Episode 3: Lena Etuk

# KL: Katie LinderLE: Lena Etuk KL: You’re listening to *Research in Action*: episode three.

# [intro music]

# Segment 1:

# KL: Welcome to *Research in Action*, a weekly podcast where you can hear about topics and issues related to research in higher education from experts across a range of disciplines. I’m your host, Dr. Katie Linder, director of research at Oregon State University Ecampus.

On today’s episode, I’m joined by Lena Etuk, a Social Demographer at the Oregon State University Extension Service. Lena has a Master’s of Science in Sociology from the University of Wisconsin-Madison, with a specialty in social stratification and demography. Since joining the OSU Extension Service, she has worked to increase Oregonians’ access to social scientific information that can help them and their communities realize positive change. She works with community members, non-profits, government, public agencies, and Extension Service faculty to create, recognize, and capitalize on opportunities for data-driven decision making.

Welcome to the podcast, Lena.

**LE**: Thanks Katie.

**KL:** So I first heard of you, Lena, on a video clip where you were discussing social demography at Oregon State and it was something that was sort of internally circulated at the university and I thought, “I don’t really know very much about social demography. Let me see what’s going on with this.” And we had had lunch and a chance to chat and I thought, “What a great podcast episode to talk about this.” So first let’s start, what is social demography for listeners who may not know?

**LE:** Yeah, most people that I run into don’t know what social demography even at the university, so you’re not alone. So social demography is a sub-branch of demography and demography is the scientific study of human population. They study the population composition, population size, population distribution. And demographers are really concerned about like population at time one, population at time two, and then figuring out births and deaths and migrations because those are the things that affect populations at the different time periods.

So demographers I think of as kind of boring, but they are the core of social demography. So that’s the core of demography, but then social demography is the scientific study of all the socioeconomic and sociological processes that affect population size, composition, distribution. So we study things like inequality because inequality has an effect on population change, as well as the composition. We study things like unemployment because those things have an effect on perhaps migration or the composition of a population. So we’re concerned with those sociological phenomenon around population change.

We study those things generally concerned about how they affect population change at the end, but sometimes we also just focus on things like unemployment just generally and we don’t really care about how it affects population size. So that’s kind of, that’s sort of the genesis, but then I’m something also a little bit different from a social demographer. I’m an applied social demographer, so I’m not only concerned about those sociological things surrounding the population change, but I’m also trying to put that into practice and put it into practical use for folks that you’ve listed. Like folks at non-profit, agencies, government, et cetera. So really trying to take those methods and data that we study as demographers and social demographers and put it to practical use.

**KL:** So I’m curious and I’m wondering if we can think of an example of this. So when social demographers look at populations are they thinking primarily in short-term or long-term? And I’m also, so the thing that immediately came into my mind thinking about a short-term was like post-Hurricane Katrina.

**LE:** Absolutely.

**KL:** Like we saw serious changes in New Orleans and the populations there and I’m wondering if you can speak to a specific example – maybe that or another one – and what are kind of the differences between short-term and long-term and how social demographers look at those issues?

**LE:** Yeah, yeah. Social demographers are actually, we’re quite involved in studying the post-Hurricane Katrina population distribution and sort of effect. Because, absolutely, we care about how populations change over time. We care about it in the short-term and long-term. So we look at population projections. We actually sort of project into the future and we look at current population trends. There’s also historical demographers that go back in time to look at how populations have changed as a result of maybe having better records now or new records emerge. So there’s looking at past, present, and future population change.

I’m trying to think of some other ones. So obviously we have lots of, right now in the current discourse, debates around immigration. So demographers are absolutely core at that conversation. Looking at migration from Mexico, but also other parts of Central America up to the US and looking at how policies are affecting that, et cetera. So demographers are really involved in all those sorts of types of issues.

**KL:** So in the applied work that you just mentioned, what are some of the kinds of maybe decision making or outcomes that are coming out of the different kinds of data that social demographers may collect? You know if we look at projections, how does that impact the various agencies or communities that you work with?

**LE:** Yeah, so one area that demographers are traditionally active in that affect something that we can all probably relate to is school enrollment projections. So schools, right, have to figure out how many teachers they need, how much classroom space they need. So demographers, very frequently, are engaged in doing school enrollment projections and that has a very immediate effect on hiring practices and building infrastructure for schools. So that’s just one example.

But, of course, demographers are used in other parts of agencies or even business sometimes. So sometimes demographers are engaged in marketing from a business perspective because we study people and we know how to measure people really well. And so sometimes we’re involved in marketing. Also from a sort of agency perspective, demographers, again, are good at studying population size and we’re good at defining populations. So if an agency is collecting information about their clientele or the people with whom they’re interacting, demographers might be involved in developing those instruments; sort of the intake forms or what have you to gather data about, you know, what’s the age, sex, race, ethnicity, those sorts of types of questions from the clientele that those agencies are interacting with. And we’re good at building data systems because we’re always trying to collect large amounts of data about people and so we have a lot of experience building data systems and data management systems for those sorts of data points.

**KL:** So one of the largest social demography projects I would imagine that folks are aware of is the census. Yeah, can you talk a little bit about how social demographers, and I would imagine there is a wide range of how social demographers engage with this kind of large data that is available maybe at the federal level or at the state level? And it sounds like social demographers are also helping to create that data as you were just saying. But what are some of the ways that I would say you’re kind of interacting with that data or also just maybe synthesizing and trying to find relationships between the different data pools?

**LE:** Yeah, so we’re involved. There are different types of demographers involved at every stage basically. So the census, technically the census I would call more core demography as opposed to social demography, but there’s a social aspect to it as well. So there’s demographers involved in figuring out how to design the sample, how do you, or not the sample because it’s the census. How do you effectively reach out to all different types of people in order to realize 100% population count? Different types of populations interact with data collection in very different ways, so that is more of a social demography thing. That is more of a sociological study to understand how people, different groups of people, some who may trust the government more than others, how likely they are to interact with the census and how likely they are to participate in it. So that type of information informs how the data gets collected for the census. So some groups, I know in the last census there was a very concerted effort to not undercount Latinos. So, for instance, there would have been a lot of studies that went on during the prior ten years to figure out, ok how can we best reach out to Latinos across the US to make sure there’s more participation. And so then those protocols would be put in place in the data collection. So that’s at the data collection phase.

Then in terms of the actual tabulation of the data, demographers and statisticians would have been involved in that. Figuring out the weighting that may have needed to happen or imputation that would have happened. And then putting the data together on the American Fact Finder, which is the public tool that people can use to extract the data.

And then, of course, demographers are involved in analyzing the data, right? And that’s where more of my work is involved. I help pull that data from the website of the Census Bureau, and then translate it and help people in the field understand how to interpret it and make decisions based on that. So demographers can be involved in every aspect from start to finish.

**KL:** So I find this completely fascinating because there are so many areas of research where these niche pockets that you, of course it makes sense, you know. We need to project classroom size, but you don’t quite know who’s doing that work and who’s engaged in that. So I find that really fascinating. Well when we come back, we’re going to take a short break, and then we’re going to come back and hear a little bit about the applications of social demography and also some of the specific skills that Lena alluded to that social demographers need to be successful.

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# Segment 2:

**KL:** So Lena, in the previous segment you had mentioned that social demographers had some kind of specific tools and skills that help them in their work. And I’m wondering if you can elaborate a little bit more on what are some of those tools and skills that social demographers bring to the field?

**LE:** Yeah, so generally demographers are known for being quantitative in their methods. So looking at numbers, whittling people down into numbers; not looking at qualitative data. Though that is not, qualitative demographers do exist and I’ve done some qualitative work as a demographer, but generally we’re known for focusing on statistics. And the type of statistics that we look at really are quite broad. We use econometrics methods, so regressions as well as other types of econometrics. But we also use things called life tables. These are really helpful for population projections and then also understanding the age, sex ratios and the dynamics of populations. And life tables are really complicated, I’m not going to talk about them right now, but it’s a very specific type of method that demographers use that other social scientists might not even know exist. Also helps you understand and predict life expectancy. It’s just a giant matrix of numbers of people by age and sex, et cetera.

So anyway, we use those types of methods and generally we focus on either secondary data, so data that somebody else has already collected for us. So that might be the federal government or a state agency, and we analyze those data. And I would say that probably the majority of demographers fit into that category of analyzing secondary data. But then there are other demographers that collect their own primary data. Let’s say they’re working with a population that hasn’t really been studied very much or they’re exploring a research question that hasn’t been collected by some federal or state agency. Then they have to go out and collect their own data. That also accounts for administrative records too. So sometimes we’re looking at administrative records that some agency is collecting on their clientele, but sometimes we might be involved in creating those data as well. So those are, so there’s statistical methods that we use, data collection methods that we use, and I think that’s roughly it, yeah.

**KL:** So are most social demographers kind of generalists or do you also find people who specialize? And if they do specialize, in what kinds of areas?

**LE:** Yeah so it really depends. I’d say generally, well actually, yeah, let me take that back. In the academic field demographers tend to be specialized. Specialized looking at marriage specifically, maybe among a certain population group, or looking at births, or studying fertility among a certain population group. Applied demographers really vary.

Some of them, if an applied demographer happens to be in a state or in an organization where there are multiple applied demographers, then they can specialize. But for me myself as the only applied social demographer at Oregon State and one of a few in the state of Oregon, I tend to be a little bit of a generalist because there’s lots of demand for different types of demographic analyses. So I kind of have to be a little bit of a jack of no trades. I do know my boundaries, however, and don’t cross those. Generally I have to be a little bit more of a generalist to satisfy those needs.

**KL:** So it kind of sounds like it depends of necessity a little bit and also just kind of where you’re situated within your professional role.

**LE:** Yep.

**KL:** So I have to admit, when I first heard about your role and, you know, that we have a social demographer on campus I immediately thought, “How can I use this person?” in the best sense of that. How can I partner with you and how could I think about ways that your work could somehow impact or influence the work that I do as a researcher here at Oregon State? So I’m wondering, you know, what are some of the ways that social demographers partner with researchers? And, you know, are there projects that maybe you’ve been engaged with? And what are the kind of skills that you brought to the table in those collaborations?

**LE:** Sure, yeah. So one in particular sort of jumps out at me. It was a long-range study of the obesogenic environment, or the factors of the environment that contribute to obesity in Oregon, particularly rural communities. And I was brought in on that project for a couple of reasons. One is that I’m focused on rural Oregon and so I sort of have a background in rural Oregon communities, so I could bring that to it. But also in that study they were trying to select particular communities based on the attributes of those communities. They wanted to target specific types of like low-income, again rural communities with some obesity in them. But actually that wasn’t the dimension, we were mostly focused on distance from an urban area, poverty, and rural status. And so because I have access to all the data about communities – because I’m a demographer and that’s one of the things I focus on, studying rural communities – I was able to put together all the data for all the communities and stratify those into different groups of communities. And then they could sample or select a few communities, I believe they chose six, out of the large number of communities across Oregon that fit their criteria and then represented a diversity of characteristics. So I was helpful for them in terms of figuring out how to sample communities.

Also I worked with them because they were studying the physical environment of communities they were going to be doing some mapping of community characteristics – i.e. those factors that contribute to obesity or sort of prevent people from eating healthy and being physically active. And they were also trying to collect data about the factors, or the attributes, of the community that were actually fostering healthy eating or physical activity. And that they were trying to put into a mapping interface and I have GIS, or geographic information systems, expertise and that’s a mapping tool. It’s a mapping software that a lot of applied demographers are actually getting trained in now. I think it’s pretty much standard in applied demography coursework these days. So I was brought on to help put the data together in GIS and analyze the data in that way. Those are the two main functions that I served, but because I have also experience doing primary data collection as part of my generalist demography role here, I was also able to help figure out how to ask the right questions and how to develop data collection protocols and methods for the team.

**KL:** So when you mention the GIS skills that you brought to this project, it makes me think of the different ways that data can be visualized or shared with people. I have to admit, when I think of social demography I think of a lot of tables of data.

**LE:** Yep.

**KL:** And just, you know, numbers and a large quantity of data. And I’m wondering if you can speak a little bit. I mean GIS sounds like one way that data can be effectively visualized. But are there other ways that you’re working to visualize data to make it accessible to people, like in communities as you’re working in these applied projects?

**LE:** Yeah. Well we’ve definitely found over the years that maps are the most engaging. When people see maps they get the data in a way that a table or a chart just isn’t going to do. They get to see themselves, they get to see their community visualized, and they say, “Oh, right ok. Now I get it. I see that. I see that 25% of my community is X or what have you.”

But certainly. We also use, we like to use charts, so line charts, trend over time data, as well as pie charts. It really depends on the data and the indicator that you’re looking at. But I also oversee a website that’s called the Rural Community Explorer that really does seek to provide public access to data for Oregonians across the state. So we present data, we present data in multiple ways. Right now actually we’re working on expanding our data visualization. We’re going to be integrating maps more fully into the data, the data visualization tools. But we also present data trend over time. We used to present giant tables and we’ve actually found that because times have been changing, the Internet has changed and our ability as public users of data, really we’ve gotten a little bit more mature. We can, we like to see charts; we like to see graphs over time. So we’re moving actually more towards that. So trend over time data with line charts, also looking at we have bar charts as well where you can sometimes drill down. So let’s say you’ve got an indicator like percentage of high school students that dropped out. You see the percentage for the particular school, the particular county, and if you click on it then you can actually see broken out by race and ethnicity for instance. That might be like a line chart for instance. So you see that Whites have a lower high school dropout than other communities of color in the state or the county or whatever.

**KL:** Well we’ll make sure and link to that website in the show notes so people can take a look.

**LE:** Oh great.

**KL:** I’m wondering, are there other go-to resources that you recommend to researchers who maybe are interested in using demographic data in their work for the purpose of sampling or other purposes? What are some sort of go-to things that people can take a look at?

**LE:** Sure. Well the American Fact Finder is the number one source for Census Bureau data. That is the website that the Census Bureau releases all of its tables on for public consumption. So American Fact Finder.

But also data from the Bureau of Labor Statistics can be really helpful. That really is focused on employment and labor. And also the Bureau of Economic Analysis. That provides data about not only some issues of employment, but also industry as well as economic productivity and other types of economic data.

**KL:** Well those are wonderful resources. We’ll make sure to link to those in the show notes as well. After a brief break we’re going to come back and talk with Lena about fostering a culture of data-driven decision making. What does that really mean?

[music]

# Segment 3:

**KL:** Lena it seems like a key component of the work of a social demographer is fostering a culture of data-driven decision making. But that’s a phrase that’s gotten kind of thrown around a little bit in recent years. And I’m wondering, you know, what does that mean to you to help an organization or a community have data-driven decision making?

**LE:** Yeah. So in order to unpack that I think it is important to reflect on what we mean by data. So sometimes what happens is that people think data is just statistics. Data isn’t just statistics. Qualitative data, qualitative information, is data too. But what sometimes happens is people get frightened by the word data-driven decision making or the concept of data-driven decision making because they think, “Oh I have to use stats all the time and I’m not a statistician. Oh my gosh I don’t know what that means.”

So part of becoming or shifting a culture of an organization or a community toward data-driven decision making is helping them understand what data is and what it isn’t. So that’s one key piece. The way I see data currently being used is sort of justifying programming or actions, decisions that have been made in the past. Data then is used to justify that decision.

Ideally we would have data, we would look at the data, and make decisions after we’ve had the data. So we have the data, we analyze it, then we make a decision. But as I said what I’ve kind of been seeing, though it is shifting a little bit, is that you make a decision, you apply for a grant, and then you insert the data. Oh yeah, right, here’s the need. So it’s a little bit backwards. It’s a little bit backwards, but part of shifting the culture of sort of organizations and institutions is helping them see how data can be used at the front end and not being scared of that process so that decisions can actually be made that really are data-driven.

**KL:** So it does seem too that the, I would imagine that part of the fear and anxiety of kind of working with data is there’s so much of it. And it seems kind of difficult to wrangle it to get to a real kind of concrete understanding of how to move forward based on what the data say because there’s so much. To what degree is it the role of a social demographer to help an organization or an institution or a community understand what the data mean?

**LE:** Yeah. I see that as my primary responsibility. Even in helping organizations, like let’s say an organization has a question and they don’t even know where to look. They might get confused and sort of confounded by like, “Oh my gosh there’s all these resources out there.” It’s then my job to say, “Ok, yes there’s ten ‘resources’ out there that can give you insights. But really only five of them are high quality, so let’s only focus on those five.” And then from there I can work with them to interpret the data correctly, not over-infer because that’s something that happens too. People look at a data point, like percent in poverty, and they read all sorts of things into that that just are not valid because the data don’t say that. But they need help; people need help really interpreting the data correctly. So I see that as absolutely my role, particularly as an applied demographer working for Extension Service where it’s sort of our job to help community members make sense of things. So yeah, absolutely.

**KL:** So you had mentioned previously a scenario in which a decision is made, a grant is applied for, and then data are used to sort of back up the need for something. And I would imagine that part of what plays a role in that is that people have observations that they make, or they have anecdotes that they hear about something that’s happening, within their community or within their organization or related to a particular program or a population. And they have probably more than a hunch, but they don’t necessarily have data quite yet to back up what they think is happening or what they have seen as happening. What is the role of the observation or the anecdote within, you know, these kinds of decisions? When we think about evidence-based decision making or data-driven decision making, does data include observation and anecdote?

**LE:** Absolutely it does. It just shouldn’t play the data point; it shouldn’t be the data point that drives the decision. So when we think about data-driven decision making and I’ve already mentioned, you know, you've got quantitative data, you’ve got qualitative data, but you have local data, you have national research, you have community research, you’ve got anecdotes. Those are all the different pools from which you can get data that should inform your decision making.

So at the local data level you should be analyzing local measures and indicators to understand pressing needs in the community and identify any local practices that may be leading to improved outcomes. But absolutely, you need the anecdotal input to provide meaning and context to maybe the statistics that you’re seeing. Or maybe even the anecdote can indicate to you, “Oh wait, I’m hearing something around town that may be happening. I need to collect more data to find out if that’s true.” So you should never stop at the anecdote; you need, that anecdote should maybe provide you like an impotence or some sort of catalyst to make you ask more questions. That’s the way I kind of view the anecdote in that role.

And really the data-driven decision or a data-based decision is going to be made at the confluence of an anecdote providing you some sort of, “Hmmm maybe that’s a thing.” And when the data support it and when national research is also saying, “Yes this is like maybe a national trend.” So at the confluence of all three of those data pools that’s when a data-based decision can really be made.

**KL:** So one area that this makes me think of, particularly thinking about anecdote and observation, is research that is kind of, that’s the starting point for research often in scholarship of teaching and learning. When someone sees something happening in their classroom and their like, “Huh why is that?” You know? It raises a question. And so it seems to me that the anecdote and the observation can really be that starting point that you said. Where you see, you know, students’ attentions wane when the windows are closed versus when the windows are open and you say, “I wonder,” you know, “does this have an impact on student learning?” And then you gather additional data, you look at the trends, you look at other research that’s been done. So I think it’s actually really helpful to think about those things as part of an overall data set.

**LE:** Yeah.

**KL:** Because I think that some people sometimes feel like that gets thrown out or that it’s not valid in some way. But really it’s about kind of triangulating information to see what you can find when it’s all put together in one place.

**LE:** Absolutely, absolutely. I think that’s exactly right, the triangulation. One thing that is interesting, though, and we run into this, actually in every sphere when I work with data and I work with people who are not demographers. A lot of times we get really wed to our anecdotes. That’s the danger. So sometimes we see something and we make an observation and we think that’s the fact and then when we get presented with data that don’t back that up we then attack the data and we don’t question our observation. So that’s, I think, where we sometimes run into, that’s where the friction sometimes happens between anecdote and, you know, quantitative data or even qualitative data that’s collecting on sort of a larger scale.

We have trouble, I think, questioning ourselves. And that’s the most frequent time when I run into, when I’m in communities when I see conflict come up. People are saying, “No, no. But my community, like I see my community members and those data aren’t right.” Like the data that I’m presenting from the Census Bureau or whatever, they argue with it. When in reality it’s like we only see what’s right in front of us, you know? That old anecdote about the blind people touching the elephant; you only know what’s right in front of you, what you can feel. So sometimes when we would get confronted with a large data set that’s really describing the whole elephant, you don’t even, you question it. And so we get sometimes a little too wed to our anecdotes sometimes. But there is absolutely a place for anecdotes; we just have to treat them as just a starting point that may not be the truth or the truth as observed across multiple observations.

**KL:** Well thank you so much Lena for sharing your experiences and your expertise.

**LE:** Thank you.

**KL:** Show notes with information regarding topics discussed in this episode can be found at the *Research in Action* website at ecanpus.oregonstate.edu/podcast.

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**Bonus Clip: Pathways to Becoming a Social Demographer** [00:00-2:26]

**KL:** In this bonus clip for episode three of “Research in Action,” Lena Etuk talks about pathways to becoming a social demographer. Take a listen.

**KL:** I’m wondering, how does one become a social demographer? Like you were saying there’s these various different kinds and oftentimes people will say, “I just fell into the work,” as if it’s some kind of, you know, accident. Yeah, magical thing that happens. And maybe you want to tell us a little bit about how you became a social demographer, but what are some kind of typical ways into this field?

**LE:** Sure. So traditionally demography has been based out of either the economics field or sociology or sometimes they stand along, but generally in higher ed. you find demographers in sociology departments or economics departments. I myself started from a sociological background. I decided in high school that I was going to be a sociologist.

**KL:** That’s pretty impressive.

**LE:** That’s pretty impressive, I know. And I actually managed to be it. That’s even more impressive.

**KL:** That’s even more impressive.

**LE:** So, yeah. So when I was a sociologist I was entering into my graduate career I was really interested in issues of inequality: stratification by race, class, gender. Those sorts of things and where I studied sociologist at the University of Wisconsin-Madison they have a very strong demography core. And that’s where folks who are studying inequality were actually based. They were demographers and so for me it just made sense. Ok, in order to study inequality I have to learn the tools of demography because that’s what people are doing here. And so as a function of that I learned all these other skills that really were quite marketable. Being a sociologist is a fascinating, fascinating field, but having demography as sort of your specialty area gives you a bunch of other tools and methods that you can apply to studying the social world and really quite practical. So it made sense for me.

But, as I said, some folks enter it from the sociological perspective, but then others enter it from the economics perspective and that’s also a possibility. Generally you can get a job as a Master’s in demography because we have agencies like the Census Bureau that engage a lot of demographers. That’s quite a possibility and we do have, it’s fairly common in state administration, sort of, state agencies, to have some office that has demographers slash economists that are sort of running their projections in terms of population, as well as economic forecasting, in which you would also need to use demographers as well. So yeah that’s my path and those are kind of the two ways you can enter in.

**KL:** Awesome.

**KL:** You’ve just heard a bonus clip from episode three of “Research in Action” with Lena Etuk discussing pathways to becoming a social demographer. Thanks for listening!

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