

Measurement and the Technology Transfer of Behavior Analysis to a Society

Henry Pennypacker, Ph. D. (University of Florida)

1: About the current status

Interviewer (I): Thank you very much for having an interview with us.

Dr. Pennypacker (Dr. P): Uh-huh

I: You are a professor emeritus at University of Florida, CEO of MammaCare Corporation.

Dr. P: It's MammaCare now. It was used to be MamaTech. MammaTech was the company. MammaCare is the technology. We decided we didn't need the company anymore. MammaCare organization is still a company, still sells MammaCare.

I: I see.

Dr. P: We are not a trading public company any more so we didn't need to separate the two domains.

I: I see. And you are a chairman, board of directors at Cambridge center for behavioral studies.

Dr. P: Correct. Good.

2: Undergraduate and graduate time

I: So, and you received Ph. D. in Psychology from Duke University.

Dr. P: Good.

I: Could you tell us what was the event that led you major in psychology at Duke?

Dr. P: At Duke, Okay... Well let me to explain how I got to Duke, we have to explain how we got into psychology in the first place. I met my wife at Whitman College where we were all in Washington when we were freshman. We got married, and moved to Missoula in Montana, so I could work and also go to school. I started up majoring in philosophy and mathematics. And by this time we had a couples of kids, and I thought "you know I have to take Psychology course to see what I'm going to have to know raise these kids," so, I took child psychology and that was terrible. I had taken introductory course at Whitman got a C unit. Child psychology course was awful.

I: Laugh

Dr. P: Just no make sense to me. But research, here I was junior at college with two kids; I wanted to know what to do. And I... What happened was that an Industrial psychologist name Frank Du Mas taught a course called "this business of psychology" or something like that. And, I just loved it. He really got me excited.

I: Oh wow.

Dr. P: So, I said, "Okay, I'm majoring in this." And went back and do that and did well enough that the faculty there suggested I go graduate school.

I: I see.

Dr. P: "I can't go to graduate school. I already have those kids." "No, no, no. We will give you this job. We will give you fellowship. You stay here and get you Master's." "Okay so lets do that." Did well enough at that, and now there was opportunity to graduate to a Doctoral program. And I applied to several, and I got into two there I remember, I think I got into three actually, Duke, Penn State, and Stanford. Would like to have gone to Stanford. We called them and found out that my stipend there wouldn't even pay the rent in Palo Alto. Penn State, I really did not that care much about anyway. So we picked Duke. Never been to the South. We didn't know what we are going to getting to. But that's where we went. Got to Duke, that's just got a to history.

I: Wow.

Dr. P: Yeah, but I went under the bridge actually, I guess that's fair to say. I wanted to be a clinical psychologist to help people. And I got there and I discovered fairly quickly that if I was clinical psychology I would not be helping people. I was going to be working with psychiatrists and they did the helping, we did the testing, not therapy. "I am not sure this is going to be what I want to do." Now, I had courses of Montana with very, very high-powered prominent

experimental people, who knew a very important experimental person at Duke, Greg Kimble. And one day one of the Duke courses Kimble came in and said "I need somebody to score eyelid records in my lab, need volunteers, I could volunteer because I was a public health fellow and I did not have to go to a job every day.

I: I see.

Dr. P: So, I learned to score eyelid records. And then I learned "this looks more like science." That might eventually be able to help somebody. So, switched into experimental. And got my degree in three years from there. And then during my last year, in the fall of 1961, I went to my first APA meeting in NY.

3: Encountering behavior analysis

Dr. P: We didn't have ABA then. And Gregory introduced me Ogden Lindsley.

I: Oh.... Nodding.

Dr. P: And it turns out I found later that Ogden had been Gregory's student at Brown University. In a very first course that Gregory taught after getting out of graduate school.

I: Oh, wow...

Dr. P: So, they knew each other from way back. And Greg said, "You know you are going to like this guy." Turns out I did. We became you know, immediate friends, but of course now this is the Psychology thing; Kimble was of the Hull's

and (Kenneth) Spence tradition, standard classic learning. And I was really getting into that and you know doing it. Ogden was a student of Skinner's.

I: At that time, he was already.

Dr. P: Yes. He was, he got his degree, but he was still at Harvard, working at Metropolitan State with schizophrenics. So, but you know, he was Skinner's student and I was a Hull-Spence Kimble's student... we shouldn't talk to each other. But I mean, we just don't have anything to do to with each other.

I: Not in common.

Dr. P: Right. So, anyway, but we became friends. And we became friends first because of music. We shared music.

I: Ah...

Dr. P: And Og sings and I play guitar and we both have the history of playing at bars. Country music and that kind of thing. We were you know hang out. So we can recognize one another from the different burrow.

I: Laugh

Dr. P: And then he started teach me about behavior analysis, what behavior analysis is. What's the operant conditioning? But he taught me things that made a lot of sense. And he taught me to read Claude Bernard for example, read Skinner and learned this stuff. And slowly, slowly, slowly really something began. Ant then I said that "Okay I'm going to do this way." And then I began to discover that I could actually help people. You know, now,

Ogden basically taught me a new method. And if you count and time and put on the chart stuff you can make changes. Now I started to feel good about it. So, that's how all this happened.

I: Oh, wow... Laugh.

Dr. P: It was a bunch of accidents. I should probably never really have gone to Psychology in first place. And then I'd be running a laundry business in Montana today... or something else, you know. I could have gone to Law school.

4: Pursuing behavior analysis and about his mentor, Dr. Ogden Lindsley

I: So, the current form of standard celeration chart came out sooner after that?

Dr. P: No, several years after. By then, you know I was totally converted and we were using the chart to do education evaluations and systems and so fourth and so on. And I figured somebody had to write all this down so people would do things the same way. It wasn't enough that Ogden went around doing workshops and I went around doing workshops and another people went around doing workshops. (12:37) You are not going to reach everybody by that way and if we do that they forget, but if they get a book that's got everything in it, they can look in there. That's why we did the first chart book.

I: Wow... So that the chart itself was developed by Ogden.

Dr. P: Yes.

I: And.. So, it's already like as what we see now ...?

Dr. P: Oh, no. It went through several evolutions, many evolutions..., but pretty much like what we see now.

I: Like having the chart parent.

Dr. P: Yeah, yeah.

I: That's kind of unique.

Dr. P: That's unique. That's the way of keeping the training pure. That's the kind of things you know that person responsible for messing up, that's his fault.

Laugh

I: Yeah, and I see that's a pretty important function.

Dr. P: Yes, it is. Yeah.

I: And is that idea coming from Ogden?

Dr. P: I think so. I think so. I'm not sure.

I: Wow, so bunch of coincidental...

Dr. P: Absolutely. Just share I can say that a bunch. Doing the Mamma Care research we had some lucky breaks. For example, a guy called me up and told me about the durometer. That made all difference in the world. I never would have known to do that myself. And the world around ... here is a Psychologist getting what's basically biomedical engineering got help. That's invaluable.

I: Keep having it over thirty years, almost forty years.

Dr. P: Almost forty years we've been working on that, but it's a big problem, and other methods come and go. People tried to copy it, tried to do quick and easy way. You can't. It takes time to teach these skills to get it right.

I: Was there a mentor or colleagues pursue behavior analysis? That's Ogden for you.

Dr. P: Yeah, yeah. He was. I mean I don't think he thought of himself that way but he mentored me.

I: Are you guys around the same age? or he is older...?

Dr. P: No, he is considerably older. He was born 1922. I was born 1937, so I was 15 years younger.

I: And so, it's pretty much you said that you pursued on what you are interested in to make you feel good.

Dr. P: Yeah, I think that's fair to say. Now let me say something about the relationship to Ogden. My Ph. D. training was excellent. Absolutely excellent. And the things like Mathematics I had minor in Statistics. Actually Math I took some at Master's level. Philosophy of science, Duke had very powerful component of that. Experimental design, experimental techniques were very good. And the same was true of Ogden. Working with Skinner, prior to that, he worked with very famous neurophysiologist at Brown University, named Robert Galambos, who just suddenly upped and left Brown and went to NIH leaving Ogden high and dry in his dissertation year. He just going to finish

with somebody else, and then the Brown University president who said "No, no. You can't have three degrees from the same University." So, Brown said, "Ogden you already got Bachelor's and Master's go somewhere for your doctorate" So, Ogden was like "Bye" and heads down to Harvard. Shows up and they assign him to Skinner's. Now I don't know if you know this but Ogden had been prisoner of wars in WWII and he was very very determined to do something to help keep that from happened again. And the fact that he got something to do with Skinner, he could've been assigned to anybody ... Boring (Edwin Garrigues Boring) or Murray (Henry A. Murray) any of them but he got Skinner. So, yeah. I think Ogden was a fascinating person, he was just very, very exciting person to be around... Have you heard Ogden give workshops? Go to Behavior Research company site now you can click on them and take you to iTunes and they've recorded and reproduce his workshops.

5: Developing breast exam with behavior analysis: Founding MammaCare and technology transfer with measurement

I: So, what was your research interest and how has it change until now?

Dr. P: Oh..., well, okay... At some point I kind of told you how we were getting into Breast cancer thing? (Before this interview, we had lunch and he was talking about MamaCare) But I could've say no. When Mark (Goldstein) came back, Mark Goldstein came back and said, "you know what," I was just meeting

with him what we got to do, "No, I'm not going to do that." Right. I could've say that, but I didn't. The reason was, Two reasons: One, I saw this is another opportunity, brand new opportunity to develop effective instructional procedure, which is needed in education from Ogden's point of view. That was one point. Number two; nobody else was doing it. And so you don't have to get out and compete with everybody in getting into the struggle of who's publishing the most and all that, here we actually can go after a problem and solve it. That's exciting. So, yeah, let's do it.

I: I see.

Dr. P: But, now at the same time, once I committed to this, I couldn't spend much more time on precision teaching stuff. But I didn't think I needed to. There are all kinds of other people doing that. That's got an army up there now. We've got to deal with this problem and solve it just two of us. But we put together a team of physicians, engineers, and our own students. Once we got a team together now we were going to go forward, get money, get these things solved. Forty years later, we are still working on it. Laugh.

I: Wow...

Dr. P: Yeah, yeah. We thought it could be in three years.

I: Laugh.

Dr. P: And, here's what happened. After the first couple of years we got a grant, big grant. And then grant ran out, and people want to buy our models. And,

you know, we had patented it. In our office, we said, "Now wait a minute, we didn't do this to sell models. We did just to save lives. We did this to make a difference in how people do this. Models are just a part of the packages." So, we kept saying "no," we kept saying "no." And then we kept saying "Alright, nobody else is going to do we do it ourselves. That's when we formed a company. "We'll take it to market." It's our company, and we can arrange ways to insure that people do it right.

I: Uh-huh.

Dr. P: Including the measurement. That's because I learn from Ogden. It's got to have a measurement; it's got to be a right measurement. So, that's why we've survived I think because we insisted our measurement. We certified people to do this and to train others, and that is on the basis of their performance. And ah, if they don't make the standard, they don't get certified. And they have to come back and do a recheck. During those years, I had learned how to fly and one of my greatest thrills was being able to fly Ogden around Montana, where I grew up and he looked down my house and he had ranch and we looked at his house. But one of things that I learned in becoming a pilot was that a pilot has to do everything well. The government specifies what you have to know, and certifies to schools to teach it, and then the FAA (The Federal Aviation Administration) examiners take student pilots who want to be become licensed pilots, out to make sure what they can fly. And they have

a very strict set of procedure you got to go through. Every two years, you got to go through, how to say this, you show some total stranger you can still fly airplane safely. And here they are able to take you up and they simulate emergencies, and you react to them. So, I always carry that as a kind of reference for how we should train people to do breast exams. Flight training is a life saving skill; breast examination is life saving skill. I'm putting it at the same level.

I: I see.

Dr. P: People laugh at that, but I think it's just as important. You know, well I can miss that though. Yeah, you can miss that, or we will never see you again until we see you in funeral. No. Don't miss that. Train to that standard.

I: Wow. So, is that's the kind of staff that you would want to share with younger generations if you have...

Dr. P: Yeah, yeah. Yes. Definitely. Importance of measurement and importance of standards. Like I said, "don't give up." You know, stick with it.

I: Set the criteria higher.

Dr. P: Yeah. As high as we can. I said, the first research we did was we determine how high that the standard can be set. What was the upper limit of physical ability people to do this. That's what we are going to teach to.

I: Uh hum. First of all, you have to know what the highest.

Dr. P: But you have to know which is why we spent first three years figuring that out. That's odd way of approach it. I guess.

I: Yeah.

Dr. P: You know, yeah. I think I would like to talk when I talk about this. The probable thing would have been we would've looked at a bunch of women found out what they were doing, give them green stamp to do more of it. Pay them, give them tokens; mere reward parts of some I don't know. But in other words don't analyze the behavior just take the behaviors that they give you and make more of it. We did our real behavior analysis. We took the behavior apart, found out what the necessary pieces were and put them back together in a new way.

I: Right. You can be successful by the contingency management. Because you have to know what it is.

Dr. P: Exactly, we didn't. Nobody else did either, but they didn't really care. They didn't think it was important. They all thought, you know, people still think that you can learn to do a physical skill through the eyes. That's the fingers, in this case. Feet, other cases. Motion of hands, putting the golf ball. You can't learn that through the eyes. You would be able to learn about it, you learn to talk about it, but to learn to do it, you have to use some muscles and sensory systems, that are involved to doing that. That's the way the training has to be.

I: Yeah.

Dr. P: End of story!

I: Yeah, I can't I agree enough.

Dr. P: Yeah. Enough so you know it is just a set of simple ideas. But the American Cancer Society has for years believed that you could teach this through the eyes.

I: Has they been changed their view of it?

Dr. P: Ah, it comes and goes... There was the time back around 19... well around 2000, when they were replicating our way. And then they said, "Not to complicate it. Just learn about your breasts. Now its positions is you need to know about your body. "Well you really don't know about your body if you don't learn how to examine it..." So, the world is changing, but the interesting thing is that the public out there knows better, and they want to know how to do it right.

I: Well, that's a Market there.

Dr. P: Yeah, and yes, we just don't know how to do it yet. I know we don't know what we are doing in that. I started out saying "You know, if you can make people through marketing and advertising what most people will sweep up off the floor and throw away, and they called it dry cereal, we should be able to make people say, 'I want to do this, and do it right.'" I haven't figure that out yet. People don't wake up and paraphrasing what Microsoft used to say, "what

do you want to do today?" People don't like apathy. I know what I'm going to do today! I want to find the breast lump. I don't have one. It's hard to at least I can't use the Microsoft approach to get people to do MammaCare. And we've tried a lot of things. Like one approach was that I did it I didn't find anything probably because there is nothing in there. So, it's kind of a negative reinforcement. It's just good not to find it. That's hard to sell. It works in Dentistry you know. Look no more cavities. You know that toothpaste ad. There you can see that and take a brush and so on. This you can't see, you can feel, but can't see. So it's, it's now, I haven't figure that out yet how to get women to see, "yeah, yeah, I want to do that."

I: Yeah, that's a tough one.

Dr. P: All the other behavioral treatment packages, like no smoking, cutting down eating all that stuff, the point is, you got the problem, if you are a smoker, we know you are smoker, you see his smoke. We don't know you got breast cancer, you probably don't. You know that at any given time you never find anything. That's good. But you don't have the one-on-one immediate relationship between what behavioral problems is, and what are you doing to fix it. You don't. You know, the behavioral problem we were addressing is not knowing how to do a breast exam. Most people don't come up to you and say, 'I don't know how to do a breast exam. I don't know what to do about that.'"

I: It's like a hidden repertoire.

Dr. P: Yeah, it is.

6: About Cambridge Center for Behavioral Study

I: Could I ask you about a Cambridge center?

Dr. P: Sure.

I: How would you link MammaCare with Cambridge center? I see some kind of similarity or relationship.

Dr. P: Yeah. The Cambridge center has its sort of underline background theme “excellence”. The best behavior analysis, the mission statement you quoted about bring behavior analysis to people who are suffering so on and so forth. You can't do that if you don't do the best, and MammaCare would be embarrassed. I got invited to join the Cambridge Center because I got invited to give a talk based on the work of MammaCare. And I did and actually it was a talk taking off from MammaCare to whole idea of technology transfer. Now, I should've said this, right. At the time I started teaching behavior analysis, I faced a question every class. Someone would say, "You know, if this this is something so damn good why isn't anybody doing it?" Teach him operant conditioning. Show him how to shape animals behavior. And I would say, "You know, that's a good question." I spent some time and effort to answer to that question and Cambridge center was the way of doing that. It was the way of

bringing, the best behavior analysis to the world. I mean sort of on an unedited basis.

I: They got an interface of behavior analysis to the world.

Dr. P: Yeah, right. That's the main function, I guess you can say. There is a web site, where people can click on behavior dot org, and go find the answers to questions or find people that they can talk to that give him answers to questions. And, my value is that those are going to be the best answers available.

I: I see.

Dr. P: So, One of the things which I do is sort through the garbage.

I: You do that?

Dr. P: Yes. We try to. Now, you got to be careful. You can't just insult people. But we are learning how to talk about particular things as this is how this works and this is why it works in here are the data. Here's what the data look like, if they want to try something else, ask them about where those data are.

I: You really do spend time to do this.

Dr. P: Absolutely. Yeah. That's why I'm affiliated with the Cambridge Center .That's to me; let me solve their problem. Why is everybody doing this same problem? Aubrey's brought that up. Aubrey is on our board of directors. So, we are all in this together.

I: Wow, so, how ...how are your relationships with Aubrey Daniels?

Dr. P: Very close. See, Aubrey got his degree at Florida. Before I got there actually. He was just leaving before I came in 1962. But we are coincidentally friends for years and then recently, he is becoming very active in Cambridge Center. We play golf together. I mean there is real friendship there. But he is the best I think for what he does. He is very good. So, I don't mind having him be the spokesperson for Cambridge Center. But I know he didn't mention the Cambridge Center today, which is good. He and I are not here to promote the Cambridge Center; we are here to promote behavior analysis. That's what he is doing. He is here, too, you know, his talk was "hey let's get this out there." And he is right.

I: Well, I think he has different position from which he can talk.

Dr. P: Oh, yeah, yeah. He is very good and his company does great stuff all over the world. They charge big. But they generated awesome results. He was a clinical psych student at Florida. He knew about experimental, fair to say. He got caught up with Ogden, too.

I: So, you guys are all friends.

Dr. P: Oh, yeah, yeah.

I: Is it always like that in your generation?

Dr. P: Tends to be more so because there weren't very many others. So, it's grown very fast that the chart they show today shows far we are up with autisms but it grows. But I think that's fine. I do want to see, you know' all the

other fields look healthful. That's what we did breast cancer stuff. That's a totally novel application. And there's many more. Volunteer to hire do these.

I: Laugh. But underline is the problem solving. Solving problem.

Dr. P: Yeah, with behavior. Now we are start talking about sustainability business. I'm supposed to talk about that. Yeah, I mean the idea is we are going to do this from behavioral perspectives what is that mean. One thing is that we deal with behavior, we don't deal with surveys, we don't deal with questionnaires, we don't deal with other things, and we deal with behavior. Defining that behavior that would be challenge. What kind of changes we want to see and how to get there through behavior. And then, of course all-important, how to measure.

I: And if you break down into piece, each one of them should be really simple to solve.

Dr. P: Yeah, yeah, should. But it's a huge challenge, and I think we should avoid trying to do all at once. Now, one thing that Cambridge Center does, and one of guys we were talking to when we were getting out from the conference room, both of those guys are on the behavioral safety accreditation team. Now what they do is they would've place it like world refiners. Oil refineries buy these sands, to survey their practices regarding industrial safety. Well, well, you find as dangerous places. Oil places are dangerous places, so. So, it's very valuable to them to have the Cambridge Center come in to say, "Yeah, you are

safe." And at the certain level of improvement they went to specify: Either do this, you are going to do this, train these people do this, this, and so on. Then at the certain level they get a credit, and they get to put Behavioral Accreditation by the Cambridge Center through behavioral safety under their staff and they do. Big company Marathon oil does this. And ah, there is a grocery store chain I forgot the name. Super value chain, they got accredited by the Center.

I: Oh, really

Dr. P: Yeah, now that we are trying to think about taking that idea to a wider field. Okay, you guys are serious about saving the planet; let's see you show us. Let's see if you can reduce water consumption by a third by next month.

I: So, that the Cambridge Center will be going out there and saying that?

Dr. P: Yes, we will bring other people into this, we can do more. EPA people and we will bring various industrial people in to help. We are there to provide behavioral intervention.

I: Wow

Dr. P: Giving you an example. You are probably individual things you should put your towels up.

I: Towels up?

Dr. P: Put your towels up. And if you don't want to, you don't have to have your towels washed today for tomorrow, pick them up and pile up somewhere. Leave them on the floor, a man gathers them up and washes them. Okay, if you leave

them on the floor, they gather them and wash them. Then they use the soap and the sinks. You hang them up, they don't use the water, they don't use that soap.

I: Ah, okay.

Dr. P: Now, how do we translate that into precise behavioral procedure? We don't know what the maids do and how the maid system works. Maybe they don't care. So, we got to find ways with the maids to reinforce their behavior; we got to important to find ways for you to reinforce. You are to do it. What would reinforce that behavior in your part? Well, you are a nice person so you do, and do for a world. A lot of people might have to have some Hilton Honor's points to do it. So, we are going to your room, with a voucher. I knew towels are I want to give 10 points for just doing that.

I: smile.

Dr. P: That's an idea. But you see, you've got a point you've got to observe the behavior, in this case the behavior products and reinforce them immediately. My suggestion is going to be, I think, every toilet you buy has a little thing that says how many gallons per flush. Okay. A great notion is do you want to save water? So that means we want to use fewer gallons. How do we do that from getting flushing, don't flush so often.

I: Laugh.

Dr. P: Really. Right. So, we want to... See, here is the thing. You got gallons

per flush, just think of the math now. Gallons everybody flushes multiply by flushes per day, okay? The flushes cancel and you got a gallon per day. So, you have a measure, it doesn't look like behavior, but you have behavior in both the denominator here and numerator here. So, we are going to attack the flushing behavior. How do you do that? I don't know.

I: You can't really.

Dr. P: You can't. You can't go there and watch.

I: Right (laugh).

Dr. P: So, can you think of a way? I don't know what way you have to, really get it precise, but I know one way we can try. And just happened we have a Hurricane in Gainesville, real bad in all Florida. And guys on the radio said, "Here is our rule. If it's yellow, let it mellow, if it's brown, flush it down." We save water so we reduce the number of flushes.

I: Uh-huh.

Dr. P: Now, we might try that, and we might try that until whole floor rooms in a hotel, and or maybe whole hotel and monitor the water usage with the prompt on there and just put a sign, little smiley face at the bottom, and then take that out. We glad be sufficient to reduce the water consumption.

7: Messages to fellow behavior analysts in Japan: Caring Natural science of measurement

I: Well, actually this is the last one. Could you give us a message? Would you have a specific message to the Japanese behavior analysts?

Dr. P: We don't give a different message to the different cultures, do we? No. We are all of us together. We are all humans, we all behave, we all have environments, and so and so forth. The rules apply, you know. My message, I think it should've come through while what we talked about all these to is the measurement.

I: Measurement.

Dr. P: And, we can go out some length about what is and what is not good measurement. I mean just a few things about that's good or upset everybody and people talk about it. There is a big fad now for we what is called "evidence based" practice. Okay. Well that leads you to ask question: "What is evidence?" "How do we know we have good evidence?" And do we know we have the best evidence?. Is this evidence enough?" These are questions should be asked and usually aren't. What I have noticed happening I think is that people justify what they do on the basis of the phrase "evidence based." And the quality of the standard for evidence is deteriorating. So, as it used to be you have to have solid behavioral data. Now you can get away with an interview with the parents. You haven't seen a kid, you haven't seen behavior here. Now basing your judgments on so called, evidence based decision-making, on verbal behavior of the parents. That's not what we do. That's not what we should be

doing. I know for other people's ways of making living, but that's not the behavioral way. The behavioral way is to get in there to get direct measures of behavior and measure in terms of its natural units; Frequency, latency, and duration. You know, count over time, how long it took to do, and how long it took to get started. Those are three kinds of measures. Our real measures of behavior. You put that together. And then remember what Ogden left us with. "Care enough to chart."

I: Care enough to chart.

Dr. P: Care enough to chart. So, that's my message, you know, fits that well. But that's because we have a natural science that has facts. We get those facts, because we measure behavior as a natural phenomenon with a frequency. Ah, our technologies are effective because we use frequency measures. We use real measures of behavior. Our MammaCare method, the measure is a real measure of behavior. We teach for example, at the clinical level, 20-palpations per minute with the level of accuracy we specify. We call it *sensitivity* in the screening, but that is the same thing. Ah, you find the real ones and you don't find false ones, that's a basic standard. Okay. All that is because of the measurement. You don't do that; you might as well get off the boat because that we are not working on the same problem.

I: Ah... I guess nowadays those behavior analyst who are in autism area especially they try to be competitive with other people in the same arena. The product Amount quantity of the publication is so different.

Dr. P: Yeah.

I: And that means in academia, in terms of getting a grant, you kind of automatic out.

Dr. P: Yeah, yeah.

I: What would you think about it? What would be the solution for keeping the quality high but being productive?

Dr. P: See that gives us what I thought we were talking about: technology transfer. Ah, this is a fairly complex idea, but all comes down to money.

Unfortunately it comes down to money. But you can say one can say unfortunately or not, if you do as we did, and keep the technology to ourselves, so that we can control. You can then make it effective. And you can make sure that the outcome and the product will be the outcome measures so on of what you want. So, what is all that to say, in order to, I think, in order to insure quality you have to have an arrangement in which two things happen. There is variability of what people do and there is variability in the outcomes that are correlated with what people do. There are outcomes in terms of people who are doing it. So, the one may have saying is cream usually rises to the top, which you don't know that's happening unless you got the measurement. So, that's

the first component you have to be able to say, "this is good and here is why." Knowing the kids with autism I would think that things like how many kids that you treated this year that have shed the label. They don't call them that anymore. That's one standard. You get more precise about which behavior have we changed. What are the behaviors and how fast do they do them? You know, what have been the celeration what's been the outcomes? How many changes have we made, I mean, new skills we put in place? Those kinds of things were the behavioral measures. I think that we are probably going to see the day pretty soon in which we can quantify that on the general basis for foreign organizations and provide service. And, we will be able in fact Cambridge Center talk about doing this. We will be able to do like Michelin does what's like restaurants. Give four stars, three stars, two stars. That's a four-star facility. They charge a lot, but your kids are going to get better. Here's another one. Over here they don't charge very much, but four of the kids wandered off near some gate. You know, see what I am saying? I mean, it comes down to direct measurement of the quality of the output behavior change that you are trying to produce. And then let the market select.

I: Ah, yeah.

Dr. P: That's very upsetting. That's why I thought I was going to get killed when I gave that talk back in 1986, my presidential address, "Buying in without selling out." But it turned out most people understood, and agreed

with me. Some of them didn't, but most did. But I don't care if they agree with that or not. That's fact, and I don't think if you can, unless we totally change the way we organize society, I don't think we are going to be able to weed out the incompetent and let selection work to produce better and better procedures without something like that operating.

I: Just like what you do for the Center.

Dr. P: Exactly. And we do that. I've been seeing that when I was a chairman of the Peer Review Committee for the State of Florida. That was just the committee overseeing what's goes on in every institutions for the retarded people. I propose a mission kind of thing like that based on behavior change. Hit the fan it got. People got furious "you can't do that!" Oh, terrible. Same things happen here. Ah, not all of it. But it is possible. Maybe in your country, people have enough sense to say, "Well yes, it's possible, let's do it." My message is "Hey, go for it!!" You know, you won't get hurt.

I: Yeah. So, having a model program is really needed.

Dr. P: Yeah, well that maybe is the place to start. And get SONY to fund it.

I: Yeah!

Dr. P: I mean there's an idea. Go to the management of both of those companies and say, "look here is this problem. Come on, let's go join forces we provide the training and talent and you provide the resources, put up a model facility for training."

I: Yeah. I guess that the most critical thing. Probably we are looking inside each other, and trying to do some stuff within ourselves. Maybe we should go outside, go out there.

Dr. P: Get their support. But I mean you got enough people now who come over here and got BCBA and so fourth and so on. You got to be able to pick some good ones those who lead this. I would think.

I: Uh-hmm.

Dr. P: Maybe you do it.

I: That's right.

Dr. P: Yeah. Here you go.

I: Well, that's all.

Dr. P: That's all. Okay.

I: Thank you very much.

Dr. P: Thank you. Enjoyed it.

Interviewed on May, 25, 2013

Place: Hilton Minneapolis Hotel

Interviewer: Yuka Koremura, Ph.D

Assistant Interviewer: Ayuko Kondo

Interview with Dr. Pennypacker
Interviewed on May, 25, 2013



Pennypacker 博士(<http://cambridge.org/>より)

