups). White and American Indian respondents had the lowest "disagree" response rates at 24% and 19% respectively, and White respondents had by far the lowest "strongly disagree" response rate at 6%.

Equal Opportunities for Women



The differences between the genders were even more striking. Female respondents disagreed that women have equal opportunities in the profession at a rate more than twice the male response rate (44% vs. 18%). Female respondents strongly disagreed that women have equal opportunities in the profession at a rate more than four times the male response rate (14% vs. 3%). These gender differences were most acute among White (14% vs. 3%) and American Indian (17% vs. 3%) respondents.

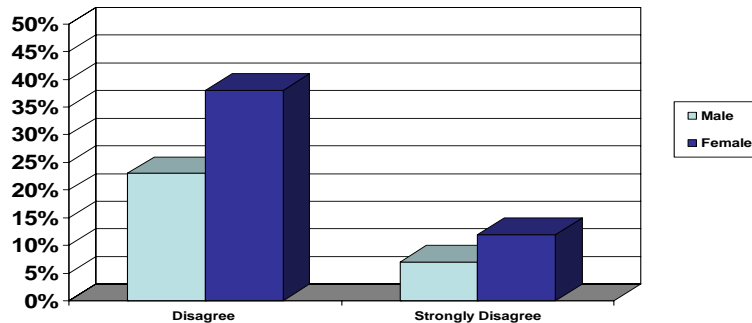
Equal Opportunities for Racial/Ethnic Minorities



Overall, 28% of respondents disagreed and 8% of respondents strongly disagreed (for a total negative response rate of 36%) that racial and ethnic minorities have equal opportunities to succeed or advance in the architecture profession as their White counterparts. This is only slightly higher than the response on gender equality, although it is inconsistent with the anecdotal/qualitative data suggesting that gender discrimination is far more pervasive in the profession than race discrimination. Again, however, there were notable differences in the response rates between racial/ethnic groups and across gender.

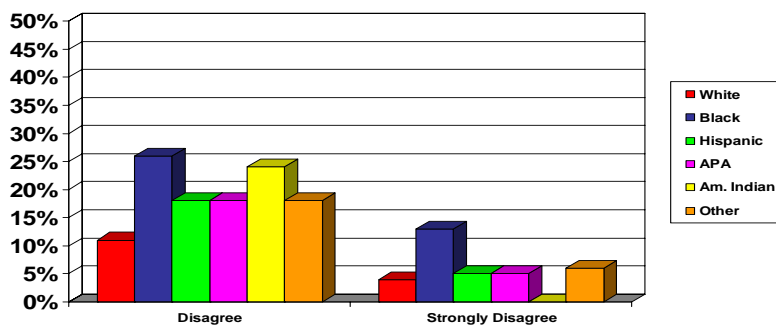
Black respondents again had, by far, the highest response rate for both disagreeing (47%) and strongly disagreeing (37%) that minorities have equal opportunities in the profession. White respondents had the lowest disagree (26%) and strongly disagree (5%) response rates on this question. There were only slight differences in the disagree and strongly disagree response rates of the other demographic groups.

Equal Opportunities for Racial/Ethnic Minorities



As with equal opportunities for women, female respondents disagreed and strongly disagreed that minorities have equal opportunities in the profession at a rate significantly higher than male respondents (38% vs. 23% and 12% vs. 7% respectively). Again, these differences are seen most starkly among the White and American Indian respondents. Only 3% of White males strongly disagreed with this statement, while 10% of White females did. Similarly, only 4% of American Indians males strongly disagreed with this statement, while 22% of American Indian females did.

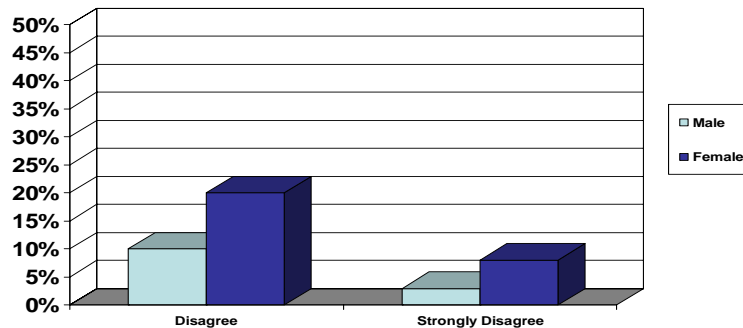
Equal Opportunities While in School



Overall more than three quarters (82%) of respondents felt that they received equal treatment while in school. However, there were differences in response rates based on race/ethnicity and gender.

Black respondents strongly disagreed with this statement at a rate significantly higher than respondents of other demographic groups (13%). While minority respondents, other than Blacks, did not *strongly* disagree that they received equal treatment while in school at a rate significantly different than White respondents, all minority respondents disagreed with this statement at a rate significantly higher than White respondents (18% - 26% for minority respondents vs. 11% for White respondents).

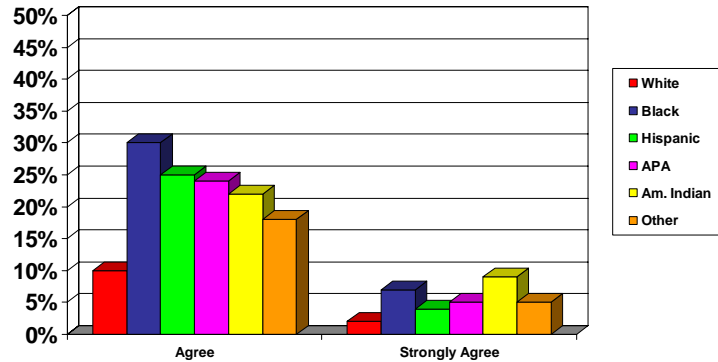
Equal Opportunities While in School



Gender differences in response rates were also significant. Female respondents disagreed that they received equal treatment while in school at a rate twice the male rate (20% vs. 10%), while female respondents strongly disagreed with this statement nearly three times more often than male respondents (8% vs. 3%). According to one female respondent, *"I attended college when the East Coast Ivys still had 'quotas,' which meant that my Texas school had a disproportionate number of women for the time – about 30%. However, I think there remains a vast struggle to integrate women and minorities into general practice."*

This time, the gender differences were seen among the White, Hispanic and Asian respondents. White females disagreed twice as often as White males (20% vs. 10%) and strongly disagreed nearly three times more often than White males (8% vs. 3%). Hispanic females disagreed at a rate of 25% while Hispanic males only disagreed at a rate of 15%, and Hispanic females strongly disagreed at twice the rate of Hispanic Males (8% vs. 4%). Finally, while Asian males and females disagreed with this statement at the same rates (18%), Asian females strongly disagreed twice as often as Asian male respondents (6% vs. 3%).

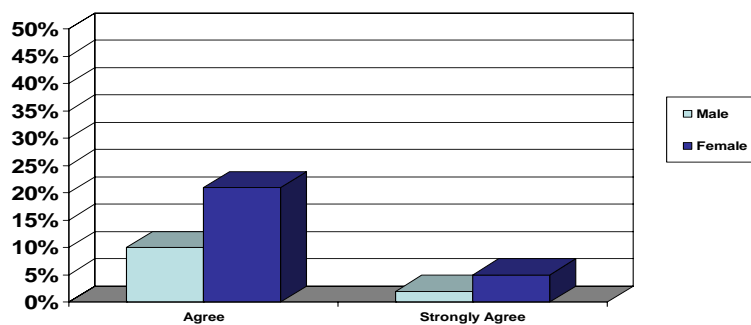
Design Juries Disadvantage Women & Minorities



Overall, 84% of respondents did not agree that the design jury process disadvantages women or minorities. Yet, there continue to be notable differences in the response rates by race/ethnicity and gender on the issue of equality of opportunity.

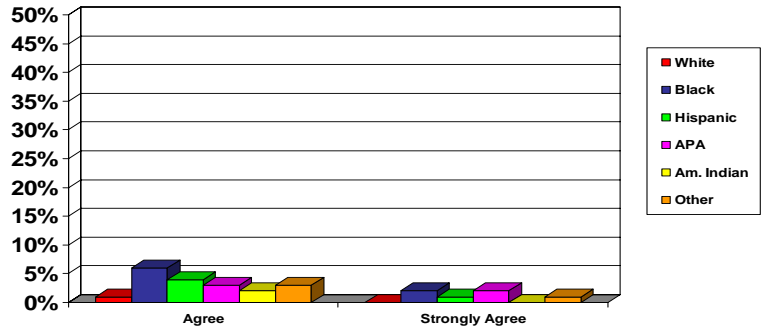
Minorities of every race/ethnicity agreed that design juries disadvantage women and minorities at a rate significantly higher than White respondents (10% vs. 18% - 30% for minorities). Additionally, Black and American Indian respondents strongly agreed with this statement at a rate higher (7% and 9% respectively) than the remaining demographic groups (2% – 5%).

Design Juries Disadvantage Women & Minorities



Females again differed from males in their response to the question of equal opportunity. Female respondents both agreed and strongly agreed that design juries disadvantage women and minorities at a rate more than twice the male rate (21% vs. 10% "agree" and 5% vs. 2% "strongly agree").

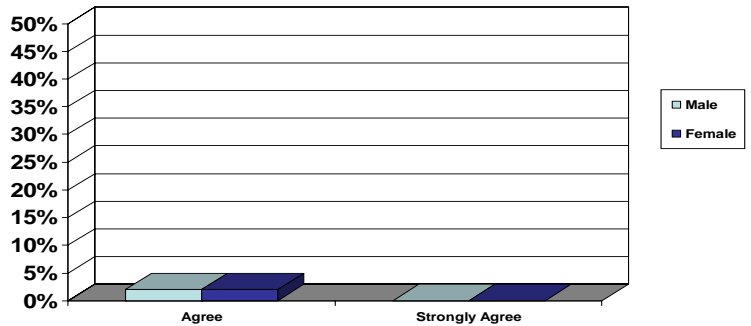
ARE Biased Against Women & Minorities



Only 2% of respondents perceived the ARE to be biased against women and/or minorities. This time there were only slight differences in the response rates between racial/ethnic groups, and there were no differences in the response rates between males and females generally.

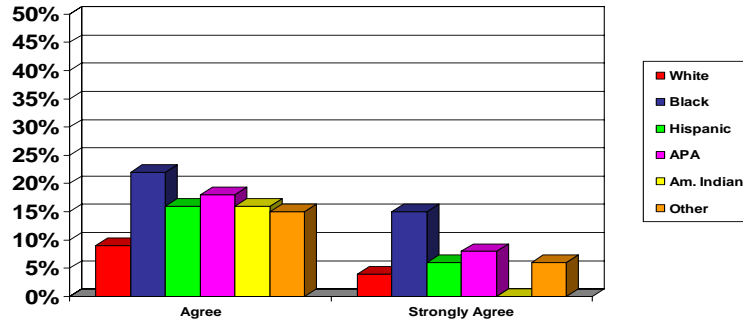
Minority respondents of every race/ethnicity agreed that the ARE is biased against women and/or minorities at a rate higher than White respondents (1%), with Blacks having the highest response rate (6%) and American Indians having the lowest response rate (2%) among minority respondents. There were no significant differences in the rates at which respondents of any race/ethnicity strongly agreed the ARE is biased.

ARE Biased Against Women & Minorities



There were no differences in the rates at which female and male respondents generally agreed or strongly agreed the ARE is biased. However, Black, Asian, and American Indian males agreed that the ARE is biased at a rate significantly higher than their female counterparts (7%, 4%, and 4% respectively vs. 3%, 2%, and 0%, respectively).

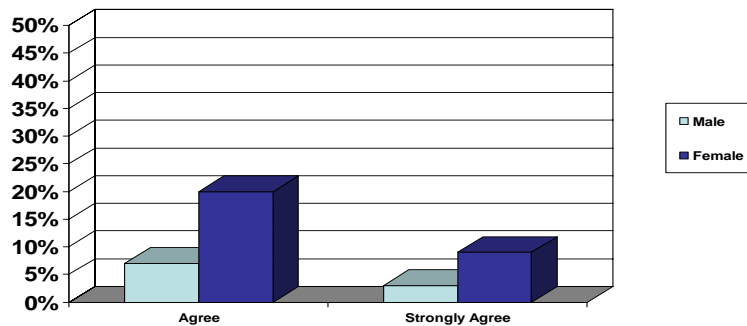
**I Have Experienced Discrimination/Harassment
in the last 10 yrs (as a Student)**



Overall, only 16% of respondents have experienced discrimination and/or harassment as a student in the last 10 years. As with each of the preceding questions on equal opportunity, there were notable differences in the response rates to this question between the various racial/ethnic groups and even more significant differences across gender.

Minority respondents of every race/ethnicity agreed that they had experienced discrimination as a student in the last 10 years at a rate significantly higher than White respondents (15% - 22% for minority respondents vs. 9% for White respondents). Black respondents both agreed (22%) and strongly agreed (15%) with this statement at a higher rate than any other racial/ethnic group. No American Indian respondents strongly agreed with this statement, but the remaining minority respondents strongly agreed at a higher rate than White respondents.

**I Have Experienced Discrimination/Harassment
in the last 10 yrs (as a Student)**

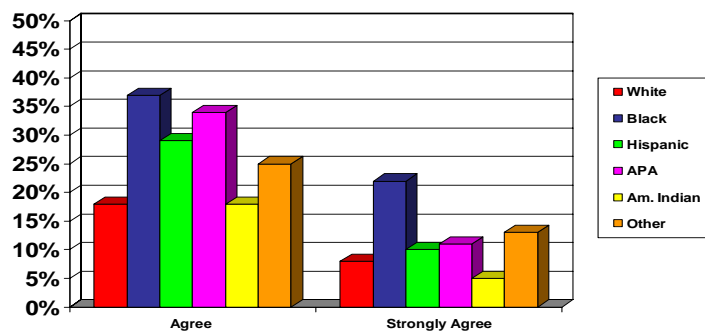


Female respondents both agreed and strongly agreed that they had experienced discrimination and/or harassment as a student in the last 10 years at a rate three times the male rate (20% vs. 7% "agree" and 9% vs. 3% "strongly agree"). According to one female respondent, "*in 1982, my*

first day of college, I took a drafting class. There were 3 women in the class. The professor announced that he did not agree that women should be in architecture or college, but he was told that there was nothing he could do about that situation. His attitude never improved – he was tenured and he was FAIA. I chalked it up to his age and ignorance and continued on with my studies and eventually my profession. I think things have progressed in 20 years, but not much. I face discrimination every day from a variety of people, co-workers, clients, superiors, construction crews. It is not fair, but it is a fact in this industry."

Among White and Asian respondents females agreed (19% and 23% respectively) and strongly agreed (9% and 10% respectively) at a rate significantly higher than the rate at which White and Asian male respondents agreed (5% and 15% respectively) and strongly agreed (2% and 6% respectively). Black female respondents also strongly agreed at a rate (21%) significantly higher than the Black male rate (11%).

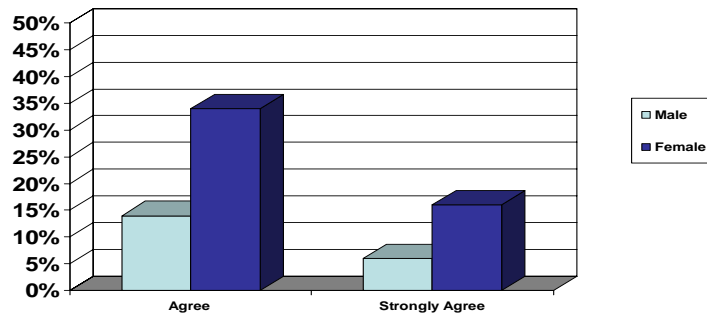
I Have Experienced Discrimination/Harassment in the last 10 yrs (as an Architect)



Nearly a third (29%) of respondents indicated that they had experienced discrimination and/or harassment as an architect in the last 10 years. The race and gender differences in response rates remain significant on this question of equal opportunity.

All minority respondents, except for American Indians, agreed that they had experienced discrimination and/or harassment as an architect in the last 10 years at a rate significantly higher than White respondents. Black respondents had the highest agree response rate (37%), with Asians just slightly lower (34%) and Hispanics (29%) and respondents identifying as Other (25%) even lower. Black respondents strongly agreed that they had experienced discrimination and/or harassment at a rate significantly higher than respondents of any other race/ethnicity. Again, White and American Indian respondents had the lowest strongly agree response rates, while Hispanics, Asians, and respondents identifying as Other had strongly agree rates slightly higher than Whites or American Indians, but substantially lower than Blacks.

I Have Experienced Discrimination/Harassment in the last 10 yrs (as an Architect)



Female respondents generally agreed and strongly agreed that they had experienced discrimination and/or harassment as an architect in the last 10 years at a rate at least twice the rate of male respondents (34% vs. 14% "agree" and 16% vs. 6% "strongly agree"). However, although White females both agreed (35% vs. 10%) and strongly agreed (16% vs. 5%) at rates more than three times greater than White males, Black males and American Indian males agreed that they experienced discrimination and/or harassment at rates higher than their female counterparts (41% and 19% vs. 29% and 17% respectively). Moreover, the American Indian males response rate for strongly agree was 8%; whereas the American Indian female strongly agree response rate was 0%.

C. Qualitative Data Analysis: Focus Groups/Interviews

We conducted a total of 23 focus groups and 55 one-on-one interviews with a broad and diverse cross-section of students, interns, practicing architects, and non-traditional architecture professionals, including a gay, lesbian, bi-sexual and transgender focus group in Las Vegas and multiple interviews with disabled architects and students. The focus group and interview participants were each asked a standard series of questions designed to elicit qualitative discussion on the issues of demographic representation and distribution within the architecture profession, and the reasons underlying that representation and distribution.

The responses to the questions from both focus group and interview participants form the basis for the qualitative analysis below. We have grouped the discussion points into seven (7) broad categories as follows: (1) Under-representation of Women and Minorities within the Profession; (2) Importance of Diversity to the Architecture Profession; (3) Insufficient Role Models in the Profession for Women and Minorities; (4) Barriers to Diversity in the Architecture Educational Experience; (5) Inequality of Opportunity in Professional Practice; (6) Attrition of Women and Minorities; and (7) Barriers to Licensure/Registration & Declining Interest in the Pursuit of Traditional Architecture Careers.

1. Underrepresentation of Women and Minorities within the Profession

Many focus group and interview participants of every race, ethnicity and gender described the architecture profession as a white and male dominated profession. As described by one minority interviewee, the architecture profession is a "*bastion of White males.*" Many female respondents referred to architecture as a "*white male dominated profession.*" Although almost all participants acknowledged that there has been visible improvement in the representation of women in the profession in recent years, especially in schools of architecture, most participants, particularly minority participants, noted that similar visible progress has not been made by racial and ethnic minorities in the profession. Even those participants who acknowledged the progress attained by women and minorities within the profession noted that progress has been slow.

Numerous participants noted that the perception of architecture as non-diverse and unwelcoming to diversity, both within the profession and outside of the profession, is attributable at least in part to the visible lack of diversity among the AIA membership, and especially the AIA leadership. These participants described the AIA as the "*face of the profession*" and noted that the lack of diversity in this public representation of the profession severely dampens the perception of architecture as welcoming to diversity. Many female and minority participants also cited the visible lack of diversity within the AIA and its leadership as indicative of the AIA's inability to be reflective of their interests or responsive to their needs as women and minority architects. According to one participant, "*the profession is perceived as an 'old white boys network,' that has to change. Look at the candidates for the AIA Board...no minorities or women! It does not take a genius to understand that we have to change from the inside out.*" Another participant comment, "*I noticed that all the candidates for AIA offices are male.*"

2. Importance of Diversity to the Architecture Profession

The most commonly cited reason for the importance of diversity in architecture is the belief that architecture reflects and, as one interviewee said "*immortalizes,*" the social and cultural values of a people in their physical structures, and that reflection should incorporate the full and diverse spectrum of values that exist in modern society. Many interview and focus group participants voiced the concern that a profession of White males is inadequate to create a "built environment" that is reflective of our diverse culture. Moreover, participants expressed the belief that people from all cultures and "walks of life" should have a voice in influencing their own "built environment."

Another commonly cited reason for the importance of diversity in architecture is the need to be relevant for and responsive to the needs of end-users, who are often diverse. This was even further articulated by some minority architects, American Indians in particular, who noted their unique ability to be sensitive and responsive to the needs of their minority (American Indian) clients. One American Indian architect interviewed relayed an experience with a tribal client where a previous majority architecture firm had designed a community center for the tribe that included a teepee reference when the relevant cultural reference for the client was a wigwam. Enhanced diversity within the architecture profession was identified as a necessary precondition to addressing these kinds of cultural nuances and insensitivities to clients/end users.

As with any profession or occupation that relies on innovation and creativity for sustainability, diversity was also viewed by participants as a necessary element for enhancing the creative and innovative processes inherent in architecture.

Interestingly, numerous participants noted that although diversity is important to the creative design process and, more important, to the social and historical contribution architecture represents in the built environment, diversity is not necessarily valued by architecture clients. To the contrary, many focus group participants noted that architecture clients are often detractors not supporters, of diversity, which impedes greater diversity progress in the profession.

3. Insufficient Role Models in the Profession for Women and Minorities

Based on the survey data (analyzed above), the path to architecture practice was surprisingly similar for all respondents, regardless of race, ethnicity, or gender. Notwithstanding these similar experiences, minority focus group participants consistently cited the acute lack of awareness by minorities of architecture generally, or as a profession, as the primary factor contributing to the underrepresentation of minorities within the profession. This lack of awareness is, oftentimes, further exacerbated by architecture's lack of cache as a profession, versus law or medicine, especially among minority communities. As one participant noted, *"I think that the shortage of minorities in architecture has more to do with cultural differences than educational opportunities. Euro-centric culture assigns a value to architects not found in the U.S., and Caucasian families are more likely to identify with this culture than minority families."*

However, numerous participants, both females and minorities, also decried the lack of female and minority role models within the architecture profession. This absence of diverse images and role models, participants believed, discouraged the pursuit of architecture among minority and female school-age children. In that regard, however, architecture is not significantly different from engineering. A poll commissioned by the American Association of Engineering Societies dubbed engineering the "stealth profession" because so few people indicated they knew what engineering was. When asked to identify what engineers do, a response was "drive trains." The choices made by young women and underrepresented minorities, as well as by their parents, teachers, counselors, and role models are affected by this incorrect image of engineering and engineers. The same is true of architecture.

4. Barriers to Diversity in the Architecture Educational Experience

One of the most troubling observations made by a significant number of female focus group and interview participants is the overt discrimination by faculty that many female architecture students experienced, including but not limited to outright discouragement from faculty towards women pursuing architecture education and/or careers. Although a great many of these experiences occurred ten or more years ago, there remains a significant number of females within the profession (both present students and practitioners) who have and continue to experience such overtly discriminatory behavior even today.

For example, one female architect recalled that in graduate school she was told "*outright*" by a professor that "*women do not have 3D ability.*" Another female architect said that female students were "*encouraged to do interior design.*" Many female and minority participants further noted the subtle discouragement from pursuing a career in architecture that they experienced simply by virtue of the fact that the architecture faculty at many schools remain heavily populated by White males.

Some minority focus group and interview participants complained of discriminatory experiences in architecture school, but more often minorities complained that the architecture curriculum lacks adequate diversity. Minorities pointed to the conspicuous absence of any instruction on the architecture of diverse cultures or places, beyond Europe, and of the lack of exposure to the work of diverse architects, both nationally and internationally, as a part of the design curriculum. This subtle indicator signified for many minority participants a great sense of exclusion of diverse persons and perspectives from architectural practice.

One of the barriers of architecture education cited by participants of every race/ethnicity and gender is the costs associated with pursuing an architecture education (*e.g.* 5 year extended degree program, material and supply costs, difficulty of maintaining employment while in school due to rigorous studio demands, *etc.*). Although this obstacle is experienced by all architecture students equally, it may have a disproportionate impact on economically disadvantaged students – more likely to be students of color – who need or receive financial aid and otherwise have greater financial difficulty completing school than their White classmates. One white female stated, "*I feel that racial and gender diversity in architecture is improving, but the fact that so few minorities and women are involved in the profession may have to do with economics more than anything else. I remember struggling financially all through school and for several years after graduation. Without the help of my parents and some financial aid, I would have dropped out. I was always questioned by friends and family about why I would want to work so hard for so little money. I am still asked this question today! I can't imagine how a student from a poor family (most likely of minority race) survives without a full scholarship.*"

Finally, the issue was raised during Phase I of the assessment, through both literature review and in preliminary interviews that minority architecture students might experience higher attrition because they have greater difficulty than their majority counterparts withstanding the design jury process, *i.e.* "design crits." This theory was tested by asking this question of survey respondents (as analyzed above) and minority focus group and interview participants. Although there were notable numbers of minority and women survey respondents who agreed that design juries disadvantage women and minorities, minority focus group and interview participants only marginally agreed. This theory was entirely unsupported by female architects, who complained more of special treatment being provided to female students on the basis of their physical appearance than their gender. Among those minority participants who did agree that design juries disadvantage minorities, the discriminatory impact was seen more as a factor of the inherent subjectivity of the design jury process, *e.g.* oftentimes homogenous majority jury panels lack understanding of and appreciation for designs that reflect unique ethnic or cultural values or preferences, than a factor of discriminatory motive or intent. For instance, one Black male

architect recalled being asked by a faculty member during a design critique why Black students *"use so much color in their designs?"*

5. Inequality of Opportunity in Professional Practice

As with the educational experience, gender discrimination was cited by the majority of focus group and interview participants as far more prevalent in the architecture profession than race discrimination. In many instances, experiences of overt gender discrimination and harassment in architecture practice occurred on job sites where women were required to interact with persons in the construction and engineering fields.

There was some debate raised during preliminary interviews in Phase I about whether the lack of diversity in the architecture profession is attributable, whether in part or entirely, to its close interrelationship with the construction industry. Specifically, some assigned blame to the construction industry for unwelcome attitudes and behavior towards women and minorities, to which architects were exposed "on sites" and which they proposed had a negative effect on architecture as a profession. Others suggested that it was the architecture profession, and architects themselves, who were not welcoming to improved diversity within the profession and that construction was the more diverse and welcoming profession of the two. According to one participant, *"this is a male dominated profession and my clients appreciate having women and minorities involved in their projects – it reflects their organization and culture, but it is construction and the architecture professionals (old boy school) that are very stubborn and discriminate against others being in this profession. If this does not change, this profession will continue to suffer and die."* This debate was not resolved in Phase II, but continued to be fueled by these opposing views, which were supported by nearly equal numbers of participants.

Many participants, oftentimes White males, acknowledged that the discriminatory demands of architecture clients fueled the lack of diversity, and opportunity for diverse persons, within the architecture profession. According to one participant, *"I don't think the big problem is members in our profession but our clients. Our clients tend to be rich white males who tend to be pretty old school when it comes to their opinion on women and racial minorities."* Interestingly, this preference for White male architects among clients was even noted by minority architects to exist among minority clients. For example, one Black architect complained that although black churches and other organizations operated or controlled by Blacks are increasingly retaining the services of architects to design expansive "mega churches" and other significant building projects, they have not given these commissions to black architects. A Chinese American architect recalled a similar experience while working with a Chinese national client. The architect said that although he was assigned as the lead project architect to the client by his firm, upon meeting with the client for the first time, the client insisted that this Chinese American could not be the "architect" on the project, by repeatedly requesting to meet with the "architect" despite the Chinese American architect's presence at the meeting. However, it was not exclusively minorities who felt discriminated against within the profession. One White male architect stated, *"white males can be discriminated against too. I was by an Asian designer who only gave design work to other Asian employees because they are perceived to be better."*

Another significant issue of gender equality within the architecture profession that was raised is the predominance of women in interior design, as well as their general relegation to other “soft” skill specialties/tasks within the practice. Countless focus group and interview participants identified the only women in their respective practices as in the "interiors" department. Even more women described their own experience of being given the color assignments or other "soft skill" tasks in the design departments of architecture firms. This experience was by no means universal, but it was prevalent. Blacks had similar experiences. According to one Black participant, *"there are still individuals within the profession that believe in the myth that Whites are more intelligent than other races. They, therefore, assign 'glamorous' design opportunities/tasks to their kind, and insist that the others, especially blacks, have to work within the technical departments of architectural teams in order to keep their jobs."*

Both women and, more often, minorities cited their inability to ascend to partnership in majority-owned firms as a perceived inequality in the architecture profession. This inequality, as in professional firms of any type, is due largely to the difficulty women and minorities face overcoming the social impediments to full integration in a firm/practice culture that is dominated by White males. Many women and minorities noted that their only options were to either start a solo/small practice of their own or leave the profession altogether. This latter option may contribute to higher attrition rates for women and minorities who, after reaching a "glass ceiling," ultimately drop out of the profession. For example, one participant stated, *"our company has 57% women and minority employees. Our management level has 70% women and minority participation. Our principal level has 25% women and minority participation."*

Finally, both the disabled, and gay, lesbian, bi-sexual and transgender architects and students complained about discrimination and perceived inequalities in the architecture profession. A few homosexual architects noted that architectural firms are fairly conservative environments and that they had to hide their sexual orientation on the job due to hostility towards homosexuals. This hostility towards homosexuals and homosexuality was reflected in numerous written comments from the survey. Many participants objected to the question regarding sexual orientation and expressed their strong disapproval towards any equal protection of homosexuals.

Disabled students, in particular individuals in wheelchairs, complained that the schools do not make adequate accommodations for their disability, especially in the design studios. Disabled student and architect participants further commented that architecture is a very physically and mentally demanding profession that is very difficult for anyone to succeed in, but particularly for those with disabilities. In this way, these disabled participants suggested that the profession may not be accommodating of those persons with disabilities who either are or seek to become members of the profession.

6. Attrition of Women and Minorities

Although there was much anecdotal suspicion raised in Phase I that women and minority students have greater attrition rates from schools of architecture than do White males, we were unable to verify this suspicion with any consensus of opinion from focus group and interview participants. Overall, the vast majority of participants did observe significant attrition within

their respective schools of architecture. However, most participants were not able to say with any degree of certainty whether the relative numbers of women and minorities who dropped out of architecture school were any greater than their White or male colleagues.

Notwithstanding the inability to ascertain a disproportionate attrition rate for women in schools of architecture, there were a significant number of participants, particularly females, who noted that women “drop out” of the profession at a significant rate due to the inability to balance demanding careers in architecture firms with family/childcare responsibilities. They noted that this balancing act is further complicated by the fact that compensation for architects does not afford women the financial ability to pay for adequate childcare.

Last, but by no means least, inadequate compensation was raised as an issue by a majority of participants as a reason contributing to the decision of many to pursue alternative or non-traditional architecture careers. Although this concern was universal, it was perceived by many minorities and women to have a disproportionate influence on their decision to pursue alternative, most-often higher paying, careers. With 2003 statistics from the Bureau of Labor Statistics reflecting an average hourly wage for architects of \$31.16, (or roughly \$65,000 a year) this concern is not surprising given the time and expense associated with pursuing an architecture education. This choice is made even easier by the expanding career opportunities for architects in other areas of practices, *e.g.* real estate development, construction management, and facilities management.

To complicate the issue further, architects recalled and architecture students relayed harrowing experiences of unbearably long studio hours and impossibly high academic demands in architecture school. Many stated that such demands discouraged many of their colleagues from pursuing an architecture degree. One interview participant recalled that of the many architecture school classmates who dropped out, several pursued educations/careers in fields otherwise known to be rigorous and challenging, such as engineering and medicine, but these classmates described their subsequent studies as “easy” compared to architecture. When one compares this perception of architecture school with the monetary rewards of practice, it is not surprising that many students choose to abandon architecture for what may or may not be less demanding studies, but can be more lucrative careers. According to one minority participant, *“I also think that minorities who have the education and resources to pursue an architecture education also have the opportunity to pursue an education in areas that lead to far more lucrative careers. Bottom line, if you are coming from a household where our parents really had to scrape and save to send you to college, you will probably select an education like law, medicine or business as these all promise better income than architecture.”*

7. Barriers to Licensure/Registration & Declining Interest in the Pursuit of Traditional Architecture Careers

There were numerous issues raised by focus group and interview participants as barriers to the pursuit of architecture practice generally that were not necessarily diversity-specific, but that were so prevalent they were worth noting both as a practical matter and for further consideration to determine if any of these issues have a diversity impact.

Two of the more critical issues raised impacting present and future students' decision to pursue architecture as a career are: (1) that traditional architecture is viewed as increasingly obsolete with the advent of design/build firms, coupled with a declining commercial value associated with architecture; and (2) recent technological advancements (*e.g.*, CAD and other automated design programs) have eroded some traditional areas of architectural practice, *e.g.* drafting. These limitations of modern architectural practice are perceived most acutely by younger architects.

Another impediment for many younger architects in pursuing traditional architectural practice is an alleged lack of information and/or clarity about the licensure process. Even when the maze of licensure requirements can be competently sorted out, young architects are increasingly unwilling to endure the cumbersome administrative requirements/processes associated with licensure because they are seen as unnecessary given the increasing number and variety of “alternative” or non-traditional architecture career choices available to architecture graduates that do not require licensure.

D. Recommendations for Enhancing the Diversity of the Profession

In addition to soliciting participants' opinions on issues of diversity within the architecture profession, we also solicited their thoughts, ideas, and suggestions on how to improve and sustain diversity within the profession. Following, we have provided a representative sample of the types of recommendations that were offered by the interview and focus group participants¹⁸ to enhance diversity within the profession. It should be noted that, while these recommendations may seem rudimentary and many may not be novel, it is not unusual that diversity recommendations are consistent with recommendations for general operational or functional improvement or efficiency in a given organization or industry. These recommendations are not comprehensive, but they are representative of the feedback received from participants. They were chosen for their consistency with diversity best practices, based on the Group's professional experience in other industries, and seeming viability for implementation. The value, therefore, is not the novelty of this information generally, but understanding the significance of these actions for improving diversity within the profession.

The recommendations are compiled into three (3) broad categories: (1) Expanding the Path to Practice; (2) Improving Licensure Rates and Reducing Attrition; and (3) Ensuring Equal

¹⁸ Due to the limitations previously noted, the survey comments were not largely reviewed. Therefore, it is not known whether those comments contain any additional recommendations for enhancing diversity within the profession.

Opportunities in the Profession. These categories are intended to parallel the quantitative and qualitative data, but the recommendations themselves were not solicited from participants in direct response to these individual data points. Rather, the recommendations were gathered in response to general questioning regarding improving diversity within the profession.

1. Expanding the Path to Practice

- Increase public awareness of architecture as a profession, particularly heavy exposure with middle and high school students
- Establish architecture recruiting programs in minority communities and/or targeted to minority populations
- Ensure adequate resources are available to those students who desire to pursue an education/career in architecture through scholarships, loan programs, fellowships, and internships
- Enhance diversity of faculty at schools of architecture
- Increase the number and public visibility of images of, and work by, diverse architects
- Improve the objectivity of design juries
- Assist schools of architecture in establishing internship programs for "promising minority students"
- Expand diversity among the leaders and role models in the profession, particularly the AIA leadership

2. Improving Licensure Rates and Reducing Attrition

- Establish mentor programs
- Revise architecture curriculums to be more inclusive of the study of diverse architects and historical architecture of diverse cultures
- Track interns more closely and provide the necessary resources and support for them to achieve licensure
- Clarify and streamline the practical and administrative process of IDP, exam (ARE), and licensure/registration

3. Ensuring Equal Opportunities in the Profession

- Require diversity training as a component of continuing education and/or sponsorship of diversity training programs for both firms and individuals by the AIA
- Establish diversity awareness campaigns within the profession to enhance knowledge of and appreciation for the benefits/value of diversity within the profession
- Showcase the work of diverse architects
- Create blind submission and consideration criteria for design projects that are considered for public acknowledgement or award

V. PHASE III – PROPOSED DATA COLLECTION SYSTEMS & PROCESSES FOR PROSPECTIVELY TRACKING THE DIVERSITY OF THE PROFESSION

A. Diversity Data Collection Practices in Other Professions

Like the AIA, various associations and educational institutions collect and maintain demographic data on the diversity of their respective professions. For benchmarking purposes, we researched the legal, medical and engineering professions and analyzed the various points at which demographic data is collected, how the data is collected, and how it is used within these professions. These three disciplines were chosen because, like architecture, they involve years of specialized professional training culminating in licensing exams prior to practice. As will be demonstrated below, the AIA fares very well when compared to other professional membership organizations in terms of the demographic data available and its penetration into the profession.

B. Legal Profession

1. Entrance Examination

The Law School Admissions Council ("LSAC") administers the Law School Admissions Test ("LSAT"), a standardized examination required for admission to all American Bar Association ("ABA")-approved law schools, most Canadian law schools, and many non-ABA-approved law schools. Students who take the LSAT are asked their race and gender on the exam application. Although reporting is entirely voluntary, the LSAC estimates that "well over 80%" self-report the data. Race/ethnicity is reported in a single category, consistent with the former Census classifications. The LSAC tracks trends in law student applications, enrollment, attendance, and graduation by race and gender, and has been doing so for over 20 years. The LSAC shares the data it collects with law schools. The LSAC does not control for the effect that multiple exam-takers have on trends over time.

2. Educational Institutions

Most law schools include a question about race/ethnicity on their applications, but response is voluntary. To the extent that law students provide this information, law schools track it, publish it in aggregate, and share it with the LSAC.

3. Licensing Entities

To practice law in any state, an attorney must be admitted to the bar of the highest court of that state. In addition to admission to the practice bar, some states require mandatory membership in the state professional bar association. Disclosure of race/ethnicity and gender is not required by any state bar or association, and many states do not include any questions about race/ethnicity on membership applications or bar examination forms. To the extent that this information is collected, it is maintained in the attorney's private file; no aggregate data is tracked. Some bar associations ask about an applicant's gender and may publicly provide general statistics about the gender ratio of its membership; most do not.

4. Professional Associations

Although there are some minority legal associations, most of the demographic data tracking of the legal profession is conducted by the ABA. The ABA membership is approximately 345,000 and represents an estimated 33% of licensed lawyers in the United States. Through its Commission on Race and Ethnic Diversity, the ABA regularly tracks and compiles data on minorities in the legal profession. Relying on Census data, cross-tabulated with its membership data, the ABA publishes statistics on law school enrollment and graduation by age, gender and minority group. The ABA has been compiling this data for more than fifteen years and believes that its methodology has resulted in highly consistent and reportedly reliable statistics over the years.

In addition to the ABA, there are a number of smaller associations which focus on specific types of practice within the legal profession. The National Association for Law Placement ("NALP") tracks diversity data for private law firms. In 2000, NALP also conducted a judicial clerkship study which included data across race/ethnicity and gender. All data on race/ethnicity and gender collected by NALP is based on self-reporting by the employers, not the individual attorneys. Additionally, NALP collects data on law students through their annual survey of law graduates, as reported by participating law schools not by individual students.

C. Medical Profession

1. Entrance Examination

Analogous to the legal profession, those who intend to become physicians must take a mandatory exam for entrance to medical school, the Medical College Admission Test ("MCAT"), which is administered by the Association of American Medical Colleges ("AAMC"). The AAMC's membership includes the 125 accredited U.S. medical schools and the 17 accredited Canadian medical schools. Students who take the MCAT are asked their race and gender on the exam application, and reporting is entirely voluntary. Race is reported in categories that track the current Census classifications, and the application allows for reporting more than one race/ethnicity.

As the administrator of the MCAT, AAMC maintains all data collected from the exam applications. Data is also collected by AAMC through a series of annual surveys including the Matriculating Student Questionnaire and the Graduation Questionnaire. The data from the MCAT, as well as these surveys, are entered into the AAMC's Student Records System, which houses enrollment information on the national medical student population and tracks student progress from matriculation through graduation. The AAMC provides this data to medical schools and other constituents. Approval of requests to use the AAMC's data by non-members is granted on a case-by-case basis to protect privacy interests. Additionally, the AAMC cross-references its data with that of the American Medical Association (described below).

The AAMC makes much of its aggregate data available on its website and also produces an annual publication titled, *Minorities in Medical Education: Facts & Figures*. This publication is available to the public and provides detailed racial and ethnic statistical information on medical education in the U.S. Additionally, *Facts & Figures* contains data related to the pre-college part of the education pipeline leading to medical school, medical school graduates, and medical school faculty, as well as data from the 2000 U.S. Census.

2. Educational Institutions

Most, if not all, medical schools include a question about race/ethnicity on their applications, but response is voluntary. To the extent that applicants provide this information, medical schools track it, publish it in aggregate form, and share it with the AAMC for inclusion in the Student Records System database.

3. Licensing Entities

Many medical licensing boards ask for an applicant's gender, but do not inquire about race/ethnicity.

4. Professional Associations

The American Medical Association ("AMA") is the largest professional association for medical practitioners. Its membership includes students, residents, and fellows and numbers approximately 200,000. The AMA maintains the most comprehensive database, the "Physician Masterfile," on physicians who are practicing or have practiced in the United States. The AMA Physician Masterfile includes current and historical data on all physicians, including AMA members and non-members, and graduates of foreign medical schools who reside in the United States and who have met the educational and credentialing requirements necessary for recognition as physicians.

An AMA Physician Masterfile record is established when individuals enter medical schools accredited by the Liaison Committee on Medical Education ("LCME"), or in the case of international medical graduates, upon entry into ACGME-accredited programs. Each AMA Physician Masterfile record includes the physician's name, medical school and year of graduation, gender, race/ethnicity, birthplace, and birthdate. Additional data (residency training, state licensure, board certification, geographical location and address, type of practice, present employment, and practice specialty) are added from primary data sources or from surveying the physicians directly as the physicians' careers develop. The file contains demographic, educational and current practice information for more than 820,000 active U.S. physicians, including AMA and non-AMA members. Physician records are never removed from the AMA Physician Masterfile, even in the case of a physician's death.¹⁹

The AMA collects this data through primary sources and surveys such as the Census of Physicians, the Census of Medical Groups, the Annual Survey of Graduate Medical Education

¹⁹ This is necessary to prevent the unlicensed practice of medicine by persons purporting to be deceased physicians.

Programs, and the Annual Survey of Graduate Medical Education Teaching Institutions. The masterfile is updated continually by cross-referencing it with data from various licensing entities, the National Residency Matching Program, the American Board of Medical Specialties, and other educational and medical organizations.

D. Engineering

1. Entrance Examination

There is no comprehensive specialized exam for students embarking on a course of study in engineering. Until 2001, the Educational Testing Service did administer a subject test for bachelors degree graduating engineers – the Engineering GRE (Graduate Record Examination) – but it has been discontinued due to the relatively small percentage of engineering students who took the exam before matriculating into graduate school. Accordingly, no statistics are compiled or maintained for this stage of the engineering profession.

2. Educational Institutions

Within various schools of engineering, diversity statistics are often maintained, but they provide neither a comprehensive overview nor a reliable cross-section of the diversity of would-be licensed practitioners.

3. Licensing Entities

Most states require that professional engineers hold a license. In general, the term “professional engineer” includes practitioners in fields related to building and construction such as civil, electrical, mechanical, and chemical engineering, but often exclude design and systems engineers.

No state licensing entity collects data on the race/ethnicity or gender of those who apply to take the exam or are licensed.

4. Professional Associations

As in any field, membership in professional associations is voluntary, and the penetration rate by any association into the profession varies over time. The American Association of Engineering Societies ("AAES"), which is the premier engineering membership organization, through its "Engineering Workforce Commission," collects data on enrollment, degree, and salary of engineers at all degree levels through their annual survey of engineering schools. This data is current as of 2004 and is the most comprehensive data on engineering students. It has been widely cited by various professional societies, academic institutions and government entities.

The National Science Foundation’s Science Resources Studies ("SRS") division, which administers the Survey of Doctorate Recipients, a biennial survey of a representative sample of those who have received doctorates in the United States in a science or engineering field, also

maintains demographic data on engineers. The SRS works in conjunction with the Census and other government agencies and entities to collect the data for this survey.

E. Proposed Data Collection System for the Architecture Profession

There are many challenges in designing a data collection system for the architecture profession. First, the AIA, and particularly the four collateral organizations, have limited staff and resources that can be dedicated to collecting, maintaining, and publishing demographic data on the architecture profession. Second, unlike medicine and law, there is no specialized exam for individuals embarking on a course of study in architecture from which to collect initial baseline data. Third, although NCARB contains the most comprehensive data on the architecture profession, it does not collect or maintain demographic information on its registrants. Many people have suggested that NCARB collect demographic information because it is the gatekeeper of the profession. However, our research suggests that, in general, licensing bodies such as NCARB do not collect, maintain or publish demographic information, especially race/ethnicity information. Generally, such information is collected by voluntary professional associations and membership organizations, such as the AIA, ABA and AMA. Given NCARB's General Counsel's uneasiness with collecting and maintaining demographic information, and the lack of precedent in other professions for a licensing body to collect such data, we do not propose that NCARB collect demographic data on the architecture profession. Instead, we propose the following data collection system:

1. Data Collection on Student Population

Due to the absence of a specialized entrance exam to architecture schools, the first opportunity to collect demographic information on the architecture profession is through the 114 NAAB accredited architecture programs. As discussed above, the NAAB currently collects demographic information from the architecture schools, but it deems much of the information it collects unreliable. Moreover, many schools do not provide the requested data to the NAAB. The casual reporting by some institutions is not likely to change in the absence of improved reporting enforcement through quality control measures and strict consequences for non-compliance.

We recommend that the NAAB²⁰ require architecture schools, as a condition for renewing their accreditation annually, to provide to the NAAB reliable and verifiable information, similar to the information the schools currently maintain and provide to the U.S. Department of Education each year. We agree with the AIA Diversity Committee that the NAAB is better suited than the ACSA to collect this data because "the accreditation process establishes enforceable standards of accountability that are absent in the ACSA's role as an association of design schools."²¹ Currently the NAAB collects aggregate data from the schools, including full-time status, gender, race/ethnicity, number of foreign students, total degrees awarded, SAT scores, minimum ACT,

²⁰ Please note that we are aware that the NAAB does not currently have the staff or resources to administer the data collection system proposed in this Report. We presume, for purposes of this Report, that additional resources will be made available to the NAAB to collect and administer the data system.

²¹ Letter from Ted Landsmark, Diversity Committee, to NAAB Validation Team, dated June 17, 2003.

GRE score, number of applicants, number of applicants accepted, and enrollment targets. However, as noted above, not all schools provide the requested information. We recommend that the NAAB implement mandatory reporting and quality control measures whereby data reports submitted to the NAAB as part of the annual accreditation process must be approved (signified by seal or signature) by the office of the Registrar for the submitting college/university. The NAAB should then analyze the aggregate data received, prepare statistical reports, and make the information available to the AIA and the general public by posting it on the NAAB's website. In tracking both students and faculty, the NAAB should use the standard racial and ethnic categories used by the Census Bureau. Without this standardization, it will be more difficult to cross-reference the data with a larger profession-wide data collection and tracking process.

Additionally, we propose that the level of detail of the information collected and analyzed by the NAAB increase over the next 5 years. Currently, most colleges and universities maintain individual student data to track registration for courses, academic performance, degree and certificate completion, and financial aid. Most states require their public colleges to report individual student data, but such information is not gathered from private institutions. However, there is a proposal pending before Congress that would require all higher education institutions to report individual student data to the Department of Education. If the new Federal data collection system is approved by Congress, the NAAB can similarly require that the accredited architecture schools provide individual student data, including name, gender, race/ethnicity, and date of birth.

Even if the measure is not approved by Congress, as a condition of accreditation, the NAAB could request individual student data from its accredited schools. More specifically, over the next 2-5 years, the NAAB might consider starting a pilot program by requesting individual data from 25 select institutions with diverse student bodies and good information technology, with the expectation to extend the requirement to all accredited schools within the next 5-7 years.²² The data requested from the schools would include student name, gender, race/ethnicity, date of birth, address, matriculation/degree, college/university, and year of graduation, among other things. Based on the information received, a profile would be created on each student, similar to the profiles created on medical students by the AAMC. The schools would submit the data electronically through a data collection system. After submission, the NAAB would review the data to ensure they are consistent within the file and with prior submissions. The data would then move to a permanent database storage system. Due to its limited budget and mission, the NAAB would share the information it receives from the schools with the AIA, similar to the manner in which student information from medical schools is shared by the AAMC with the AMA. The NAAB, perhaps with assistance from the AIAS and the ACSA, would administer regular surveys of architecture students, including a matriculating student survey. Information received from the surveys would also be used to update student profiles. After graduation, the AIA would continually update the student profile to include such information as enrollment in

²² The data collection system proposed is a very ambitious undertaking and it is not clear that architects need to maintain this level of detailed data. It also raises concerns about student privacy and confidentiality, and a student's right to withhold or control personal information. However, a thorough analysis of the privacy and confidentiality concerns raised by collecting and maintaining individual student data is outside the scope of this Report.

IDP, IDP completion, ARE completion, state(s) of licensure and practice areas, regardless of whether the student eventually became a member of the AIA. For this system to work effectively, the AIA would not use the profiles as a membership recruiting tool.

2. Data Collection on Interns and Architects

As previously discussed, the AIA has a membership of over 72,000, which includes slightly more than 50% of all registered architects. The AIA's 50% penetration into the registered architect population is better than many other professional associations including the ABA, which has only a 33% penetration into the attorney population.

Like the AMA, the AIA currently maintains a profile on each of its members and former members. We recommend that the AIA aggressively continue to collect demographic data on its existing members, as well as on the intern population through its "Emerging Professional Companion" resource. The demographic information on the AIA's members should be collected more aggressively during annual membership renewals and through periodic surveys of the membership. The AIA should also work closely with its state and regional chapters, who have more regular contact with local members, to collect demographic data.

Because minorities and women are less likely than white males to be members of the AIA, the AIA should also partner with Professors Mann and Grant to collect information on Black architects, and with many of the minority and women architecture organizations, including those referenced in Section II of this Report, to collect information on their membership. The AIA should also more aggressively use its non-member survey to collect demographic information on non-members, and, similar to the AMA, maintain detailed profiles on non-members as well as members. The AIA should also maintain Census data and cross reference annually the Census data with data received from the NAAB and from the AIA's own membership records. Additionally, information from the AIA's files should be cross-referenced with architects and architecture firms, institutions, and government agencies nationwide. This demographic data audit has provided the AIA with the most comprehensive analysis of the demographics of the architecture profession to date. This audit, together with the existing data on the demographics of the profession outlined in Phase I of this Report, provide an adequate baseline from which the AIA can begin to measure and track the diversity of the architecture profession over time.

By utilizing these tracking and data collection systems and processes, the AIA should be able to develop a reasonably detailed and reliable picture of the demographics of the architecture profession. In the interim, the AIA can and should begin to implement and encourage (or facilitate) implementation of the recommendations contained in Phase II of this Report designed to enhance the diversity of the profession. As implementation occurs the AIA can track the effectiveness of the measures by assessing the extent to which notable progress is made in the demographic data that is being maintained by the AIA in collaboration with NAAB. However, a complete and reliable picture of the profession from this data tracking may not be seen until a full cycle of reporting on the profession (from matriculation through practice) has been completed, which in the profession may span as long as 10 years.

VI. PHASE IV – ENVIRONMENTAL SCAN

There are many factors that will influence the architecture profession over the next 20 years. The following observations, although not comprehensive, provide an overview of some of the most pressing and pervasive issues the architecture profession faces in the coming two decades. They are grouped into seven categories: technology, design build, social/political trends, licensing trends, demographic trends, economic outlook, and compensation trends.

A. Technology

In the next 20 years, new and advanced technology, including virtual reality, will have a profound impact on how we live and work. Participants opined that new and emerging technology will trigger a shift in architecture similar to the changes brought about by the Industrial Revolution in the late 18th Century. According to Sun Microsystems founder Bill Joy, emerging technologies such as robotics, nanoscience, and artificial intelligence will eventually eliminate the need for architects, as well as other professionals, as we will be able to punch our desires into a keyboard and produce our dream homes and buildings.²³ Although Joy's dire predictions may never become reality, computer technology has become the fastest growing trend in the architecture world. Virtual reality is drastically altering the architect's design process. Computers and plotters are replacing typical architecture supplies, like T-squares, triangles, pencils, and ink. New computer technology allows designers to visually construct a building and virtually walk through it before it is actually built. Computer Aided Design ("CAD") is the most popular microcomputer-drafting program and is what most architecture schools teach and most architects use.

In the next 20 years, virtual reality, along with the Internet, will expand the architect's ability to work remotely and to share ideas. It will allow the architect to confer and collaborate with other architects the world over. For example, an architect in Maryland can work on a project with an architect in China, allowing them to exchange ideas and designs. New technology will also enable architects to present designs and plans to clients who may be across the country or around the globe. This will dramatically increase global competition, in an already shrinking marketplace, thereby increasing the need for improved and diversity and culturally competent practitioners.

The Internet, along with AutoCAD technology, will continue to impact how architects are educated. The new technology will cause traditional architecture activities to take place online, including building models, and consulting other visuals. Increased use of technology will also allow architecture students to share information and interact with other architecture students across the country and the globe. Many architecture schools are introducing virtual reality and CAD earlier in the curriculum. For example, the Mississippi State School of Architecture introduces CAD into their curriculum earlier than usual. Students are required to own a personal computer that will run AutoCAD or some design program by their second year. Many other architecture programs teach AutoCAD in the third year.

²³ See, Bill Joy, "Why the Future Doesn't Need Us," Wired, April 2000.

In the next twenty years, technology enhancement also will lessen the demand for new commercial construction as non-traditional work and retail environments, such as teleconferencing, home offices, telecommuting, and electronic shopping, proliferate.²⁴ Today, online shopping accounts for just over 3% of retail sales, not including car dealers and gas stations, but over the next 20 years, online shopping is expected to dampen the need for new brick-and-mortar retail establishments, and by some estimations cause existing retail malls and establishments to disappear.²⁵

Continued advances in technology will impact all professions, not just architecture. Nonetheless, profound changes in architecture are occurring right now, and architects must adapt to new and emerging technology if they are to remain viable and profitable in the future.

B. Expanding Role of Non-Architects in Design and Construction

Over the past decade the building industry has been gradually shifting to an alternative approach to construction called design-build that relies on new information technology. In design-build, a single contractor has overall responsibility for designing, engineering and constructing a building. This new approach has enabled other professionals, such as engineers, facilities managers, and construction managers to perform some of the work that was traditionally considered the exclusive domain of architects. Today, many construction companies are teaching their engineers and construction managers how to design buildings by utilizing computer programs and other available technology. Programs, such as AutoCAD, enable general contractors to do their own design build work, which is more cost effective for the owners, and decreases the market share of architects. This trend is expected to continue in the next 20 years, as engineering and construction firms continue to encroach on the traditional domain of the architect. As a result, in the next 20 years, the number of people who perform design work who are licensed architects will likely decline.

C. Social/Political

The architecture profession is experiencing tremendous social and political pressure to change the way it perceives and shapes the built environment. Consumer preferences are helping turn "green" building into a mainstream idea. The popularity of green building has also been gaining momentum because of increased knowledge by architects. Design publications have begun to highlight green buildings more frequently. Renzo Piano and Norman Foster, in receiving the 1998 and 1999 Pritzker Architecture Prize, were recognized for their completely integrated design solutions, often called high-performance buildings or green design.²⁶

²⁴ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2004-05 Edition*, Architects, Except Landscape and Naval, on the Internet at <http://www.bls.gov/oco/ocos038.htm>

²⁵ Joseph Weber, Ann Therese Palmer, "How The Net Is Remaking The Mall," Business Week Online, May 9, 2005.

²⁶ See, Greening a Profession by Ross A. Leventhal, *Architecture Week*, Page C1.1 . 16 August 2000.

Additionally, there is an increasing call for healthy workplaces and homes. More companies are seeking naturally ventilated, daylight-flooded working environments, in which their employees will be happy and productive during their ever expanding workday. In the next 20 years, we should expect a huge acceleration in, and the proliferation of, green building practices, as well as other environmentally-conscious building designs.

Another social/political factor that will impact architecture in the future is building security. Thirty years ago, security consisted of little more than locks and security personnel. Whereas, today, in the post-September 11th world, building security means cameras, photo IDs, access cards, elevator controls, electronic key pads, voice identifiers, and much more. In the next 20 years, building security will continue to heighten and evolve with new technology, which will impact the way architects design buildings.

Additionally, in the wake of September 11th and disasters such as Hurricane Katrina, there is growing discussion among politicians and in the media about the need to design buildings that can withstand both natural disasters and terrorist attacks, including changes in zoning laws and building codes to improve structural integrity and security of buildings, particularly commercial and government structures. The next 20 years will likely bring more drastic changes in response to growing fears of terrorism and natural disasters.

D. Licensing Trends

Based on anecdotal information obtained during Phased II of the Audit and recent figures from NCARB and California, there appears to be a decline in the number of individuals seeking licensure. Many of the interns and architecture student participants noted that they had no intent to seek licensure or stated that licensure is not as important as it was previously. This is primarily because many architecture firms, and even more so design-build firms, are placing less emphasis on whether or not individuals are licensed. As discussed in Phase II of this Report, respondents also noted that the time and resources required to obtain licensure made many forego the registration process.

According to figures from the NCARB, the number of initial licenses issued nationally was 2,820 in 2002 and only 2,470 in 2003. In California, the number of newly licensed architects declined rapidly in the 1990s, and went from 1,339 in 1989, to 362 in 1999, and increased only slightly to 398 in 2004. In 1989, the figures show, 15,248 people sat for one or more portions of the Architects Registration Examination in California. In 1999, only 3,720 did. At the same time, the number of California architects died in a given year increased from 566 in 1989 to 1,689 in 2000. The decline in the number of newly licensed architects will have a dramatic impact on the profession in the next 20 years. If these current trends continue, and data suggests it may even accelerate, in 20 years, the number of people with architecture licenses will represent a fraction of those eligible for licensure.

E. Demographic Outlook

Today, architecture is still largely a white male profession. However, in the next 20 years, the changing U.S. demographics will largely impact the profession in terms of both who will become architects and who will employ architects. First, as discussed in Phase I of this Report, minorities currently comprise 27.6% of the architecture student body. By some projections, by 2030, members of today's minority groups will account for 50 percent or more of the United States population. As minority representation expands among the population from which new architects are drawn, minority representation in the architect workforce should naturally rise. The demographic changes will create not only a more diverse profession but also a more diverse client base.

Second, as discussed in Phase I of this Report, women now constitute roughly 40%-50% of all architecture students. Even without any further increase in the proportion of women entering architecture practice, the gradual retirement of older architects will result in continuing growth in the overall proportion of female architects.

Third, unprecedented numbers of people are living longer, commonly referred to as "the graying of America,"²⁷ which require rethinking of the average user. From 1960 to 1980 the total population of the U.S. increased 19%, but the population of people age 65 or over increased 35%.²⁸ According to Census 2000, there were 35 million people, or 12% of the population, who were age 65 and over, the highest number to date. The growing aged population will drive demand for the construction of adult daycare, assisted-living, and other outpatient facilities. These persons are also living more active lives longer,²⁹ which will drive demand for increased "universal" or accessible residential and commercial design that accommodates persons with the broadest range of abilities and disabilities. In short, in the next 20 years, architects and their client base will become more diverse, not only with respect to race, ethnicity, and gender, but also with respect to age and disability.

F. Economic Outlook

According to Thomas P. Cramer, "the latest research reveals that between now and the year 2030, our built environment in the United States will double."³⁰ The Bureau of Labor Statistics projects that the employment of architects will "grow about as fast as the average for all occupations through 2012, and additional job openings will stem from the need to replace architects who retire, transfer to new occupations, or leave the labor force permanently for other reasons."³¹

²⁷ Donald H. and Barry C. Kausler, "The Graying of America: An Encyclopedia of Aging, Health, Mind, and Behavior," Second Edition (July 2001).

²⁸ *Id.*

²⁹ *Id.*

³⁰ James P. Cramer, Inspiring Change Through Design Build, at http://www.aia.org/db_a_katrina

³¹ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2004-05 Edition*, Architects, Except Landscape and Naval, on the Internet at <http://www.bls.gov/oco/ocos038.htm>

The Bureau of Labor Statistics projects that "employment in nonresidential construction will grow because the replacement and renovation of many industrial plants and buildings has been delayed for years and a large number of structures will have to be replaced or remodeled, particularly in urban areas where space for new buildings is becoming limited."³²

As discussed earlier, the growing and aging population will drive demand for the construction of adult daycare, assisted-living, and other outpatient facilities. Similarly, the construction of schools will increase to accommodate growth in the school-aged population. Additions to existing schools (especially colleges and universities), as well as overall modernization, will continue to add to demand for architects through 2012.

The Bureau also predicts that the demand for residential construction will continue to grow.

As the baby boomers reach their peak earning years and can afford to spend more on housing, demand for larger homes with more amenities, as well as for second homes, will continue to rise. Some older, more affluent, members of the baby-boom generation will want townhouses and condominiums in conveniently located suburban and urban settings. At the same time, as the "echo boomers" (the children of the baby boomers) start to augment the younger age groups, the demand for starter homes and rental apartments also should increase.

Growth in demand for new-home construction will be tempered by consumers' preference to perform home improvements and renovations—especially in attractive, established neighborhoods—rather than construct new homes. Many starter homes will be remodeled to appeal to more affluent, space- and amenity-hungry buyers. Also, as buyers trade up, some may prefer to remodel existing homes, rather than construct new homes.

Because construction—particularly office and retail construction—is sensitive to cyclical changes in the economy, architects will face especially strong competition for jobs or clients during recessions, and layoffs may ensue. Those involved in the design of institutional buildings, such as schools, hospitals, nursing homes, and correctional facilities, will be less affected by fluctuations in the economy.³³

G. Compensation Trends

Overwhelmingly, architect, intern, and architecture student participants complained about the low salaries and long work hours of the profession. According to data from the Bureau of Labor Statistics and the AIA, compensation for architects has been increasing steadily over the past 10 years. According to the 2005 AIA Compensation Report, "average salaries at architecture firms

³² Id.

³³ Id.

have increased more than 10% between 2002 and 2005, approximately a 3.3% annual compound growth rate. These figures represent a notable increase in compensation considering that professional salaries in the U.S. economy grew by only 2.5% on average over the same period, according to U.S. Department of Labor figures."³⁴

Despite the upward trend in compensation, the overall low salaries for architects and the long, demanding hours will continue to negatively impact the profession, as more architects leave architecture practice to seek more lucrative or satisfying careers. One participant voiced the views of many when she stated, *"I really do have a love of architecture and design, but I want to be able to raise and support my family. As much as I love architecture, that does not seem possible, so I might have to change careers."*

Globalization, technological advancements, and changing demographics, among other things, will continue to impact the architecture profession in the next 20 years. Most, if not all, of these trends will have an impact much broader than the profession of architecture, but some will likely be felt more acutely by this profession than many others, such as technological advances that will reduce jobs, environmentally and ergonomically motivated design, and the encroachment of engineers and contractors into traditional architectural practice. Like all professions, architecture must effectively adapt to these rapidly changing conditions in order to continue to thrive.

³⁴ Architects' Compensation Growing Faster than Comparable Professional Salaries, August 1, 2005, AIA Press Release, at http://www.aia.org/release_080105.

VII. CONCLUSION

The Group commends the AIA, especially its Diversity Committee, and the four collateral organizations for undertaking this important first step to sustaining and improving diversity within the profession. Although reliable data on the demographics of the architecture profession is difficult to ascertain, it is undisputed that there has been significant growth in the diversity of the profession over the past two decades. Additionally, in many diversity indices, architecture compares favorably to law and medicine, and is more diverse than engineering. However, these numbers may simply suggest that there is much progress to be achieved by all professions. Certainly, the participants in this Audit overwhelmingly supported this as an important effort and expressed collective agreement that there is much work left to be done, and all eyes are on the AIA to lead the charge.

Recommendations for Future Research and Analysis:

- Do minorities and women drop out of architecture school at a higher rate than white male students?
- Why are Black women so under-represented in architecture? Of the 1519 architects, only 174 of them are Black female.
- Do design juries disadvantage women and/or minorities?
- Are clients and/or construction personnel a barrier to greater diversity and inclusion within the profession?
- Is there a glass ceiling in private architecture firms for women and minorities?

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