Dr. Amy Ong Tsui is Professor of Population, Family and Reproductive Health in the Bill and Melinda Gates Institute for Population and Reproductive Health at the Johns Hopkins University Bloomberg School of Public Health. She received her B.A. and M.A. in Sociology from the University of Hawaii in 1970 and 1972, respectively, and her Ph.D. in Sociology/Demography from the University of Chicago in 1977. She is world-renowned expert on reproductive health.
WEEKS: We are here today to interview Dr. Amy Tsui, who is professor of Population, Family and Reproductive Health in the Bill and Melinda Gates Institute for Population and Reproductive Health at the Johns Hopkins University Bloomberg School of Public Health. Lots of name recognition in there…

TSUI: All the names are important.

WEEKS: And Dr. Tsui was the president of the Population Association of America last year in 2017. Thank you very much for being here with the PAA History Committee today.

TSUI: Not at all.

WEEKS: And what we'd like to do is to kind of work through your entrance into demography, how you got to this point. How you see the field having evolved over time, and some specific things about the Population Association of America in its role in the whole field of population. So maybe you can just kind of take us back to -- as you were starting college -- and because I know you started college at Carleton College, in Minnesota, which isn't necessarily the usual choice. So tell us how things transpired over time.

TSUI: I was born to a father who lost his country because of the 1949 China Communist Revolution. So he ended up traveling overseas, working for FAO, Food and Agriculture Organization, and that took him to many places. So I think we developed the bug for international exposure that way.

But I ended up at Carleton because he took a year sabbatical at the University of Minnesota. And it was pretty cold, having come from Bangkok at that time. But then after Carleton -- you have to remember that was 1966, '68 -- '68 was when the U.S. civil turbulence was pretty high. I was a social activist. I didn't do so well with my grades. My father called me home. Home at that point was in Honolulu, Hawaii, which I did not object to. And then I ended
up, you know, demonstrating a bit out of Honolulu, against the Vietnam war, but ended up finishing college at the University of Hawaii, and stayed there because they started the East-West Center at that time. And it turned out that my father being in Honolulu was because he was also affiliated with the East-West Center. The East-West Population Institute was being established within the Center. They brought in brand-new faculty, a new director—Paul Demeny. Lee Jay Cho, Jay Palmore, James Fawcett, and a number of luminaries, such as Bob Retherford were also brought in. These were the new faculty, so I learned my population methods from them. And I was actually in the Master's of Sociology degree program at the time. But I received this grant to be an East-West Center grantee in my second year. And then they shipped me off to South Korea, which was where family planning and fertility issues were emerging, so I spent six months --

**WEEKS:** By “they”, you mean, the East-West Center?

**TSUI:** The East-West Center, yes, as part of an internship, sent me off there. And so that was the beginning. From there on I was hooked on the population issues. I later on gravitated more towards health rather than staying in sort of traditional sociology. Although demography was the reason I ended up in Chicago, again because of Lee Jay Cho and James Palmore, and they had been mentored by Donald Bogue.

So I ended up where they were mentored at the University of Chicago, and then stayed and worked there. And then from there I went to the University of North Carolina at Chapel Hill. Eventually became director of the Carolina Population Center. And then I went to Johns Hopkins.

**WEEKS:** But now in your early years there at the East-West Center, the director was Paul Demeny who became subsequently a PAA president?
TSUI: Yes.

WEEKS: And, of course, then you went off to Chicago where Donald Bogue also had been PAA president.

TSUI: Yes.

WEEKS: But my recollection of the things that you published back then with Donald Bogue, they were more in terms of population growth—a more global picture?

TSUI: Yes. So the '60s, early '70s was also when the population growth issues were coming to the fore. Paul Ehrlich had written *The Population Bomb* earlier. And fertility was seen as the driver of population growth. So many people, including many who now have turned to other areas, were looking at the issues relating to fertility trends. So I ended up in Chicago as a doctoral student, working in Donald Bogue's Community and Family Study Center.

It was an interesting time. Phil Hauser was head of the Population Research Center then. Donald Bogue and Phil Hauser didn't always see eye to eye. Donald Bogue was also quite cavalier with his hypotheses and beliefs. And he would do his research that would generally support his hypotheses. And so one of them was about zero population growth. And it got published in the *Public Interest*. And it was about how we would achieve zero population growth, I think, by the year 2000. Paul Demeny critiqued the article. He was, at that point, at the Population Council and editor of *Population and Development Review*. And I remember that period, because the PAA was involved at that time also--I was like the young graduate student with the senior mentor and doing some of the analyses that Donald Bogue would interpret and then we would get into trouble.

WEEKS: Okay, so did you see that exchange with Paul Demeny as getting into trouble or as publicity?
**TSUI:** Well, Donald Bogue didn't do it for publicity reasons. He firmly believed that, and the thesis of it all was that, family planning programs would have a role in bringing down fertility, which would then end up enabling slower population growth. I'd known about the program part, but certainly contraception, its availability, organized delivery of it--that piece has been proven to be a good reason for fertility reduction and why population growth has slowed in many places.

So what did we get into trouble for? Well, because no one believed that there were organized family planning programs. No one thought that the use of contraception was that widespread that it would impact fertility rates in many places of the world, especially in the low-income countries. And, at that time, the focus was on Asia and Latin America. Africa was a region where no one was ready to go; and they didn't until later in the '80s. In any event, it was an eye-opening moment to see how academics could debate strongly and have great opinions, and I think I dove for cover for a while.

**WEEKS:** Now, thinking about your training and education, one of the things that we're kind of interested in over time in terms of the “celebrity issues” is where the funding came from, and whether you think there was any influence from funders on the things that were being studied and conclusions that might be drawn.

**TSUI:** For sure, various sources of federal funding to build the population research committee are immensely important. I mean, we can't underestimate how important that's been. I think for population, the Demographic and Behavioral Sciences Branch, NICHD, I think that was its early name -- was started by NICHD staff who really wanted to build the population research community. And I, myself, was an NICHD trainee as well at the University of Chicago. Foundations were partners in all of this. And the U.S. Agency for International Development was a big partner, because they had started in, I think, 1974, which was about the time I was in
graduate school at Chicago. Their funding was for foreign assistance going to different countries, but again to amplify the number of contraceptive methods that were available, to improve human resources, to be able to deliver them, to understand what the best practices were. And also to monitor and evaluate, which was the research piece that spoke to those of us who were in academia working on population issues at the time.

We who are trained in demography always understood that the drivers were fertility, mortality and migration, and that we needed to understand the basic demographic methods that were important for studying population change. Fertility rates, migration rates, infant, child and adult mortality rates and how they were interrelated, and how they were used for population projection. So you could immediately see if you applied (cohort) projection methods how each one of those three main factors influenced population growth. The other piece that became important--as far as donors were concerned--is that all the different funders had different goals. NICHD was to build a generation, and now generations, of rigorous population researchers who could do independent research, and merit their own NIH research awards which serve as the gold standard. Other funders were more interested in meeting shorter-term goals, to be able to shed a light on why fertility would change, wouldn't change. Why people might want to use contraception? How do you best monitor this? The Demographic and Health Survey(DHS) was born out of all of this, first as the World Fertility Survey, and USAID played a major role in those survey programs. And now if you look around PAA for those who are doing international work, there are a large number, hundreds probably, of presentations based on this bank of DHS data that has been available, allowing for all kinds of standardized cross-sectional time series analyses.
**WEEKS:** This would even include a recent paper that you published with Win Brown in *Population and Development Review*.

**TSUI:** Yes. That was a fun paper. And I think it enabled us to bring to the fore a lot of topics and areas we had been observing in the field. After I relocated to Baltimore, I started to travel more. We developed—through the Gates Institute there—university-based capacity building programs in different countries: Nigeria, Ethiopia, Uganda, Ghana, Egypt and Malawi. We were able to work firsthand with counterparts which was immensely educational. A lot of what we would read in the published literature would not necessarily align with what we observed. But then you could see things changing that might not yet make it to literature. And I think that was what our paper tried to show.

**WEEKS:** Now, could we step back for just a minute? Because you went from Chicago to--

**TSUI:** To North Carolina.

**WEEKS:** -- North Carolina. The Carolina Population Center is very, very important. If you look back at the history of the PAA, the early meetings went back and forth between Princeton and Chapel Hill.

**TSUI:** Yes.

**WEEKS:** And so as you showed up there, what were the things you were hoping to accomplish?

**TSUI:** So I moved to Chapel Hill as a displaced spouse. My husband took a position at the University, and the director [of the Carolina Population Center] at the time was Dick Udry, and he eventually became one of my other mentors.

**WEEKS:** Another PAA president.

**TSUI:** Another PAA president. And he taught me that you can have an eminent, highly regarded population center based on good science. And he himself tried to push the boundaries
of science in population and reproduction by introducing biomarker measures, whether these were collected samples of urine or blood or saliva, to assay and have measures that correlated with behavior. I learned a lot about this area from him. But I also learned how to manage a center.

Dick was instrumental in my own career development, because he gave me a home. I did have grants to establish there and eventually I was able to fund myself (the norm of professional Schools of Public Health). I eventually was given an appointment with the Maternal and Child Health Department. That time at UNC actually moved me more towards health than social sciences.

**WEEKS**: Okay. So I had never understood why you were in Maternal and Child Health given your background in sociology from Chicago. But it was just resources at the institution.

**TSUI**: Yes. And there are -- in the range of population centers that NICHD has funded, many different kinds of centers. There are self-standing centers, like Michigan, North Carolina. There are centers that are part of departments, like the one at Hopkins. There are centers that are somewhere in between. Centers that are virtual. But University of North Carolina--the Carolina Population Center--had its own space, a physical building, which was not part of any department.

It also reported directly to a vice chancellor for research. That was actually a very important lesson as far as intellectual freedom in terms of population research in being able to work in an interdisciplinary, multidisciplinary setting where you were not having to wend your way through a department or other departments, other schools, to be able to build a collaborative teams. This was one of the big lessons I learned from Dick Udry. Being at CPC and learning from Dick Udry broadened my thinking about population and fertility and contraceptive delivery
towards looking at reproductive issues overall. This then influenced my thinking about health outcomes.

I learned about epidemiology--if you're in a school of public health, population health comes to you more in terms of social epidemiology. Social demography shares some paradigms with social epidemiology when looking at health and mortality outcomes. The exposure to social epidemiology was another research window to thinking about population issues, although epidemiologists and demographers think very differently.

**WEEKS:** Well, so you got into that, too, with the move to Hopkins. How did that come about?

**TSUI:** So I was the CPC center director then. We usually serve five years renewable. And I was in my fourth year, and I got a call about the Hopkins position. I wasn't prepared to move. The first call came from a chair, the next call came from a dean. So I went to talk to the dean, and the opportunity to work completely internationally was really what sold me on the idea of moving. The CPC is wonderful but it is in the regional south. And somehow I felt like I would not be able to convince the North Carolina state legislature or the chancellor or the UNC system that they really should be more global. I did start, that is, competing successfully for a large international project, that was called The Evaluation Project. It was USAID-funded, and then later expanded into the MEASURE Evaluation project. Both of those projects focused on measurement, monitoring and evaluation of different kinds of outcomes, contraceptive practice, fertility, eventually later, HIV/AIDS and malaria outcomes. These were quite international and now many years later MEASURE Evaluation is the largest global project, I think, at the University in terms of funding levels. The thought of trying something new and globally scaled was interesting, so I ventured forth with a great team of colleagues.
WEEKS: Okay. And the work that you've done over time, it seems to me has been relatively consistent. Do you feel that way, that your research agenda has been along the same path over your career or am I missing something?

TSUI: I never lost any interest in continuing to work on fertility regulation, no matter the topical lens. During the period when the HIV epidemic became the main “cause celebre”, and when a disproportionate share of resources were channeled away from reproduction, we all had to reinvent ourselves. So you'll see I did work looking at STI (sexually transmitted infection) or HIV outcomes and pregnancy outcomes. My focus was usually trying to make the case for why contraception is relevant for HIV-infected women or why it's an important prevention measure. I never really did move away from thinking about what was the role of contraception in individual lives, in society and in the world.

WEEKS: So how did you perceive the field of demography shifting as you kind of didn't shift?

TSUI: Yes. So about the mid-1990s—if you can actually find it -- I don't know if you knew Bud Harkavy from the Ford Foundation--one of his last books was *Curbing Population Growth* [Oscar Harkavy, *Curbing Population Growth: An Insider’s Perspective on the Population Movement*, New York: Plenum Press, 1995]. And he asked if I would write a closing piece, which I did. I talked about how the demographic field--population--had actually divided. And that one side was moving towards family demography, aging, migration and domestic population issues--not that they weren't important. But as new generations of researchers were graduating from U.S. universities, most of the subject interest was shifting to these newer topics. And this meant that fewer people remained in the field. Fortunately, USAID always had a fairly healthy budget, including for research, whether it was operations research or supporting these large cross national survey programs. There was always enough support to keep the international side of our
field occupied, but the field did diverge. And you can see it now in the PAA program--we now have many research sessions on aging, adult mortality, family demography, migration, family composition and living arrangements and so on. So, there is a shift, but that's probably healthy. The one area we somehow never captured, and maybe we need a celebrity for this, so to speak, an advocate, is environment. The linkages between population and environment. Maybe this will come now with more geographers, like yourself, being involved. But we need that disciplinary contribution to really enrich the population field.

HODGSON: I've got one quick question, particularly about this time period. If you think about Cairo 1994 and the decade before that, the real critique that was coming about family planning had to do with a feminist critique that was potentially quite coercive. As the director of Gates Institute at Johns Hopkins, very much engaged with family planning, can you give us your reflections on what is was like to have a time period when your critics were feminist and the issue was coercion?

TSUI: I still have some of the battle scars on a personal level (smile). We actually were invited by UNFPA, which sponsored the Cairo conference, to write the State of the World Population Report for that year, for ICPD. And I recall them telling us, well, you have to incorporate STDs. You have to incorporate something about mental health. You have to incorporate something about domestic violence. And I was thinking I only know about contraception. But we assembled a team and we did finally pull that report together.

But I remember many of us feeling like the rug is being pulled out from under our area, you know, how much of this is evidence-based? I think the thing I reacted to the most was there was not a lot of evidence about these newer areas that were being introduced and their impact on
reproductive health. Now I understand their importance—a woman's health or a family's health is more than just the role of contraception in their lives. But yes, it was quite jarring at the time.

**HODGSON:** Was there any rebelling by, say, grad students who were more inclined to accept this feminist critique --

**TSUI:** Yes, there was.

**HODGSON:** And faculty?

**TSUI:** The younger generation was more prepared to embrace it, obviously, than older faculty. And it was fine, because we did really eventually learn from all of them. And I don't think any of us would have been as intellectually enriched if we hadn't.

**WEEKS:** Thinking about the influence of, you know, outsiders and funding agencies, how do you perceive the role of the Bill of Melinda Gates Foundation, which obviously has an important presence at Johns Hopkins? You were a director of that program for several years. How do you see that evolving and what is its influence on the field of demography?

**TSUI:** The Gates Foundation has had a profound effect on family planning since 2012, which is when they did what was sort of the equivalent of the ICPD, the London Summit on Family Planning; it's been profound. They came at a time in the field of demography where many of the scholars are working on aging and other areas. But there still are a few people who are very interested in reproductive health, sexual and reproductive rights as well as sexual health. And for the Gates Foundation, itself, incorporating these issues wasn't based on an immediate epiphany. It took staff, I believe, efforts to introduce family planning as a relevant development initiative, an appropriate investment area for them. Then Melinda Gates embraced family planning’s relevance and after this they sponsored the 2012 London summit.
So the part of the field that has consistently worked on fertility and family planning, fortunately now has a champion. And it's been very heartening and also very inspiring. It also came at a time geographically when most of the attention was on Sub-Saharan Africa and parts of South Asia. The Foundation has made those their priority geographies as well. I think the Foundation had a profound effect. They are now the second largest global funder of family planning, short of the U.S. Government. They have exceeded the European donors and other private donors and they continue to message the area of family planning in very positive ways, challenging governments and communities alike to recognize the importance of contraceptive access for women and families. I think someday somebody will probably do that population projection, you know, with the lines that show this is what the constant rate would have been, and this is what the growth rate is after London 2012.

**WEEKS**: What about the role of abortion? Because certainly around the world contraception is not the only thing that women use.

**TSUI**: Absolutely.

**WEEKS**: But I noticed in the paper that you just published in a special issue of PDR, you were talking about contraceptive utilization, but I don't think you really mentioned the role of abortion in that.

**TSUI**: So I have written about abortion. In fact, we had a journal issue all about managing unintended pregnancies through abortion. I don't shy away from it at all. I certainly think it's a personal choice and a right in many societies. The problem with studying it is obviously measuring it. There's so much social stigma around it that it's very hard to get accurate data, whether women will self-report ever having it. Even with breakthroughs, like the availability of medical abortion, which you can, in many places, purchase at a pharmacy for a dollar, or the
equivalent of a dollar, women won't report that's what they have done. I think until we change the social climate around how people perceive and value abortion, we will have challenges with studying and explaining its use. You know, it isn't always just an individual woman's decision. Most abortions happen in low income settings because women weren't using something before or because their circumstances are so impoverished that this is the only way out. They can't afford another child. And that's also how abortion got legalized in the U.S., how it got public opinion to be on its side in the '70s. Until that social climate changes, I'm not sure that we will be able to really understand the factors behind abortion use. Abortion wasn't something that, under foundation funding, we were comfortable using their funds to study. But we had no hesitation to using other funding sources that allowed studying it.

**WEEKS:** Okay. That was going to be my follow-up question: Whether you thought that funding agencies, whether government or private, tended to keep a lid, really, on the research about the use of abortion?

**TSUI:** Yes. In principle they all say, you know, we have nothing against abortion research. But nearly every organization that will undertake it is a bit skittish because of the potential political ramifications, and because they've already had a period of time under the Bush 43 administration where there were ramifications.

**WEEKS:** Right.

**TSUI:** But it is so important to study both contraception and abortion. If we really are about reducing abortion incidence, we would should be ramping up contraceptive access.

**WEEKS:** Now, can we spend just a couple minutes here talking about your presidential address from last year, which hasn't yet been published? It seems as though the general theme was that
from contraception a lot of other things in society emanate which strikes me as being a way of
thinking about the whole field of demography.

**TSUI:** Population definitely--it's human capital, right? It's people. So everything emanates from
people. You can't avoid the importance of population, no matter what. And that's what always
keeps us really interested and being part of the PAA or doing demographic research. The talk I
did last year was about contraception and social vaccine. It had two parts. It had one about
benefits of using contraception, not because you were necessarily trying to control people's
family sizes but where you had access and you used it for the purpose of trying to time or have
the number of children you wanted, it enabled you to have other benefits. You didn't have
compressed birth intervals. You didn't end up having mistimed pregnancies when you wanted to
invest your resources in something else.

I tried to show how important it was for fetal development because if you have proper
nutrition during the pregnancy period, gestation period, important fetal organ development, in
particular brain development, occurs. And that brain development is accelerated through year
three and beyond. It is so important to have healthy organ development in the fetus, especially
for the brain. Cognitive development is subsequently also important. Now we're starting to see
research on early childhood development showing school performance and not just cognitive
ability are very much tied to fetal health.

There are also consequences for chronic disease, such as diabetes, hypertension,
cardiovascular diseases when you were older. If you had a compromised fetal period in
gestation, you might end up having been born low birth weight, or premature, or having
congenital anomalies. Low birth weight and the prematurity have these long-term implications
when you are 50 or 60 -- you could start to develop metabolic problems. So that was one point.
In addition, there are economic benefits from being able to invest in your children, being able to invest in their schooling and nutrition and so on.

The other point of the talk was on how contraception acts like a social vaccine. Because over time as contraceptive methods became more available, people found them very acceptable and incorporated them into their lives, family lives, especially such that the practice ended up spreading, diffusing. This change is something I actually learned from Donald Bogue--the importance of social diffusion, and he learned it from Everett Rogers. Now we're conducting social network analyses. The change is the diffusion of contraceptive practice to where in a population you have 65-70 percent of the female population using it at any given time. This situation is what Charlie Westoff called the perfect contraceptive society, and presently we experience the benefits of it. But the diffusion process is something many are trying to enable any disadvantaged community that doesn’t have access to be able to benefit the same way.

WEEKS: Now, the talk was to the PAA, obviously, but what do you see as the audience for the work beyond the publication that you put out?

TSUI: The talk was to the PAA, and asking all the males in the audience not to look at their cell phones (smile) because this is usually the first kind of reaction when people start to talk about birth control or pregnancy. The audience for this -- well, first of all, the one lesson someone told me was speak to something you know about. Previously I was thinking, well, I'll talk about some other topic, you know, like global changes and improvements in the world. But then I thought, no, I really only know about family planning. So this is what I did. To whom is it addressed? To the PAA and to the rest of the field at large that might not come to PAA, but might go to the International Union for the Scientific Study of Population (IUSSP).
Contraception is one health intervention, a public health intervention, that is as important as seat belts, fluoridated water, fortified foods. And it has a vital role. It's not just because it's tied to sex, or something that we have to hide or not talk about or avoid studying.

WEEKS: Now, can we turn our attention to the PAA itself, because obviously since there are so few departments of demography in the world, the PAA plays a different role than many organizations might. How do you think the PAA has influenced your own career, and then how have you influenced the PAA?

TSUI: I'm not sure I've influenced the PAA. But the PAA has definitely influenced my career. I started going to my first PAA when it was in St. Louis. I don't even remember if that was '77 or '78. [editor’s note—it was 1977: http://www.populationassociation.org/wp-content/uploads/PAA_timeline.pdf] I've tried not to miss any. I think I might have missed one when I had our second child, but other than that, I've always attended the PAA. I feel very loyal to it, have occupied different elected offices, served on different committees, and now hope that we continue to strengthen it as the professional society for our field, remaining loyal to its mission, which is rigorous science and service to population well-being. So that's been its influence on me. It's just been there, and it's always provided the public forum for being able to share research. And that's, as you know, probably the most important thing PAA does. It does obviously publish the journal *Demography* which is an outlet for many of us. And its membership enables networking with and learning from others in terms of what they're doing that is interesting.

WEEKS: But now as PAA president, you've got really kind of a three-year commitment; president elect, then president and past president. In those three years for you, which are the
three most recent years of the organization, what would have been the issues that you think have been important to the PAA?

**TSUI:** Well, the one issue this year, and has been important actually last year, and going forward, is being sure that the U.S. Census is adequately resourced. This year has been really more about the introduction of the citizenship question. This has galvanized many people to think about what it means for the quality of the census. The implication obviously for the census is if it's of poor quality, it spills over to counts of population, undercounts of important populations that might be served by federal programs. But also these counts affect, as you know, legislative districts, the boundaries of legislative districts and so on. So it's tremendously important. Right now, that's the one major issue.

The other issue is really keeping our field resourced in terms of population centers, in terms of demography programs. And as you just mentioned, demography programs don't really exist anymore. We should think of other ways of revitalizing them. Maybe they can't be brick and mortar type programs anymore, but now we should be thinking of new communication channels, whether it's doing virtual conferencing, doing virtual education through webinars in a systematic organized credentialed way. I don't know if we always need to be thinking about a Ph.D. in demography. But we can certainly be thinking about ways to teach people about demographic tools, even if it means doing it in the field (outside the classroom). You know, tombstone demography was one of the first ways that people learned how to construct a life table.

**WEEKS:** Right. So are those the kinds of things that have happened at Hopkins?

**TSUI:** No. We are also on the side of losing our population/demographic focus in our department, which is unfortunate.
WEEKS: And to what is that attributed?

TSUI: Actually my concerns may be unfair in terms of characterizing the whole field. Because you can feel the vitality of population here, at the PAA, in terms of the program. It's coming through social science. I think sociology is leading in terms of teaching social demography. I think the part that was called formal demography remains the purview of a few people. It's much stronger in Europe than it is here in the U.S. So maybe it's just geographically shifting to other parts of the world.

WEEKS: So when you think about Hopkins -- another past PAA president from Johns Hopkins is, of course, Andy Cherlin, a family demographer.

TSUI: And Robert Moffitt --

WEEKS: Well, yes, exactly.

TSUI: -- and Jack Kantner is the other one.

WEEKS: I was just thinking about the most recent one we've interviewed [Cherlin], but you're right, you've got four. So do you see there being a coalescing of ideas or a variety of different ideas about how the field of demography is changing?

TSUI: If I were to evaluate systematic efforts to shore up demography in any university, I would say this is really hard unless there's a huge renewal of funding, say, from NIH or NSF. But I think people find their ways, especially people who have these skills and interests, to either academia or research organizations, and they're able to flourish. Whether they ended up at RAND or at Max Planck or Australian National University or Hopkins, usually it's the selectivity of the individual skills that helps them discover how to pursue population research successfully.

We (Hopkins) do have faculty, both newly recruited and those who graduated from our programs, who are now our demography faculty, and they're doing great things. And thus was it
part of a systematic effort to build the program? To some extent. But what we need to do is to be sure that they can flourish, by being sure they're not going to end up switching to some other area of study.

HODGSON: I've got one follow-up question to this. So, if you look at the broader environment, particularly domestic environment, in which population centers try to survive and change and what have you. And particularly in the context of your own career, where you've really emphasized the importance of quality demographic research and its ability to produce better policies and programs. And that's the import of pure perspective. What happens when the larger environment does not have any respect for what evidence-based research can do in the context of policy formation? So you've mention the citizenship question, which was known to those making that decision that it's going to produce undercounts, significant undercounts. And they proceeded to do it anyway. We just had in the last week, we will stop producing evidence-based assessments of abstinence-only sex education in the schools. And we're doing it on purpose. We don't care about what you've spent your career doing and what population center research centers are all about. What does that do and does PAA have a role in trying to combat that larger environment in which all this activity is taking place?

TSUI: Yes. This has been discussed considerably here at PAA. PAA, first and foremost, is non-partisan, and its primary concern will be about the impact on scientific research from whatever changes are going on, political or social. The one thing that PAA won't do is what I did back in the early 1980s--dive for cover when soundly criticized (smile). PAA has put forward special sessions to discuss such implications--whether it’s related to administrative records linkage for privacy issues, the census implementation or how global population projections are made. PAA will always make its conference accessible to people with sound
scientific interests in sharing their research. It is not unlike the advice you received as a parent of an adolescent, that your adolescent will always challenge you, but keep communicating.

**HODGSON:** So you're optimistic?

**TSUI:** I don't know that we can be anything but optimistic right now, so yes, I'm optimistic.

**WEEKS:** Karen, we haven't had a chance to get questions from you. Are the things we haven't talked about? I've been kind of dominating the questioning here.

**HARDEE:** No. My question was sort of along the lines of Dennis's question. You obviously are a very sound academic. And that's your grounding. But you've also worked very much in the policy space with USAID, with the Bill and Melinda Gates Foundation. What do you see as the role of academics and maybe your role sort of bridging that policy or the research to policy divide?

**TSUI:** So I probably am constitutionally or by my DNA makeup (remember I used to demonstrate against the Vietnam War) not one to sit and theorize and do the research and just let it be there. I'm sure that I gravitate towards these areas, because I feel it important that good research also gets communicated. And there are a number of organizations, including your own, that feel this way, too. I think there's a communication role for academics. And one thing we can always do better is learn how to communicate findings that are obtuse in a clearer fashion. But there is also a role for people to be able to translate. I actually see this skill becoming quite popular with the graduate students in my area. Maybe it's because I'm in a school of public health; but they are not satisfied to sit and just model without the results of models being communicated when these might be important to decision-makers.

**WEEKS:** Now, you've been on a lot of advisory groups and panels in your professional career. Have you gone on those with a specific agenda in mind to push?
TSUI: No. No.

WEEKS: -- to push a particular part of science -- no?

TSUI: No. If a scientific advisory board, it's usually because there are questions to be posed to those who are members of the board that we have a duty to fully answer. If I am a member of a nongovernmental organization, like a board of directors, I’m not there to push anything. It's usually to advise on their program directions, where they go, and to be able to connect their work to parts of the spheres where I work as well. But I don't think I--others may feel differently--but I don't think I'm seen as a spokesman for a particular cause.

WEEKS: Okay.

TSUI: I think I would be very disappointed if that were the case.

WEEKS: Well, okay. It's not like demonstrating against the Vietnam War, but in terms of bringing your expertise, that is what you would be doing?

TSUI: Yes. But not for a particular message.

WEEKS: All right. What things have I missed?

HODGSON: How about words of advice for that younger generation of people just entering into the field?

TSUI: Words of advice for the younger generation. Always explore all opportunities, don't close your mind off to different ideas. There is no wasted time in anyone's career. When I became, you know, of age and growing up professionally, so to speak, I did have family needs, so I gave those priority. I don't regret any of that. I know that young women today are always faced with this challenge, but I think that the world has changed a lot and I think that there are many opportunities out there. There are just different ways you can take advantage of them. And
then if research is something young colleagues are very much interested in, they should continue to build their methodological skills.

I often say that our population field could rest, and could grow, on three legs. One is demographic methods, one is epidemiology, and the third is geography, the geographic methods. But we have yet to decide if a young person today should also master spatial, social and health sciences to address population outcomes and understand the cross-terminologies and how they converge in explaining phenomena, because they do ultimately address the same natural phenomena. If they could also master the spatial sciences, they would be well equipped.

**WEEKS:** But you have a new program in GIS and spatial sciences at Hopkins.

**TSUI:** Yes.

**WEEKS:** Are you associated with that?

**TSUI:** I wish I was. I'm a little bit dense when it comes to spatial analysis, but, yes, there’s a great new Master of Applied Science and Certificate in Spatial Analysis for Public Health.

**WEEKS:** But, I guess my question's really more, is there an attempt to wrap that into studies of population and family planning?

**TSUI:** Yes.

**WEEKS:** And other research going on there at Hopkins?

**TSUI:** Yes.

**WEEKS:** Okay.

**TSUI:** Yes. I'm affiliated with a new survey program on family planning performance, funded by the Gates Foundation. It's called Performance Monitoring and Accountability 2020 and it collects GIS data -- right now one of the new things is how do you sample survey clusters, without having to rely on census maps? They are drawing polygons and with knowledge of the
underlying population is in those polygons, they can have a probability of selection. So that's one spatial method being integrated. Another is that the surveys obtain the GIS location, the geo-coordinates of the household and because they repeat the survey in the same cluster, sometimes a respondent who has been interviewed earlier ends up being re-sampled. Colleagues are working on constructing a respondent cohort or panel using GIS data – this has obvious cost advantages. But the other piece that I hope that I live long enough to do is to see how the diffusion of fertility regulation or limitation ideation takes place among countries in Sub-Saharan Africa. How do families decide or learn about controlling their fertility?

HODGSON: I have one little follow-up question in terms of the future. I think that's a big one in terms of fertility in Sub-Saharan Africa. But if I think about the 21st century globally, anyway in context of population, it's a population-environment issue. Particularly in the context of climate change and the migration that might happen, mortality that might happen, et cetera. And as a director of a population center, can you imagine right now trying to get funding to examine in detail, with good research, the population-environment relationship?

TSUI: I think it's possible. I think it has been done. I don't think that it has been done through the Gates Institute or Hopkins.

HODGSON: Right. Even though we have an administration that's totally opposed to the notion that climate change is occurring…

TSUI: True.

HODGSON: Would there be federal resources available for such research?

TSUI: You know, I am personally optimistic that if it doesn't come from the federal government right now, it might in a few years or that there's another breakthrough source of funding for this.
And one of the amazing things from where I sit is the rise of many people with wealth--what do they call them--high-net-worth individuals.

**WEEKS:** Plutocrats.

**TSUI:** Plutocrats -- high-net-worth individuals. Bill and Melinda Gates, Michael Bloomberg, Jeff Bezos--these very wealthy people who have started their own foundations and put their personal funds to support research. That has been immensely important. We can't be too grateful for their own humanitarian philanthropy in that regard.

**WEEKS:** Well, no, that takes us really back to the beginning of things in demography with Rockefeller and the Ford Foundation.

**TSUI:** Yes. Rockefeller and Ford.

**WEEKS:** One kind of final question -- oh, sorry, Karen, go ahead. Go ahead.

**HARDEE:** So you've worked with a number of donors. And Bill Gates has a particular reputation for correcting people's numbers, for being very "numerous". And I'm sure Melinda is the same way. Is it different working with donors such as them who are also very quantitative compared to other donors that you've worked with?

**TSUI:** It's different working with a funding organization where the person makes many of the decisions as opposed to sort of a more corporate decision-making apparatus. By the time I worked with Rockefeller, it was long established as a foundation. But the Gates Foundation is still very much driven by the interest of the couple. And he is super brilliant, and so is she. And we are always keen to provide them with any information that they need, that they don't feel they have. But they have access to anybody. So when they come asking us for anything, we're more than happy to accommodate.
WEEKS: The final question I was going to ask has to do with the role of culture. Because it seems to me the question that Dennis asked about, say, planetary health and the work that you've done with respect to contraception, and we were talking about abortion, comes back to culture and how people view society, how they view the environment. And I'm wondering how you see that even in your own work as being part and parcel of the things we need to focus on.

TSUI: I think planetary health is an outgrowth of our interest in human well-being and being humanitarian. I believe it is hard to convince someone who's struggling to survive in Uganda, a rural district in Uganda, that they should be stewards of the resources in their immediate environment. I don't feel that they can't eventually think that way, but I feel right now that it's the privilege of those who are better off to be able to see the importance of conservation and protecting the environment. And I'm sure other populations will become stewards too, but probably it's our responsibility to bear both the intellectual, the financial and technical costs of being sure that we protect planetary health.

WEEKS: Okay.

TSUI: And I certainly hope we leave something for the next generation.

WEEKS: That's for sure. We only know of this one planet. Dennis, Karen, anything else?

HODGSON: Just want to say thanks.

HARDEE: Thank you.

WEEKS: Thank you for sitting down with us today. We appreciate it very much.

TSUI: Thank you!

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