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Clay, Patricia ~ Oral History Interview

Ruth Sando

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Voices from the Fisheries
166 Water Street
Woods Hole, MA 02543

Interview with Patricia Clay by Ruth Sando

Interviewee

Clay, Patricia

Interviewer

Sando, Ruth

Date

June 17, 2018 at 10:00 a.m.

Place

Home of Patricia Clay

ID Number

VFF_SP_PC_001

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Biographical Note

Dr. Patricia Clay is a fisheries anthropologist with the Social Science Branch of NOAA, where she has worked since 1993. She has a B.A. in Anthropology and Modern Languages from Notre Dame, and a Ph.D. in Anthropology from Indiana University. She works with the NMFS Northeast Fisheries Science Center in Woods Hole, Massachusetts from the NMFS headquarters in Silver Spring, Maryland.

Scope and Content Note

Interview contains discussions of: anthropology, fisheries anthropology, fisheries management, NOAA, NMFS, social impact assessment, social sciences, fishermen, fishing communities, catch shares, Magnuson-Stevens Act, women in science, minorities in science, databases, SAS, oral histories, government agencies

In this interview, Dr. Clay discusses her varied work as an anthropologist with the Northeast Fisheries Science Center, and the development and growing significance of fisheries anthropology over the course of her career. She was the first Social Scientist of any kind, excluding economists, to be hired by NMFS in the Northeast. She discusses how natural scientists were initially hesitant to accept her anthropology work, primarily interviewing fishermen in the field, as a legitimate science. Her work consists of researching questions relating to the human element of fishing: who the fishermen are, what they do, who their families are, and who their communities are. She describes her career path, from being drawn to anthropology after entering university as a chemical engineering major to her graduate research in a Venezuelan fishing neighborhood. Clay also discusses how the number of women working

in science has increased over time, and how the percentage of scientists in her field that are ethnic minorities is still low. When she first began working at NMFS, she found that the other scientists questioned the value of anthropologists, particularly the usefulness and validity of qualitative work like oral histories, but has seen this improve over time. Clay concludes by commenting on her love for her job, particularly the freedom it allows her in choosing her research projects. She feels that there are many areas of fisheries anthropology with the potential for future research.

Indexed Names

Colburn, Lisa
Crespi, Miki
Curtis, Rita
da Silva, Patricia Pinto
Fricke, Peter
Hall-Arber, Madeleine
Holliday, Mark
Jepson, Mike
Johnson, Teresa
Kitts, Drew
Logan, Phil
McCay, Bonnie
Olson, Julie
Orbach, Mike
Peterson, Allen
Pollnac, Dick
Russell, Suzanne
Seara, Tarsila
Solomon, Nancy

Transcript

Ruth Sando: Alright, now it's recording. I'm going to put it right here. Let me test the volume level—volume level's high. Alright, this interview is being conducted as part of the Voices from the Science Centers project funded by the Northeast Fisheries Science Center. It's also a part of the Voices from the Fisheries project that is supported by NMFS Office of Science and Technology. I'm Ruth Sando and today I'm speaking with Dr. Patricia Clay at her home. We're meeting on June 17, 2016 at 10:00 am. Dr. Clay is an anthropologist with the Social Science Branch of NOAA, where she's worked since 1993. She has a B.A. in Anthropology and Modern Languages from Notre Dame, and a Ph.D. from Indiana University. So, let me start off by asking you to describe your current role at NOAA.

Patricia Clay: Well, I think it's similar to what it's always been, except perhaps I have slightly more leeway. I do some just basic research, although it always has to be related to fisheries in some way. I do some social impact assessment for fisheries management regulations. I do some

work on policy documents, both at the Northeast region level and nationally. I'm kind of the go-to person for if there's any document coming around—official document that needs a review, I'm one of the people who always gets a copy. Yeah, I guess that's it. I sort of—at this point, I also do a little unofficial mentoring of the younger staff.

RS: Well, you've been at NOAA a long time—since '93, so that's twenty-plus years. It sounds like, from what you've said, your current role isn't terribly different from some earlier ones.

PC: Well, I had the enviable position that when I came in, I was the first anthropologist—or sociologist, or any sort of not-economic social scientist—who was hired in the region. And so, they didn't really know exactly what I needed to do, they just thought that it might be a good idea to have me. So, I basically wrote my own position description and told them what I needed to be doing, and I've continued doing that. I made it kind of broad and generic, and all the things that I might like to do, and those are the things I do [laughter].

RS: Can you speak to what it was that made them decide that they needed someone like you? The who, the what?

PC: Well, there had been some discussion about the fact that people started realizing that they were not, strictly speaking, managing fish—they were managing people. And then they thought, oh, who does people? [Laughter] And, as it turned out, the then Science Director at the Northeast Fishery Science Center, Allen Peterson, had a daughter who had studied anthropology, and the head of what was at that time called the Economics Investigation, which later became the Social Sciences Branch at the center, Phil Logan, had done some Peace Corps work with Dick Pollnac, who was an anthropologist. So, he had some familiarity with what anthropologists could do. Between the two of them they kind of thought, maybe we could try hiring an anthropologist. It was very interesting because even the—I guess it was '94, which was only the second year I was there, I was hired in November of '93—there was an ICES science conference, which they have every year. ICES is the International Council for the Exploration of the Sea. It's the European group that sets fisheries' allowable catch and conducts research. They're sort of equivalent to the National Marine Fisheries Service, except they cover all of Europe. They had also been having some meeting, planning the science meeting, and somebody said, you know, maybe we should have somebody who studies people, has anybody got one of those? Somebody, a biologist from our center, stood up and said, we have one [laughter]! So, you know, there's this very kind of... I guess the timing was right. There had been anthropologists and sociologists—well, there was one position at headquarters that had kind of rotated among a number of different—well, one sociologist and several anthropologists—through the years, but there had never been anybody in a region. The people at headquarters don't—especially in the group that they were in, which is sustainable fisheries, they're about management, they're not about research, so it was kind of a different role and they reviewed plans that had already been assembled for the social impact assessment and economic impact assessment and biological, et cetera, were already done and put into an EIS, an environmental impact statement, and then said, you know, this is sufficient or it's not sufficient. They didn't actually do the writing or preparing of any of that stuff. So, that this was the first time there was somebody who was a research scientist in the agency in anthropology, and I guess people just thought, oh, well, I don't know. The time had come there

was some... People had suddenly realized we managed—now it's the whole thing, we manage people not fish, you hear that statement made. But then it was a brand-new idea and it had just come to some people and they were trying to put that into action, and the Northeast was the first region to actually do something about it.

RS: It strikes me as both sort of a lonely position to be in, number one, but also one with a lot of responsibility for your discipline.

PC: Well, yes. I didn't have a lot of colleagues, there was just one at headquarters—that was Peter Fricke, who has since retired. He's a sociologist. But there were a lot of academic colleagues in the region and around the country who did fisheries anthropology, so I had people I could communicate with, they just weren't in my office or down the hall. Generally speaking, I was made quite welcome. There was still, especially among the natural scientists, a little bit of concern that, you know, what do you really do, is this really science—I mean, the economists, they have models and equations, but are you just like, collecting anecdotes, or what are you doing? How is this science? And it's taken a long time to really work through that as we've had more and more people come in, more anthropologists and sociologists... and at one point we had an environmental psychologist. Although there still is some resistance to, or concern, about qualitative work. If you can conduct a survey, that's good, but if you're just doing interviews... ehh, a little bit of like, what really are you getting at? We also had to overcome the idea among council members, fishery management council members—especially the state representatives, they would say, well, we know our guys, so what are you really bringing to this. Or if you'd say, well, we'd like to collect some demographic information, age, family size... they'd be like, what's next, shoe size? I had someone say that to me. So, you know, there was really kinda a push back at the beginning which has slowly lessened, although there's still a little bit of that there, especially among people who are my age [laughter]. But yeah, it's improved. We added—when did Julie Olson get hired, probably, I guess 2000—so it was a while before there was a second person and she was also in the Northeast. So, that gave me some... it was an actual colleague. Although by that time I had moved to D.C., because I married a journalist who was based in D.C., and Phil Logan very kindly made—he really couldn't move to Woods Hole, that wasn't going to be able... he covered Washington—Phil made this arrangement with Mark Holliday who was then in Science and Technology in what was called the Statistics Branch or group, I guess division—now they've redone all the divisions within ST many times since then—so that I could come and sit in headquarters and do maybe 20% of my time work for headquarters, and the rest of the time work for the region. The plan was, do it for a year and see how it goes, but then I did it for a year and I did it for a couple years, and then at some point Phil said "well, I guess we should make that your official duty station." So, we did that. It didn't end up being really a clear-cut 20% all the time. In any given week or month I might do a lot of headquarters stuff or very little headquarters stuff, it just depended on what came up. Phil kind of considered me his "secret agent" at headquarters because I would hear things that were going on perhaps before they were officially sent down the line to the regions. So, that gave me also the permission to basically run into somebody in the hall and they'd talk about a meeting they were having, and I'd say, "well, that sounds kind of interesting, can I go to that meeting?" And so I'd kind of insert myself in things, in those early years, to try to both get a sense of what the agency did—the breadth of it—and also to insert social science into as many areas as I could. I always

followed the—Miki Crespi, who used to be at the National Park Service, I met her very early on... I think the first year I was there, maybe second year. She told me that she had, at the very beginning, made it her mission to review things and insert social science into policy documents, and then later she could go back and say, "we have this policy and we're not actually doing it? That opens us up to lawsuits" [laughter]. So, I've made it my mission to follow that plan, and it's been very nice [laughter]. I think it's served us well.

RS: Brilliant [laughter]. Well, how long were you originally in the field office, before you came to Washington?

PC: I was hired in November of '93 and I moved here in probably December of '97. So, four years there. And I still go back periodically and I do a lot of phone calls, so I'm still involved, I'm just not there.

RS: When you were first hired and working just strictly in the regional office, what were you responsible for then?

PC: Well, I'll just say—terminology—the regional office is different from the science center.

RS: And you were in the science center?

PC: I was in the science center. Pretty much the same stuff. I would get called in to help with national things because it was just Peter and me, and he couldn't—he'd been trying to do everything, and that was really too much [laughter]. So, I would help out. It was similar, but I spent more time in the field, I think, then I do now. It was always interesting—when I first got there, I just kind of took a vehicle, a government vehicle, and I visited a bunch of ports. Fishermen would always say, ugh NMFS you know, they hated NMFS...but you seem nice. And they would talk to me, because I seemed nice. I had one guy say to me, yeah, I saw something about anthropologists on the Discovery Channel. So, they felt like they sort of knew what I did, even if they didn't really, exactly. I think that was a good initial introduction to things. And I found that one of the first things that I tried to do was disabuse everybody of the notion that there were "fishermen," and they were this monolithic group, because that seemed to be the way they were being treated. Not necessarily by the economists, but kind of in a broader sense. So, I spent a lot of time talking about—at the beginning—about how there were very different subsets and it wasn't just who fished for what species, or who used what gear...it was who came from what community, who had what ethnicity, there were all kinds of other things that were important in how fishermen chose how to behave. So, that was one of the first things I'd have worked on getting across.

RS: You said that you were in the science center. So those were all regional science centers?

PC: Every region has a regional office and a science center.

RS: Oh, okay. So, it's not a different name for the same thing?

PC: No, no, no. The regional office does management and the science center does science. We do analyses for management, but our job is really just to provide the science and to show what—you know, we can say studies have shown that this policy will do this, and this other policy will do that, or do more of this than the other. But then it's up to the council to make the decision and up to the regional office to take care of putting together the full environmental impact statement, and then working with the council to create the regulations and enforce them.

RS: Does every region have a science center?

PC: Yes.

RS: Okay. And is that a longstanding arrangement?

PC: Oh, yes. I don't know exactly how far back that goes. I think it may be from the beginning of NMFS, which was in—what, '72? It was early '70s or '60s, it's not a number I keep in my head.

RS: So, you were saying one of the first things you did was to get out into the field, meet fishermen, kind of get introduced, have them become familiar with you and vice versa. At that time when you were working in the science center, besides Peter, who did you work most closely with or what other people or organizations?

PC: Well, I worked with the economists, I sat in their group, and also with other anthropologists in the region—there are a lot of fisheries anthropologists in the Northeast. There are fisheries anthropologists all over the country, I mostly worked with people in the Northeast because I was primarily doing Northeast work, except for the occasional foray out to somewhere else to help them because they didn't have anybody...but, uh, yeah, Madeleine Hall-Arber and Bonnie McCay and Dick Pollnac, they were all every active then. Bonnie and Dick have retired recently, or gone to research professorships. Madeleine is—I don't think she's planning on retiring any time immediately, but you know, a number of us are getting a little bit older and we talk about who's the next generation, who's going to really take over. It's more problematic, I think, in academia right now than it is in NMFS, surprisingly. Although, I don't know. And it depends on the region. Some regions have a lot of up and coming people—we have some up and coming people, but it's a concern that we want to keep the high-quality research going. Some people have been students of Dick or—Madeleine doesn't really have students because she works for Sea Grant—or Bonnie, or of Mike Orbach that have stayed in fisheries, and some of them have moved into other areas. But we've got a few people, Teresa Johnson up in Maine and Tarsila Seara at New Haven...

RS: How would you, you know, given the fact that you were a founding anthropologist—you were the founding anthropologist—how would you describe the breadth of anthropology right now?

PC: Fisheries anthropology?

RS: Yes, fisheries anthropology in the National Marine Fisheries Center.

PC: It's really quite broad. I mean, everything we do has to have something to do with fisheries, but as in any area of anthropology, that's not every limiting. So, we have people who are studying issues specifically related to fishery regulations and things like, catch shares—I think in the academic literature we usually talk about property rights, but in the Fisheries Service there are no “rights,” there are only privileges [laughter] because the government can take them away. So, we've come up with this term “catch shares,” which has kinda been adopted by a lot of other people. So that has been a big area for a number of years, but also look at what happens with gear regulations and various things. So, that's sort of one area—how people fish, and what the rules are going to be for them to fish, and there's a lot of research that can be done there. And then there's sort of, on the boat—how do they get their crew? What size crew? How does the crew interact on board a vessel? What does the crew do on different vessels? And then there's issues about whether the owner is actually the captain, or whether the owner has multiple vessels—so whether it's owner-operated, which is kind of like the small family farm, or if it's bigger. On the East Coast, we don't really have the huge corporate fishing that you can see sometimes in Alaska, partly because the Bering Sea just requires some really big vessels. But we do have some cases where people own two, three, four, five, ten boats. And then, you know, questions about fishing communities. What are the fishermen's wives doing? What are their roles? To what extent are there fishermen who are women? Actually, we found in the U.S. mostly, the fishermen prefer to be called fishermen even when they're women—they don't like the term “fisher,” so they say that's like a weasel, that's not good. Don't call us weasels [laughter]. So, we just call them all fishermen. Although there are not a lot of women fishermen, but there are some. There's a history of women not being allowed on boats and various beliefs about women, you know, they couldn't do certain things or near boats, and that's kind of—a lot of that is falling by the wayside, but it's still not an area where you see as many women as men at all. We have people doing food systems—that's a relatively new area. The Fisheries Service, the main law we operate under is the Magnuson-Stevens Act, Magnuson-Stevens Fishery Conservation and Management Act, but we just call it the MSA. It requires that we work towards something called “optimum yield,” and one of the components of that is “food.” As an agency, we have historically been about natural resource regulation, and that's it. We get involved in food safety to some degree, but not food security or food provision, or looking at the broader food system—what happens once the fish comes to the dock, then what happens to it, what are the various options. There's been some research on community-supported fisheries, which is a thing that's really taken off in the last ten years. So, we really do a wide range, and somebody's always coming up with some new thing that ought to be studied. We're looking at resilience of fishing communities in response to regulations and to storms and climate change... So, if it has to do with people that catch fish, or their families, or their communities, or what happens to the fish once it hits land, or how people deal with fish on boats—that's all us. We do all of that stuff.

RS: It sounds very well established at this point.

PC: It is fairly well established. We now have at least one anthropologist or sociologist, and frequently a couple, in every region except the Southwest right now. But we do have some Sea Grant people who do a lot of work there. And the Northwest anthropologist also sort of covers—

the Southwest is basically just California at this point. There's been some changes in the structure of the regions in the past several years. So yeah, we've got somebody in each region, we do some coordination, we do some joint work across regions. We do other work where we might be doing similar or the same things in different regions, but not actually collaborating, but then we connect with each other and say what are you finding? A thing that's kind of risen to the surface more recently—although we've been hearing about it since I joined Fisheries Service—fishermen have been talking about how fishermen are getting older, there's not going to be a younger generation. They've still managed to somehow muddle along, but this is something that there's been research—it's often called “greying of the fleet”—done in a number of other countries as well, and that seems to be something that's both within NMFS and within academia there are a number of people who are looking at that, that issue right now. In Alaska, the State Fisheries Commission actually has pushed research in that area. So, they've had a lot of people in Alaska looking at that.

RS: Well, let me go back to—you mentioned that you worked with a lot of people, there were a lot of anthropologists outside that were in fisheries studies. How would you describe the contribution that the work of anthropologists within the NMSF...N, M, F, S—

PC: You can just say “nimfs” [laughter].

RS: —NMFS, has made to the work of anthropologists outside, or the science outside?

PC: I think we've made some significant contributions. A lot of the anthropologist that we've worked with have already been in the field for a number of years before I even arrived, so they had a more established portfolio of research. But I think we've done a lot of interesting things and we've coordinated with them, and we've had grants with them, we've contracted them to do work for us... There's been a lot of interaction and cross-dissemination of ideas and work, so I think we've made a difference. It would be a very different situation now if NMFS had never gotten into anthropology, I think there wouldn't have been—because both the work that we do and the support that we provide to academic research, I think it's been important.

RS: Speaking of academic research, let me just go back to your personal history and ask you what made you decide to go into social science to begin with? And then specifically marine science?

PC: Well, when I started college I went in as—I declared a chemical engineering major. And then one of the requirements freshman year was to take a history or social science course and I took “Intro to Anthropology,” and I just fell in love with it. And I changed my major [laughter]. I told my dad, my parents, and my dad said, we were going to support you, but I never thought you really were going to like engineering, and this seems like something you're really going to like [laughter]. And yeah, I've been in it ever since although initially, I thought that I was going to end up doing linguistic anthropology because I speak a couple of languages and I was always interested in languages and linguistics, but then my father—during my, when would that have been...that would have been my senior year of high school, we all moved to Venezuela where my father had taken a job at a university, the Universidad de Cumaná. I ended up really enjoying

the country, and also, you know, came back every summer, and then when I graduated from college, I thought well, I'll spend a year here and do something. At first I was going to teach at the university, because at that point if you has a Bachelors you could teach Bachelors courses. Somehow that didn't work out with some red tape or something, but one of my dad's graduate students knew somebody at the regional development corporation in our region, like a semi-autonomous agency affiliated with the government—sort of like the fisheries councils, except that it was more oriented toward research than towards management. So, I went and I talked to them, and we ended up deciding that I would spend some time in a small fishing community—actually a neighborhood, a fishing neighborhood that was at the outskirts of a moderately-large town, and then I also spent some time out in a rural farming community and I wrote up some reports for them. That's how I got interested in fisheries, so when I came back for grad school, I ended up doing economic and ecological anthropology—not linguistic anthropology at all. And then ultimately I went back to Venezuela to do my Ph.D. research on fisheries. When I got back, I was teaching, I had been teaching at the—there's a joint Indiana University and Perdue University campus in Indianapolis, which is called Indiana University/Perdue University at Indianapolis (IUPY). I went to a conference of the International Association for the Study of Common Property, which is now the International Association for the Study of the Commons, and met Peter Fricke. He said, "you know, the Northeast Fisheries Science Center has this job, and so you should apply." I thought, oh, okay, and I—this was long enough ago that I had to, I went back to Bloomington and then I had to drive up to Indianapolis, pick up some forms at some state government office or federal government office, I don't even remember, fill them out, fax them to the science center, and they called me to do an interview. I'll always remember Phil Logan saying—what was it—he basically said, so what would you do [laughter]? He basically asked me what I should be doing if I came there, and I said, well, I want to do some field work, and he said, oh yeah, you guys do that. I said, would there be support for that? And he said, we could give you a government vehicle and you know, like anything out of the supply closet, but basically at that point there were no funds to actually support going out and doing anything.

RS: There was no tradition for that?

PC: No, no. The economists didn't do that, and the biologists didn't—they went out on boats, so there was a whole platform for how you fund research vessels and things, but there wasn't any—nobody had ever done the kinds of things that I wanted to do. And eventually, when the Sustainable Fisheries Act was passed which amended the Magnuson-Stevens Act, that brought in 1996—one of the things that that added was National Standard 8, which was about communities. And that particular thing became a line item in the budget, and there was a million dollars attached to it, so we had a million dollars for the whole country to do research once they had somebody. It ended up also funding some of the positions, and it still does. So, at the beginning it was kind of like, we want to get more people in more regions, but that also cuts the small amount of funding that we do have. But you know, it's worked out and every year there's some internal grant money which basically comes from that and some other places—and Rita Curtis, who's now head of the Office of Social and Economic Research, administers that. She's very good about kind of trying to piece together from various sources as much money as she can to fund any projects that people put in. And then we also have started applying for other grants and various things that come up. So that's helped as well, to supplement. Yeah, at the beginning it

was just, you can take some paper and pens and a vehicle and whatever you can do with that per diem [laughter].

RS: Aside from money, what would you say were your biggest challenges at the start? Or maybe it didn't feel like challenges.

PC: Well, I think it's what I mentioned earlier—the kind of push back as to what was I really doing and was it really science, and you know, how did I fit in. I didn't have lots of numbers like everybody else, like the economists and the biologists so how do you...and it's still an issue of if somebody is reading an environmental impact statement and they're trying to look at the biological impacts, the economic impacts, the social impacts, you can create a bioeconomic model with equations and you can say if the price goes up this much, they'll likely catch this many more fish and all kinds of things like that. But we don't have—excuse me—a really good way yet to fit our work into that, especially the qualitative work. So, often the fishery council members will sort of say, well, the essay was interesting, but I don't know how to weigh it against the other sections. And so that's still a challenge that we face.

RS: Had you expected to have a sort of educational role when you came in?

PC: I didn't really...I guess I didn't realize the extent of it, but I was not surprised because I knew that I was coming in as a new kind of scientist that they hadn't had. So, I expected there would be a little bit of sort of figuring out how to work together, but it ended up I guess being more than I had initially perhaps even imagined. But I like the challenge [laughter].

RS: Well, you have to be up for a challenge.

PC: Exactly.

RS: So, it sounds like you work very closely with the other social scientists.

PC: Yeah.

RS: What other professions or parts of the organization do you work most closely with?

PC: Well, more and more in recent years—especially as Magnuson Act has added more and more pieces about ecosystem-based management—we've started to try to figure out how we can do joint work with the biologists and the oceanographers. This is happening in all the regions and we're coming up on requirements to produce not just fishery management plans but ecosystem plans. We're creating some kind of multi-disciplinary groups and we seem to be—I wouldn't say we're up and running exactly the way we would want it to be, but I think we're making a lot of inroads in that area. I mean, initially we had to fight all the social scientists including the economists to be on say, the plan development teams so that we could input ideas early in the planning process rather than just being approached at the end. And then with the natural scientists we would tend to get—they would write some sort of a white paper or an article and then it would be an ecosystem approach, and then they would come to us and say, can you add

like a paragraph that will, you know, sort of throw in your stuff? Now, they've gotten kind of the idea that actually, if you're going to write something up we need to be there at the beginning and all work together to figure out how it works. And that's happening more and more, which is very exciting.

RS: I'm going to stop.

[Break]

RS: Alright, we're on. I'm picking up with Trish Clay on June 17th. So, a question I'd like to ask you is given that you walked into an environment in which people were sort of mystified about what your contribution was going to be, what is the flip side of that, in that did you have a learning process about their disciplines, their thinking processes, and how they approached problems?

PC: Yes, definitely. I mean, I had taken some economics in grad school so I had, like, a basic familiarity with economics that helped me to work with the economists, although I obviously over the years picked up much more. I had to learn something about both the kind of work that the biologists did, in terms of some of it is life history of animals, animal behavior, and some of it is they have these very complex mathematical models to calculate population sizes, and so I had to learn to at least be basically familiar with what those things were, even if I couldn't follow all of the equations to actually know to say, oh that one looks like it needs changing.

RS: Did you get formal training, or did you just have to read and pick it up on your own?

PC: No, it was mostly I just picked it up as I went along. I guess, it's been so long now that I've gotten really familiar, but I think I also had to learn as—I seem to recall that I was learning sort of the culture of the natural scientists at the same time, not only what they did, but what their worldview was. I don't recall the details of that at this point, it's been too long, but I do have that sense that yeah, I was also trying to sort of figure out what... There were women scientists, natural scientists, which was nice, and I got to know some of them quite well. There were a few of the older men among the natural scientists who sort of treated me as a—almost like a daughter or a young mentee—and it wasn't meant to be condescending, but sometimes I sort of felt that. You know, like, they didn't necessarily want to let me drive if we were going somewhere together, to a meeting, but eventually that all worked out and some people retired [laughter]. It's a very different world now than it was when I first joined the Fisheries Service.

RS: Is it more diverse in sort of all sorts of ways than it was, or is it not that diverse?

PC: I think there are a lot more women among all the sciences—natural and social—although, I think that among the social scientists, once we started hiring people, there tended to be more women among the anthropologists. But we still, I think, struggle with ethnic diversity just in NMFS as a whole. And that's something that the agency is aware of and they're trying to work on, but you know, you often will walk into—especially here at headquarters—you walk into an office and all the support staff is black, and all the scientists are white, almost. There's some

scientists...you know, and some Asian and various other ethnicities, but it's still a lot of white people [laughter] and even a fair number of white men. So, that's something that's slowly working and the agency has on its radar, and there are some programs to encourage minorities to get into fisheries. I think over time that will get better.

RS: Knowing—since you've been there over twenty years, is it your observation that people tend to end up in marine sciences due to some childhood familiarity with it? In other words, does it tend to be people that come from the coasts?

PC: To some extent. I mean, there are definitely people who have fished since they were kids, a lot of people and then eventually got into it. Or lived by the sea. It's not everybody, but that's probably a fairly significant portion of people that already had some familiarity—or you know, they just went on vacations to the beach as a kid and they loved the ocean. If you just grew up in Indiana or Kansas or wherever and you never really went to the ocean, you probably never—you might have seen a documentary or something that kind of sparked your interest, but I think it's kind of just a natural progression if you're familiar with the sea, then you become more interested.

RS: Well, I was thinking your experience in Venezuela sort of put you in that camp.

PC: Yes...yes it did, it did. Because I still don't know how to fish, really [laughter]. I mean, I can fish a little bit. I went out with some people in Venezuela and I've occasionally gone out with friends who fish, and I've been on a research vessel. But yeah, it was not something that I grew up doing. Although I lived near the ocean in a lot of different places in Venezuela and Ghana and California when I was really small. But somehow, we were not a family that fished. We didn't fish, we didn't go camping—that wasn't our thing [laughter].

RS: Let me go back to your current work at NOAA. What—well, actually I want to go back to when you started out. What were the research methods that were most important to you when you started out?

PC: Well, one thing was that suddenly I had access to this huge database of permit information, which wasn't really exactly what I wanted, but at least I could sort people by fishery, by community, by you know...and it was huge! I was like, oh my gosh, I've never had a database this big that I could play with. I started learning the database and figuring out what I could say based on that. So, that was very exciting, actually—I was not accustomed to huge databases. You usually don't have them in anthropology—sometimes now, but especially then.

RS: Is this just something that you could use SPSS on, or what would you...?

PC: No, there were—I don't even remember the names. Initially it was...we used SAS but you had to pull the data from these—the permit data was in one kind of system, and the landings data was in another, and then you had to combine them and then work with it in SAS. Later, everything got moved into Oracle databases, so they were all in the same kind of database and then it was easier to pull things both with Oracle and with SAS, or you can do SAS-access which

pulls via SAS from Oracle. So, it became easier over time, and we had some opportunities—myself and the economists—to give some input and say, you know what would really make it easier for us is if you did X, Y, or Z as you're putting this database together because we need to be able to connect these things. The biologists maybe didn't really need the permit data at all, so they weren't accustomed to worrying about whether it was easy to link the permit data to the various landings databases, which was critical for us in order to be able to conduct our analyses. You could say people from this community mostly fish with this gear and this size vessel and they catch mostly this species, and that would tell you something that then you could use in EIS document. So, that was very useful. Then, I did some you know, going out and just talking to people, and I also did a lot of phone interviews with people. So, I would just be working on an SIA amendment and I would want to know what was happening shore-side, and I would talk to people to get names and contact information for processors. I would start calling people and say hi, I'm from NMFS, I'm working on the SIA...usually people are very willing to talk because if you show interest in them, they show interest back. People will say, oh, I've never had anybody from NMFS get in touch with me, you know. They were very pleased that actually, I was interested in the information that they could provide—and it wasn't just they wanted to have the numerical data about their landings turned into a dealer and who knows what happened after that. One thing I did very early on is I actually convened a workshop and I asked both anthropologists and sociologists and also economists from all over the northeast region and also Atlantic Canada who worked on fisheries to come down and I had organized sort of subgroups by various topics, and I had questions to discuss. It was a way to kind of say, what do we see, as a group, are the key research topics that we should be working on right now? I think that was very useful for everybody, because it was both a way to meet people and a way to sort of orient myself and say, okay, these are some topics to start with since I'm not really familiar with the region very much. Out of that, Madeleine Hall-Arber, who was one of the attendees, said—people were like, oh we should find a way to keep in touch—and so she actually created, I don't know if anybody's mentioned Fish Folk, which is a fisheries social science listserv. It's become sprawling now, and we actually—the researchers use it a lot less than they ever used to, but at the beginning it was like 68 people and it was just the people who went to the conference and we would keep in touch and what are you doing...It was very fun. I think that was one of the first “social media” things I ever did. Interestingly enough, I went back not too long ago and looked at the notes from that and the broad topics are pretty similar, now and then, I would say. Not identical, but they were really...yeah, we're still talking about some of the same things because they were very broad topics. We weren't narrowing in on let's do this very specific, very targeted research project, we were saying what are the questions, what are the areas that we need to be looking at. And a lot of them are the same.

RS: Do you think that NMFS is good at knowing its' own history of what it's researched, how knowledge has developed? Because that's problematic in a lot of organizations.

PC: I don't know that it's—I think that there are still a lot of cases of individual people with institutional knowledge that doesn't get passed on. So, I think...I know when Susan and I were doing the paper looking at the history of social science—interestingly enough, within NMFS, social science only means the social people. The economists are not social scientists.

RS: I saw that in your article, an interesting split.

PC: Yeah. So, you can be hired with the title Social Scientist, but you would never be hired with that title if you were an economist. Anyway, so yes, when we started doing that we realized sort of how much we ourselves didn't know about the very early years as we started to interview Peter and Mike Orbach and various people who had been involved in some of that early time period when that single position in sustainable fisheries was first created. So yeah, I think that—and I think probably if you asked anybody sort of what's the history of ecosystem science in NMFS, I don't know how well you could get that on a national level. Maybe in a region, people might be familiar with what had happened in their region, but... There's a lot of—each region is very individual and has its' own character, and it's not as if... I mean, a lot of the regional databases, they don't connect together in some national level, and so people—you have different variables in some cases that are collected even just in terms of the landings data. What data related to an individual gets put on a permit... As we've started to, within the social sciences—I don't know what they're doing in terms of the biology or to some extent the ecosystem—but within the social sciences broadly read, including economists, we've over the years started to develop some national performance metrics and we've had to work through those issues of ok, what might be—what might we want to collect? What individual variables? How might they be combined in some way to create indicators? And what is the basic set that everybody can do? Oh, how about this, well, we don't collect that variable, etc. And so that's been something that's been interesting, sort of an insight into how little we have connected because each region goes up—our connection is a chain up through the region to headquarters. We don't have any actual official connections across regions, just personal relationships. So, I think there's... I don't know that we're any better than any place else in keeping that institutional knowledge, that historic knowledge.

RS: Let me ask you a little bit of a different question, and that is since you have this history, what has the role of anthropologists been in guiding decision-making?

PC: I think we've actually—well, there's a couple of kinds of decision-making. In terms of decision-making in the councils... it's kind of hit or miss. There's never been a case where the information and the social impact assessment was the deciding factor. In part, that's based—that comes from the law which says that, you know, biology comes first and then sort of economics and other social sciences are considered after that. The primary thing is you must preserve the fish at a certain level. Now I've forgotten what you asked me.

RS: Oh, guiding decision-making.

PC: [Laughter] Oh, guiding decision-making.

RS: You said there were different kinds of decision-making.

RS: Right, right. So, there's that level of decision-making, and then there's kind of the broader policy, and I think that's something where I feel like I've made a real difference. The first national strategic plan for NMFS was created, and then it went out to review to something called

MAFAC—the Marine Fisheries Advisory Committee, I guess it is. And that is a lot of outside people who form a committee that can advise NMFS on various things when it feels like it should get some outside advice. MAFAC read through the strategic plan, they said "where's your social science? There isn't any social science here." At that point I was already at headquarters and so I ended up getting tapped to put the social science into the strategic plan. I immediately—I sort of knew what I wanted to put in for the social part, and then I contacted various economists and I said, "okay, what do I need to say, what are the buzz words, how do I put in." And I think that you know, we didn't always live up to those or fulfill those things, but I think that was the first time I felt like I actually got something into a major policy that ultimately would make a big difference.

RS: What timeframe was that?

PC: Oh, that was...It's in that paper, but early to mid-90s. Let's see, it would have been after '97, because it was when I was already at headquarters, so yeah... '97 or '98, '99. Somewhere in there. Since then I've tried to both—and so I think that influences a broader level of what does NMFS think about when it's trying to plan for its' future activities. And there are other things like that that I've tried to insert language—a lot of the early ecosystems stuff, policies that came down, you'd read them and there was no social science. It was like...*ecosystem*. That includes people, right? Well, they would include people because we were predators, and so we were in there. Or somebody says well, it includes anthropogenic effects, and I'm like mmm...no. Pollution, that's not social science [laughter]. So, slowly—this is sort of the Miki Crespi side, getting language into things. Even if it doesn't have an immediate impact, down the line it becomes the norm that that's part of things.

RS: So, part of your role was building a basis for awareness, and then also for future impact for the social sciences.

PC: Yes...yes.

RS: Well, let me ask you about methods because, well in the sciences and in the mathematical modeling it's all big data nowadays, but there's also new technology like—well, not so new—but GIS is quite big. Have the methods that you've used changed over time?

PC: Yes, well...I mean, I started using SAS quite early on with say the permit data and connecting it to the landings data and things like that, and Oracle. In terms of... We do a lot more—I'm thinking in terms of qualitative data, we've ended up trying a number of different software packages to help do analyses and sometimes in the end we sort of feel like, maybe if I just read through them all I'll really have a better sense [laughter]. But it can give you some interesting ideas and I know one project Lisa Colburn and I each did some network-mapping, separately, on the same things and then we showed them to each other, and we had each taken something slightly different from some of the same quotes. So, that was an interesting point where you could say, ah, well you know, there's different ways to interpret this and maybe we would have noticed it if we just each read them and talked, but this was kind of an interesting way to highlight what was going on.

RS: What kind of qualitative content analysis packages have you used?

PC: Oh, we've used Atlas, TI...we've used a little bit of NVivo. We've recently gotten MAXQDA—so, a variety of things.

RS: Do you tend to use those more when you have a larger team doing work?

PC: Yes, partly because, I guess, if you're just doing a set of calls yourself, you really—you're the one with in-depth knowledge of exactly what's in there, but if you have different people doing data collection, recording oral histories, and then they bring them in, and then it gets coded and a couple of people are coding, but maybe not everybody in the group is doing the coding...although you know, we all talk about what are you coming up with and does that make sense, and what about this. So, then you have a lot of people with different pieces of the puzzle and it can be a useful way to coordinate a larger group, I think. Whereas if it's just one or two people, then it's not really as important to do that. Although it can make to easier to pull out by various demographics—what are the people who are fifty-plus say, as opposed to the younger people, what are the people in each community. And you can pull that stuff out by hand, but it's kind of—it's just easier to shuffle through and say, okay, I want to see things divided this way. And you can go through iterations of multiple different configurations like that. So, that can be helpful.

RS: Thinking about collecting all this data and then putting it into a usable format or report or whatever, what kind of audiences are you writing for?

PC: There are a variety of audiences. Sometimes it's fishery management council members who are mostly either fishermen or state bureaucrats who also are likely to fish—a lot of the state fisheries officials grew up fishing, maybe not commercially but that's why they're in the fisheries division. Then, some of the stuff we write is for the general public. Sometimes we're writing things for an academic audience in a journal, and sometimes you're doing...not necessarily things that you—if you're, say, working on policy documents or something, then you're writing for an internal NMFS audience who will know a lot of the acronyms and the various things, and you can be a little bit more shorthand and not explain certain things as much because you know they know. So, there are a lot of different audiences that we write for.

RS: I know that NOAA does quite a bit of work with schools developing programs on sciences and on marine issues and coral reefs and everything. Do you get involved in any of the work that is directed toward school and education?

PC: I haven't really so much. I did a little bit, I started to get involved in some things when I was in Falmouth and Woods Hole with local schools, but down here, I tend to give a talk at Career Day in my kid's school every year. Whatever school they're in, when it comes around to Career Day, I give a talk and usually people have never heard of anybody who does anything like me [laughter]. I sort of create some interest. Some people are like, oh, that sounds kind of interesting. But there isn't—there are some very formal national programs for recreational

fishing and things like that, and there isn't anything like that on the social side in NMFS. Okay, there's something like "learn to fish," you know, take out your pole and go enjoy the ocean, and then there are some programs that are specifically designed to help train, say, minority fisheries scientists—mostly natural scientists. But we don't have anything like either of those, really, that's focused on social science—although various individuals do get involved in their local school or something. In sort of an indirect thing, this year in the Northeast we funded Nancy Solomon of Long Island Traditions to do a climate-related version of something she's been doing a long time, which is getting fishermen into local schools in the Long Island area to talk about their jobs and to do sort of net mending and various things with the kids and the students and their families. Go out and see the vessels, and they might interview some fishermen. And we asked her to do a set of interviews with fishermen about climate change and incorporate that into some of the curricular materials, and that project is just finishing up—we're going to be getting all the materials, the curricula, the recordings and transcripts of interviews, all that kind of stuff, within the next, I don't know, few weeks. So, that'll be interesting. That was through a Preserve America grant, which is something that NMFS is involved in and that funds a lot of oral histories as well, oral history projects. So, that's been helpful to us. It also funds non-social science things, but that's been an area where we've been able to get involved because they're looking at basically history. History of fishing, history of fisheries management, that sort of thing.

RS: Is that something that you get involved in—writing grant applications for funding for projects like that?

PC: Yes, for Preserve America. That's something we have written a couple of different grants for. Occasionally, we've gotten a little bit more into writing things, for instance, an NSF grant. Although as government officials, we have to pair with an academic in order to apply for a number of grants like NSF. Whereas Preserve America is sort of an internal NMFS thing—I think there's Preserve America beyond NMFS, but we apply for the NMFS-related portion of it. Sometimes NASA has ecosystem things for the ocean, so we've applied—not necessarily gotten those. Sometimes, now that we're doing a little more ecosystem work, sometimes we go on grants with the biologists for various other funding sources that are really not available to us without them, including internal NMFS funding and NOAA funding.

RS: What outside organizations do you find most useful? And I'm including in that AAA and SFAA and everything, but other perhaps science-related or professional organizations.

PC: Well, SFAA has become a real home to fisheries anthropologists. The last meeting we had—I think it was like 73 different fisheries presentations.

RS: I noticed that.

PC: [Laughter] Partly, I think it's helped that beginning last year, and I think I am going to be continuing this, I was asked to sort of curate those, to sort of organize. And so I spent a lot of time—usually just within NMFS people will kind of coordinate and go, I'm doing this... But I put out notes, notices on Eanth-1 and AnthroSci and Fish Folk and a bunch of places to say, if you are going to do some sort of fisheries anthropology thing and you're thinking about going to the

SFAA, contact me. And then sometimes I was—there were a number of people who had organized, say, a session and then I was able to say, I found all these other people who are also interested in that same topic and they grew to be like three-part sessions. That was, I think, a helpful thing and it made it more—people were more aware because then I could say, here's the list of the sessions that are being organized, look for these. And we've also formed a topical interest group within the SFAA: fisheries and coastal communities. We don't...you get some fisheries papers at AAA, but we don't really tend to gravitate there. If we're not at SFAA, we're likely to go to ISSRM—International Society for the Study of... Well, it's IANSR is the group, which is the International Association for the Study of Natural Resources, but the conference they hold, the meeting, is ISSRM—International something, I forget. I'd have to look it up [laughter]. It's always been confusing to me that they don't—there's the SFAA, and they hold a SFAA meeting, but the IANSR holds an ISSRM meeting. Why? And there's some international...I never know—different people pronounce it different ways—but the MARE, the Maritime Association something something. They're based in Denmark and they all have a big meeting every year. There's a World Congress of Fisheries, which is all over the place, different years. Sometimes we go—especially if we're working with an economist—we might end up participating in, there's something called the International Institute for Fisheries Economics and Trade, and they have an annual meeting. And there's also a subgroup that's only for U.S. people of that, which is largely—it wouldn't exist if it weren't for NMFS anthropologists. They're like the vast majority of all the people who attend that. So, sometimes if we're doing a paper then we might end up at that. We also sometimes go to the stock assessment meetings, which can be really interesting.

RS: What's stock?

PC: Stock. Fish stocks. Stock assessment meetings.

RS: Oh stock, yes, stock

PC: There's not a big push for us to attend, but they're open to us attending, and that can be interesting.

RS: Well, it sounds like you really have quite a network among social scientists who are involved in fisheries.

PC: Oh yeah. Very much [laughter].

RS: And it sounds like the network itself is quite vibrant.

PC: Yes, a lot of people—there's a whole group of us that have known each other for years and years, and then new people are kind of being added in periodically. It was interesting this past SFAA, when I was doing this sort of curating, a bunch of people that I had never heard of showed up. They said oh, I've heard about this paper and I was like, oh, that's really interesting [laughter]. So, hopefully we kind of incorporated that and we're trying to get all of them into the topical interest group...

RS: Are there certain universities that tend to feed anthropologists into this topical area?

PC: Well, yes. URI, University of Rhode Island, is one. Rutgers is another. Some U Colorado people...Duke...I think those are the biggest ones, but there are other smaller programs where there are always a few people here and there. Oh, and well, The Hart Institute, which is in I want to say Texas, or am I thinking of...It might be in Louisiana.

RS: Is it H, A, R, T?

PC: Yeah, H, A, R, T. What is it in...in Texas there's a group that also starts with H. It's not going to come to me right now. I find my memory is not good anymore on things that I don't think about on a regular basis [laughter]. I've decided that it's just age [laughter].

RS: I was reading the material that you sent me. I got to all of it except for that last paper that you sent—I didn't have time to read that. I wanted to ask you, thinking about research approaches and working in this multidisciplinary environment, one of your papers was talking about the development of this model on well-being. Can you talk about that a little bit in terms of how it developed and how it's functioning, how it's working right now—particularly in an interdisciplinary basis?

PC: Well, right now we have sort of pieces of the well-being—we don't have like a full well-being. And we have community-level well-being in the sense that we have vulnerability and resilience. We don't really have individual well-being yet. That's something that's sort of on our radar to try to work on when we have a free moment [laughter]. It seems like every year there's so much else going on, it's hard to get to that.

RS: Well, what was the importance of having a model, per se?

PC: Well, the original idea was to have, the biologists have MSP, which is maximum...I forget. It's the measure of stock size. And then the economists have MEY, maximum economic yield. Oh, the biologists have maximum sustainable yield, which is about fish, and then the economists have maximum economic yield, and we thought—what if we had well-being and we would also have a big economic indicator that could be a way to compare? We don't really have that yet, we're working on pieces of it.

RS: It strikes me as something that is—if for no other reason, it's really helpful for credibility with the other sciences that are so used to modeling.

PC: Yeah. Although it's interesting—Lisa Colburn who's in the Northeast and Mike Jepson who's in the Southeast are the ones who've put together the community resilience and vulnerability indicators. They have found they did not want to roll it all up into one big indicator because there are so many different variables involved that they like to keep it at sort of sub-indicators because then you can actually say, well look, you can tell which individual pieces are having the most influence and so it gives you a better sense of what's going on than if you just

roll the whole thing up and said here's the number...we don't know exactly why [laughter]. That's down in the weeds. So, I don't know that we ever will...there's sort of that—we're not sure if we ever actually want to have a well-being number, although it would make a nice trio. I don't know. It's something we're still sort of wrestling with, whether we should go for that or not. We've got some community information—a lot of community information, but we don't really have a measure of individual well-being in part because the community well-being is primarily based on secondary data, a lot of census data, some other data, but all data that's collected regularly that we can just access including landings data. But for individual well-being, we're just now getting to where we may have a fairly regular survey in the Northeast that would collect some, although not necessarily all of the information we might want. We're balancing, we're collecting some economic data as well that's not collected any other way. There are a lot of things we'd be interested in, but you can only ask people that answer a survey that's so long [laughter]. So, that's something that we did a sort of a test version a few years ago where we actually had two different versions that were overlapping, but each had some data that the other didn't because there were so many things that we want to ask we said that we can't ask them all. Let's do it this way, and then we'll analyze the results and then we can bring it down and so that's something that's in process...I don't know exactly when we'll be done with that. And then the idea is to then have that survey go out every three years, and we think we've got the funding to sustain that now. And that will be helpful—it will be interesting because one of the things we run across is the biologists have trend data going back to the '30s and in some cases the 1800s. We have trend data for...a couple of years? [Laughter] We haven't had this ability to collect—a lot of the data that we're interested in has never been collected, and we're just getting started on collecting those data and there have been a number of one-off surveys that have collected things similar to what we might want. But in order to have that—be able to say, this is the trend because we asked this question this way. Something like the Census, where you know that, in fact, you're measuring the same thing and you're measuring it across a broad area and you can actually say, well, what's happening in Massachusetts versus Virginia...This has been a tension for us because on the one hand, we really want to be able to get some of that quantitative data. On the other hand, we don't want to abandon the qualitative data because it's so useful for contextualizing the quantitative. And you get things out of qualitative data that you can't get out of quantitative data. Sometimes we try to do a mixed methods thing where there's a survey and then at the end there's a set of open-ended questions so that people can explain themselves more. Sometimes we do just the oral histories—we call all interviews, all long interviews oral histories or mini oral histories because the Paperwork Reduction Act requires the Office of Management and Budget to oversee all data collection and make sure we're not harassing the public, the government is not supposed to harass the public by demanding that they provide too much stuff too frequently. Surveys, because they ask the same questions in the same order every time, must always go through that PRA process—which, if you're really lucky, will take you six months but is likely to take you a year or maybe even more. So that makes it very hard to say, oh, something just came up, I'd like to know what people are thinking or what's happening. You can't just throw a survey together and go out, you've got to plan in advance that I think this might be coming up. But there's a specific exemption for oral histories. So, we just call all interviews oral histories.

RS: I love that solution.

PC: And it's because even though we might ask everybody for you know, their age and the type of gear they use and a few common things, we don't just ask the same specific questions in the same order. We have a protocol and people can kind of wend their way through it, and they might get to some parts and not other parts and they may talk about things that weren't on the protocol at all, and that we can do at the drop of a hat.

RS: Well, this brings up a question I wanted to ask you, and that is what is—I'm going to use the word challenge, but maybe it's not a challenge—but what are the challenges of working as a social scientist in the government? I think you actually just mentioned one [laughter].

PC: That's a big one. Well, I think we've been very lucky at NMFS. You hear all the time about EPA scientists being told they can't publish things or can't put things out in reports—I've *never* heard of anybody having that issue in NMFS. We do go through—if you want to publish something, before you can even send it into the journal, it has to go through an internal review and it's by region. I mean, I go through a Northeast review, and first the head of your group—the Social Sciences Branch in this case—reads through it, or that person may assign it to some other person that they think would understand the topic better, and then they get that review, and then it goes up to the division chief who looks at that review and then also reads it him or herself and provides comments. These two levels are reviews about the content and quality of the research, and then there's a final review once you've passed that—which is usually not that hard, I've often had, even when it's been biologists reviewing at the division level, they've often had interesting questions that I felt really improved the research. So, I don't mind this process at all. And then the last thing is the director of the science center reviews it for policy issues, which is to say anything that is going to get NMFS in trouble, sort of, because you're saying something totally against NMFS policy. That's always been kind of a perfunctory review, in my experience. I've never had anybody ever say, ehh, I don't know... But they do ask us to always include a little disclaimer, "These do not represent the views of the National Marine Fisheries Service, only of the researcher." And you know, fair enough. So, that's something that I think some agencies have that challenge, but we have not. Well, I guess it's just always a lot of government bureaucracy—there's a lot of paperwork associated with everything. I don't know if it's less paperwork or more paperwork or the same amount as you do in academia. You automatically assume, oh, government, there's more red tape, but I hear some academic colleagues talk about the red tape they have to deal with and I think, it might be worse than what I deal with. Yeah, I mean there are specific kinds of red tape that we deal with, PRA is one of the big ones... I don't know, maybe I'm just so used to it after all these years. I can't think of any really specific challenges other than the PRA that I think, oh my gosh, that just drives me crazy all the time.

RS: Well, talking specifically about SFAA and all the panels—papers you've put in panels and everything. Seeing people who are more at the beginning of their careers in the social sciences and interested in fisheries, do you believe that they see government as an attractive destination for them?

PC: I think so. I mean, I'm always having people contact me and say let me know if there are any openings. Because the government is a very stable place to work for. Once you get hired,

they have to really find cause, a serious cause, before they can fire you. They will work with you, they'll create individual development plans, they'll send you to training—you can even, there's a program where you can go and get a graduate degree if you don't have one, you work part time and they cover your tuition. There's all kinds of good things. Something that I had really appreciated is, there's this—I don't know if it's an actual program, but there's this idea of if you are thinking about leaving, think about just working part-time instead. I have taken advantage of that with my kids, and I had some medical issues, some surgeries. I took some long periods of time off, seven or eight months a year, and then I would come back maybe full-time, maybe half-time, maybe less than half-time and then work my way up. There's always been the option to—and I've been full-time since, I guess, 2006 again, I've been full-time—but I know that if I really needed it, I have the option to work part-time again and then go back to full-time. I can telework, telework is an option for anybody. So, you can arrange your schedule if you want to start work at like six o'clock and be sure to be home by three when your kids are out of school, you can do that. So, there's a lot of flexibility and a lot of support in a government job, I have found, and so that makes it attractive.

RS: So, it sounds like you do get approached by people who want informational interviews and all sorts of stuff.

PC: Yeah...yeah.

RS: Let me ask you, there was something you were saying that reminded me about—oh, I sort of remember it—I wanted to ask you about social media. This interview, for example, I was told they might put snippets on NOAA's Facebook page, so NOAA has a Facebook page. Have you incorporated social media to any extent in data gathering or communication or collaboration? Is that something that's kind of rising as a method?

PC: This serves to some extent in terms of collaborating or you know, finding people, but I think...Social media we haven't really tapped into, although there are—there are more and more, I mentioned community sustainable fisheries, and most, if not all of them, are on Facebook and I've been kind of collecting those, keeping track of how many different Facebook pages that are associated with community supported fisheries or other direct marketing kinds of things. Periodically I'll go and I'll kind of search around and see if there's some more. So, that's one way I've kind of kept track in a very—not a dedicated way, but kind of watching and seeing how much that has just exploded. But that's not really...I haven't really used it for an actual research project at this point. Maybe in the future. I think that's an area that we could certainly exploit—there are a lot of fishermen who are on Facebook. But so far I don't think we've really...I'm not aware of anybody in NMFS who's really used that for research the way you hear about some people using it. So, that's an area where we might think about moving in the future, but so far it's mostly about presenting NOAA accomplishments or NOAA projects to the public.

RS: Sort of appealing to younger people, perhaps younger scientists.

PC: Yeah. I believe NOAA has a Twitter feed also.

RS: Someday you'll be blogging.

PC: That's right [laughter].

RS: Let me—I'm running out of time here—so, let me ask you to describe a project that you're particularly proud of in the past that you've worked on.

PC: There's so many different things that I've done...

RS: Or maybe instead of a project, a contribution.

PC: Well, I guess I would mention two things. One is something I've talked about before, is just inserting social science into important policy documents. I think that's been a major accomplishment of mine. Another interesting project that I was involved with from the beginning was the social and economic fishery performance measures, which were first put together in the Northeast and eventually became a national thing. I talked a little bit about that. Patricia Pinto da Silva and Drew Kitts were also involved in that—Patricia I think was one of the real people who pushed it at the very beginning. But then the three of us kind of worked together and we organized, we sort of came up with some ideas, we worked them within the Social Sciences Branch, and then we held meetings—one was academic, one was fishermen, another industry members—to get feedback and to try to improve them and make sure that we were actually addressing all the right things. I think that was a big project that's ultimately had a lot of impact in the Northeast, definitely, because we've had an introduction of a catch share program called Sectors in the ground fish fishery which has been controversial. As we've done a ground fish report every year based on a lot of these performance metrics, and some of them—especially certain things about consolidation, which is really more of an economic measure, but it's sort of one of the measures that we came up with—have become part of the public conversation about Sectors and people would mention them at council meetings when they'd go to council meetings and they'd say, well NMFS has this thing and it says this is happening and what are we going to do about that? So, I felt like that was another thing where we really have created something that has an impact—and I guess for me, that's one of the reasons why I like working in the government, if because I feel I can have an actual influence on people's lives. I'm not just doing studies. And you can certainly as an academic anthropologist, the things that you publish and work that you do can have an impact, but I feel like my impact is very direct in terms of social impact assessments or these various large-scale projects that you can actually do when you're in the government. Which is much easier to do when you can make it a national program, which is harder if you're in a university and trying to, how do you create a national program just from a university. It takes a lot of coordinating, but we can just say, ok, all the regions let's get together and we're going to aim to do this. Which, I think, is a strength that we have. I guess those two things I would say are the top things.

RS: This is asking for a specific number, but approximately how many anthropologists, specifically anthropologists, are in NMFS? Do you know? Now?

PC: Right now, I haven't done an official count because some people leave, some people arrive,

but it's, you know, ten to twelve. There are not a lot of us.

RS: No, but that's a lot more than none or one [laughter].

PC: Yeah, no it's definitely grown. It's definitely grown over the years.

RS: Do you see it as continuing to grow?

PC: Yes, I think if we had more budget, it would grow more [laughter]. We've had sort of stagnant budgets for—we had increasing budgets for a while, which was really nice, but then, for I don't know how many years now, we've had basically the same budget. So, there's not a lot of ability to hire new people.

RS: Do you find when people leave, if they retire or whatever, are they always replaced? Or is that used to cut back...

PC: Not always. Often you can replace them, but sometimes you can't. So, it varies. Or you may not be able to for several years.

RS: Would you say there's a lot more interest in anthropologists joining NMFS than there is room for them?

PC: I think so. I think if we had more jobs they would fill right away.

RS: And what—this might be a little big generic—but if you were hiring someone right now coming out of say a Ph.D. program and they had a research background, what would you be looking for in terms of their skills?

PC: It'd be nice to have some experience doing something that is applied or could be applied. It would be good to have a mix of qualitative and quantitative skills. Experience with interdisciplinary work would be nice. All of these things, depending on the person and just...I think the key thing is that it is someone who is dedicated to the research and they're enthusiastic and they're a good critical thinker—you see that they come up with good problems and answer them well. Then, you can learn a statistical package, or you can get more training in conducting interviews. So, I think all those things would be really nice, but the most important thing is that they...I don't know, they just seem like an anthropologist [laughter]. It's just someone who you feel like, this is somebody who could go out and talk to strangers and make a connection and gather information and know how to put that together to say something useful.

RS: And if that person were coming in now, do you feel like their colleagues who are interdisciplinary would have a fairly good idea of what they bring to the table and what their contribution could be?

PC: The new person?

RS: The new person coming in. So, what would they face in contrast to what you faced?

PC: Oh, I think there's a much better sense now that anthropologists actually can do useful things. There's still a little bit of misunderstanding about what exactly interview data or qualitative assessments are—we're trying to work on that. But more broadly, the kinds of issues that we study are much more accepted. I think nobody would say, why are we hiring an anthropologist? They might say, can you do a survey in addition to those interviews? But I think we've started to...we've pushed back and we're still pushing back and we've won some issues. We had a report on Hurricane Sandy where we had someone who didn't understand why we had quotes from fishermen in. We had conducted a survey, we also had open-ended interviews, and they felt like, well, you're just like picking odds and ends—how do I know this is even representative? And we were able to say, well, it is representative because of this. We went through all the interviews, we analyzed, we found themes that were dominant, we choose specific quotes that were really emblematic of those themes. And they were like, oh, okay. But you have to justify why your qualitative work actually means anything. So, that's the biggest challenge that we still have.

RS: So, they face a little bit of educational work, but not nearly as much.

PC: No, no. I think everybody has an anthropologist in their region, at least one, and so they've gotten used to the fact that they're around and they're doing things and that they're doing interesting things, and that they have a contribution they can make.

RS: Before I finish up, I just want to bring up the issue of climate change. Do you see that as an issue where there's recognition within NMFS that anthropologists can play a key role in the work that's done?

PC: Yes, I think so. I mean, we've been involved...Lisa and Mike have some climate change indicators that are associated with communities that they've created. Recently there was a bi-coastal thing, a northeast/northwest group out of the regional offices from those two regions that was talking about community resilience. Lisa and I and Suzanne Russell, who's in the Northwest, we not official members because they were regional office groups, but we were consultants and they were looking at what could NMFS do to increase community resiliency including in the face of climate change. I think that's definitely, it's a big topic that the agency is really interested in and they know that they need to understand what fisherman think about it, climate change, and they know that community-level action is going to be important and therefore we're the go-to people for those things. And funding agencies, too. There was a grant that some of us were on that we ultimately ended up not getting, but the first round of reviewers said, "you don't have enough social science in this—actually, we like it to be *mostly* social science and have the natural scientists be extra parts. So, can you reverse this?" If the people who are funding you are pushing for that, then that says—that pushes you.

RS: Oh happy day [laughter]. Well, is there anything that we haven't talked about that you would like to include as part of this summary—this oral history—of your experience basically in government and science and at NMFS?

PC: I think we've touched on most things. I mean, I think it's—this is a job that I've had for over 20 years, and it's a job that I love, that I've always enjoyed, that I feel there are always new research areas opening up, you know, things we haven't looked at yet. Some of them we have like stacked up—oh, we should be looking at this, this, and this, but we don't have time yet. And some of them suddenly come up and you go huh, yeah, well that's something that we haven't really thought about. So, part of that is just anthropology—I think anthropology's like that—and part of that is that this is, the government has offered me a lot of freedom. As long as I'm doing something related to fisheries, I can basically choose my research agenda. I've had good bosses who were very open to whatever I wanted to do. They let me move here, they supported me when I was on maternity leaves, when I was on sick leaves...I just feel I've been very lucky to have this job.

RS: Well, that's a great place to stop [laughter]. Alright, let me turn this off.

Note: Patricia Clay would like to add the following: "I chaired the 1996 Working Group that wrote the NMFS Guidelines for National Standard 8 on fishing communities. It continues to frame the way communities are evaluated today. That and writing the social and economic language for the first NMFS Strategic Research Plan"