**Episode #28**

**Speaker 1** [00:00:01] Welcome to the Cabrera Lab Podcast.

**Speaker 2** [00:00:07] How you doing?

**Speaker 1** [00:00:08] I'm doing great.

**Speaker 2** [00:00:08] Today is another fun day!

**Speaker 1** [00:00:11] Fun day, fun day.

**Speaker 2** [00:00:12] Today, we're going to dedicate all of our time to systems, part-whole system.

**Speaker 1** [00:00:20] The S in DSRP.

**Speaker 2** [00:00:21] in the SRP and in we're gonna land in the zoom in zoom out move and do some practice and examples around that as well.

**Speaker 1** [00:00:29] The move that helps you build the skill of the universal pattern and structure of system part whole.

**Speaker 2** [00:00:43] So I want to talk about a lot of things, really. I want talk about how we know they exist, what does it mean for us to be aware of part-whole systems, how does that help us in life? And I want a talk about part and whole, sort of the elements of systems, and then also, I have a womanist, and also talk about how we actually practice getting good at these things.

**Speaker 1** [00:01:09] if you've listened to the other patterns you're going to see a theme because the research that we've done has focused on sort of validating or proving, as scientists don't say prove very often, but the general public thinks of it as proving certain things. So with each of the patterns, we kind of went through the same. steps, research-wise, in terms of proving that they exist existentially in nature, in the real world, proving that are operating universally in the mind, proving that, again, I'm using the word proving in a way that I normally would use it. Evidence for. Evidence, for. To what extent we're biased around using part-hole systems. evidence for the awareness of part-hole, systems part-holes, this pattern, whether or not that affects your performance. All those kinds of things, you'll see a pattern across all these four structures.

**Speaker 2** [00:02:25] Yes, so I think maybe it would be good to start with our big study, the 35,000 people study, where we looked at what people tend to do and tend not to do, just to kind of anchor this episode and then we'll go into the existence and efficacy and all of that. But if you remember, we tried to reduce the results to make it easier to out of 10 people.

**Speaker 1** [00:02:51] Yeah, so that study, you know, again, 35,000, that's kind of a big number to conceptualize what does it mean. But if you, if you sort of think of it as you have a team of 10 people and you ask them to solve a problem or to think through, think something through, what do they do? What are they going to, what are you going to witness them doing? And this study kind of tells us what, generally speaking, people will do. And it turns out what they do five of them get stuck They freeze up right away. I don't know where to start. Thinking through a problem or anything, an issue, a situation, a problem, whatever. Five of them start making identities but not others, which is the distinction pattern. And two and a half out of ten breaks stuff down into parts. Two and a half out of ten. So that means you got a team of 10 people, you're paying all of them. Two and a half of them are gonna break things down into the parts. zero of them zero zero of your 10 paid employees or your 10 team members are going to think about those things in terms of what they're a part of meaning the whole yes they're not zero of them are going go a level up and two and a half of them are gonna go a little down

**Speaker 2** [00:04:26] Yeah, and the other thing we found in that study that was interesting was, okay, so what you just said, we tend to be able to, two and a half out of 10, tend to break things into parts. But what we also saw is where what we tend not to do is we don't, like you said, go up levels of scale. So we always talk about plus 1 and minus 1. Well, we're good at minus 1, sometimes minus 2, like parts and then parts of parts, but we're not good at putting things in that wider.

**Speaker 1** [00:04:55] you're going to. So that's...

**Speaker 2** [00:04:57] So that's a weakness.

**Speaker 1** [00:04:58] Yeah, it's a bias. It's a weakness and a bias, and the reason I say the bias part is because the bias, being aware of the bias actually transforms the weakness, right? Yes. So when we're aware of a bias then we can go, oh, you know, I will tend not to think plus one. Yeah. Okay, now I'm going to think plus one. Exactly. So being aware of what people tend to do, and also what they tend not to do helps us see the bias. And so with systems part whole systems is the pattern. Part of the two elements that make up that pattern. And what what the research is showing is that we're okay, we're not great. Because the only two and a half people do the part. we're okay at that, two and a half being not so great. No, it's not. So we need to do more drilling down and we need do more thinking up. And ironically, a lot of what we hear from CEOs and executive teams and people, anytime executives are choosing to train up their middle management to try to bring them up into upper management, what they're looking for Is they want to see people that have what they call enterprise thinking. They want people to think one or two levels up. And they're trying to train people into thinking one or 2 levels up because we all get pretty good at, I give you a task, you're gonna think naturally about, how do I break this task down? But you're not always gonna think about, well, this task that I was just giving. given, what does it fit into? What is it for? What does its purpose? How's it going to play out above me? That we tend not to do. Yeah. And even breaking it down. A lot of people like like the research shows seven and a half people are not going to even really know how to tend to break it down

**Speaker 2** [00:07:11] Meaning the thing is the thing. They don't think about what is it made up of? How can I better understand it? I mean, the other thing I think is important about part-whole systems, and I'm hesitant to use the C-word category in front of you, because I know how you feel about categories, but I do think it's important to address the fact that when we're organizing things into part-hole systems, often those become categories or groupings. And one of our weaknesses is that we don't tend to question how things are organized into groupings or categories.

**Speaker 1** [00:07:50] Yeah. And that's actually, as you pointed out, the term categories, which is widely used in cognitive science and psychology and is one of my pet peeves I get on my soapbox. And in part because part whole, this interplay between part whole is such an important idea to understand. It's one of the most profound ideas. And it's one of the most profound ideas that the mind is doing all the time and that nature is doing on the time. The problem is, so there's part-hole structure, right? Parts are contained by holes, right. And the way that part-holes are configured, it can be quite fluid in real life. It can be quiet adaptive. It's the old saying, you never step into the same river twice. So when we create groupings, so I tend to call things groupings because groupings are a little less, you know, we can group stuff and we can ungroup stuff, but a category is something that kind of we group it and then we think that it's that it is just static and it stays that way.

**Speaker 3** [00:09:05] Right. Right.

**Speaker 1** [00:09:06] And we also miss the idea that any group of objects is grouped based on a perspective. And the perspective's kind of hidden, right? And our research actually shows these interdependencies between the systems pattern and the perspective pattern, for example, or the systems patterns and the relationship pattern. There's dependencies on these things. And so. When we talk in terms of categories, I think we get into the danger zone of one, that these things are permanent and static. They're not. They're highly fluid and dynamic. And two, that we ignore that a huge part of that category being static or permanent is that you've already biased the hidden perspective that makes it so. That's right. So I like to talk about things more in the more, what I perceive as more fluid terms in terms of groups. Things group, things ungroup, you can watch a group of birds and they'll group and then all of a sudden they'll ungroup and they will group into different groups. You can watch nature, things are constantly grouping, watch a party. People are grouping and then ungrouping and grouping into a different set of groups

**Speaker 2** [00:10:29] Meaning there's several ways to organize and connect things into groupings, it's not only one way. And we do though, because of categories and hierarchies and all kinds of things, we tend to believe that once things are grouped, that's the only way they can be grouped. Like species, for example, things like that. But what we're learning from research is there's more fluidity and possibility and the way you can actually think about them.

**Speaker 1** [00:10:55] Absolutely. There's much more dynamicism and fluidity in the way we group things. And by the way, if you're wondering like maybe that feels too esoteric or theoretical, like why does this matter? Well, you might group something one way, say the parts of a particular piece of product or machinery. your next big innovation isn't actually inventing something new, it's just grouping something different. Your next big innovation, your next, big discovery could literally be not that you're discovering or innovating something totally new, right? It's simply that you are organizing what you have differently, slightly differently. So the way we things can dramatically change. the way they show up in the world. That's right, that's right. And so paying attention to part whole organization and the systems that result as a result of that part whole of organization is one of the most, well, one of four of the important cognitive or thinking skills that there are.

**Speaker 2** [00:12:11] I also think though that, just from my own experience over the years, that part whole seems to be the most obvious and therefore the not as profound as you say it is. People you know, because everybody organizes, breaks stuff into parts and you know they group stuff and it seems.

**Speaker 1** [00:12:28] Superficial or something that we do.

**Speaker 2** [00:12:33] And when you get to the level of what you're seeing where you're actually challenging how things are grouping, challenge the way things could or could be organized differently, which changes those things in and of itself.

**Speaker 1** [00:12:45] Yeah, I mean part whole, I think you're right. First of all, I part whole is the one that people are more familiar with than anything else. And as a result of that familiarity, they're not as blown away. They're not a happy mind blown emoji as they probably should be. and I'll give you an example. systems people and systems thinkers are notorious for saying the following phrase. Systems thinking is holistic. It's about the whole, not the parts. It's About seeing the forest rather than the trees. It's, about being holistic, not reductionistic. Right. Right. That is, you can Google it. You can read. Everywhere you go, you will run into those kinds of statements, those exact statements and many, many statements like them and many assumptions that come out of those statements about the fundamental way that systems thinking is. and it's all completely wrong. Systems thinking is, yeah, it's a huge problem, right? Systems thinking is not holistic, not reductionistic thinking. It's not synthesis, not analytics. It's whole, not part. It's either or. It's an either or thing because in order to understand the system, you have to understand it as a whole. And you have to understand it as parts, you have to understand the parts that make up the whole, including the relationships, which are parts. That's another place where they go wrong.

**Speaker 2** [00:14:37] We'll do that later.

**Speaker 1** [00:14:37] We'll do that one later. But you have to understand the forest and the trees. You have to the analysis and the synthesis. You have understand both. It's not an either or thing. You have be a reductionist and a holist.

**Speaker 2** [00:14:55] And and one of the things that we've said over the years and and you know that there's two types of people There's people who split stuff up people who lump stuff back together

**Speaker 1** [00:15:03] Spooners and lumpers.

**Speaker 2** [00:15:04] Right. And what we've been saying, and you've coined the now famous phrase, splumpers. You want people who can do both. Which is what we're talking about. Go up a level, down a level. Up a level down a scale.

**Speaker 1** [00:15:15] We need splumpers.

**Speaker 2** [00:15:16] people who can do both.

**Speaker 1** [00:15:17] You need to be a swamper.

**Speaker 2** [00:15:19] the bigger context, the smaller, you know, big picture, little picture, all of that.

**Speaker 1** [00:15:23] Yeah. We need these kind of amphibious people that can do both. That can go down to the tactical level at the thousand feet and then go up to the strategic level through the operational level at 30,000 feet and through and all the way to the strategy level at a hundred thousand feet and go right back down to a thousand foot tactical level to the parts. Yes. That's what makes somebody really an expert in any world or any field is that they can traverse that 100,000 foot down to sea level in that fast. And they just have no problem going through the strategic operational or tactical level or the 100,00 foot level to the parts. They have no problems. They understand the ecological aspects and dynamics of the forest, but they also understand the tree and you know what they understand? They understand that the tree is a part of the forest but it's also a whole. That has parts. That has part, right? And that's really important because when we talk about the system's pattern of DSRP, the S in DSRP. We're talking about the interplay between part and whole, which has a relationship. Parts are part of the whole, the whole contains the parts, but also every whole is a part of some larger whole, and every part is a whole lesser parts. And those dynamics are really, really important to not only to natural systems, but to the way that the human mind works.

**Speaker 2** [00:17:03] Yeah, and I think what people will start to pick up on is, generally speaking, systems thinkers do both. They see parts, they see health. They see identities, they others. They see action, they say reaction, point, and view. And it's about seeing both and the simultaneity of both at the same time in all things. So let's get to the research, the fun part, where I get to nerd out about the research.

**Speaker 1** [00:17:30] I want to bring up one thing, which is a case study that we did many, many years ago, before even this research, which was the one with the...

**Speaker 2** [00:17:42] Asian butthead.

**Speaker 1** [00:17:42] Preschoolers Apple. Yeah, and they were pre-k. They were pre K and K

**Speaker 2** [00:17:46] N.A. So they were four, like four years old.

**Speaker 1** [00:17:49] Four years old and they were in schools and so they had a, they have a standard, a learning standard and this particular learning standard that we were doing a case study on was called community helpers which is where they learn about policemen and firemen and all that kind of stuff. All the people in your community that help you. Exactly. So these little kids are learning about that and this is a particular lesson that they do every year. was about firemen and so the firemen would actually come with the fire truck and park in the parking lot and the kids would go out and meet the fireman play with the truck and all that kind of stuff then the kids will build a fire truck out of cardboard and then they would draw a fire truck right and they would label all the parts yes and they do this every year so we have a long history of how they do it what they do and we knew what they would do they would make a picture of a fire truck that had about four parts on it or five parts on

**Speaker 2** [00:18:53] Not even, I was like...

**Speaker 1** [00:18:54] Yeah, like a couple parts.

**Speaker 2** [00:18:55] a steering wheel wheels in a box.

**Speaker 1** [00:18:57] Yeah, and they build the fire truck out of cardboard, and it would have wheels, a steering wheel, the front, the back, and a ladder. So how many is that? Wheels, steering wheel. Front, back, ladder. So it had five pieces, five parts to the firetruck. And that would affect the structure that they built and the structure that they drew. It would also affect the number of words they learned, like ladder, wheels, the vocabulary. Okay, so we come in and we say, well, let's teach them part whole, just this one out of four patterns. We're going to teach them a part whole and they made a song or something. That's how you teach four. That's right. So they sang a song. Every part's a whole, every whole's a part, every hole has parts and they had hand gestures and stuff. So this is like a couple minute intervention, like maybe five minutes where they talk about part whole. Everything we just said part whole Every hole has parts, every part is a hole that has parts. Every hole is a part that is part of something larger, basically. They go out this time.

**Speaker 2** [00:20:05] They bring the fire truck.

**Speaker 1** [00:20:05] They bring the fire truck, the firemen. This is the next year. With this treatment of part whole, just being made aware of what we're talking about here. Part and whole. Part and hole and how they interact. They go out. see more, they see more stuff. They see stuff, they don't even have words for it. So they have to invent words for like the grippy stuff on the ladder. So it wasn't just a ladder. It was a ladder that had the crossy things, the rungs and the right, but they didn't even know the word for rungs. So the cross things and then the cross, the things had the gripy stuff, but that opened up the possibility of having new words, new vocabulary for those things. and they came up with, you know, words and so. They go back in, they do all this stuff, right? Their pictures have more stuff on them. There's more stuff. More parts. More parts, yeah. So they're seeing more. Yep. And more vocabulary for each one of those parts. Yep. So they are learning more words. Yes, that's right. The structure that they build has more stuff on it. Yep. The fire truck has. Not just a steering wheel, it's got like dashboards and you know, the ladder has pieces to it. And the, you know the back part has little valve thingies on the side that they draw and the door had a handle.

**Speaker 2** [00:21:32] Remember.

**Speaker 1** [00:21:32] They literally created, they saw more parts.

**Speaker 2** [00:21:36] because they learned part-all.

**Speaker 1** [00:21:38] because they learned part whole, right? And they were able to see this fire truck as part of the larger community and as part a larger function, right. That's right. That's with just a few minutes. awareness of what your brain is doing and they just went at it and they they literally took apart with their minds this firetruck to the nth degree from just learning part whole so that's how powerful it seems like such a simple thing yeah and now imagine those kids they just keep going and getting better and better at part whole I mean you study part whole for the your whole life and just get better.

**Speaker 2** [00:22:18] Yeah, but let me tell the second part of the story. Oh, yeah. This happened at the beginning of the school year in September. And I think it was around January, February of that year. They had there's a prison near the school, they had an escape of a prisoner, and they had to lock down the school. And so the teacher says, Okay, we're doing a lockdown. Everybody go, you know, to the back corner of the room, turn out the lights, be quiet. She's going. He's going.

**Speaker 3** [00:22:46] Lock the door.

**Speaker 2** [00:22:46] locked the door, she's going through it all. And these are little kids are four years scary, and they're probably terrified. So they do the lockdown. Thankfully, it resolves without incident. And then they lift the lockdown, the lockdown up and they put their desks where they need to do and they sit down and one little girl says to the teacher, she says, Mrs. Smith, Smith's not a real name, but Mrs. smith, she said, Can we part hold the lockdown?

**Speaker 1** [00:23:12] Can we part-hole the lockdown?

**Speaker 2** [00:23:14] Take a minute and take that in this four-year-old child who's terrified and is trying to understand what just happened, a traumatic event, knows that the way that she can understand it is to break it down.

**Speaker 1** [00:23:27] and has the language to ask for it. And nobody told her to use that to understand it. She took that from the fire truck. So this is the amazing part. This is called transfer. And transfer is the holy grail of learning theory. And we often don't know how to do it. We're not very good at increasing transfer. And the reason transfer is kind of like really important part of learning theory. Far transfer, so near transfer is I teach you something in a particular domain and you're able to transfer it within that domain. But far transfer is, I teach something in one domain and you are able to use it in a completely different context or domain. Well, what she did is called far transfer, right? That's, she learned something about fire trucks and community helpers and firemen. And then she said, oh, I could use this over here in lockdowns.

**Speaker 2** [00:24:25] Yeah, something that's come something come

**Speaker 1** [00:24:27] something completely unrelated and no adult told her to do that.

**Speaker 2** [00:24:31] She had an intuition.

**Speaker 1** [00:24:32] She had an intuition that that tool that she learned to take apart fire trucks would be cognitively helpful to take part lockdowns.

**Speaker 2** [00:24:42] Those are the moments that make everything worth it.

**Speaker 1** [00:24:46] There's more to the story though.

**Speaker 2** [00:24:48] That's right, because then they went to an orchard.

**Speaker 1** [00:24:52] we get an email, and it says, Dear Dr. Schubert, I think the teacher helped them write the email and everything, and we were wondering, we went to the Apple orchard and we think, we think.

**Speaker 3** [00:25:08] This is like...

**Speaker 1** [00:25:08] that we have discovered a new part of the apple that maybe scientists don't know about.

**Speaker 2** [00:25:15] Nobody knows.

**Speaker 1** [00:25:16] Maybe nobody knows about this new part of the apple that we've discovered. Right. So they're thinking like a scientist, right? They're breaking it down and they maybe have discovered this new parts of the Apple and they called it the belly button of the apple. That's the name they gave it because when you're a scientist you get to name the things you discover, right. So, they named it the Belly Button of the Apple and described it as the part that has the fuzzy bit at the end. And they were wondering if we could tell them, as scientists, do scientists know about this? About this. Right? So it turns out scientists do know about this particular part. It's called the calyx. That's right. Right? And it's part of the flower structure that leads to the fruit. But it's called calyxy. That's Right. So we We said, this is great that you discovered this. It turns out scientists do know about this part.

**Speaker 2** [00:26:16] Didn't you feel a little bad?

**Speaker 1** [00:26:17] I know, I know. Because they really wanted to have discovered it. But that's the important part is they did discover it.

**Speaker 2** [00:26:26] For that we end.

**Speaker 1** [00:26:26] for them they went through a scientific process and they discovered it in the same way that they what they didn't do is discover something that nobody knew about but they did the process of discovery

**Speaker 3** [00:26:38] That's right.

**Speaker 1** [00:26:39] Which is exactly what we want our young people to be doing every day, is the process of discovering. Because then if they get good at that process, then they really will be discovering things that nobody knows about or products that nobody know about or innovations or new science or cutting edge things, right? Cures for cancer, that's the process. And so they use part hole at the apple orchard, again, far transfer. They used it in the lockdown, far-transfer. they used it in in the. in the fire truck. Remarkable.

**Speaker 2** [00:27:14] Yeah, and they did that all on their own, which is pretty cool. And just to finish the story.

**Speaker 1** [00:27:20] There's more.

**Speaker 2** [00:27:21] that one class of pre-K kids.

**Speaker 3** [00:27:25] Oh, right.

**Speaker 2** [00:27:25] met all of the pre-k benchmarks for Common Core and also all of the kindergarten benchmarks in one year and had to have a special teacher assigned to them.

**Speaker 1** [00:27:35] That understood DSRT, that's right.

**Speaker 2** [00:27:37] for the next year because they were so far ahead. So, true story.

**Speaker 1** [00:27:42] A little bit of a side, side.

**Speaker 2** [00:27:44] We love our stories and, you know, we're allowed to tell stories because we can. Um, all right. So let's talk a little bit about the research on existence and efficacy of systems, not to be kind of nerdy in the way I saw that, but.

**Speaker 1** [00:27:59] of S, Systems Part-Hole.

**Speaker 2** [00:28:01] Systems Part-Hole.

**Speaker 1** [00:28:03] And, you know, I called it systems. You could have called it, you know, sorting, you could have call that a lot of thing, organizing, grouping. Sometimes people get confused by why it's called systems. It was just a word that's describing that the, the interaction of part and whole leads to the systemization of things, the organization, the groupings of things. And so nature's grouping, our mind is grouping and ungrouping. And so the S in DSRP, when we talk about it, you should think about that as more just the grouping of things or the ungrouping of things or the nesting of things. Not necessarily systems as we talk about them in systems science or systems engineering or whatever that kind of.

**Speaker 2** [00:28:56] Well, so you talked about the existence of systems in nature, part whole. There were a couple of studies that we, in particular, found in our analysis of other research to show that they existed in nature.

**Speaker 1** [00:29:11] Again, across physics, chemistry, biology, psychology, sociology, economics, business, policy, astronomy, you know, across the disciplines we see part-whole structure universally. And so we did, many, many studies show this phenomenon.

**Speaker 2** [00:29:35] Um, so let's talk about a few of them that I've got highlighted. So the first one was, um, by Pellegrino. I don't know if they're related to Pelle Grino water, but Pelle Grino, I know they did, and I'm going to refresh your memory and then we'll talk about the significance. They did morphs of dogs and cats.

**Speaker 1** [00:29:54] with chimps.

**Speaker 2** [00:29:55] and had chimps look at them.

**Speaker 1** [00:29:55] Yeah.

**Speaker 2** [00:29:56] Yeah, do you remember that? So the idea was to see if monkeys could categorize the difference between dogs and cats, and they found that 90% of the time they could do that. They could sort them into groups of cats and dogs.

**Speaker 1** [00:30:13] Yeah. And not only that, they could do it. So they're showing them pictures of dogs, pictures of cats and they get those right. Yeah. But they could. So that's kind of distinguishing, right? But then they would show them morphed pictures of like 70% dog, 30% cat. Yep. And they would get those, right. They would get the part, the partial nature. of the morphed images right yeah 60 percent 50 percent yep it's kind of crazy if you think about

**Speaker 2** [00:30:48] It is kind of crazy. Then there was another one.

**Speaker 1** [00:30:50] And the morphed cat dog pictures, they're kind of creepy.

**Speaker 2** [00:30:55] They're creepy, they look a little bit too like weird mountain lions or something.

**Speaker 1** [00:31:02] They look evil, but I think it's why dogs are cute and cats are cute, but dog cats are not cute. They're strange. They're weird looking. Anyway.

**Speaker 2** [00:31:11] All right, so talking about groupings in nature, then there's another study that showed that we make groupings just based on language, where there were a bunch of objects and some of them started with the same letter, like octopus, ostrich, hornet.

**Speaker 1** [00:31:31] Ohio.

**Speaker 2** [00:31:32] people sort of naturally group them.

**Speaker 1** [00:31:34] And they call those categories in the study. They call those categories. Yes. But what's important about that is that the there's a relationship between those things, those parts. And that relationship is utilized as a perspective to group them that way. Yes, but they're not inherently group that way, no, they're just grouped that way according to that perspective. So you can see relationships of Oh, they all start with Oh, And that's what makes Ohio group with ostrich.

**Speaker 2** [00:32:09] Yeah, which is not something you would just...

**Speaker 1** [00:32:11] It's not like a, but you know, at some point in time, for a crossword or something, it might be important to make that grouping, but that grouping is very fluid and very dynamic because at other times, that would be a completely erroneous grouping, right?

**Speaker 2** [00:32:27] Well, unless you're a second grade teacher and you're trying to think of all the words to start with O. all the O words.

**Speaker 1** [00:32:34] Exactly, and then it becomes incredibly mean.

**Speaker 2** [00:32:35] Linguistic

**Speaker 1** [00:32:36] category. It becomes a critical grouping and then all of a sudden in another situation from another perspective it's a completely erroneous unimportant grouping.

**Speaker 2** [00:32:49] And then there was another study that looked at grouping by things like color.

**Speaker 1** [00:32:53] color, like red things, like stop signs and lobsters and...

**Speaker 2** [00:32:58] What else is a red thing? Do you think of some red things?

**Speaker 1** [00:33:00] Roses, strawberries, fire trucks.

**Speaker 2** [00:33:04] And then there was another study that showed we naturally inherently sort of categorize things by function. Yes. Writing implements become a category, musical instrument.

**Speaker 1** [00:33:14] musical instruments.

**Speaker 2** [00:33:15] You know all those worksheets in school where it's like match these things up group them in a category baseball bats

**Speaker 1** [00:33:21] Yeah. So this is interesting, right? Because this study is saying we group stuff by color, we group by the letter, we group up by the function. There's all these different ways that we group things by, meaning from the perspective of, right, seeing the relationships between them and then turning that into a perspective that groups the thing, right. But here's the thing, anything could be a perspective. By which you group something. By which group something, anything, not just those categories, those categorical perspectives, but anything could used to group. Yeah. And so the function of grouping, the function organizing parts into a whole, an infinitely large set, which could be anything could cause things to group.

**Speaker 2** [00:34:25] Well, what's interesting about that, what you just said, is that that happens in nature and also in your mind. That's right. So nature can organize things in an infinite way, infinitely possible number of, you know, infinite, oh, I'm saying that wrong, infinite numbers of ways. And in our own mind, we can do that. We can organize in any way.

**Speaker 1** [00:34:48] in any different way you want.

**Speaker 2** [00:34:50] but also that means that then there's often a difference.

**Speaker 1** [00:34:54] Yeah. And so what we want to do is try to figure out, like sometimes we want to be creative. Like if we're writing a Harry Potter novel or something like that. Yeah, it doesn't really matter. You can, you can have three headed dogs and you can be very creative about the way you group things. You could, you could group a, a part whole of a giraffe's body with a lion's head and you could put those two together and make a creative new but you could also, you might also want to get in greater alignment with the reality on the ground, which is how are things grouping in reality, right? How are these terrorist networks grouped so that we understand how they're working? Well, that we want to make sure that our mental model of the grouping is mimicking how it's actually happening. Both of those are part-whole grouping, but they're just different, you know, purposes.

**Speaker 2** [00:35:53] Well, so we talked about in the beginning that we tend to be able to break things into parts, but that we don't question how things are organized. We don't go up and down. And one of the studies that you and I have been highlighting is this idea of bias, that we're biased more towards breaking stuff down and seeing parts.

**Speaker 1** [00:36:15] That's true.

**Speaker 2** [00:36:15] Yeah, so why does that matter?

**Speaker 1** [00:36:17] Well, it just matters if, if I said to you, you know, your bias towards, uh, working your chest in a, in a gym bench pressing versus working your back. Well, then when you go into the gym next day, you're going to say, Oh, maybe I should do some, you know, or, or the classic one is, uh. You know, we skip leg day.

**Speaker 2** [00:36:42] No, we have tiny ones.

**Speaker 1** [00:36:44] You know, people are biased towards skipping leg day, right? So you got to do some legs. Big up top. Because you're big up top and you're tiny down low. So it's the same thing. We're out of balance in our thinking. The bias just tells us where we're out of balance, it tells us what our default is. If your default is to break stuff down into parts, then yeah, start thinking some more in holes. Where our systems thinking folks went wrong is that without knowing this research. they noticed that people tended towards breaking stuff down and, oh, okay, yeah, but that doesn't mean systems thinking isn't about that. Right. It just means we need to pay attention to the holistic aspect of things also, also, not instead of, right? So it doesn't means stop doing this, it means do this and this.

**Speaker 2** [00:37:40] Right, so being aware of that bias that we all have towards zooming into things and breaking into parts is a way that we can then say, okay, I have to make sure I'm asking myself, how do I go a level up and how do i go another level up, and put things across levels of scale to better understand them, right? That's how they exist.

**Speaker 1** [00:38:00] Yeah and there's this thing that we should probably point out like if you have some parts right if you, have a part and you say well if you're going to be a system thinker you need to think about the whole okay well so that makes you a systems thinker right this person's a reductionist and this person is a holist right or a systems thinking yeah but then you Well, that's part of something. So now, oh, so this person's a reductionist and this person is a systems thinker and a holist. And then you go, well, but that has a hole. Oh, well this person, you know, this person a reductionists and this persons a systems, thinker, and holistic. And you go and it's like kind of infinite, right? So then that gets us to the only. people in the world who are based on based on this erroneous thing that systems thinking experts say all the time the only people in The world that can classify as systems thinkers are like people that study the universe you know and but of course the universe is part of the sense to say that. that you just always have to be holistic. Now, if you're trying to study this thing here, you probably should consider this stuff here and maybe a couple levels of this stuff. You've got to think about the whole that contains the thing that you care about and the parts. Yes. That's why we sometimes say plus one, zoom out, plus one zoom in, minus one. Plus one, minus one. Zoom in, zoom out. From the place that you're concerned with, meaning it's relevant to you, what are you interested in? What are you trying to figure out? What are trying to solve? What's important to you? Okay, well, zoom-out and zoom-in from that thing that you are concerned.

**Speaker 2** [00:40:02] And do both.

**Speaker 1** [00:40:03] And do both. Make sure you subscribe to our channel.

**Speaker 2** [00:40:03] Make sure you're doing both.

**Speaker 1** [00:40:05] Zoom in, zoom out.

**Speaker 2** [00:40:05] We teach our students that all the time, to do both.

**Speaker 1** [00:40:08] It's just Zoom, I sometimes just call it Zoom Zoom, because I like that. Val, you don't like Zoom Zoom?

**Speaker 2** [00:40:14] No.

**Speaker 1** [00:40:14] I think it's cool.

**Speaker 2** [00:40:15] You know what it reminds me of when you say zoomed in me reminds me of when the dogs at like

**Speaker 1** [00:40:19] This is Zumi.

**Speaker 2** [00:40:19] 5.45 at night. They're just running around the house crazy. I associate with Zoom Zoom.

**Speaker 1** [00:40:27] Because it's Zoom. They're Zoomies.

**Speaker 2** [00:40:29] They run around like nuts.

**Speaker 1** [00:40:30] But zoom zoom means zoom in zoom out, zoom in, zoom out. Whatever you're interested in, zoom in and zoom out? Yes. And we're going to show that move today, I think, right?

**Speaker 2** [00:40:41] The other part of research that we did, which has to do with the efficacy, is the fish tank study, if you remember.

**Speaker 1** [00:40:49] You might want to describe what efficacy means to a researcher that makes sense, but it's not a word people use very often. What do we mean by efficacy?

**Speaker 2** [00:40:59] the degree to which it's useful, the degree that it creates value, that the effect is valuable.

**Speaker 1** [00:41:05] Yeah, so it's like if you know this thing or you know how to use this thing, does it have a positive effect on something, like are you better at work, are you better in your personal life, are better at doing something, problem solving or thinking complexly about stuff? Right. Because we often say we want to study the existential and the efficacy. Yes. And what we mean by that is we want to determine. with evidence whether these patterns exist in mind and nature. And then also if knowing about these patterns actually causes you to be better at something, that's the efficacy part. So it's quite simple if you think about it. First we want to know, are these real things in both in the world and in the mind?

**Speaker 3** [00:41:58] Which, yeah.

**Speaker 1** [00:41:58] which we call the existential, are they, do they exist? Yes. And then are they efficacious? Meaning do they have an effect that we actually want?

**Speaker 2** [00:42:09] Yes, we could call it, we can say effectiveness or effect. So we set out to think that, to think about that. Is, you know, what is the value? Does it increase our thinking? Does it make our thinking more robust? We talked about the fish tank study when we talked about distinctions. So we did the fish tanks study across all four patterns. In the case of systems, part-hole systems, it's the same thing. People were given an image of the fish-tank. They were asked to describe it. than they were taught only.

**Speaker 1** [00:42:41] A one-minute test of kind of what we've been talking about, that everything has parts, every whole is a part, every part is a whole.

**Speaker 2** [00:42:53] Then they were asked to describe the fish tank again. And just like the pre-K kids who learned it, they saw more. They saw more in the fish tanks, their language was more complex, their cognitive complexity was increased based on what...

**Speaker 1** [00:43:07] To a highly statistically significant degree. So these are like the fish tank, I mean the kindergartners we talked about, that was more of like a case study. But this is a study where we saw highly statistically, significant results from a one minute intervention or one minute treatment of them being made simply by making them aware of the SPW pattern, the systems part whole pattern. they were more complex in their thinking, they saw more, they distinguished more, just like the kids, like you're saying. They saw more in the fish tank and broke things down into parts and parts into parts and all that.

**Speaker 2** [00:43:52] Yeah, based on their vocabulary and the answers and the complexity of what they wrote. And then just the other thing that we should say, mimicking what we said about the other about distinctions, is we also looked at systems in isolation relative to competence and confidence. Yes. And we are also as humans overly confident in our perceived ability to

**Speaker 1** [00:44:17] Which is again called the Dunning-Kruger effect, which is that our competence is lower than our confidence in these types of things. So people think they're better at systems part whole than they actually are.

**Speaker 2** [00:44:30] We set out to.

**Speaker 1** [00:44:32] to look at the existence of part whole and in particular, the interdependencies between the system's part whole pattern and the other patterns, because DSRP is essentially a theory, it's a mathematical theory that makes a bunch of predictions. It actually makes quite a number of predictions about the universe. Yep. And one of the predictions is that that you can't do systems part whole without doing some perspective and some relationships and some distinguishing. That's a hypothesis, in a sense, and we wanted to test, is it true that you cannot do those things? And also, is is true that everybody will do part

**Speaker 2** [00:45:20] So the first thing we did, and Alina will put up an image of this question, we had, remember, we had a circle, a triangle, and a square, and then another circle, and they were all different colors, circle, triangle, square, and then we had one that was a blank, and we said, fill this in.

**Speaker 1** [00:45:35] This is a standard kind of, it's a type of question that you would see on an IQ test, right? It's visually oriented so you don't have to really know language or anything like that and you're trying to figure out some logic. There's logic to the puzzle that gives you the answer.

**Speaker 2** [00:45:55] And what was interesting is, you know, 88% of people picked the square of the same color of the row of shapes, which showed that, you know, they were able to see that pattern across the shapes and across the color. Interestingly, what that meant is they were also seeing two systems, right?

**Speaker 1** [00:46:16] two groupings. Two groupings based on the relationships from one to the next to the next. So they're seeing both relationships and groupings at the same time in order to arrive at the answer.

**Speaker 2** [00:46:32] to pick the current answer. Yeah, exactly. Yes, yes. And so that gets to some of the interdependency stuff that you were talking about. Then we started thinking about sorting, testing sorting, and seeing how people sort stuff, to see the patterns of how people source stuff. If you remember, we started with what we called the world famous sort stuff study. That's a tongue twister. Sort stuff study, we say that 10 times fast. people were given a list or a set of common items, like a wrench, a pen, a broom, a hammer. I can't remember, there were six objects and they were all different types of things, but things that people would recognize. And they were asked to. to group them for lack of a better word. And what we found was, strangely, a wide variety of how people could sort them, right? Based on different characteristics. Some by function, some by color, some my name, like we were saying in the beginning.

**Speaker 1** [00:47:38] It can be sorted in a lot of ways.

**Speaker 2** [00:47:42] And what that showed is if you don't tell somebody the perspective by which you want them to sort things, they will find many different ways to sort them.

**Speaker 1** [00:47:53] And the reverse of that is true, which is, for example, if you want to direct a team to figure some sorting thing out and you want to be very innovative and inventive, then don't give them a sorting perspective. But if you them to like focus in on one particular thing, then do give them perspective. So it just kind of depends, do you want to create options or do you wanna limit options? Yes. And that's how sorting works. That's how part-whole works, is that it's dynamically dependent on perspective taking.

**Speaker 2** [00:48:34] Yes.

**Speaker 1** [00:48:35] And that's really important and it's something that we miss a lot in categorization theory and some of that.

**Speaker 2** [00:48:41] Yes, and I think we had six objects and there were something like 243 unique groupings with different names when a perspective was not provided. So then you provide a perfect segue into the button study. Remember that this is the world famous sort, button study, right? Where people were given images of buttons, different colors, different number of holes.

**Speaker 1** [00:49:03] Different sizes, yeah.

**Speaker 2** [00:49:05] and so they were asked to sort them.

**Speaker 1** [00:49:07] Guess what? They sort them in a lot of different ways. And they also, given the perspective of sort them by the number of holes or the color or the size, they get it right. But otherwise, they sort in a lots of different way.

**Speaker 2** [00:49:28] Yeah, and it was overwhelmingly so. So when they were asked to sort by color, they all got it.

**Speaker 3** [00:49:35] The same. Overwhelming.

**Speaker 2** [00:49:37] number of holes in the button, they all got it right. Size, small, medium, large, they got it all right. So we're really good when somebody gives us a perspective by which sort things, we're good at that.

**Speaker 1** [00:49:49] But think of how many times, I mean, because people watching this or listening to this might, they might go like, no, duh, like, if you tell people to sort a bunch of buttons by the color, then of course, they're going to get that right, right. But think about how many times we get into arguments with each other around the exact same thing, which is no, this is the way things are. And you go, no, this is the way things are. And we're like, no this is a way, right? And you're like oh, you're just sorting them by color and you're sorting them by size. Right. And you are arguing about which is right. But they're both right. They're both, right. It depends which perspective you're organizing it by. That's right. Right? So if you recognize these structures, you can kind of go. why are we arguing about this? If you want to organize them by size, and obviously when you get into more complex things, it's a little bit more complex than that, but it comes down to something that simple, which is this person over here seems to be organizing based on highlighting this particular perspective, and this personover here is organizing the situation based on this other perspective. So yeah, it totally makes sense. why they see it this way and they see it this way. Yeah. What doesn't make sense is why we're willing to kill each other over it, you know, why are we willing to fight so much over it when if you ask this other person to organize the same situation from the perspective they would they would at that same conclusion.

**Speaker 2** [00:51:37] That's right. Yeah. I mean, categories are problematic. Yes. Very problematic. They're very problematic. In all kinds of ways. So what's interesting is what we're showing is that we see nature is organized into part whole systems. We organize things in our mind into part whole systems, we show the interdependency between you actually can't make a sorting without making a distinction and seeing relationships among things and also taking a perspective. So we see that interdependence. between S and D and R and P, which we're gonna see across all four patterns.

**Speaker 1** [00:52:12] And those are all predictions that DSRP theory makes and they turn out to be valid predictions.

**Speaker 2** [00:52:18] Yes, and then we also saw that awareness of just the idea of part-hole systems increases the complexity, the cognitive complexity of things you're thinking about and brings what you're think about better into alignment with.

**Speaker 1** [00:52:35] Which is quite remarkable if you think about it. Like just, again, just the awareness of this structure, like the example of the kindergartners, just that awareness changes the ballgame. Yes. Right? So like awareness is pretty cheap. Awareness is pretty easy. Like all you got to do, like we've got this amazing brain and all you gotta do is make it aware of systems part whole or distinction identity other, you know. Relationships, action, reaction, or perspectives, part and point and view. You make it aware of systems part whole, and all of a sudden it can do all these amazing things. Yes. More effectively. Yes. Think more robustly. Think more dynamically. Think more complexly. Solve problems better. Yes. Faster. Yes. Cheaper. For sure. Remarkable.

**Speaker 2** [00:53:25] And just like what you're saying, so the question is, how do we become aware of that? So what we have done is we've reduced this question to something you can practice, which is the move. Yes. Because we know people are really good at zooming in, not zooming out. So we've created the move, zoom in, zoom out, which is designed to teach people how to see parts and holes and understand systems differently.

**Speaker 1** [00:53:47] That's right, so the move, again, real simple. You start with place where you're starting at, so what, I don't know, what do...

**Speaker 2** [00:53:57] Just say a project.

**Speaker 1** [00:53:58] A project, so this is the project. Yep. Project X, right? And then what are the parts of the project? So we just put those in like indented. You could think of it as an indenting kind of thing. And then, what is the product a part of and what is that a part, let's say? You don't have to, you can go up however many things. So what is what is a project a part? And what is that a part of? Or you could say, what is the project a part of, meaning it's part of more than one thing. It could be part of several things. Yeah, yeah. So this is the zoom out.

**Speaker 2** [00:54:42] Up, up, up is out.

**Speaker 1** [00:54:44] Right. So we just think of this as the zero level. This is plus one plus two. and then, you know, this is minus one. And then, you know, one of the parts of the project. So it might be like hiring, you know, you got to hire some people and you got to design what marketing you got to do marketing or whatever it is. Right. And of course, this part can be a whole that has parts and so on and so.

**Speaker 2** [00:55:13] Yeah, and this could be an initiative. This could be a marketing strategy. Like, this project could be part of an initiative, which could be of a larger strategy for market share.

**Speaker 1** [00:55:21] So it's just zoom, zoom out. zoom in. And if you practice this, and again, recognizing that we're more biased to this than we are to that. So we're gonna we're gonna, we're going to tend towards doing this over that. But remember, only two and a half of out of 10 are gonna do this. Yeah. So don't don't think oh, this is easy two and half out of ten people are going to do this Yep. Most people are going to do this, which is. Oh man, Project X. Holy moly, what do I do? Two and a half out of ten people are gonna do this, and zero people are going to do this. Out of ten.

**Speaker 2** [00:56:08] Let's just slow that down a minute and take the implications of that. So, let's say you're a person that just does this, and then you start doing the project, and you've got a whole team of people, and everyone's assuming that it's this, just this Project X. Nobody's taking the time to break it down into its constituent parts to better understand what the project actually is. So down the road, they have the... Terrible results because they didn't start by really thinking more deeply about what is this by looking at what parts are?

**Speaker 1** [00:56:42] And then imagine that all they do is this. Yep. And they don't think about one of the wider implications of Project X. What other projects does Project X have to interact with in order to be successful? Yep. Right? So it's super simple to say, zoom in, zoom out. But you've got to practice it. Because the truth is, if you don't, and our research has shown this. Yeah. All right, our research is shown that if you don't practice these moves. There's five moves and they're the most important moves. This is one of them. Yes. If you don't practice these moves, when you get into the situation, you're not gonna do it. No. It's like, if you don' practice shooting a basketball a certain way, when you're get in the game, that's not the time that you're gonna suddenly shoot the basketball the right way and make it basket. You gotta practice. So that when you get in the game and things are actually more kind of, you know, discombobulated and chaotic and stressful, you've practiced it. And so, yeah, you're just going to nail it. You're going to know it because you practiced it

**Speaker 2** [00:57:53] Yeah, I think there's the other thing that's interesting is practicing a shot, you're building a muscle memory. Yes, you can do that in your mind. You can burn out pathways to automatically go in and go out and go in and go instead of just in, I mean, have the two and a half that do it, right? Yeah, you can burn pathway to do in and out.

**Speaker 1** [00:58:15] Zoom in, zoom out.

**Speaker 2** [00:58:16] It's just a muscle memory, but it's inside of here. And we should mention also, our most recent batch of research looked at the effect of these moves on ability to solve problems. And what we did is we took a sample of 500 and some people. We gave them a scenario to solve, which was around a community problem around waste.

**Speaker 1** [00:58:40] Yeah, pretty complex problem, yeah.

**Speaker 2** [00:58:42] It wasn't a simple problem. They read the problem. We asked them to write out how they would think about it, how they would solve it, think it through. Then we taught them just systems, part whole.

**Speaker 1** [00:58:53] Just this move, just zoom in, zoom out, moving a one minute video.

**Speaker 2** [00:58:57] There was a one-minute video that showed what we just showed you here. People watched that, and then they were asked to go back and solve the problem, think it through and say how they would think it through. We had third-party people evaluate the robustness of each the pre and the post answer, and what we found to a high statistical significance is that people's ability to problems more robustly went up by 266 percent.

**Speaker 1** [00:59:26] or 266% based on a one minute teaching of Zoom In Zoom Out.

**Speaker 2** [00:59:35] That is real.

**Speaker 1** [00:59:37] remarkable yes yes so practicing this move so everything we talked about today was kind of like a little bit of background of what what s of dsrp is it's made up of part and whole yep it's this really deep interaction between part and hole yes and the fact that every part's a hole and every hole's apart and that these two things interact. They interact with distinctions and relationships and perspectives too. But all of that, you can kind of tie all that up into a bundle, really the most of this conversation is background. Tie that all up into a bundled and just practice this move.

**Speaker 2** [01:00:15] Because practicing this move is going to get you off.

**Speaker 1** [01:00:16] It's going to get you all that. Practicing this move is going to get you, according to the research, you know, 266% increase in your ability to solve problems if you practice. And practice means, you go out in the world, see it in places when you're driving to work, when you're walking on your walk, part hold the tree, you part hold of the forest, part hold the road, part hold a ditch when you are on a walk. when you're going to work and you see a billboard. Yeah. Part whole the billboard, why are those particular pictures and images and words on the set? Why did somebody decide to group those? From what perspective were they grouping those words and things to make that advertisement of that billboard?

**Speaker 2** [01:01:04] Yeah, but it's not just breaking down physical stuff. It's, you know, what is a healthy relationship? What are the parts of a healthy relation? What is a why is a healthy relationship a part of something bigger? Like, how does it fit into the context of how I want to live?

**Speaker 1** [01:01:17] Yeah, do you remember when the kids were little? Our kids? Yeah, our kids. We used to, when they were little, we used to do like, what is meal time?

**Speaker 2** [01:01:28] Oh, yeah, the parts of

**Speaker 1** [01:01:29] The parts of dinner, right? Because they would always say, I'm done. Can I go? I'm eating. I'm doing eating. And we would say, well, dinner is not just eating. Dinner is eating, nutrition, you know, talking with each other, manners, their favorite was manners. So dinner had more parts than just eating Uh, there was one other, wasn't there? Yeah, love. So it was like, we're discussion, eating, love, and manners. And so, so we literally would take like a block with the little kids and we'd say, you know, dinner is made up of four things, there are four parts to dinner, right? It's not just one thing. So if you, you might be done with eating, but are we done talking? Are we done being loving? Are we done? Practicing manners that type of thing. It's it's more than just one thing Yeah, and so, you know part whole is something that we could do Anywhere any time with anything

**Speaker 2** [01:02:39] For sure, and I also think it's really important, what you said in the beginning, which is it seems so simple, but it really is profound if you think about it and if you really apply it and allow yourself to see both across levels of scale, to challenge the way things are organized.

**Speaker 1** [01:02:59] Yeah, I mean, that's why in part why I told that story about like one of the things that are executive, the people we work with that are executives in the Silicon Valley and some of the top people in the world. The thing they say all the time is, boy, developing enterprise thinkers, people that can think above where they're at. How's this going to affect that several levels up? You know, how are we going to see? That's all about part hole, zoom out. and relationships, which we'll get to in another podcast, but the zoom out, that's just one part of this move, zoom out. And then the zoom in is like, oh, you've been given a task, you're gonna break that down, but how do you see that task in terms of what other projects or what other things, other task masters do I have to talk to, to make sure that when I do this task, it's integrated with other tasks or it's connected to other projects. that's going to make it a successful completion. And that's rare. I mean, executives are looking for that. So I mean this simple move could get you the job you want. The promotion you want, it can get you, you can understand what your kid is dealing with better. You can understand how you're saying something that's kind of confusing to me in our marriage. and you know, can you break that down for me? What are you saying? Tell me again what you're saying because I'm not really understanding it. What are the parts of what you are saying?

**Speaker 2** [01:04:32] It's the key to understanding your mental model.

**Speaker 1** [01:04:34] Yeah, I want to understand it. So it, you know, it's something that can be applied in so many different areas, universally. That's right. And it's a simple, it seems it's like, it's so simple. It's disarmingly simple. And so you can, you can almost think how, how, how effective could that possibly be? Yeah, well, 266%.

**Speaker 2** [01:05:03] That's pretty big. Think about how many other things in your life you can increase by 266% in no time at all.

**Speaker 1** [01:05:11] Yeah, I mean, that's pretty cool powerful stuff

**Speaker 2** [01:05:14] I think we've done it. Yeah, we've done what we set out to do. I'm hoping this is

**Speaker 1** [01:05:19] SPW, Systems Part O, the S in DSRP, just getting it out there to help people with these things and sharing the research with you.

**Speaker 2** [01:05:32] Go out in the world and challenge groupings, see groupings break things down.

**Speaker 1** [01:05:37] Yep. And there's a couple of parts to the things we need you to do. Is it like I can't even remember what the parts are like comment commenting is really important subscribe subscribe download share share all of that and be the town crier go downtown stand on a box and just start yelling about the pot yeah like

**Speaker 2** [01:06:05] No, don't do that.

**Speaker 1** [01:06:06] So far, you're going to seem crazy, don't do that, but if you want to do that.

**Speaker 2** [01:06:12] Nuff done.

**Speaker 1** [01:06:12] you should totally do that yeah especially in a small community where you know everybody they're gonna they're going to be fine with that

**Speaker 2** [01:06:23] I don't think so.

**Speaker 1** [01:06:24] I think they would love it.

**Speaker 2** [01:06:25] But most importantly of all those things, remember that we appreciate.

**Speaker 1** [01:06:30] Yeah. Now we're just...

**Speaker 2** [01:06:31] and re-listening and we hope this has been useful and that's a wrap.

**Speaker 1** [01:06:36] Zoom in, zoom out, zoom, zoom. No. Be like the dog, zoomie, zoom zoom.

**Speaker 2** [01:06:42] That's a wrap.

**Speaker 1** [01:06:43] That's a wrap.

**Speaker 2** [01:06:44] We'll see you next time.

**Speaker 1** [01:06:45] See you next time.