

# Highlights from Presentations by the Plenary Speakers

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## Asian Americans and Pacific Islanders' Issues in Research and Education

**Dr. Indira Nair, Vice Provost for Education,  
Carnegie Mellon University**

*Dr. Indira Nair chairs the National Science Foundation's (NSF) committee on Equal Opportunities in Science and Engineering and serves on the Advisory Committee for the Directorate for Education and Human Resources. Nair's work includes women in science and engineering, the inclusion of ethics and science and technology education for all Carnegie Mellon students, increasing the inclusion of underrepresented minorities across all segments, and fostering discussions of diversity and authenticity on campus.*

### **Welcoming All Into Science**

Dr. Nair began by examining the general idea of how to approach building capacity in Science, Technology, Engineering and Mathematics (STEM). She reminded workshop participants that the National Science Foundation attends to the three goals of promoting people, ideas, and tools. Dr. Nair shared Dr. Bordogna's assertion that this issue is not about building capacity for STEM. Rather, it is about the self-realization of all people, with capacity building for Science, Technology, Engineering, and Math as by-products.

While STEM is traditionally viewed as the enterprise and the people are considered an input, Dr. Nair pointed out that it would be of considerable benefit to turn this paradigm around and look at people as the enterprise and at STEM knowledge as the output. In taking this approach, all people would have a better opportunity to get to the best place possible.

Dr. Nair elaborated on the significance of this concept when she stated, "This means having a culture and a climate of doing science that is welcoming to all and that represents the cultural and community needs of all people regardless of the particular group under consideration." She went on to point out, "Done properly, all groups should stand to gain."

It was acknowledged that this approach might be more difficult to implement than the traditional route, which tends to focus on the underserved populations exclusively. However, it was pointed out that the traditional approach often does not benefit everyone. This idea is especially important when considering the diverse needs of Asian Americans and Pacific Islanders.

### Disaggregating the Data

Through examination of information available to describe the Asian American and Pacific Islander population, Dr. Nair explained that existing gaps become even more apparent when the data is disaggregated. This data is expected to assist NSF in the evaluation of existing policies and their adaptation to address the specific needs of Asian Americans and Pacific Islanders.

It was emphasized, as well, that disaggregations might also show relative strengths. “We need to disaggregate the Asian groups also since they are a very diverse population,” said Dr. Nair. However, she cautioned that too much disaggregating could quite conceivably lead to conclusions that are not helpful in the long run.

Dr. Nair described Asian Americans and Pacific Islanders as a group of groups, arguably the most diverse of all minority groups. Their range of diversity spans Native Hawaiians and members of the far-reaching Pacific Islands, who have distinct cultures and community ethos still intact and attached to particular locations. The Asian American and Pacific Islander designation also includes immigrants that came to the United States beginning in the mid 1800s and extending through today. East Asian groups have been brought here as laborers, Southeast Asians and Indians arrived as professionals, and recent immigrant groups have come to the United States to contribute to the information technology workforce. Thus, there is a large range of first-generation immigrants whose needs are unique, depending on the subgroup. Asian can mean a range of nations with extremely different cultures. In addition, it is important to support the population of second-generation Asian Americans who are trying to integrate the needs of both cultures.

Dr. Nair addressed the specialized needs of the Pacific Islanders as an original native group who remained in their communities, attached to their local cultures. These Pacific Islanders can be described as having a strong sense of community and their need to contribute to their community is sometimes at odds with the traditional views of the scientific community.

However, now that NSF and the scientific community in general are seeking to stimulate synthesis and integration with research that is systemic and multidisciplinary, Dr. Nair sees the role of Pacific Islanders as increasingly important. This is particularly true in the areas of Environmental Science and Ecology, which have been underserved by this group. Dr. Nair stresses that it is equally important that the AAPI community not lose its individuals that are successful in STEM, as this will lead to the loss of community-mindedness that is essential in STEM.

Equally important, according to Dr. Nair, is the need to bring the expertise and science infrastructure to these communities to enable them to compete in the world of 21st-century research science. Today, the major portion of this kind of funding goes to large research universities that are largely exclusive of AAPI communities. Dr. Nair suggested that research should focus on creating alliances with the community college systems where the AAPI communities are flourishing. She stressed the importance of taking the expertise of the universities and translating it into ways that can be effectively used at the community college level.

### **Bringing a Systemic Focus to Science**

Dr. Nair pointed out that the tacit wisdom and knowledge that comes from the Asian Americans and Pacific Islanders can contribute to future generations in science. After introducing this issue as the Ecologies of Knowledge, Dr. Nair articulated the need to integrate the community mindedness and tacit knowledge of Asian Americans and Pacific Islanders to engage in good science that is meaningful and valuable. Dr. Nair referred to the structure of scientific research, which tends to ignore issues that are too large or complex to be described with a two or three variable equation, pointing out that this mindset creates a scientific system that undervalues and disrespects the Asian American and Pacific Islander communities. Science must not ignore the real problems of the world in order to solve the more trivial issues that can be easily quantified. As science continues to become more focused on the systemic, perhaps Asian Americans and Pacific Islanders can bring back community-approached, systemic ways of thinking. It is important to realize that we do not want to reduce our human and social dynamic to a quantitative equation.

Dr. Nair suggested that it might be valuable for all scientists to work with a cultural anthropologist, since this approach brings a more human and community-minded perspective to research.

Describing teaching in a multicultural classroom in terms of the tension between identity and authenticity, Dr. Nair stated, “The old ways of learning, for example, living with a guru in India, offered individuality and authenticity, while the classroom offers everyone the same identity.” She acknowledged that it is difficult to teach without the students in the classroom experiencing a loss of authenticity. Further, it is an unrealistic expectation to think that everyone will leave with the same learning or identity.

### **A Call for Leadership**

Dr. Nair focused attention at another facet of the AAPI population: Asian Americans who are successful graduate students, fellows, and researchers. Dr. Nair explained that it is not yet clear if a uniform set of needs may be ascertained. Statistically, this set of Asian Americans and Pacific Islanders tends to be overrepresented in the STEM research community, with 11.4 % of all NSF awards made going to this group. She warned that we must not look at this group as all Asian Americans, since that term includes many who are not educated and not successful in the STEM community.

Addressing the need for leadership and collegiality in the STEM community, Dr. Nair described the successful Asian American group as lacking in leadership skills. Asian Americans and Pacific Islanders are often drawn to the United States as a result of their mathematical abilities, which surpass their leadership skills that have yet to be developed. Dr. Nair stated, “This group needs to take their place as leaders and accept responsibility for community inclusion and collegiality. In addition, this group needs to help their children to grow in leadership and social skills as the children are now part of the domestic population and are torn between both cultures.”

In conclusion, Dr. Nair suggested that supporting the AAPI community is about building a culture and climate that honors diversity and builds to a natural state of inclusion in the greater community.

**Discussion**

During the brief discussion period that followed, the importance of focusing on the domestic needs of inclusion in the STEM community versus the more alluring global focus that is popular at the moment was the central theme.

The need to look at the context-dependent nature of science was emphasized. It was pointed out that a more diverse group of students would be served by presenting university courses in the context of real social problems rather than the more traditional, equation-oriented method.

## A Demographic Profile of Asian Americans and Pacific Islanders in the United States

**Dr. Nirmala Kannankutty**  
**Senior Analyst Division of Science Resources Statistics,**  
**National Science Foundation**

*Dr. Nirmala Kannankutty serves as Senior Analyst in the Division of Science Resources Statistics at the National Science Foundation. As one of the project officers for the NSF's Scientists and Engineers Statistical Data System (SESTAT), Dr. Kannankutty is responsible for the integration and production of a database that provides detailed information on the science and engineering workforce in the United States, through three national data collections.*

To establish a demographic profile for reference, Dr. Kannankutty began by reviewing the numbers of Asian American and Pacific Islanders in the United States. According to current Census Bureau statistics, AAPI incidence in the U.S. population has risen from 2.9 percent in 1990 to 4.4 percent in 2002. Dr. Kannankutty further defined and recognized Asian American and Pacific Islanders as a highly diverse group, representing over 60 percent of the world's population, many cultures, and many distinct and unique ethnic backgrounds.

By definition, Asian Americans are those individuals with origins in the Far East. This geographical distinction encompasses Southeast Asia, or the Indian Subcontinent, including Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, Laos, Burma, the Philippine Islands, Thailand, Myanmar (Burma), and Vietnam. Dr. Kannankutty showed the diversity of this group by highlighting no fewer than seventeen different ethnic backgrounds.

Native Hawaiians and Other Pacific Islanders (NHOPI) are defined as those individuals with origins tracing to any of the original peoples of Hawaii, Guam, Samoa or the Pacific Islands, including Australia and New Zealand. This group was shown to contain at least eleven diverse ethnic backgrounds.

To illuminate the details of Asian American and Pacific Islander participation in education, Dr. Kannankutty presented a series of data slides that highlighted the participation of Asian American and Pacific Islanders in various stages of the educational pipeline. From this analysis, Dr. Kannankutty focused on three major points:

- Compared to other ethnic groups, relatively high proportions of Asian American and Pacific Islander students are taking high school math and science courses. Therefore, the conclusion can be drawn that some of the AAPI population is preparing for participation in science and engineering at the college level.

- Among all ethnic groups, including Asian Americans and Pacific Islanders, there is a decrease in interest in both math and science between eighth and twelfth grades, suggesting that opportunities exist to further develop math and science interest at the high school level.
- Among all ethnic groups, including Asian Americans and Pacific Islanders, there is a decrease in math proficiency between eighth and twelfth grades, indicating that proficiency could be improved for this age group through various reform measures.

In terms of college enrollment and degree attainment, Dr. Kannankutty showed that although fewer Asian Americans and Pacific Islanders are receiving financial aid, and that those who do are receiving higher than average levels of aid. It is possible that there are more Asian Americans and Pacific Islanders who need aid for college study. Although high school science and math scores have tended to drop, interest in majoring in science and engineering at the college level remains high among Asian Americans and Pacific Islanders. Dr. Kannankutty reiterated that this points to the importance of pre-college preparation, designed to improve proficiency in math and science, and could encourage college-level AAPI students to complete science and engineering degrees. In addition, Dr. Kannankutty found that at all levels (bachelor's, master's, and doctorate), Asian Americans and Pacific Islanders report earning a higher proportion of their degree in science and engineering compared to other population groups. However, she concluded that there is certainly room for growth.

Dr. Kannankutty showed that in 1999, among Asian Americans and Pacific Islanders in the U.S. whose highest degrees were in science and engineering, 22.3 percent were U.S. born and 77.7 percent were foreign born. Of the foreign-born, the top four countries leading in degrees came from India, China, Philippines, and Taiwan.

There has been significant growth in participation by Asian Americans and Pacific Islanders in science and engineering occupations, according to Dr. Kannankutty. Between 1993 and 1999 there was an increase of approximately 200,000 individuals in science and engineering fields. Most of this growth was in computer/math occupations and engineering occupations. Asian Americans and Pacific Islanders were shown to be working mostly in the industrial sector, which reported the highest median salaries for Asian Americans and Pacific Islanders, as is the case for all groups.

In summary, Dr. Kannankutty noted the range of diversity in the Asian American and Pacific Islander group, and that this diversity engendered diverse needs. This is particularly true of Native Hawaiians and Other Pacific Islanders (NHOPI) and other "underrepresented" groups within the broad "AAPI" label. Viewing Asian Americans and Pacific Islanders as one homogenous group, which is dominated by a few large subpopulations, tends to mask the complex needs that are required by some of the small subpopulations. Dr. Kannankutty also noted that educational attainment varied widely, with some groups being more educationally successful than others. Finally, Dr. Kannankutty indicates that more educationally successful Asian Americans and Pacific Islanders could participate in and contribute to the science, technology, engineering, and math workforce than currently do.

## Asian American and Pacific Islander Issues In Industry

**Jeffrey C. Chen, Ph.D.**  
**Former CEO of General Science Corporation**

*Dr. Jeffrey C. Chen founded General Science Corporation (GSC) and served as President from 1977 to 2000. GSC has become one of the most successful Earth Sciences companies with revenue of \$25 million and over 300 employees. Chen took GSC public in 1986, raising Research and Development funding of \$3 million to develop an Integrated Meteorological Information Processing System (METPRO). More than 40 METPRO Systems have been installed in 20 countries worldwide to provide real time weather forecast information to millions of people.*

In his workshop presentation, Dr. Chen addressed the issues of Asian Americans and Pacific Islanders in industry, bringing attention to the concept of a glass ceiling at the management level. This kind of barrier, historically charged with keeping minorities and women from attaining their financial and professional goals, keeps Asian Americans and Pacific Islanders from getting the recognition and promotions they need and deserve. Drawing on his experience as a successful entrepreneur and scientist, Dr. Chen identified various major obstacles that prevent Asian Americans and Pacific Islanders from reaching the highest levels of success in private industry.

Dr. Chen described these barriers as a combination of complex cultural and social issues that both Asian Americans and Pacific Islanders and industry must share responsibility for developing. While industry should do more to encourage greater numbers of Asian Americans and Pacific Islanders in management, Asian Americans and Pacific Islanders tend to develop cultural patterns that make climbing the proverbial ladder of success difficult in a traditional American business culture.

### **The Price for Humility**

Dr. Chen noted that many first generation Asian Americans and Pacific Islanders are not as aggressive as they need to be if they are to advance in an American company. Dr. Chen stated the reason is because many first generation Asian Americans and Pacific Islanders often tend to graciously take what is given and not seek what is deserved. When Asian Americans and Pacific Islanders graduate, they often feel lucky and better off than the others left behind.

“We come (to the U.S.) out of necessity; when we get a job, we are happy.” Dr. Chen explained that often Asian Americans and Pacific Islanders do not feel that they deserve more.

Humility is encouraged in Asian American and Pacific Islander families. For example, when a project is finished and a manager gives praise, the Asian American or Pacific Islander is likely to modestly proclaim, "No, no! The work was done by others." This culturally taught humility has a high cost in dignity in American industry. Dr. Chen claimed, "In the end, those 'others' get the credit and the promotion." Dr. Chen acknowledges humility as a great virtue, but recognizes that in the competitive world of U.S. industry, Asian Americans and Pacific Islanders must learn to speak up for themselves, and take credit for their contributions.

### **Staying in the Comfort Zone**

Another cultural issue challenging Asian American and Pacific Islander success is that many do not feel a sense of community with Americans, and as a result they tend to stick to their own communities. Dr. Chen stated it is not a matter of being social; rather it is an issue of being more comfortable with one's own culture and people. He indicated that is why there are pockets of populations such as Chinatown or Little Saigon. The first generation is resistant to feeling isolated or blending into the dominant society, so they often decline to socialize with their non-Asian colleagues.

Dr. Chen explained that managers promote individuals they know they can work with and with whom they get along. He claims that this is the reason for management socializing. Because Asian Americans and Pacific Islanders seldom engage in social situations with their colleagues, outside of the workplace, management tends to overlook them for the best promotions. In that sense, a high level of intelligence and competence in science, technology, engineering, and math is not enough to transform Asian American and Pacific Islander scientists and engineers into managers and entrepreneurs.

On the other hand, Dr. Chen suggests, Chinese-Americans must also carry some of the blame. For example, when many Chinese-Americans encounter a social situation, they immediately scan the room for Chinese colleagues. Once identified, they tend to communicate in Mandarin because it is familiar and comfortable. As a result, the small group remains isolated and does not get to know others as well as they might have had they not been drawn together by language and culture.

Dr. Chen states that discrimination is human nature. Asian Americans and Pacific Islanders, like other minorities, face discrimination issues well beyond jobs in private industry. In academia, it is less obvious because the workforce is more integrated, Dr. Chen explained. But when Asian Americans and Pacific Islanders strive to become teachers they often encounter barriers and he suggests that even the students have problems and their own unique challenges regarding discrimination.

Dr. Chen believes that Asian Americans and Pacific Islanders must work diligently to resolve these issues. "We create it ourselves as Asian Americans and Pacific Islanders, and we must recognize that and work on the solution."



### **Lacking Alliances**

Another apparent obstacle to Asian American and Pacific Islander success is the lack of business alliances and support. Obtaining capital, marketing goods, and customer service present challenges. A weak political lobby and alliance contributes to the situation, particularly in terms of ensuring political support, Dr. Chen explained. When politicians want votes, Asian Americans and Pacific Islanders are third or fourth down on the list of voters. “We have to be better organized or we will continue to be weak politically and economically,” Dr. Chen exclaimed.

Dr. Chen pointed out that Asian Americans and Pacific Islanders often find it difficult to get funding from banks, and recited the adage that banks generally lend to those who have the least need. He suggests that Asian Americans and Pacific Islanders have to be smart and well informed. When Dr. Chen went to get minority identified funds years ago from the Small Business Administration (SBA), he had to justify why he was applying for these funds, since at the time Asian Americans and Pacific Islanders were not recognized as socially or economically disadvantaged minorities.

Instead of taking that response at face value, Dr. Chen was determined to evaluate the accuracy of the initial response. He went to the Library of Congress and researched the Exclusion Act of 1882, which barred Asian Americans and Pacific Islanders from holding certain jobs. He sent the document to the Small Business Administration, which then reversed their decision and acknowledged Asian Americans and Pacific Islanders as an identified and covered minority group. They are entitled set-aside funds, though the group is still not a priority in receiving those funds.

Dr. Chen obtained his SBA funding and 8a Classification, which gives minority-owned companies special consideration for government contracts. However, as he raised millions of dollars and his company went public, the SBA “graduated” Dr. Chen’s firm from the 8a program. The effect was critical for his company. At the time, the SBA indicated that the firm exceeded the capitol-to-cash flow requirements required to remain in the program. Dr. Chen fought that requirement to no avail, but his influence and experience paved the way for others. At present, the SBA allows minority companies to strive beyond basic success.

In industry, Dr. Chen indicated that Asian Americans and Pacific Islanders do not always provide sufficient collegial support for each other and often tend to become too competitive. Dr. Chen suggested that healthy competition is welcomed, but sometimes colleagues become competitors hurting each other in business dealings, a reality that may come from feeling politically disconnected or vulnerable. A stronger political lobby, bolstered by better organization within the Asian Americans and Pacific Islanders’ community, would help secure better overall support for Asian Americans and Pacific Islanders.

### **Threatening National Security**

Dr. Chen claims that the distrust Asian Americans and Pacific Islanders might encounter varies depending on the kind of work they do. In the 1960s, when Dr. Chen’s technology was first unveiled, there was much distrust of those considered to be foreigners. National security

concerns contributed to mistrust. At one time, the threat of the era was “the evil Russian empire.” Now, Chen elaborates, it is perceived as the economic threat posed by Asia. Concern for national security and a lack of trust and understanding are at the heart of the problem.

As an example, Dr. Chen cited a weather satellite produced by his company. It should have easily been authorized for export. It was only cleared under the provision that Dr. Chen was exporting the technology to South America or some other country that posed no perceived threat to U.S. national security. Yet, as soon as he tried to export his technology to China, Dr. Chen’s integrity was challenged when he was interviewed by the State Department and questioned as to whether his technology would be used in missile technology. Dr. Chen attested that his satellite was merely a weather forecasting system. Dr. Chen cautioned that as in his experience, an Asian American or Pacific Islander will undoubtedly encounter discrimination and must deal with it tactfully, regardless of whether it is mean-spirited or not.

#### **Meeting Half Way**

Dr. Chen concluded his discussion by saying that if Asian Americans and Pacific Islanders want respect, they must not simply demand it. They must earn it by doing their part to identify and then to bridge the cultural and social barriers to their own success. Dr. Chen advocates mentoring and coaching programs to help Asian Americans and Pacific Islanders learn how to become more successful in American industry.

## Social and Educational Issues For Asian Americans and Pacific Islanders

**Dr. Paul M. Kingery**  
**Associate Dean of Research, College of Education**  
**University of Hawaii at Manoa**

*Dr. Paul M. Kingery serves as the Director of the Violence Prevention Network. Prior to holding this position, Dr. Kingery served as director of the Hamilton Fish National Institute on School and Community Violence. Most recently, he was asked to serve on the Scientific Council for the International Conference on Violence in Schools and Public Policies in Paris. Dr. Kingery was called upon by the Clinton Administration to assist in formulating a national framework on violence prevention. He continues to serve on advisory panels for the U.S. Department of Education and the U.S. Justice Department.*

Dr. Paul M. Kingery led into his presentation by sharing his feelings about the relative benefits and advantages of being a white male in an American society. He acknowledged that he has an absolute advantage in the professional world. Although he came from a modest family, he was rich in training and education. He claims this allowed him economic and cultural mobility while immersed and well established in the dominant society.

Dr. Kingery spoke about experiencing life from a different perspective. While that may never be witnessed in entirety, he claims that experiencing violence as a victim of a racial confrontation served to sharpen his perception of discrimination. Dr. Kingery shared his account of the time he was badly beaten by a group of African-Americans during a race riot. Dr. Kingery later chatted with the individuals who had served up this beating and discovered that at the root of their anger lingered deeply ingrained and unresolved issues with American slavery.

Dr. Kingery mentioned that his work has been cross-cultural and collaborative in nature, in association with diverse minority groups. His work and interests eventually inspired him to embrace the Native Hawaiian culture. He indicated that the Hawaiian culture is perhaps the most peaceful in America, when measured separately. Dr. Kingery acknowledged the incredible diversity of the Hawaiian Islands, yet pointed out that paradoxically, he is involved in a Hawaiian university that is predominately run by white males. Dr. Kingery stressed the costs that exist for being an ethnic minority. He mentioned that non-minorities probably do not appreciate the costs incurred by ethnic minorities. Although many Asian Americans and Pacific Islanders succeed in spite of these costs, one should not be complacent.

**Institutional Barriers**

Dr. Kingery stated that the institutional barriers are significant and that organizations and agencies like the National Science Foundation must identify and overcome barriers to access. He indicated that NSF has systemic biases that must be acknowledged before they can be adequately addressed. His example was that NSF does not give the same attention and priority to “messy” measures. Claiming that NSF has traditionally deferred to measures that are more scientific and less societal, he suggests that research is not always so clean and clear as to be reported in purely quantitative terms. He suggests that there are other ways of looking at data and evidence that will provide a more informative and concise picture of the research situation.

Dr. Kingery provided population data for Asian Americans and Pacific Islanders, presenting information indicating that 12.5 million Asian Americans and Pacific Islanders are in the United States and 95% of them live in metropolitan areas. Dr. Kingery mentioned that Asian Americans and Pacific Islanders are more likely to graduate from high school than whites and are least likely to drop out. Asian Americans and Pacific Islanders also fit into a niche where they are either very well paid or very poorly paid. He mentioned that this is very distinctive within the AAPI category, with Asian Americans having much higher salaries than Pacific Islanders.

Dr. Kingery stated that the poverty rate of Asian American and Pacific Islander families, at 14%, is higher than that of whites (8%). Many Asian Americans and Pacific Islanders lack such essentials as health insurance. He addressed the teaching concerns regarding Asian Americans and Pacific Islanders, pointing out that only 1% of all K-12 teachers are Asian Americans or Pacific Islanders. Only 1.5% of higher education faculties are Asian American or Pacific Islanders.

**Unpacking Culture**

Dr. Kingery suggested that we must consider “unpacking” culture. AAPI is a federal category. Because it is a broad group, statistical studies often underestimate the significant achievement by some subpopulations and overestimate the success of others. For example, college degrees earned by Asian Americans are 44% compared to 21% for Pacific Islanders. He mentioned that this disparity increases with advanced degrees. Dr. Kingery said, “Unpacking will help develop solutions.”

Dr. Kingery pointed out that research is generally conducted in a cultural context. Variations across cultures need to be identified and studied.

**Going Pacific**

Dr. Kingery pointed out a need for the National Science Foundation to be better represented by Asian Americans and Pacific Islanders. He indicated that the process must begin at home and then branch out. It is logical to have a good representation of Asian Americans and Pacific Islanders as panelists and reviewers, if one is attempting to address specific problems. Science funding is one thing, but a study within a particular culture is quite another. Applied science varies widely from one culture to another, and this must be acknowledged and addressed. Dr. Kingery indicated that the National Science Foundation would benefit by distributing available funding across broader areas.

A need to prepare Request for Proposals (RFP) on Asian American and Pacific Islander culture was expressed. Dr. Kingery suggested that the National Science Foundation gauge AAPI expertise in certain studies. The perception is that NSF funding and service opportunities are out of reach for many groups in the AAPI community. NSF and AAPI individuals should be proactive, smart, and productive by developing and supporting funding projects specific to an area, for example the funding of coral reef ecosystem studies. Dr. Kingery noted that through this process, NSF could legally set up funding to minority-targeted populations.

Dr. Kingery described the logistical complexities that face Asian Americans and Pacific Islanders in regard to their geography. Asian Americans and Pacific Islanders live the farthest from Washington, D.C. of any group of Americans. Dr. Kingery suggested that the National Science Foundation embrace the Pacific in real time. Visits and meetings in the Pacific area are vital to the support of this important geographical region and its inhabitants. Dr. Kingery described the need for NSF to go “local” in acknowledging and celebrating cultural and geographic diversity. Asian Americans and Pacific Islanders have strong links to their lands. Some Islanders live on their historic and ancestral lands and some live in micro-ethnic regions. Because of this, education gains local relevance. Dr. Kingery suggested that although we are global, one still needs to acknowledge and tend to the local cultures that contribute to our purpose.

Dr. Kingery believes that the National Science Foundation needs to communicate with and attempt to understand the dynamic processes and unique needs of the culture of origin. He mentioned that it is time to “take off the lab coats.” Asian Americans and Pacific Islanders have a commitment to get to the source. However, not all research has global responsibility. Asian Americans and Pacific Islanders respect themselves and their privacy and there is some research that indicates that they would not benefit by publishing for the world. Broader impact would, of necessity, be better defined by alternate measures that respected cultural concerns.

#### **Grass Roots Effort**

Dr. Kingery stated that a grass roots effort could prove effective. He encouraged the idea that Asian Americans and Pacific Islanders create more non-profit organizations and support them as they develop their own institutes. Considerations for timing are essential. NSF needs to assist by making these projects long term, since positive change develops over long-term analysis.

Dr. Kingery concluded the session by identifying measures that need to be taken immediately. He suggested that the National Science Foundation develop a Request for Proposals that targets the Pacific over a long period of time. A short-term assignment is too risky for many Asian Americans and Pacific Islanders. Another suggestion was to start with scale and move up. Dr. Kingery stated that stronger grants could be available if there was an electronic bibliography of research on Asian American and Pacific Islander topics. His closing statements encouraged ensuring that these workshops contribute to something solid, in order to successfully serve the needs of the Asian American and Pacific Islander community.

