

[00:00:00] **Michael Donovan:** On this episode of the Evidence-to-Impact podcast, we'll be discussing all things Census, including the decennial Census, some of the additional products of the Census Bureau, demographic trends and challenges, and measuring hard-to-reach populations. I'm joined by Dr. Eric Jensen and Dr. Raven Chandler. Dr. Jensen serves as a Senior Technical Expert for Demographic Analysis in the Population Division at the U.S. Census Bureau, and also is an alumni of the Rural Sociology and Demography Ph.D. program at Penn State. Dr. Chandler serves as the Director of the Pennsylvania Population Network, also known as PPN, a component of the Population Research institute or PRI, and is also an Assistant Research Professor in Rural Sociology. It'd be wonderful to begin with some introductions of your backgrounds. Raeven, would you start us off?

[00:00:46] **Raeven Chandler:** Absolutely. Thank you for having us here today. My Ph.D. is in Rural Sociology and Demography which I also obtained from Penn State University. My areas of interest and research focus largely on the spatial and social determinants of health and along racial and ethnic guidelines.

[00:01:09] **Michael Donovan:** Excellent. Welcome to the show, Eric, could you give us a little background on yourself?

[00:01:15] **Eric Jensen:** Yeah, my name is Eric Jensen. And like they said, I'm an alumni of Penn State University. I did my PhD in 2010 in Rural Sociology and Demography. So I've been at the Census Bureau since fall of 2009 and I've started out there working on international immigration statistics. And now I lead one of the two programs that we have at the Census Bureau to measure coverage in the decennial Census and that's demographic analysis. My research at Census focuses on Census coverage on hard to count populations on international migration, on measuring racial and ethnic diversity and also population estimates.

[00:01:53] **Michael Donovan:** Excellent. Welcome to the show. We've got a lot of overlap today and lots of items to discuss. Let's just start things off. My first question is for you, Raeven, could you just give us kind of a primer on your work at the Pennsylvania Population Network and give our listeners an understanding of why population research is so vital?

[00:02:13] **Raeven Chandler:** Absolutely. So at the PPN, we seek to be a visible program of demographic and health research application and outreach focusing on how population characteristics change and how they impact different aspects of our social structures. So what that really means is we're looking to benefit the wellbeing of all Pennsylvanians. And we look at

population change, that can impact many of our structures, including housing development, school developments, and then enrollments, retirement needs, taxes, health infrastructure, you name it basically. So everything changes with population and we need to ensure that our infrastructure is built so that we all live healthy, happy lives. What I do mostly is working with agencies across the Commonwealth of Pennsylvania, to assist them with population projections or, perhaps, maybe at local needs, such as during the COVID-19 pandemic. I've been working with the department of health, assisting them with understanding many of the rural communities and what their needs might be during these difficult times.

[00:03:25] **Michael Donovan:** Great and so much to do there that just really overlaps in our lives. Eric, could you give us an understanding of how the population division of the Census bureau kind of fits into on the federal level.

[00:03:36] **Eric Jensen:** So I work in the Population Division at the U.S. Census Bureau and the Population Division, prepares data and statistics on the U S population. And as you think, we look specifically at key demographic variables, age, sex, race, Hispanic origin. I worked specifically in population estimates area, and we produce estimates of the population, for the nation states and counties and also cities and towns. And we do that every year. And those estimates are really important because they're used to allocate billions of dollars of federal funding each year. We also have part of the Population Division that works on international programs. So they do a lot of work in developing countries to help train and build capacity to do like a Census or a survey in those countries. And so not only are we sharing our expertise nationally, but also globally. so those are some things that Population Division works on.

[00:04:33] **Michael Donovan:** It's fascinating, such a long reach into so many different areas. And I wasn't aware of the international component. I do want to talk a little bit about as you mentioned, the allocation of funding across the country, I want to talk about a policy brief that you, Raeven and the PPN released earlier this year on apportionment in the U.S., which really is the determination of seats, that each state will get, in the house of representatives. could you tell us a little more about that process and of course, why it's important and what the 2020 Census itself could mean for Pennsylvania?

[00:05:09] **Raeven Chandler:** Absolutely. So apportionment, as you've mentioned, has to do with the number of house seats and, that a state or a Commonwealth has for representation. So in Pennsylvania, we have consistently been losing seats in the house. And the reason for that is it's based on population growth so apportionment is a very important process and a very

important component of the collection of the decennial Census as well. Article One, Section Two of the U.S. Constitution requires a Census of the population be collected decennially in order to determine how many seats each state is entitled to within the U.S. House of Representatives. This is based on our population change population growth or decline. Apportionment totals are based on the number of people who live in each state, as well as overseas, military employees, federal workers, and their families residing with them who are allocated back to that home state. So each state is given one seat and the population is then used, to divide the remaining 385 seats. As of the 2020 apportionment results, each member of the House represented roughly as 710,767 individuals. Obviously this has a lot to do with how much each state is represented within, the voting of the House of Representatives. Pennsylvania specifically has been in decline as far as the number of seats we've had, since 1920. So the last hundred years. With our results of this last decennial Census 2020, we did have a slight increase. So Pennsylvania's population increased roughly 2.4%. However, that is in relation to the growth of other states, is how the rest of the seats are allocated. So based on our small growth, we are actually set to lose one seat in the House.

[00:07:09] **Michael Donovan:** And that's basically because they're capped where the number of, individuals within each district keeps growing as the population of the country keeps growing. Is that right?

[00:07:20] **Raeven Chandler:** Correct. The number of seats are 385 So if other states are growing faster, they receive more, even if there is growth, you don't have to experience overall decline to lose a seat.

[00:07:33] **Eric Jensen:** Yeah. In fact, there were some states that gained population from 2010 to 2020, but actually lost the congressional seat because it just didn't grow as fast as other states. So it's really about that relative growth. Your state compared to the other states and how fast you're growing.

[00:07:48] **Raeven Chandler:** I think this touches on a major point about why the Census is so important, as you mentioned, Michael, oftentimes individuals are not fully aware of what the results of the Census really entailed for them as individuals and representing their states. And so this is one of the prime examples and the major reason for the Census but there are many other aspects of why it's important for all of us to complete the Census.

[00:08:16] **Michael Donovan:** Census data I know is so vital to demographic work. In addition to the decennial Census, what other products Raven, do you

use, or Eric, are you involved in, throughout the year? I know there's the ACS and a variety of other ones.

[00:08:30] **Raeven Chandler:** So as mentioned the ACS, the American Community Survey is something I use probably in almost every single project. And then that gives us many things such as the percent impoverished, the racial and ethnic diversity data, housing estimates, group quarter estimates. So being a Penn State person, we are really concerned about group quarters I think we'll talk about a little later, college towns. So the Census has many great products that we as demographers use on a daily basis.

[00:09:01] **Eric Jensen:** Yeah. Raven mentioned like the American Community Survey, which is a great resource that we have. This is a large survey that's conducted every year and the data from that is used to provide information down to the community level. So it's a really large survey. It has several million households that are in the initial sample. And so it's one of the largest surveys that we do for sure. We also have the Current Population survey, which is a labor force survey. It's actually sponsored by the Bureau of Labor Statistics. we conduct that every month. And then another survey that a lot of people use, it's called the Survey of Income and Program Participation or the SIPP. And this is one that I know demographers at Penn State used quite a bit. In addition to the surveys, there's other opportunities for researchers use in Census Bureau data and other federal data. for instance, there's the Federal Statistical Research Data Centers or RDCs, and these are places where qualified researchers can access restricted use micro data from a variety of statistical agencies. So not just the Census Bureau, and they can use those data for important research questions. Penn State actually has an RDC and has since 2014. I know that some of the RDCs have been closed during the pandemic, so I'm not sure about the status of Penn State. But again, Penn State has had since 2014, one of these places where researchers can, if they get approval, they can go and use restricted micro data to use in their research.

[00:10:23] **Raeven Chandler:** And having used the research data center at Penn State as an academic researcher wanting to inform community policy, this ability is really amazing because we're taking individual health data and linking it to the communities people live in and seeing how those individual characteristics and that the community infrastructure interacts really impacts our overall health. So it's an amazing resource that really gives us the ability to build stronger policy.

[00:10:53] **Michael Donovan:** And it's a good example of a distributed network around the country where access can be metered and safe and ensuring

confidentiality and privacy standards that are a vital component of this work. I do want to think a little bit about technology and how technology supports the Census in the rolling out of all of their programs, not just the decennial Census, but the products we discussed just now. There's been some news media coverage of how technology has been leveraged to lower some costs while improving the data collection for the decennial Census. And I'm wondering Eric, if you have any comments about what that looks like, how it's been utilized, some risks associated with some of these technologies, particularly around harder to reach populations.

[00:11:40] **Eric Jensen:** So for the 2020 Census we used four new technologies to keep cost down, to prepaid, to collect. One of the other associates, satellite imagery to check addresses. So in the past, prior to the Census, we've had, this huge army of people go out and physically check every address, but we thought that there's so much cost involved with that. And so for 2020, we had a project where during the decade we used satellite imagery to check addresses. And for the ones that we had questions about, we actually went out into the field. So that saves cost quite a bit. One of the biggest things is online responses. Also using mobile devices for numeration. And this is something that was new. So we tried to get away from paper as much as possible. And then we have new ways of protecting privacy. Now I do want to talk more about idea that the Census was online for the first time. So it's online, both for self response. You could have filled it out online, but also it was online for the enumerators. So now they were actually using tablets and phones to, to collect the data. And this was a big thing for the Census bureau. This is a big improvement and a big change. As far as using technology. I have a interesting story about this. In January, 2012, I was going to a conference in Texas as the applied demography conference size on the same flight is the Census Bureau Director. At that time, his name was Bob gross. And we ended up talking to each other as we waited at the airport and we took a cab together to the conference and I asked him at one point, I said will the next Census, the online, because at that point, a lot of other countries that started doing there to study on Census online, and we hadn't done that in 2010. And so I said the next Census be online. And he said, yes, it will be. If they to ask you to say yes, it says, the problem is right now, we don't know the Internet's going to look like 10 years from now. And for me, my mind was blown a little bit. Cause I'm like, okay, That's really interesting. What's the internet going to look like in 10 years and you think about it in 2012 for me the internet, and for most people, it was like a desktop computer or a laptop. And by 2020, the internet was your phone. It was a tablet it was your watch, so there's all these ways that changed.

[00:13:43] And when you think about the decennial Census, we're planning that 10 years or more in advance, we're already working on a 20 30 Census and

thinking about that. And as we're, making these plans throughout the decade, we have to change . And that's just the way that, we used new technologies for 2020. So again, the ideal thing for people in 2020, as far as cost and everything was through respond online. But we know that some people have limited internet access so for instance, our initial contact strategy we built into this, that digital divide.

[00:14:14] So we use the American Community Survey with classified households based on their internet availability for their community. And we had two different groups. One was internet first, and the other was called the internet choice. And so for the end of that first group, they received a letter telling them about the Census, asking them to complete a questionnaire online. Then for the internet choice group, they received a paper questionnaire and information about completing it online. So the idea was they might not have very good internet. And so we'll give them the option of paper, but saying, please do it online if you can. That's one way that we looked at that digital divide and tried to incorporate it into our planning for the 2020 Census. But we know that especially like rural areas and other places, they might not have as much internet accessibility. Another area that we use technology in the 2020 Census that might have kind of differential impacts across groups is our use of administrative records. And this was a new thing again for 2020, but we use administrative records to numerate some households where we were not able to get a response but yet we still had good administrative records for those households. So for instance, we had gone several times knocked on the door and no one responded and based on some records that we had, we decided it was enough information to enumerate the household. And we use this approach for about 5% of households total. What's interesting there is the some populations might be represented in the administrative records. And some might not. I mentioned earlier, I had done a lot of work on the foreign born population and international migration, and that's a group that we don't have as strong of administrative record. So that's a hard to count group and they're also hard to find in administrative records. And so that could potentially be an issue. But again, we only use that method for a small subset of households where we felt that we had enough records and good enough records that we could do in an enumeration.

[00:15:59] **Michael Donovan:** So really a collection of a variety of technologies and techniques to really try to get at a more accurate number. That's a moving target. I'd imagine. What are some differences that you've seen in the nature of hard to reach populations? Is there a more of a rural component? Is it a an urban component? What are the racial and ethnic breakdowns.

[00:16:23] **Eric Jensen:** So I talked about hard to count populations. A lot of that has to do with Census coverage and groups that we've traditionally seen large undercounts for for instance people who rent versus people who own, we see that renters have lower coverage than owners. We also see a lot of differential and a lot of variation in coverage by race, ethnicity historically black males have been one of the largest under-counted groups in the Census. So there's definitely patterns that we see consistent patterns over time. I do work on Census coverage. That's my focus. One of the things that I like to show is trends from like 1960 to 2010. And now we're going to be able to move that to 2020 and see. But if you look at coverage for all groups has generally increased over time, but even in 2010, we still saw a big differential between the total population. It might be adult black male population. So coverage has improved, but there's still purpose differentials. So there are definitely populations that are harder for us to count. Again we see that varies by race, ethnicity. Also whether people own or whether they rent is another strong indicator of under count. So another group that's hard to count, but a lot of people don't realize is young children. And we talked about young children ages zero to four. So it's before they start kindergarten. What's interesting is that in the 2010 Census, young children zero to four had the largest net undercount of any other age groups. And this was 4.6% for the total population. And so one thing I see, this is a persistent problem that we see over the years in Censuses, it's also not something unique to the United States, but also other countries see an undercount of young children in their Census. And we don't really understand why. There's been a lot of research, I've been involved in lot of research in the last decade, to understand that. But we don't have one thing, we don't think it's one thing either. We know that it's related to race ethnicity. We know that it's related to household structure. But it's just something that we're doing a lot of work at the Census bureau to try to understand, but also to try to improve there, there were several things done for the 2020 Census to help improve the count for young children. There was, for instance, there was language added to the form that talked about including young children and, said like stepchildren, grandchildren and other things. So there was language arts support also. The training materials for enumerators talked specifically about young children. So we could get this issue out there that people could understand and we can hopefully improve the count for that 2020. We won't know what the coverage rate was for young children in 2020. We won't know that until next year when we have more detail data released from the Census. I did want to say one of the biggest factors that we found in our research looking at the on young children is household structure. So young children are more likely to be missed when they live in what we were calling complex living situations. So for example, if they live in a blended household with step-parents or other stepchildren, if they live in multi-generational households, like with their grandparents, or if they live in a house full of non-relatives and this is really family demography when you

think about household structure and living situations and kind of those issues and Penn state is, such a great place when it comes to family demography and thinking about this. So I could see collaboration between the Census Bureau and family demographers try to understand more about this.

[00:19:50] **Michael Donovan:** I know as well that there was some release of new information in mid August on the racial and ethnic diversity and local populations based on the Census data. Raeven, did you have anything you wanted to add about kind of diversity question here?

[00:20:06] **Raeven Chandler:** Absolutely. So in my line of work, obviously very important that we understand these differences in our communities and growth structures so that we can provide services and really assist our neighbors and all their potential needs. As we know that different racial, ethnic groups have different needs, healthcare wise, and really improving our wellbeing. The numbers were released and overall in the nation the white alone population, so it's people who check white and only, and no other race or don't report being Hispanic or Latino, decreased by about 8.6% in the last decade. So that's nationally. In Pennsylvania, specifically, the number that we saw, the biggest growth was amongst the Latino and or Hispanic population, which increased today about 3%. So it was 5.1% in 2010, up to 8.1%, which is a pretty large for a place that is not considered very diverse. So Census Bureau and maybe Eric can speak a little bit more about this, but they have a diversity index for every state and it tells us what the random chance that two people could be chosen, and they would be of different racial and ethnic groups. And so Pennsylvania is really on the low end of that at 44% in chance of randomly picking two people from different groups, for comparison, a place like Texas, is at like 67%. So that increase amongst the Latino population is really driving the diversity change in Pennsylvania. And as Eric mentioned previously talking about language and this would seem to have been something that we needed to note about the Latino and Hispanic question language.

[00:22:01] **Eric Jensen:** So for 2020, there are some improvements that we made to how we ask people about their race and ethnicity. And specifically there were improvements to how we coded responses that we got. Now we feel that we've made these improvements and so the data is better, but we also know that I make some harder to compare to the 2010 Census results for example. I do want to mention, we've always changed the race question that it's never been the same from one Census to another. And so we're always trying to improve and update how we measure race, ethnicity. But there was a change, and especially how we, not only how we asked the question, because we gave more opportunities for people to respond. We had write in boxes for all of the major

race categories, which is not something we've done in the past. And then in how we coded people, they allowed people to to say more about their own identity. When you look at the results, we saw a big increase in the multiracial population. And we feel that this is an improvement over the past where we limited because of space restrictions, either on a form or character restrictions in how we process and coded things, we weren't able to capture all of the information that people right at us, but we were able to do that in 2020, it was mentioned about diversity, the 2020 Census results show that the U.S. population is more racial and ethnic diverse than how we measured it in 2010. Because people might have different definitions of diversity, so the concept of diversity that we is the Census Bureau refers to the representation and relative size of different racial and ethnic race within a population.. And diversity is maximized when all groups are represented in an area and they have equal shares in population. So for 2020, we used some new measures, new kind of for us new measures of race and ethnic diversity. And I was a part of a working group that sort of put this together. The working group included subject matter experts in race and ethnicity, demography and data visualization. And so in August, we released several diversity measures that we developed through our research, and also through collaborative discussions with the working group, as well as with consultants and external experts and advisors. Actually one of the experts, so we reached out to to get, some advice about different diversity measures with John Iceland, who is a Distinguished Professor of Sociology and Demography at Penn State. He advised us about different summary measures that we could use. And as Raeven mentioned, we ended up using the diversity index. And that's not a new measure. That's something that's been used by social scientists for decades that we've found it to be a very important measure and it tells us the probability or the chance that two people chosen at random will be from a different racial or ethnic group. So in 2020 at the national level, there's a 61.1% chance that two people chosen at random were from different races or ethnicity groups. And this was higher than what we thought in 2010 when the diversity index score was 54.9%. In August of this year, we released our redistricting data. And this was the first time that we had released any data from the 20 20 Census on race and ethnicity. We produced several data visualizations and one that focuses on racial and ethnic diversity. So this has several different diversity measures at the national, state and county levels. So I definitely encourage our listeners, if you're interested in race, ethnicity, and diversity to go to [Census.gov](https://www.census.gov) and they click under visualizations and they should be able to find these pretty easily.

[00:25:23] **Michael Donovan:** And it really underscores how improving the coverage of hard to reach and minority populations in the Census has major equity repercussions, as we think about allocating those billions of dollars and seats in the House of Representatives, right? For representation. Deeply vital

work. And really important to this conversation is what does the complexity behind non-response the decisions by individuals or families to not respond? Or were we not able to get to them for other reasons? Eric, do you have thoughts on that?

[00:25:59] **Eric Jensen:** That's a really good question. So the Census Bureau conducted research prior to 2000. To understand why people do and don't fill out their Census forms. So this is called the Census Barriers, Attitudes and Motivations Study, or C-BAMS. The results showed some interesting things. So some of the barriers to responding, why people said they weren't going to fill out their form or might not fill out their form was one being unfamiliar with what the Census is and how it is used, concerns about data privacy. That was a big one. Also fear of repercussions. So especially for the foreign born population, something happening if they fill out the Census. Then another one was distrust in all levels of government. And then finally thinking that it didn't benefit them personally. So these were the main themes that we saw in that C-BAMS study. This study was conducted before 2000, which needs to happen before COVID and that adds a whole other layer of kind of complexity about why people might or might not have responded, especially responded to in-person interviews. If someone came to their door, whether or not they opened to them. And so there's some reasons why people might not have responded.

[00:27:08] **Raeven Chandler:** I believe that, the Census and academics are in agreement that given the COVID-19 pandemic, we feel pretty confident in our response rates however, living in a college town, I know people are a bit concerned because that population was not where they would normally live in the March, April collection era and in a town like state college, the student population really shapes the town for nine months out of the year. And then being gone really affects what our town looks like. Could you talk a little bit about what you have found or what the Census has found in general on college towns across the United States? Given the trying times we went through during collection.

[00:27:51] **Eric Jensen:** That's a great topic. I can't speak specifically to the experience of college towns but I can talk about that process that we had for enumerating students. And, again, I mentioned that I do work on coverage and what's interesting is if you look at coverage by age, we usually see over counts for the college age population. And we think it's cause they might get counted in two places and that could have been what happened this time as well. But so the way it works is if you live in student housing, then the Census Bureau works with the representative from your student housing facility to ensure that you were counted in the 2020 Census, at least that's how the plan was that we would

work with someone at your dorm to do the count. If you lived in a private residence, so off campus and not specifically for college students, so like a rental house or an apartment that you might've shared with roommates, then you should respond to the 2020 Census online, by phone or by mail. But we know because of COVID-19 many students were sent home and not living either in student housing or in their college community at the time of the enumeration. So historically, that contact person at the college or university they mainly use methods that would allow people to still self respond, but, because of COVID-19, that contact person often had to answer on behalf of the student using facility records. So this was a big deal that for a lot of students, we got records that were coming from university and not necessarily a self response. But the Census Bureau has different residence rules about where it should be counted. And these really guide the enumeration. It tells you who should be included in your household on April 1st when you're filling out the Census or that Census for that reference date. And the Census Bureau's residence criteria stated that in most cases, students living away from home at school should be counted at school, even if they were temporarily elsewhere due to the COVID-19 pandemic. Now how that played out for people, we don't know, say we're counted both at school and at home. We don't know yet. We don't have the data yet to fully understand that. So that's how it normally happens, but we know they were allowed to disruptions because of COVID-19. Are you seeing anything specific, Raeven, in State College that you could talk about?

[00:30:11] **Raeven Chandler:** There has been a little bit of concern from the borough in that their numbers are lower than the estimates. However, this is a great segue, I think, to talk about why I love dealing with Census data is that we can look at these topics on multiple geographic levels. So when we maybe are talking at a state or a county level, things are a bit larger. Some of the tiny differences and explanations can be missed. So we're talking about a borough within a city, within a municipality and within a county. So when we start honing in and looking at those things we're seeing there's more movement in this other block group than we thought there was going to be. And maybe that's the explanation really rather than that's population loss. So it's important that we're all talking about the same geographic level. I think that in general, people are just concerned from, we know that the college students are gone. From my perspective and what we're seeing it's nothing of too much concern at least once we start drilling down at different geographic levels.

[00:31:24] **Michael Donovan:** And it really gets down to resources. Where they're going and how they're going. Eric, I wonder if you could, out of my curiosity, explain what the process is, post collection and prior to release of information, are there data validation techniques in play, data cleaning? What is really going on behind the scenes at Census to get these products available for

the various consumers, whether they be RDCs and restricted data levels or the general population estimates.

[00:31:55] **Eric Jensen:** So collecting data is really the first step. And after that, there's a lot of editing and processing that goes on what we do for instance, is we have to come up with a value if you skip the question. And so we have procedures for doing that. A big important thing for 2020 is protecting the data, and so we've done a lot with disclosure avoidance and data privacy. So that adds another step to the process where we have to make sure that we're not releasing personal information. And then finally just edit and review. We do a lot going through. Does this make sense, are there any issues that we need to correct. And that's a normal part of doing the Census. In fact, you might have heard last year that there were anomalies that were found in the Census data, and that was picked up in the media. And a lot of people had questions about that. That's a part of every Census that we have these anomalies and anomalies don't necessarily mean errors in the Census. It means that during the process and we found something that we felt we needed to correct, and it just shows our review process, but as we're preparing the data that we're checking things and making sure that the data are consistent in ways we want them to be consistent and that any issues that we find that we're able to resolve those. And again, there's a lot that happens afterwards, after we collected. In order to get them ready for release.

[00:33:11] **Michael Donovan:** Great. Thank you. That satisfies my curiosity. So really what this boils down to is, what's the importance of the Census? What is this massive investment of federal dollars going into and how does it really impact us for generations to come? Eric, you have some thoughts on that.

[00:33:30] **Eric Jensen:** Yeah. So the importance of the Census, as Raeven mentioned earlier, that the constitution requires that we have a Census in order to do apportionment of representatives in the House. Beyond that, Census is used for so much, and one of the biggest things is for shaping decisions about how billions of dollars each year flow into communities. And it's not just in the year of the Census, but it's every year after that. So healthcare, emergency response schools, education programs, roads, bridges, they're all impacted by the Census. And you think about why is that? A small town that doesn't have a very large population doesn't need as much, federal resources for roads or other kind of projects as like a larger town, and so that's why population is used in those kinds of equations. Counting everyone living in community helps community leaders plan for the future. I'm also, yeah, it helps us identify where there are greater needs and where we need to have more resources. So since this results informs planning and funding decisions for communities for really

important public services. These include hospitals, health clinics emergency and disaster response. So like fire and other public safety services, schools and education programs, roads, and bridges, businesses, and economic development. Also housing services and programs for special populations, family, and social services, even things as simple as water and waste management. Having that information from the Census allows people to plan and to also it's the funding as well. So there's a lot of important decisions that the Census helps make.

[00:35:02] **Raeven Chandler:** The other process that's really important specifically in Pennsylvania right now is the issue of redistricting, given that we're losing a House seat and ensuring that individuals are again, accounted for. It also allows for a more equitable redistricting so that we know where people are living and that we're making those right decisions. And so that's a huge issue to ensure those hard to reach populations, particularly racial and ethnic minorities, other rural individuals, right? That's a very big issue here in Pennsylvania. So that when we come to the process, when we have to redistrict and the folks across the Commonwealth are making these decisions, we have the proper information to ensure proper and equitable representation.

[00:35:46] **Michael Donovan:** So really it's so pervasive across our society in so many different ways. We've talked to a little bit about some of the ways that we can better intersect our communities from an academic perspective and then practitioner perspective here. Eric you serving from the Census Bureau and Raeven from Penn State, you talked about task force participation seeking guidance from the academic community, the really interesting geographically distributed research data center model. What other ways can we better work together? How can we better efficiently and effectively reach our goals together? I don't know if either of you had any thoughts on that.

[00:36:31] **Eric Jensen:** I think working together, people at federal agencies and working with academics, I think that's so important and it's something that I've done a lot throughout my whole career. I mentioned earlier that I lead one of the two programs that we use to measure coverage at the Census Bureau and that's called demographic analysis. And for the last five years or so, I lead this program. Demographic analysis is one of the two ways that we measure coverage in the Census. And we develop estimates of the population and to do that, we really have to understand a lot about demography, a lot about the data and methods that are available. And so we've had this model where we work with academics. We work with researchers in fact, Jenny Van Hook, professor of Sociology and Demography here at Penn State, she's advised us on our methods for the demographic analysis, both in 2010 and in 2020. And that's been really invaluable to have their input. Her expertise is in international

migration and we really asked for a lot, had her review things and talk about methods and talk about data. And again, having those kind of relationships, it's just, it's been really good to get that feedback. I also do work on race and ethnicity and measuring diversity and there we've reached out to different academics and gotten their feedback. And as we talk through different approaches that we're thinking of taking and, helping them providing their feedback on the data and methods that we're using it, it's just invaluable.

[00:37:54] **Raeven Chandler:** Similarly, the data collected by the Census really informs our own surveys as academics that we may want to collect for instance, I base my sampling frame on what the population is across Pennsylvania based on the Census numbers. So I need those numbers to be proper so they can inform other research I'm doing and collecting on whatever health topic that may be so that the two really feed into one another. I would like to work and build a stronger relationship with the Census and local agencies, to bridge that gap. That's where I see the largest gap between academia and policy and the information we need is that state agencies may not follow similar survey design or question language, which can make it really difficult to advise them with their administrative records if they're not aligning with the information we have from the Census. So I can't make comparisons to, to the larger information we have about the population which can be challenging when they want to know how do they better serve their communities based on this one agency, if they're not aligning with the larger information they have.

[00:39:17] **Eric Jensen:** So that's a great point, Raeven, about having those connections be not only among academics, but also, state agencies. And I worked in the population estimates area and for several decades, we've had this federal state cooperative for population estimates. So, FSCPE, and we have representatives from every state that are part of this group and so as we're making changes in our population estimates, we informed this group and we actually get some data that we use in the population estimates from this group. We have this group help us to review data before it's finalized. It's this great opportunity that we have to work with, like people at the state level. And we go to them to help us get information like at smaller levels of geography. But that's been a great relationship and I could have an example of kind of the Census and our state partners working together. For Pennsylvania, our FSCPE representative, Sue Capella is at the Pennsylvania State Data Center. And I know I've talked with her specifically in the past about Penn State and about measuring college students, and just population issues surrounding Center County and Pennsylvania.

[00:40:25] **Michael Donovan:** It really gets to the challenge of federalism here where we have 50 states and thousands of local governments to be operating with. It really gets at our challenges of de-centralization. Any other ideas on how we can better improve our relationships? It does really seem to be a really wonderful bi-directional relationship between the Census Bureau in particular and academic demographers and sociology here. Is there a better integration perhaps with the other federal statistical agencies that could be perceived or could be improved? I know you mentioned that the RDCs often do have data sets from other agencies beyond Census. Opportunities for a better integration there?

[00:41:07] **Eric Jensen:** I can't speak to other federal agencies, but another way that there's a good relationship between Penn State, and for instance, Census Bureau is through training I mentioned, I came from Penn State. That's where I did my PhD. And the year I finished up, there were four or five of us from the demography program at Penn State who came to the Census Bureau. And I currently work with several other Penn Staters that have come since then. Penn State has been a great training program, so strong, it lets you do the dual title degree with different programs. Like I came from Rural Sociology and demography. So did Raven and so it really lets people have a broad perspective and it teaches a really good skill set. The Penn State demography program is very strong on methodology and always has been, and it's the kind of methods that we need at the Census Bureau, that we use at the Census Bureau. So that training has really been good for us. Like I said, we have a lot of staff at Census Bureau who came from Penn State. Also sometimes Penn State seeks out some of our expertise. I actually am part of the advisory board for the Penn State Applied Demography Program. So because of the applied demography work I've done it at the Census Bureau, they wanted some feedback on their programs. It's definitely a two-way street, but that training is so important. And like I said, a lot of staff at the Census has come through the demography program at Penn State.

[00:42:29] **Raeven Chandler:** I obviously concur with Eric's statements as an alumni as well. I will say as an academic that does a lot of applied work, an area that I think demographers and those of us in the community that very much care about the issue of the Census, advocacy could probably be one of the largest things we could do. I personally answered so many questions last year concerning the Census. And quite frankly, my job does not exist without people filling out the Census. I can not conduct research without it. That is how I learn about what's happening in communities and how I do link it to health issues and how I say our communities are making us healthier or sicker. And a lot of people have those barriers to filling out the Census, as Eric mentioned previously, and it's our job to really inform them of why it's so important. So I

think us reaching out and really letting the community know why this matters and why it's not just some paper trying invade your private life. It really is quite important.

[00:43:33] **Eric Jensen:** I think the advocacy part is a really big deal. I know that we, the Census Bureau has gotten so much support from members of the community and from the academic community. Not just because a lot of academics use our data, but just they realize the importance of the census and having good quality data. And like Raeven said, a lot of times, professors are answering questions about the Census and we really appreciate that. And having that support from them.

[00:43:57] **Michael Donovan:** I do want to give you each an opportunity to do some closing remarks or any thoughts. I can put Eric on the spot here. Anything from you?

[00:44:07] **Eric Jensen:** I'm just grateful for the opportunity to talk about the 2020 Census. Every Census is a really big project and the 2020 census was that again. It's such a big effort by so many people and it impacts communities and it impacts communities not only in the Census year, but for the next 10 years and so we want to do as well as we can with it. And so this has been a great opportunity for me to talk about the 2020 Census, and some of the issues surrounding the census and also the opportunities.

[00:44:39] **Raeven Chandler:** I second, everything Eric said it's a great privilege to talk about something that really, as I mentioned before, informs so much of what we do as a department and a field of study in general, without the census, it just wouldn't be possible. And so we're grateful for the work they do and we really just are appreciative of every person who fills that form out and gives us that information so we can improve our communities based on research and policy.

[00:45:08] **Michael Donovan:** Excellent. Thank you both so much for your time today. As a reminder to our audience, today we're speaking with Dr. Eric Jensen, who serves as Senior Technical Expert for Demographic Analysis in the Population Division of the U.S. Census Bureau, and also a proud alumni of Rural Sociology and Demography here at Penn State and Dr. Raeven Chandler serves as the Director of the Pennsylvania Population Network, PPN, a component of the Population Research Institute, PRI, and also serves as an Assistant Research Professor in Rural Sociology, also at Penn State. Thank you both so much for your time. I really appreciate it.