

## **Episode 37 - Dr. Claudia Coulton: Location, Location, Location: Using Technology to Address Social Problems in Context**

[00:00:08] Welcome to LIVING PROOF A podcast series of the University at Buffalo School of Social Work at [www.socialwork.buffalo.edu](http://www.socialwork.buffalo.edu). We're glad you could join us today. The series Living Proof examines social work research and practice that makes a difference in people's lives. I'm your host Adjoa Robinson and I'd like to take a moment to tell you about a new feature of living proof. In addition to listening subscribing to and sharing podcasts you can now rate and write a review of each episode of Living Proof rate or write a review of a podcast. Just go to our Web site at [www.socialwork.buffalo.edu/podcast](http://www.socialwork.buffalo.edu/podcast) click on to create your own review button. We look forward to hearing from you. Location location location is a familiar advertising adage but spatial location and its concomitant dynamics and processes is an important factor to consider in the pursuit of community and social development. In today's podcast Dr Claudia Coulton discusses the use of technology to analyze and address social problems that affect individuals families and communities by understanding them with specific physical and environmental contexts. Dr. Coulton is the Liliam Harris professor of Urban Research and Social Change at the Mondale School of Applied Social Sciences Case Western Reserve University. Dr. Coulton also serves as associate dean for research and training and codirector of the Center on Urban Poverty and community development. The center's regional and Neighborhood Information System. Neil Kandu is a national model for how in a wide array of social indicators integrated with mapping tools can be used to support community action and planning.

[00:02:11] Dr. Coulton has been an investigator on several studies related to neighborhood effects and community development and the author of numerous publications on urban neighborhoods community research methods and Social Welfare Research. Notably Dr. Coulton has been selected for the inaugural class of fellows for the American Academy of Social Work and Social Welfare and honorific society of distinguished scholars and practitioners dedicated to achieving excellence in the field of social work and social welfare through high impact work that advances social good. Dr. Kelly Patterson assistant professor at the University of Buffalo School of Social Work spoke with Dr. Coulton by telephone Dr. Coulton thank you for being with us this afternoon. Thank you Kelly I'm looking forward to it. Today we're going to talk about your perspective on the challenges of utilizing analytic tools in both research and teaching and community and social development budget culture and social workers find it hard to see the utility of technology in their work. How do you address that issue through your research and teaching. KELLEY I understand that feeling that social workers didn't go into the field to apply technology they're applying more of the human element to their work that I find that social workers and community and social development do want to be competitive in their field to be ahead of the curve. To be up to speed with what others in the field are doing not necessarily social workers but the other disciplines and professions they work with. They're often engaging with government agencies with businesses and all of these entities are making use of technology so it's not that hard to sell to make them realize that they also can benefit from being adapted applying these technologies in their work.

[00:04:11] Well what are some of the analytic tools you use when conducting your research. I have always been something of a technical. Some people call me a data nerd. I've always gravitated throughout my career to the tools and technologies that were available so I really am eager to try anything that comes along and the things that I found most useful in my working communities and social development are the tools I really try to teach in the classes. One of the fundamental tools is geographic information systems and spatial analysis methods. These are techniques are you to link data data and people data on buildings data on assets to the spatial locations of data and then to take the spatial location into account. When you're working with that data and other tool that I use

increasingly are computer assisted techniques of gathering survey data and not just the Web surveys which are increasingly easy to use and popular but also the same underlying technology can be used to conduct personal surveys personal interviews that make the data immediately transferable to the computer and use the same basic technology of web surveys to guide the interviewer.

[00:05:32] I've also had a lot of experience using government records administrative records for data sources and linking those together to provide useful data for research and finally observational tools ways that we can make observations in communities that are valid and reliable and put those observations directly into various types of handheld devices or other ways of recording the information so that it can then be processed and used in our research well Dr. Coulton how do you use those tools though to better understand social problems the kinds of social problems that I have worked on the most are those that affect low and moderate income communities and families and individuals. And these problems tend to be concentrated in in particular geographic location. And there are aspects of the neighborhood or the physical structure of these areas that also need to be brought to bear on fully understanding the social problem. So I try to look not just at individuals and their problems and treat those in isolation but to put those within the context of the neighborhood and community because we know that generally speaking individuals don't just simply bring problem onto themselves or nor do problems simply come from individual origin but they come from the interaction and the relationships between individuals and their social networks and the physical and social environment in which they live. So I believe that layering of data and information gives us better insight into the social problem I see so now based on your research on neighborhood indicators why are the spatial dynamics of neighborhoods and communities important for social work. Research when we treat the individual or family as floating out there in no particular space then that situated with respect to where they live where they work where they go to school we're missing a part of their experience that when we tie it to other kinds of information about that context we can better understand the problem. And part of the relationship of people to their contact is distance, its spatial. It's where people have to move to move around to get access to resources and so forth. That's where they have to travel to to go from school to home.

[00:08:18] It's where it can be a spatial barrier that they have to overcome to access a resource or it can be spatial processes around them not really about where they have to travel to or move through spatial processes that are going to affect them even if they stay completely still such as traffic pattern or environmental problems toxic materials and so forth. Or social problems that might have a spatial element such as drug trafficking or crime pattern. So understanding where individuals and families are situated relative to each other and relative to this environment can be increasingly informative to social work especially to working communities. Well and this question really is focused more on your specific research on child well-being. And I wanted to know why are spatial dynamics so important to model when researching neighborhood effects on individual well-being. My colleague Jill Corbin and I have been doing research for many years on one important marker of child well-being which is child abuse and neglect. We've also looked at some other markers having to do with child health. We started by first noticing that there was really concentrated nature to child abuse and neglect as measured by official child abuse and neglect investigations by the child welfare agency. Child abuse and neglect as kind of a footnote is difficult to measure. What we know most about as social workers or as social researchers is that part of child abuse neglect that does rise to the surface of becoming officially recognized by the system. When we saw how geographically concentrated these cases were we began to ask the questions of what are the places like where this is geographically concentrated.

[00:10:20] And we began to try to work it out to what degree that geographic concentration of child abuse or neglect was due to what we might call selection in other words perhaps people who were likely to be involved in child abuse neglect anyway happened to be selected into these particular places by the elected I mean they either chose to live there or they were attracted they are forced to

live their lives by only being able to afford to live in public housing or something like that. So we don't know whether it was mainly due to collection or whether there were either independent factors or additional factors about the environment south that may have made these families more likely to be involved in child abuse and neglect. And so we did a series of studies attempting to get these things out in all of these studies. We had to model where people lived where other things that might affect them were located and to take into account the spatial relations among those things. We looked in particular at the influence of neighborhood disorganization at varying degrees of closeness to where the families were situated. For example neighborhood signs of neighborhood disorganization being things like graffiti and instabilities among neighbors and people being concerned about children being out on the street at all hours of the night or being unsupervised or stray dogs there are all of those kinds of things. So that kind of analysis does involve that racial dynamic. And to cut to the chase we found that even when you took into account all of the individual factors that might be associated with child abuse and neglect those external aspects of the neighborhood actually neighborhood disorganization were part of the explanation of the high concentration of child abuse and neglected places.

[00:12:20] Well how can social work practitioners then benefit from understanding spatial dynamics of neighborhoods and communities. I think an obvious aspect of that is that if we're thinking of programs to improve the well-being of children that in addition to working directly with children in their families to improve their outcomes we need to look at their neighborhood environments to try to improve those environments in ways that are supportive to child development. For example crime rate and safety of children walking to school is a good example of a factor that diminishes child well-being but is not solved by working directly with the child and family. I mean I suppose you could work really hard with the child and family to find another route to school going around and around and backwards and or perhaps transporting them in a taxi cab or not. But a bigger solution that would affect more children is to really work on the safety of the roads around and the streets and the sidewalks on the street corners between where the children live and where the school is located. So that's kind of an obvious example but we can say the same thing about playgrounds about social networks that are available to families and children and working on those networks to see that there are opportunities healthy recreation for afterschool programs for child care. That's of good quality. It's a collective response to what could also be individual problems of children. How does proximity and distance play a role in the success of community interventions. I would say that there are several aspects to that question.

[00:14:05] One aspect that I think is important to bring out is that we often design a community intervention for for a target area and the target area may be selected not necessarily based on where people think their neighborhood lives or where the people in the neighborhood tend to go to obtain things utilize services carry out social activities. But it may be chosen based on the convenience of a government or an agency or those providing the services. So a good example is the concept of catchment area which is often used by agencies. It's an area that the agency thinks is where they're going to focus their service that this particular target area may not be what people think about when they think about what their neighborhood but their community and it may not be equally convenient to all people within the target area. In other words accessing different resources are benefiting from different things in the neighborhood may not be equally distributed throughout the area. So one way in which proximity and distance play a role is in the evaluation of community intervention. The target area probably should not be treated as a well single place but taken apart based on distances based on what people think their neighborhood space is to do a more nuanced way of evaluating these programs. For example we may introduce an after school program into our target area and then look to see whether there is a reduction in children who are unsupervised after school. A reduction based on either observation or parent's self report or some other method of determining that. But what we also have to take into account is something about the distance of children from the after school program or the spatial locations of the after school program.

[00:16:24] To really see if there's sort of a buffer around the after school program that may be determining who actually gets involved. So treating the space within a large catchment area as if it were a single space can be problematic for evaluating community intervention. Similarly treating a whole space as if it's equal and not differentiated can be a problem for planning community interventions. Because the access the information is not necessarily going to flow equally across a rather large catchment area but may be more specific to the more informal definitions of neighborhoods that are held within the area. So in my mind it's fine to have a catchment area it's fine to have a target area but it's important to go beneath that and get a better sense from the shelter and from the families from the rest residents from the stakeholders as to how they view the pacifically the distances and spaces within those communities. Before we either launch to design intervention or evaluate it. Well you found in your own research on child maltreatment. I'm thinking about specifically that you found greater incidence in the city of Cleveland versus the county of those who are indicated and substantiated in child abuse reports. And so how could that knowledge of where the abuse or neglect is taking place. Help in community interventions. Social workers we might want to distinguish the type of intervention before answering that question our traditional services directed toward abused and neglected children are sort of after the fact that their intervention to protect the child and improve the ability of the family to take care of the child or to protect the child by removing the child from that family. There are also interventions to address the consequences of child abuse and neglect.

[00:18:26] So there are interventions to provide treatment or remediation for the consequences of what has happened. The whole other branch of thing of interventions so are more preventive and the question of geography and space than what we do with what we know about where cases are concentrated may have different implications if we're thinking about prevention or treatment and the prevention side. If we're trying to prevent any diminishment of child and family well-being we have to find people before they really emerge into any system like the child welfare system. So it seems like prevention programs frequently are spatially targeted because that's where to find people. So knowing where the concentration of cases is gives us a sense that the areas that may be at risk in our research we did find a higher concentration of child abuse and neglect in the city of Cleveland as compared to the suburbs. But that is not the entire city. As a matter of fact it was less than probably a third of the city had really high chances really high risk situations though knowing precisely where the locations were within the city was very important to do outreach to put into place preventive programs. In our case we had counselors that were being formed in various parts of the city that were made up of community based organizations and residents and their whole purpose for being was to think about and design things that they could do within the neighborhood to improve the well-being of children. I also want to point out that there were suburban jurisdictions and locations where there were high concentrations of child abuse and neglect as well.

[00:20:14] So that's probably also important to recognize that these problems Jonas's fairly stabat municipal boundaries. They really have to do with the third of the particular ecology which can be in a rural area a suburban area or or what we might think of as the traditional central city area. How can a social worker identify and monitor these types of disparities in child well-being by neighborhood. And why do you think that would be beneficial. It does take a certain investment in a technology to do this kind of monitoring. It requires that government agencies and other organizations that keep records on child well-being or records that are pertinent to child well-being be willing to share their data and to have their data geo coded so that this specifics can be brought down to the level of the neighborhood in the community and somebody has to it has to take on that responsibility for geocoding the data and putting it out either annually or on some other casual so that people in the community can use that in our community. We have a what we call it data intermediary it happens to be in my center. It's now turned into a web portal. It's called neo CANDU which is northeast Ohio community and data for neighborhood information and it's a web

portal that contains all kinds of information on both the neighborhood environments and on the well-being of the families and children that live there. So for example you can for any census tract in our county you can look up the child abuse and neglect rate and you can see a trend from for many years back. You can track it forward.

[00:22:04] You can compare it to other census tracts other neighborhoods you can aggregate it up to the level of the municipality you can map it and so forth and you can also correlate it with other indicators of well-being such as the teen childbearing rate or the rate of drug trafficking in the neighborhood. You really get a full picture that kind of information is what then really can equip neighborhoods communities government agencies nonprofit organizations to be very specific and on top of what's going on in places and whether progress is being made or whether new problems are cropping up having such a capacity in one city is really levels the playing field for all organizations who do this kind of work. Very expensive to pull this kind of data together and you don't want every agency that's thinking about doing a project to help improve the well-being of children have to go out and collect all the data every time they want to plan or evaluate their program almost like a public utility in my opinion that ought to be available to the public and to the organization in 32 cities. Now I'm happy to say there are these kinds of data intermediaries. They're all part of the National Neighborhood indicators partnership which anyone can look at by googling NNIP. It will take you to a Web site at the Urban Institute the Urban Institute is helping to support all 32 of these cities by knitting together in information of a peer learning network. And it's a very valuable place to start in your own city if you're interested in moving along this path.

[00:23:47] The entities deal with all kinds of problems and produce data on many many aspects of well-being ranging from how much lead is there in the soil in particular neighborhoods to how many people are availing themselves of food stamps. So it's really quite a range of social and economic indicators that the organization put together and I think this forms a really good resource for doing community both intervention and prevention. Getting away from just the childhood indicators why is it important to determine the geographic dispersion of outcomes such as neighborhood employment social services availability of fresh foods and health care services subsidized housing for social workers any of the problems the social workers deal with. Although we may cut them into specific problems because that's the way we teach and that's the way the government funds programs and so forth. We all realize that they occur in context and there is an entire relationship of what affects people's lives. So I'd like to take the example of housing although that's only one aspect of the built environment. But I think it's profoundly important to the well-being of children and families. I'm not discounting other aspects of the environment such as access to public transportation and access to jobs and so forth but that has things I think one that's a very good case in point the quality of housing varies a lot from community to community neighborhood to neighborhood even black to black. The quality of housing shape the lives of people who live in the housing housing that is substandard housing. Has severe problems can be very hazardous to people's health. Asthma for example is concentrated in particular neighborhoods. We know it's related to the nature of housing. Children are in lead poisoning is an even more obvious than commonly thought of example. But there is mold.

[00:25:47] There's other environmental factors that come with housing. The other aspect of housing that's really important is housing security. There's many studies that demonstrate that especially low income children often move a lot now because their families are seeking more appropriate housing better housing or seeking better schools or trying to get closer to a job. But a turning kind of moving moving due to not being able to pay the rent or the House gets out having problems other serious problems that result in the families moving in that kind of churning is harmful to children. It's unsettling at minimum to the children. It's certainly stressful and unsettling to the parent and it often causes them to change how care centers to change after school programs to change schools to change peer relationships. So it's a nonproductive type of moving knowing where that's happening

and knowing why it's happening having to do with housing is just one example of the importance of getting beyond the social service indicators and really looking at housing and community development issues. What the recent technological advances that have made it more feasible for communities to develop neighborhood indicators. And you talked about this 32 city type of database that you're creating. What are the other type of technological advances. When I first started this work in 1992 it was a very different world. We were in another millennium and it was meaningfully different. So what's happened since 1992. Well we've gotten the world wide web which is extremely important.

[00:27:28] We've really had tremendous advances in the ease of using statistical software and geographic information software and many governments have made significant investment in what you might call e-government that really just meaning growing more computerized and automated with records and a lot of the data that we find useful began with the recording of an event at a government agency. So for example I think Kelly you've worked with section 8 or housing subsidy data. Yes. And that's a very important marker of where people are moving when they get housing subsidies and we can look to see if we're if they're moving to better neighborhoods than they live to previously or whether they're getting into good housing situations and so forth. That starts with a government record of a subsidized household that has often some information about the household and the address at which they're living. There are other records that provide additional information about housing in that neighborhood that those records might reside with the county recorder of deeds or the county Texas Bedser. So there are many government offices that generate records that have to do with housing and more and more of those government offices are computerizing their record keeping and therefore they're able to produce a database that can then be utilized for some of these purposes both research planning social work advocacy and so forth so that so the government recordkeeping is something we often forget when we say technology we think of mapping software or our internet but feed it which governments are developing data systems is not that even in 1992 that governments weren't putting their records in computers.

[00:29:20] But the ability to manipulate that data has really changed and government agencies can now often prepare for either researchers or entities trying to do this kind of planning and prepare extract and those extracts can provide these kinds of records much more workable than they were in 1992 when we started the ease of getting the information for researchers has certainly changed and availability so yes. And finally Dr. Coulton you teach a course entitled analytic tools for community and social development and you develop discourse. What do you want students to learn from that course and how will they be able to use those tools and social work practice. My major goal on a broad level for that core is that students will begin to think of the communities they work in analytically and think of all of the physical social economic conditions in those areas and how they affect one another and begin to appreciate how residents experience and view and benefit and may be negatively affected by those aspects of the environment. I want them to be able to use the latest technology to take information and turn it into guidance for action. One of the challenges though in teaching the course is that it takes quite a bit of time to teach the analytic tools themselves. In other words those of us who work with geographic information system tools had to spend quite a few hours getting comfortable with those tools and learning to manipulate the maps and the data and so forth. So I'm trying to strike a balance between teaching people how to use the tool but not losing sight of why we would use that and how it would benefit both community development work and the residents in the community.

[00:31:23] I think sometimes it's easy in the middle to get kind of bogged down and say Well isn't this the cool mapping tool or isn't this a challenging difficult kind of data to manipulate but it really is the application we're after also in the class. Because it's such a deep and technically rich area I don't try to produce students through our geographic information specialist or web survey specialist or observation community observation specialists. I want them to be aware of examples of tools that

exist. I want them to know how to find new tools and keep up with the field once they're out of school and I want them to appreciate the practical application and be aware of when they need to search for a tool and when they could apply a tool as they get out into practice. Nobody is going to expect them to do all of these things completely on their own. When they get out into practice I want them to be leaders and I want them to be at the table and to be the person who's that. I think there's a tool that we could apply to this community problem and I have the wherewithal to know how to search for the data search for the appropriate tool establish connection with relevant expert and technical capacity and bring this to bear on the problem. Could you give us an example of some student work in your class. One of my students did her project on sex offenders. She has been interested in working with community groups that are trying to do more to relate to the existence of sex offenders in their community and to see whether there's anything they could do to the outreach or be handling it in a way that would be more helpful both through the individual sex offenders into the safety of the community.

[00:33:22] And so she used the sex offender registries and got all the data and the addresses she mapped that using GIS tools. And then she also used data from the American Community Survey and from other local records that had ages of children and locations that schools and so forth to lay out the geographic situation and location of sex offenders children along with other resources that could be helpful. She brought this information to some of the volunteer group trying to come up with more productive ways of addressing this issue in accommodating individuals within their community. And they found it very helpful to further their conversations thinking about how they were going to try to work with this problem. This is something she was able to do with the tools that she learned in the class. We had many other examples of students bringing together data they collected themselves and geocoding that data and pulling down then data from other government resources and mixing that together. So were some of them also in their fields practice or placement where some of the places where they were were they willing to give them data also. Yes. Another example was a student who is working in community development and she was able to get the addresses of all the householders homeowners who had obtained paint from one of the government supported paint programs where they provide paint for people to paint their houses and some of the weather ization programs she was able to obtain addressed level data from the different agencies on that. And so then she geocoding that and again Drew.

[00:35:12] In other government data sources into the analysis to see whether for example the pain was really addressing some of the areas that have been thought to be most rundown in terms of housing conditions. The question it's possible to paint with go to the least rundown areas and you might say that's really not where we wanted to target the paint to. So he may have been able to get data from their agencies as a matter of fact that the requirement for the class I required them to bring in an x sound file with addresses and additional information about problem they're interested in. So another student brought in information on after school programs and it was the addresses of after school programs and some of the features of those afterschool programs. And her question was whether children who had been involved in juvenile delinquency filing through the juvenile court that data we already had on hand. But you know in another community that might be also data you'd have to go out and get her and she was able to then correlate that with the availability of afterschool programs. So I think the experience of getting data from one's own agency which of course you're actively interested in that data and geocoding that and then bringing in a couple of other sources of data that may be available from elsewhere is a good one for the student. Well Dr. Coulton and I really thank you for your time today and all of the rich information you gave us about utilizing analytic tools for both research and teaching and community development and social development. Thank you for your time. Yeah well thank you Kelly. I'm glad there's an interest in it and I hope we can have further conversations and keep this going.

[00:37:01] You've been listening to Dr. Claudia Coulton discuss the use of technology to promote

community and social development. Tune in again next time for more lectures and conversations on social work practice and research. Hi I'm Nancy Smith professor and dean at the University at Buffalo School of Social Work. Thanks for listening to our podcast. For more information about who we are our history our programs and what we do. We invite you to visit our website at [www.socialwork.buffalo.edu](http://www.socialwork.buffalo.edu). At UB we are living proof that social work makes a difference in people's lives.