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Presentation Transcript
Understanding Human Behavior – Part 1
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The title of of this presentation is *Understanding Human Behavior, Part 1*.

I had a third grader in my office recently with her mother. It was her first session. Mother is there so that she'll feel comfortable with a stranger. She played in my moon sand while I talked to her mother most of the day. And I was able to engage her to some degree, but mostly she just had a good time playing with the sand and the toys there. When it was time to go I asked her if she wanted to come back. She gave me this big beaming smile and said, "Yes!" And I said, "Well, how many times would you like to come back?" And she said, "Forever!" And she kind of launched herself at me and gave me a big hug around the neck. So I thought, "Well, all is well."

The next week she came in and she frantically bounced from activity to activity. She was like she had an electric motor going inside of her. She made a total mess of the office. She spit through a straw at the windows. She burped repeatedly and then would laugh about it. She did everything she could possibly think of to make herself obnoxious to me. That's what was going on there. She also repeatedly ran to the door to see if her mother was still in the waiting room. I'd say she probably did that every five to ten minutes through the whole session. When it got right down to it, though, she only did the things I allowed her to do. When I said, "No," she would desist. So she was responsive to the limits that I set on her.

This child has been to all kinds of doctors and psychologists around town. And she's been labeled with ADHD, bipolar disorder, depression. She's found out that if she threatens to hurt herself or some other kid, she can go home. So, if she wants to go home, she looks at some kid, gets their attention, and goes, "Kiiiiich," and they have to follow the protocol – that's what they say they have to do – and send her home. So she's pretty smart. She's figured out how to get what she wants.

So what's going on with a child like that? Why do people act like they act? Have you ever met somebody and you start to become friends with them, and you think everything's going along fine, and then all of a sudden, they pull away? And there really isn't anything you've done that would have been offensive? Have you ever had that

experience? Or you run into people that get angry at the slightest provocation? They're on a hair-trigger all the time?

Or think about Senator John Edwards. He ran around on his wife – we learned this two weeks ago – while she was sick with cancer. And when they asked him why he did this, he said he did it because he thought he deserved it – and because he didn't think he would get caught. Now our political figures in this country are probably under more scrutiny than anybody has ever been in the history of the world. The paparazzi, the media – everybody – is bugging them, watching them – got those parabolic mikes and big long lenses. And he thought that he wasn't going to get caught. Does that strike you as a bit odd? As in completely self-centered? And completely unrealistic? It does to me!

And think about church. You have a nice thing going in your congregation. And after it's been calm for a certain length of time, somebody's going to start up something that's going to upset everybody. Have you ever noticed that? There'll be power plays, control issues.

Or think about this. Have you ever been startled by something and practically jumped out of your skin when there really wasn't anything to be startled about? Why do we do that? What's going on inside us that causes that to happen? Some people have that response about things that are said to them. Have you ever noticed that? You can say something to somebody and it's like you scared them out of their skin – the way they react. They become instantly angry or afraid.

We're working on a new series – *Understanding Human Behavior* – and we're going to try to understand why folks act the way they act. In this series we're going to explain more about how the human mind works, how God has made a physical brain that has spiritual properties, why people act like they act, how the past affects all of us and why it does, what we can do to change the things about ourselves that we don't like, and how we can learn to relate more effectively to other people. Remember, it's all about relationships. Right? The Kingdom of God is about connection. And we're going to talk, too, what the Bible says about why we act the way we do.

So today we're going to start out by talking about two things. One is our culture and how our brain reacts to it. What's going on? Elaine was telling me that she watched a program on TV recently called *Babyland*. Maybe you saw it. It's about the millions of babies being born stillborn and premature in the United States. We lead the world in premature births and death from premature birth. I think the story was centered in New York City. They have a place in New York City that they called Potter's Field – maybe it's Memphis, Tennessee – because that's where they buried poor people. Well, now they call it Babyland, because there are so many babies being born premature there that they just dig a trench, and they put these little tiny boxes with these little tiny babies in them – five to a trench or so – cover them up, and put a stake in the ground with a ring on it – right? – so they can attach their name. Who are the mothers? And how does this happen to them? What is the effect on the mother on the loss of a child? What happens to the other children in the family when the mother loses a baby like that? How does it affect the kids and future children?

There are over a million abortions a year in the United States. How does an abortion affect a mother? How does it affect her life and her future children? Something like that *has* to affect us, doesn't it?

Did you know that there's a virtual explosion of mental illness in our country today? An *incredible* increase in the use of anti-depressants and anti-anxiety medications. We're right in the middle of it right now – at least I hope we're in the middle of it. But it's just exploding exponentially. So many people in our culture find their lives intolerable that they have to medicate themselves to get through it. And this explosion in depression and anxiety is affecting people who are increasingly younger. It's not uncommon anymore to see suicide threats and attempts among even *younger* elementary-aged kids in the first and second grade. Cutting, head banging, jumping out of windows, hitting one's knuckles with hammers. These things are all on the increase in the United States.

The first client I ever had in private practice was a nine-year-old boy who came in with a great big red welt on his head, where he'd been beating his head on the concrete at school. All these things with an intent to cope with incredibly painful emotions. Our kids and our teenagers are beside themselves with depression and anxiety.

I had a young man come into my practice a while back – I think he was twenty-three. But without any alcohol in his system, at two in the morning, he punched a chain link fence until he shredded both of his hands. Think about that. That wasn't a one-time deal. He had to work at that for quite awhile – totally out of control, totally unable to deal with his feelings.

Let me ask you this question. What does it say about us, as a country, when we have innumerable state and federal agencies, with budgets in the billions, whose job it is to protect children from their parents? That's the state of our culture today. Child abuse, neglect, abandonment are rampant. We think that this is kind of the way things are in this country. But I was reading a book recently by Beverly James, who is an expert on child trauma, and she was talking about a session that she had with a bunch of grandmothers in Hawaii. They were on the beach. And there were all the Hawaiian grandmothers there with their grandchildren. One of them asked her if it was really true that there were children in the United States who were unwanted, who had nobody to take care of them and had to go into foster care. And when Miss James told them that that was true, they really couldn't take that in, because in their culture, the concept of an unwanted child is not a part of the way they think about things. But it certainly is in our culture, isn't it? We see that all the time.

Now when you talk about people that are on anxiety medication, and kids who threaten to commit suicide at seven years old, and you take all of those cases, and you put them all together, that group of people is just the tip of the iceberg. Because for everybody that's treated, there are hundreds of thousands of people. And since there are millions of people in treatment, that pyramid gets broad at the bottom really fast. There are so many people in our country whose symptoms have not escalated out of control yet, but are on the verge.

A really nice-looking, middle-aged gentleman came into my office one day – very friendly, very kind-hearted, congenial – seemed a little sad. I learned that he was a minister. I learned that he was married, that he had two college-aged sons, who were successful. I learned that he was a school teacher who went to work everyday. And for the last five years, every day of that five-year life of his, he had thought about killing himself. You'd see him walking around on the street and you'd have no idea – millions and millions in our society, who are very unhappy, very stressed out, very frustrated, very isolated. The way we live is not conducive to mental health. The way our culture *is* is not conducive to mental health. And that affects all of us to one degree or another. We all live in that same environment that's not good for us. It can't help but affect us.

Let's go to Deuteronomy 28, and verse 1.

Dt. 28:1 – *If you fully obey the LORD your God,* it says here, *and carefully follow all His commands I give you today, the LORD your God will set you high above the other nations on the earth. All these blessings will come upon you and accompany you if you obey the LORD your God. You will be blessed in the city, and blessed in the country. The fruit of your womb will be blessed, and the crops of your land, and the young of your livestock, the calves of your herds, and the lambs of your flocks. Your basket and your kneading trough will be blessed. And you will be blessed when you come in and when you go out.*

But later in this chapter we're told that if we *don't* live God's way, then everything wrong is going to start happening to us. Besides blessings for following God, there is a long list of natural consequences that are automatically attached to forsaking God's way of life. What are some of those?

Let's look in Deuteronomy 28:28.

Dt. 28:28 – *The LORD will afflict you with madness, blindness and confusion of mind.* That's one of them.

We have lived in a nation that has, essentially, gone way off from God. And we're starting to reap the benefits of that departure from His ways – that lead to mental health and every other good thing.

Now I want you to look with me in Revelation 2, and verse 4, for a second. It says here – and this is at the end of the story:

Rev. 2:4 – *With a mighty voice he shouted, "Fallen, fallen is Babylon the Great. She has become a home for demons, and the haunt of every evil spirit, a haunt for every unclean and detestable bird. For all the nations have drunk the maddening wine of her adulteries. The kings of the earth have committed adultery with her, and the merchants of the earth grew rich from her excessive luxuries.* So here's a note that's in place. It says that the merchants of the world are maddened in their lust for the produce that is produced. Then it says in verse 4, *I heard another voice from heaven, saying, "Come out of her, my*

people, so that you will not share in her sins, so that you will not receive any of her plagues."

Now I'm not quoting that scripture to say anything specific about the end time, but only to point out just a simple principle of common sense. If you lie down with dogs, you're going to get up with fleas. Right? It doesn't make sense to think, "Because I'm not a dog, I'm not going to get fleas." But a lot of people do. They think, "I am impervious to Western culture and the ways around me," and yet that is not true. God says that if we're going to hang around that, we can expect the results that come with it.

Am I saying we should all leave town? No! But I think that we need to think about why our culture is the way it is. And we're going to draw some conclusions about what that means as this series progresses.

So all of us are affected. Our culture has a *lot* to do with what's going on – with a huge increase in mental illness and problems that we face in our nation. So if we want to understand ourselves, our children, the people we go to church with, the people our kids go to school with, the people we work with, we need to know why we are negatively affected by this culture – what it is about the culture that's the problem.

So what we're going to do to understand why we're negatively affected by what's going on around us, we're going to start by understanding about the human brain and how God made it.

Let's go to Psalms 139, verses 13 and 14. This is a really interesting observation by David. He said:

Psa. 139:13-14 – *For You created my inmost being, and You knit me together in my mother's womb. I praise you because I'm fearfully and wonderfully made. Your works are wonderful. I know that full well.*

So David was extolling God's great wisdom and power, and His abilities, and the way He created the human being. Probably the most amazing part of a human being is the brain. When God made the human brain, He created something that is *so* complex, the human brain cannot conceive how complex it is. That's a good way to explain how complex it is. There are more neurons and more possibility for links there – in the human brain – than we could use in ten lifetimes. There are millions of miles of brain neurons just in that outer cortex of our head. And each one of those neurons has the capability of ten thousand connections. You could never use it all in ten lifetimes!

A long time ago, I read a scripture that says that we all have a *spirit* in us – not an immortal soul, but a spirit that is a part of us. We've all likened the light in somebody's eyes, and the smile on their face, or the scowl as an expression of the spiritual aspect of human beings. And the New Testament says that when we die that spirit goes to God. We're dead, but the spirit goes to God.

I used to think that there was a spiritual component that God put in each of us, along with our physical brain. And that may be true. If God comes along and says, "You were wrong about that Jacobs." I'll say, "Okay, go with it." But the more I look at all the new brain research that is coming out, they're just beginning to uncover how *enormous* the complexity of the human brain is. And I think, more than put a spirit in us, that God has perhaps done something that it is even more *astounding* than that. It looks to me like, instead of putting a spiritual component in our brain, I think He's replicated spiritual process – spiritual functioning – *in* a physical organ. Now, if that's true, that really *is* doing something. Maybe that's why those angels looked down at us and wonder what's happening.

But as they study the brain, they're coming to see that it is absolutely *designed* for spiritual functioning. It's designed to seek out to the edges – to push out to the edges – of perfection in every endeavor. It's designed to ask philosophical questions about origin and eternity. It's designed to be motivated to altruistic endeavors. Is there anybody that can deny these things happen in human beings? It's all a part of us, isn't it? It's got a place in it that's designated for family – for relationship and for affiliation with others – to connect with parents and others in a loving manner. It has *built into it* the desire to live indefinitely – a desire for eternity built right into us.

We think that that can come from the spirit, but a good brain scientist can show you the places where that activity takes place. And they can show you neuronal firings that are going on around those topics and around those issues. Scientists now know how the brain can put a warm smile on a person's face and a light in their eyes. And they're also coming to understand how people can run around on their mates when they have cancer, and think they can get away with anything, and have no remorse when they hurt other people, become unable to control their anger, or to cut oneself intentionally with a razor blade. That's all starting to come into our realm of understanding about how these things happen – what *causes* them to take place.

So let's understand some of that. The scripture tells us that God is *not* the author of confusion. A mathematician can show you how the heavens – even though there was supposedly a big explosion – that sounds pretty chaotic – but it still all operates according to mathematical principles that they have discovered already in place.

Biologists know that living things function by another kind of organism – biological principles. The brain, certainly, is no exception. It is organized, too. It looks like a big mass of goo. Those neurons are just made out of fat, really. So it's kind of gooshy and spongy, but it's still organized. And as we understand the organization of the brain, we also can understand more about how it works, what it can do, and even more important than that, what's good for it – what's good for *us*. And we can also understand how a brain that's taken care of properly...what that looks like and what a healthy person is like. We can learn what happens when the brain is not taken care of – what a mentally *un*healthy person is like.

So let's first look at how the brain is organized. It's hard to do this without pictures, but since we're doing audio today – we've got video, but we don't have visual for the audio –

I'm just going to explain it to you. Now, if you don't pay attention, you're going to get lost. Then it's going to be even more boring than you thought at first. So, remember these little cups that you used to pull out of cupholders that were spiral – they were like a cone? You could get a little water out of the bottom of them – glug, glug, glug – that kind of thing? Well, let's imagine that a brain is organized that way. You've got the bottom inch of the cone – you fill it up with water. Now you fill up the second inch. Which inch has the most water in it? Right. And then the third even more, and the forth even more yet, right? That's how the brain is organized. At at the bottom of the brain is the smallest part of it – the brain stem. And then up next to that is the diencephalon. That contains the thalamus and the hypothalamus. It's a little bigger than the brain stem, but it's not as big as the limbic system, which sits on top of it. Then, the biggest part of all, by far, is the neocortex, which is the gray matter that you see on the outside – the brain that kind of looks like it overflows and covers up the rest of the brain. So there are different parts to it and they all have different jobs – biggest part on top, smallest part at the bottom.

So, each one of these parts *do* various different things that you can identify in your own life. They all have to do with different parts of you – and me. Now, if you think about the smallest part and the biggest part, for a minute, which part do you think would take care of the simplest, easiest-to-accomplish functions? The smallest part, right? The one with the least neurons and brain cells. And sure enough, the brain stem takes care of things that are easiest to do – breathing – at least, breathing when you're not thinking about it. You just started thinking about your breathing, didn't you? So that's an example about how you you can take over autonomic function in some cases. Your heart rate, blood pressure, sleep function, appetite and satiety, your state – how agitated you are – motor regulation. You've seen some people who can sit very quietly and calmly and other people that are always moving around. That stuff is all regulated in the two lower parts of the brain.

Then the limbic system, which is up above the brain stem and the diencephalon, regulates your emotional reactivity, sexual behavior, attachment – how we attach to mother and father, and friends and all that.

Then, lastly the neocortex. That regulates friendship, affiliation, how we feel connected to people. It affects concrete thought, or it does our concrete thinking. And our abstract thinking is also in that big part of the brain.

So, how can knowing this be helpful to us? Well, you notice your heart is racing. Where is that coming from? Where is that being controlled? It's down in the brain stem, right? Let's say you watch a tiny baby – like I did with my grandson – try to navigate a piece of red carpet fuzz into his mouth. He was so young that he couldn't get it in the right place at first. He had to take several tries at it. Where is that going on in his brain? It's probably going on in partly both of the two lower parts. So that part is developing, and he's practicing, and his brain is wiring the experience of missing and sticking it in his ear, and then coming back and trying again. And when he finally gets it in the right place, that's going to get stored as a pattern of experiences – be the feel in his arm, the eyes are watching it come to the right place, the sensation of the fuzz in his mouth. That will all get put in his brain. And what's really interesting is, the feeling about the taste – that will

go to one place in his brain – the feeling in his arm to another, the visual thing – that goes to another place, and yet somehow, they are all connected by different wires running to these different parts that form a *network*. And we call that *experience*. That's what experience is – things that have happened to us in the past, even though the senses store... everything that's visual go to one place to get stored, everything that's touched here, sound here, but still they're connected through a whole network – a neural network of connection. So they become patterns. And the brain compares what's going on now with the patterns that it has recognized in the past to figure out what's happening.

You're talking to somebody and all of a sudden they go ballistic on you. They're just screaming and yelling. Where's that going on? That's dropped out of the cortex – that's quit working. They're not thinking anymore. They're all down in the limbic system – and even lower than that, because their heart is racing, their face is red, their veins are distended, their blood pressure is up. So the three lower parts of the brain are now engaged, and the outer part is turned off. It's not working anymore.

Okay, somebody explains brain function to you, and you get it. Which part of the brain is working there? The neocortex, right? The thinking part. The fact is, we're sitting here. All of our brain is working together. We're hitting on all cylinders. Nothing is shut off. We're still breathing. Our heart rate is normal. Everything is okay. We're able to function in an intellectual manner, so the neocortex is working, too.

So what? What does it matter that we can know where things are happening in the brain? Well, that's coming. But first we need to learn some more – some more about brain function.

The first principle that we want to talk about is – we've got six principles of brain function that we want to cover – *all incoming information goes to the lowest part of the brain first*. Then it works its way up to each succeeding area. It all comes in through the spinal cord – right? – up into the brain stem. And in the brain stem, and throughout the brain, are billions of cells that divide, and move, connect, interact, and organize during development into a heirarchial group of structures – one, two, three, four. That's the heirarchy. And as we saw, the smaller the part, the more simple and fundamental the operation. And as you get more complex, it moves up into the other parts.

The brain is formed of complex chains of brain cells that communicate and interact within and across these four structures – *within* and *across*. So it's not like with your liver. You have cells in your liver. And they are liver cells. You're not going to find liver cells in your kidneys. But in the brain, you're going to find cells that run through all parts of it that are connected. They're very long. So they can go from your brain stem clear out into your outer cortex and across the two sides of the brain. It's just a huge network of connections that's capable of happening there. So that complexity and that interconnection provides for an amazing range of function.

So how is data handled? Well, the brain is continually sensing, and processing, and storing, and perceiving and acting in response to information that comes up the spinal column from the outside world. It also senses information that is coming from inside.

Sometimes we can tell when we're getting upset, or when something is hurting, or whatever. And so it takes in all this data from outside and from inside the body as well. Visual input is handled from one network of cells, auditory by another, and so on. The first stop off point for all this incoming data is in the lower part of the brain – in the brain stem. The brain stem and the diencephalon take that information and then they send it to the various areas for further processing – sights, sounds, touch, smell – all sent to different areas. But it's still all connected through this network of brain cells that go through.

So there's this tiny infant. It's just born. And they put the baby up on mother – up on her chest. And she's holding it in the hospital. And there's all this input coming from the baby's nose, eyes, ears, it's sense of touch. And it's building that information. It's coming in, it's analyzed, it's connected, and then it's sent off to storage. That baby gets that experience quite a bit. So there's a bunch of those networks that are stored. And they're all similar. So that becomes *mom*. That's how the baby recognizes who mom is – all that stuff that's stored there. So it forms a pattern of neural connection in the baby's brain that means mom. When mom's around, the same information keeps coming in. She smells like mom. Her voice sounds like mom. She looks like mom. It hears mom's heart – same rate, same unique beat. So when other people are around, that information comes in, and that's compared with mom's network, and that comes back *not mom*. At first, not mom. That's all it knows to do. That's, eventually, *dad*. See, a network is built there with repeated connections.

Now here's something else about how this information comes in. Have you ever noticed that if you're not paying attention, and you accidentally touch something hot, that you're already pulling your hand away while you're still just learning that it's hot. You're already on the way out before you have a chance to think about it? That's an example of how you can tell where it is going on in your brain. You haven't even had time to think about it out here. But down in the middle, the early stuff is taking place. It's already withdrawing your hand.

That's what a startle response is, too. You walk up on somebody and they go aaaahhh! If they turned around and looked at you, and they knew it was you, they wouldn't do that, but they're reacting because they've been startled, and they think something bad is happening down at that low level where we don't think. Right? So you see how it works? You can tell. You can tell where it's going on in your own head sometimes.

Have you ever lost it? No, no, no one here has ever lost it before.... We all say stuff we deeply regret later – after we've done that. That's because the outside part turned off and we're just operating out of that limbic system at that point. We get a headache later and we feel that our heart is racing, and our blood pressure is up, because all that stuff is controlled down lower in the brain.

So information comes into the brain stem and the diencephalon, and it's processed there before it goes up higher into the bigger thinking and feeling parts of the brain. Okay? They call that *sequential processing*. It processes in a sequence. That's good, isn't it? That is *so* good. Because if you were touching a hot stove, and..."I smell something,"

"My finger's burning. I guess I'd better pull it off." See, that's thought, right? We don't have to think. We are designed to be protective of ourselves. And there's an early warning system there that just handles that simple stuff. I mean, you don't have to be a rocket scientist to know when you're burning yourself. So that can be handled by the brain stem. It doesn't take any thinking at all to do that. So, no thinking going on there – only comparing of network and reaction. And God created our brain with this reflexive capability to protect us from all the harmful things in the world.

So the brain, in a way, shoots first and asks questions later, if I can use that terminology. Act first, interpret and understand later. "Oh wow, I burned my finger. I'd better get some cold water to put on it." I mean, that's exactly what we do. We think about it after the fact, because of this sequential processing that goes on.

So one of the functions for the brain, then, is to scan for danger. There's a little thing that sits right on top of the spinal column in the brain stem, called the imigdula, and that's what it does. It's about the size of a walnut in most people. It compares incoming information with stored patterns already in the brain. "Oh, hot! Danger! Withdraw, withdraw, withdraw!" That's what it's doing.

So, the brain, if you think about it as a mechanism, is like an amazingly complex predictor that takes in information and stores it in patterns in the brain cells through electric and chemical connecting points. Then these patterns of neuronal connection get compared with others – experience. And when this takes place in the brain stem, then no thinking is involved in it. It happens automatically it seems like to us. That's why we can be startled by a loud noise. All that stuff happens *before* we think about it.

Okay, so what? Well, let's talk about what this can help us to understand. When a child, from birth, lives in a state of alarm, or threat, patterns of alarm, and danger and threat are created at the lowest level of the brain – down in the brain stem. Right? That's where it happens. And that is *outside* of conscious awareness or control, because it's way down deep where there is no thinking that goes on. It happens before thought takes place. And because the brain is a predictor, it tends to take those deeply imbedded, early patterns of threat and generalizes them to other similar incoming stuff. So when this happens to a child, for all the rest of the child's life these associations will create fear responses which can alter emotions, behavior and even body responses that happen before any thinking goes on – before any thinking occurs. And no amount of thinking about it will change it – no amount of thinking *can* change it – because they were put in place lower in the brain than thinking takes place. Pretty scary, isn't it, when you think about how many kids are in foster care because their parents mistreated them in our culture.

Here's something else that happens – for you to think about. You know how sometimes you're really calm and then at other times, if you're worried or afraid about something, you become agitated and kind of hyper? When you're anxious you just tend to be more hyperactive. Well, a child who grows up under threat stays at a higher level of agitation than others, even when there's nothing present to agitate them. Right. That happens, even when there's nothing there to agitate them.

The little girl who was hyper in my office. I used her for a reason. Let's understand what was going on with this child. The clue there was the constant checking to see if mother was outside. She's afraid. She's afraid she's going to be abandoned. She hasn't received enough nurturing and care early on to feel secure with her mother. And that's traumatic to children. So, if you ask her, "Why are you so hyper?" she wouldn't even know that she *is* hyper, because that's normal to her. She's never felt any other way. She doesn't know what calm is. It might be relative. Her baseline calmness is way above some kid that's been well cared for early in life. She's going to be in a state of arousal all of her life.

Now this kid has been diagnosed with ADHD, which is a whole different thing. If she has ADHD, I'll eat my hat. It's *not* what's going on there. And the big tip off is the insecurity about where mother is. And there's some other stuff, too, that I know that I probably wouldn't want to bring up here, but that's what's going on with that kid. And that's my diagnosis of what's happening. It's interesting that there really isn't a diagnosis in any of the mental health stuff for attachment stuff right now, except for reactive attachment disorder. She may have that.

But that's what I think is going on with that child. And because all of this hyperactiveness happens down in the brain stem, which is the first part of the brain to develop, you can guess that what happened to her that caused that happened very early – very early – in her life – before her cortex was fully developed.

So what do we do about that? About these people that have been traumatized very early on – way down deep in their brain – before the rest of it was even developed. They have no conscious awareness or conscious control of it. It's just like you can't control when somebody startles you and you jump. It just happens. There's nothing you can do about it, because you don't have any control over it. It's happening in a part of your brain that you don't have control of. What can happen? Well, there are still things that can be done to help people like that. We're just starting to learn.

I'll give you an example. If a girl has been abused by a male in very early childhood, what could help her? Well, a lot of caring, positive interactions with a safe male can help her break those early associations – not because she's thinking about it, but because new patterns are being installed over and over and over again. And they're getting compared with what happened. And pretty soon the old one gets rejected or put aside because this is reality now. That's one way that those old patterns can be broken.

Now, the older we get the harder it is to break that. And that's why this term *early intervention* is so *totally* important in helping children that have been mistreated. We're going to understand why it's harder when we get older later.

The one principle that we know now.... We can look at the way people behave and we can have some idea of why they're behaving the way they are already. If we understand what's going on – what areas of the brain control what kinds of functions – we can look at people and we can start to understand, "Oh, there's something that happened to that person when they were very little, or when they were in elementary school, or..." You get some general idea of where this is going on. We can understand where in the brain a

behavior is coming from. And it's not just with kids. It's with adults, too. This all provides clues as to what might have happened to create the behavior. And once you learn what happened, then you kind of have a clue as to what needs to happen next to kind of undo that – or at least, make an effort.

Now what's really discouraging in my work, when I get forty-five minutes a week with a kid, is that forty-five minutes a week isn't going to undo all of that stuff. So the implication is that there has to be a whole huge effort to reverse the effects that are caused in the brain stem early on in life.

So what are we doing here? Well, what we're doing is we're building a *framework* in our minds to hang all of this information on, so that when we see it, we'll have a way to understand it. We'll have a way to think about what's going on that helps us organize all this data that we're looking at and understand what to do with it. When we look at that child that acted that way, "Oh, why is she doing that? Well, I kind of have an idea because I know how the brain works." That's what we're working at right now.

Okay. So we covered one of six principles. I'm intending this series to be like a class, where the professor covers as much as he can, and then saves the rest for next time. So we're not finished. There's a lot more to learn. And as we learn things that we've wondered about for years, things will start to become clearer to us. And we'll also learn what to do about some of the relational difficulties that we have in our lives that *we're* causing, because we'll know more about how *we* work and what to do to take care of ourselves and help ourselves overcome some of the problems that we have. So stay tuned. We can all become better Christians by learning what God has done inside our heads.