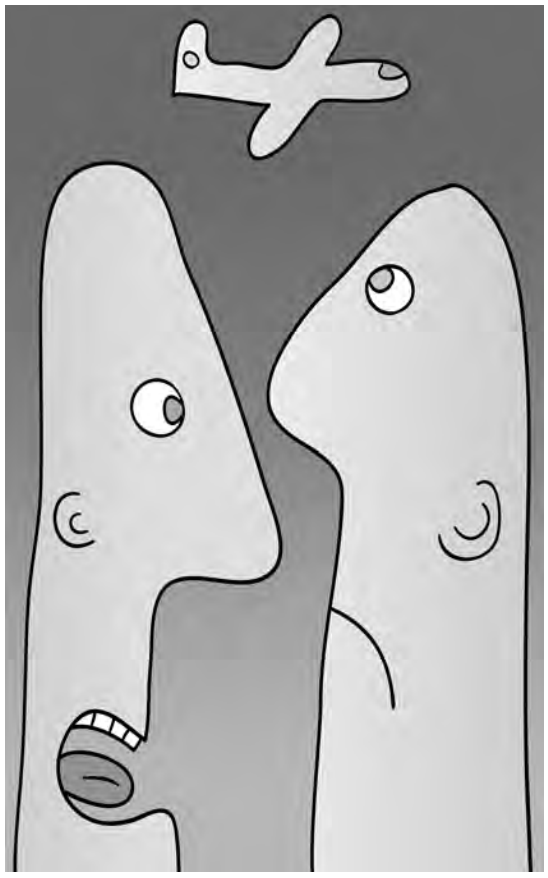


"Don't talk to me now, I'm scanning for danger"

How your nervous system sabotages your ability to relate

An interview with Stephen Porges about his polyvagal theory

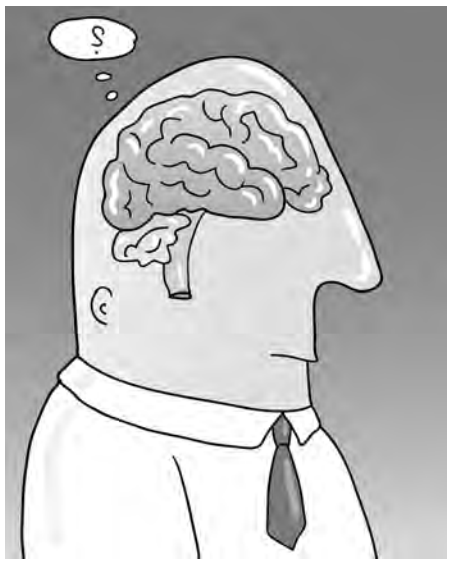
By Ravi Dykema

What if many of your troubles could be explained by an automatic reaction in your body to what's happing around you? What if the cure for mental and emotional disorders ranging from autism to panic attacks lay in a new understanding and approach to the way the nervous system operates? Stephen Porges, Ph.D., thinks it could be so.

Porges, professor of psychiatry at the University of Illinois, Chicago, and director for that institution's Brain-Body Center, has spent much of his life searching for clues to the way the brain operates, and has developed what he has termed polyvagal theory. It is a study of the evolution of the human nervous system and the origins of brain structures, and it assumes that more of our social behaviors and emotional disorders are biological—that is, they are "hard wired" into us—than we usually think. Based on the theory, Porges and his colleagues have developed treatment techniques that can help people communicate better and relate better to others.

The term "polyvagal" combines "poly," meaning "many," and "vagal," which refers to the important nerve called the "vagus." To understand the theory, let's look at the vagus nerve, a primary component of the autonomic nervous system. This is the nervous system that you don't control, that causes you to do things automatically, like digest your food. The vagus nerve exits the brain stem and has branches that regulate structures in the head and in several organs, including the heart. The theory proposes that the vagus nerve's two different branches are related to the unique ways we react to situations we perceive as safe or unsafe. It also outlines three evolutionary stages that took place over millions of years in the development of our autonomic nervous system.

The bulk of Porges's work is now



conducted in the Brain-Body Center, a 24,000-square-foot, interdisciplinary research center at the University of Illinois. At the Center, professionals in the fields of endocrinology, neuroanatomy, neurobiology, psychiatry and psychology work together. They study models of social behavior and develop treatments for disorders such as autism and anxiety. Porges' polyvagal theory is becoming art of thet raining of bodyworkers, therapists and educators. An example is last summer's national Hakomi conference held at Naropa University, where Dr. Porges was the keynote speaker. (Hakomi is both a system of bodywork and a system of body-centered psychotherapy.) Here, Porges speaks about the polyvagal theory and its significance with *Nexus* publisher Ravi Dykema.

RD: Please tell me about the theory you have developed, polyvagal theory. Isn't it an innovation on the theory of the two nervous systems?

SP: Let me clarify. Historically, the autonomic system has been broken into two branches, one called the sympathetic, and the other parasympathetic. It is an organizational model that came into place in the late 1800s and the early 1900s. Over the years, this model has taken on a life of its own, although we know more now. Essentially, it linked the sympathetic system with the "fight or flight" response, and the parasympathetic system with ordinary functioning, when one is calm and collected.

This model of the autonomic nervous system has evolved into various "balance theories," because most organs of the body, such as the heart, the lungs and the gut, have both sympathetic and parasympathetic innervation.

Most of the parasympathetic innervation (nerve energy) comes from one nerve, called the vagus, which exits the brain and innervates the gastrointestinal tract, respiratory tract, heart and abdominal viscera. However, the easiest way to conceptualize the neural pathways that go through the vagus is to think of the vagus as a tube or conduit. Conceptualizing the vagus this way forced the scientist to notice that various fibers in the nerve originated from different areas of the brainstem. For example, the neural pathways that go through the vagus to the lower gut come from one area of the brain, while the neural pathways that go to the heart and to the lungs come from another area.

RD: Is that relatively new information?

SP: Yes. But the theory is that the system reacts to real world challenges in a hierarchical manner, and not in a balanced manner. In other words, if we study the evolutionary path of how the autonomic nervous system unfolded in vertebrates—from ancient, jawless fish to bony fish to mammals to human beings—we find that not only is there a complexity in the growth of the cortex, (the outer layer of the cerebrum, which is the largest portion of the brain), there's also a change in how

Stephen Porges, Ph.D.

the autonomic nervous system works. It is no longer just a sympathetic/parasympathetic system in balance. It's actually a hierarchical system.

RD: So one thing happens then another thing happens then another thing?

SP: Right. This influences how we react to the world. The hierarchy is composed of three neural circuits. One circuit may override another. We usually react with our newest system, and if that doesn't work, we try an older one, then the oldest. We start with our most modern systems, and work our way backward.

So polyvagal theory considers the evolution of the autonomic nervous system and its organization; but it also emphasizes that the vagal system is not a single unit, as we have long thought. There are actually two vagal systems, an old one and a new one. That's where the name polyvagal comes from.

The final, or newest stage, which is unique to mammals, is characterized by a vagus having myelinated pathways. The vagus is the major nerve of the parasympathetic nervous system. There are two major branches. The most recent is myelinated and is linked to the cranial nerves that control facial expression and vocalization.

RD: Which are virtually all for the benefit of someone looking at us, right?

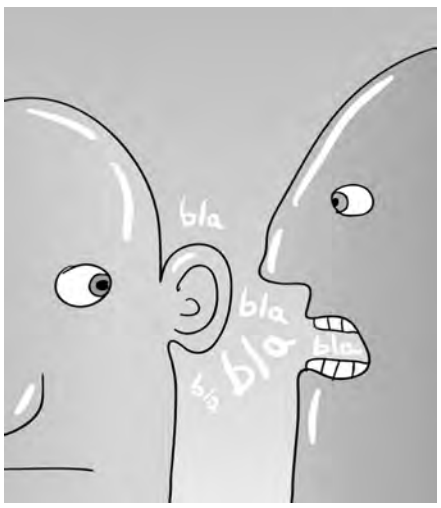
SP: Right, or for us looking at them or communicating or signaling--or even listening. We forget that listening is actually a "motor" act and involves tensing muscles in the middle ear. The middle ear muscles are regulated by the facial nerve, a nerve that also regulates eyelid lifting. When you are interested in what someone is saying, you lift your eyelids and simultaneously your middle ear muscles tense. Now you are prepared to hear their voice, even in noisy environments.

RD: Very interesting. How would you apply these principals or findings in a treatment setting?

SP: Let's say you're a therapist or a parent or a teacher, and one of your clients, students or children's faces is flat, with no facial expression. The face has no muscle tone, the eyelids droop and gaze averts. It is highly likely that individual will also have auditory hypersensitivities and difficulty regulating his or her bodily state. These are common features of several psychiatric disorders, including anxiety disorders, borderline personality, bipolar, autism and hyperactivity. The neural system that regulates both bodily state and the muscles of the face goes off-line. Thus, people with these disorders often lack affect in their faces and are jittery, because their nervous system is not providing information to calm them down.

RD: How will polyvagal theory change treatment options for people with these disorders?

SP: Once we understand the mechanisms mediating the disorder, there will be ways to treat it. For example, you would no longer say "sit still" or punish a person because they can't sit still. You would never say, "Why aren't you smiling?" or "Try to listen better" or "Look in my eyes," when these behaviors are absent. Often



treatment programs attempt to teach clients to make eye contact. But teaching someone to make eye contact is often virtually impossible when the individual has a disorder, such as autism or bipolar disorder, because the neural system controlling spontaneous eye gaze is turned off. This newer, social engagement system can only be expressed when the nervous system detects the environment as safe.

The concept of safety is relative. You and I are sitting in this room together and nothing appears to threaten us. We feel safe here, but it may not feel safe to a young woman with panic disorder. Something in this environment, which is safe for us, might trigger in her a physiological response to mobilize and defend.

RD: So if she gets a flat affect or is fidgety and nervous in this situation, she may not have a choice. It's a neurological phenomenon, right?

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SP: Right. It is actually an unconscious or subconscious neurobiological motivational system. She's not doing it on purpose. It's an adaptation to a situation that her nervous system has evaluated as dangerous. The question is, how do we get her out of feeling threatened?

Traditional strategies would be to reason with her, to tell her she's not in a dangerous situation, to negotiate with her, to reinforce her, to punish her if she doesn't respond as directed. In other words, we try to get the behavior under control. But this approach doesn't work very well with social engagement behaviors, because they appear to be driven by the body's visceral state. Our current knowledge based on the polyvagal theory leads us to a better approach. Thus, to make people calmer, we talk to them softly, modulate our voices and tones to trigger listening behaviors, and ensure that the individual is in a quieter environment in which there are no loud background noises.

RD: Because it's hard for them to hear a human voice with background noises?

SP: That's right, because those systems aren't working and because loud background noises will trigger physiological states and defensive behaviors.

RD: So if someone's in a severe reactive state, he or she may not able to pick up a human voice against background noise?

SP: Exactly. People in these states are often brought in for hearing tests, and they test perfectly in a soundproof room. People whose nervous systems function properly have certain neural mechanisms for hearing beyond background noise. Those mechanisms attenuate low-frequency background sounds, which enables them to hear human voices more clearly even in environments with noisy background sounds.

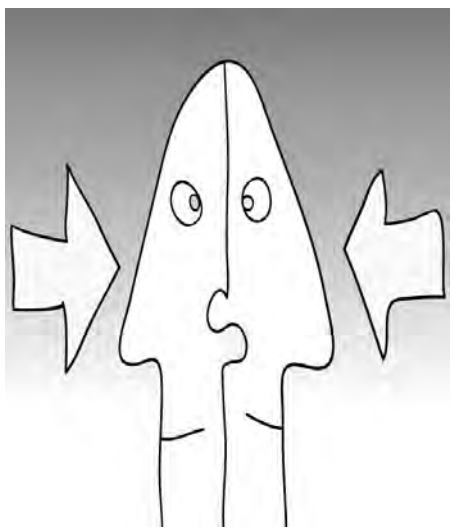
These mechanisms aren't available to people with certain disorders. For example, a young boy with autism will have difficulty differentiating voices from background noise; human voices will wax and wane based upon the background sound. The voice will start "disappearing." That's why people with autism and several psychiatric disorders generally don't want to go to shopping malls, or don't want to be where there are loud ventilation systems. For them, the background noise distorts the human voice.

RD: What about the normal neurotic, those of us who don't have an identifiable or diagnosable disorder, but have periods where we're stressed or anxious? How would polyvagal theory suggest that we be treated?

SP: In much the same way that we'd treat someone with a more severe disorder. For example, when we're stressed, we may engage in high-intensity exercise. But this actually creates a greater retraction of the social engagement system; it puts us in a state of analgesia, so we no longer feel the stress, as opposed to stimulating a sense of safety and security. Polyvagal theory would suggest strategies to create that sense of safety, like retreating to a quiet environment, playing musical instruments, singing, talking softly, or even listening to music.

Think about what we do when we're stressed; we take ourselves out of interpersonal relationships, as opposed to moving into them. But it's natural for human beings to use other people to help regulate our own mental and emotional states. So when you ask, "How can we use this knowledge," the answer is that we have to re-understand what it is to be a human being.

Part of being a human is to be dependent upon another human. Not all the time, of course. Similar to most mammals, we come into the world with great dependence on our caregivers, and that need to connect and be connected to others remains



throughout our lives. As we mature, we need to find safe environments so that we can sleep, eat, defecate and reproduce. We create the safe environments by building walls to create boundaries and privacy. Or, we may get a dog, which will guard us, so we can sleep. The point of these strategies is to create an environment in which we no longer need to be hypervigilant, and to allow us to participate in the life processes that require "safe" environments. Social engagement behaviors—making eye contact, listening to people—require that we give up our hypervigilance.

Back to the issue of clinical applications: when we see people with flat affect, flat muscle tone, drooping eyelids, people who are talking without intonation in their voice or having difficulty hearing what people are saying, people who are in states that are kind of jittery and non-relaxed, we can see how these physiological states might have adaptive functions related to protection. But these adaptive functions will not mesh well with the social context in which an individual is living.

RD: You mean they think it's an unsafe world?

SP: It's not related to a cognitive process. It's a physiological reaction that involves the nervous system. It's not a conscious reaction; most people who feel that way would rather not feel that way. They just can't turn it off. We have to understand that these feelings are physiological events, triggered by specific neural circuits, and we need to figure out how to recruit the neural circuits that promote social behavior. That's the important part of the research--we can actually recruit these neural circuits through a variety of techniques: intonation, reducing the amount of stimulation in the environment, listening, and presenting familiar faces and familiar people.

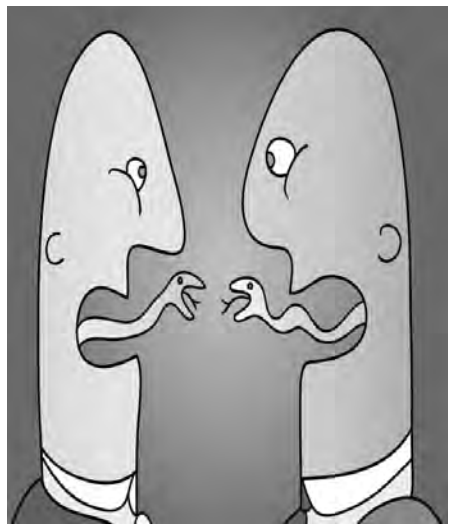
What we often do when we're stressed or anxious is to distract ourselves or create novelty. We'll say, "Let's go to the park! Let's do something different!" But what we need to understand is that the nervous system is really requesting familiarity and predictability, which is a metaphor for safety.

RD. It might explain why some New Yorkers wouldn't leave Manhattan after 9/11.

SP: Right. It's familiar. It's home. And "home" is a powerful metaphor for safety.

RD: I've heard the human mind described as a paranoid instrument. The premise is that when we are living in our senses, in the here and now, we usually feel safe, but our thinking mind often throws scary impressions in front of us, as if it's anticipating some threat.

SP: I'll address that by describing to you a part of our nervous system that is entirely focused on responding to other people, even other mammals like dogs and cats. This is not the same part of the nervous system that can put us into states of enlightenment or ecstasy. In a sense, this is a very grounded component of our nervous system. It engages contact with certain levels of senses that are not the ones that you're describing. It's where we are feeling our bodily information from inside our organs. This information from the body actually travels through nerves up through the brain stem and radiates upward to our cortex. This part of the nervous system provides a contact with reality; it regulates our bodily state, so we become alert and engaged. That does not include all of human experience, but it does include most of what we call social interactions. We can say that the social interactions are a very important component of our psychological experience as human beings. And this system, the social engagement system, is what determines the quality of those interactions—the features that we show other people,



the facial expression, the intonation of our voice, the head nods, even the hand movements, are part of this. And if I turn my head away while I'm talking to you, if I talk in a monotone without any intonation, or if I drop my eyes, will you have a visceral response? How do you feel when I do that?

RD: It feels like you're not very present, like you're withdrawing or you're disconnected.

SP: Disconnected, which may be interpreted by the other person as evaluative, not liking, not being motivated to engage, condescending or suspicious. So these facial gestures, which for some people are purely physiological responses, are

now interpreted with a moral or, at least, a motivational overlay. This may or may not be true. Social engagement is a unique and very powerful component of our interactions.

Now, how valuable is this knowledge? Let's take three different types of clinical populations. One, fussy or colicky babies who cry excessively. Two, kids with attention deficit disorder. Three, individuals along the spectrum of autism. How do the parents of these three types of children feel? Do they feel that their children love them? Is it easy for them to love their children? Or, do they feel duped and disliked by their kids? How do they feel?

With the fussy baby, parents often feel that their overtures of love and caring are being rejected. With the hyperactive kid, they feel their overtures of engagement are being rejected. They feel the same way with the autistic kids. So they are responding to a common feature expressed in these three types of children, and their nervous system interprets their child's features as if the child is motivated not to like them.

Where's the power of knowledge and science in helping these families? Where and how can this knowledge be used? We can teach these parents to understand that the child's behaviors are not motivated by or directed at them. We can teach the parents that they need to help soothe and calm their children.

What generally happens in all three conditions? The parents are feeling very upset and these feelings increase the intensity of their interactions with the child and makes the child's behavior worse.

RD: They can't help but reveal their anxiety about the child's behavior?

SP: Yes, and that anxiety gives more cues to the child, and often is translated to the child as anger. The parent may feel justified, because they think that the child does not love him or her. It's tragic.

RD: Have you used these principles to treat autism?

SP: Yes, but I have approached it at a very different level. I've actually tried to trigger the neural mechanisms in the autistic child that enable him or her to make better eye contact and facial cues. I went through the portal of how they listen to acoustic information, and actually created an intervention program that stimulates active listening to modulated sounds.

This system of intervention works very well, and very rapidly—within a few hours. As many as 60 to 80 percent of the children treated demonstrate changes in eye gaze, heart rate activity, visceral state and ability to process language. The changing of eye gaze and facial expressivity of a child who is autistic changes the whole interaction with the parent. It's quite amazing. What's perhaps the most interesting is that many parents don't even know it's happening, because it's such a natural process.

If I am looking at you, and our contact feels safe and appropriate, and your nervous system is in tune, you'll feel uncomfortable if I turn away. But then, if I turn back, you're back on target and you forget about the fact that I turned away. The same thing happens with parents of autistic kids. Once the child is engaged, they forget the child ever had a problem on those levels. Our nervous system expects this facial expressivity and dialogue. When that expectation isn't met, we feel bad. When it comes back into play, it's natural.

RD: Can you talk about polyvagal theory as it relates to our need for safety and our reaction when we don't think it's there?

SP: If we start thinking in terms of what happened through the stages of evolution, when mammals evolved they required lots of nurturing. When they were born, they were not able to take care of themselves. Unlike reptiles that hatch and scamper off to the water, mammals need to be suckled. So with this physiological evolution, there also evolved social cueing—facial expressivity, crying, vocalizations, sucking movements; all these types of behaviors of the neural regulation of the face provide poignant cues and are part of the mammal's repertoire for behavioral and state regulation.

We still use the same "cueing" communication system to test social interactions. The neural regulation of the facial muscles provides a way to reduce psychological distance before we deal with the inherent risk of moving physically closer. This social engagement system enables people to touch each other. We don't just walk up and touch someone; there's a whole interaction between the face, vocalizations, other bodily cues, to see if we feel safe with each other. Then we can touch. Thus, social engagement behaviors precede the development of social bonds. Social engagement behaviors provide an option to test interactions in "psychological space" with very low risk, prior to the test in "physical" proximity. Polyvagal theory shows that as reptiles evolved into mammals, the neural regulation of the heart and lungs changed. It came to be regulated by an area of the brain that also controlled the facial muscles. After that, emotional expressivity, ingestion of food, listening and social interactions were all related to how we regulated our bodies. Those components calmed us down. Thus, social behavior could be used to calm people down and to support health, growth and restoration.

Everyone knows that social support is good. But what are the features of social support and why does it work? Generally, it operates through the mechanisms that we're talking about; it triggers the social engagement system, which is linked to the myelinated vagus that calms us and turns off our stress responses. It's self-soothing and calming, and makes us much more metabolically efficient. The theory involves the complex linking of systems: how the nerves that regulate the heart and lungs are linked to the nerves that regulate the striate muscles of the face and head and how the cortical regulation of brain stem areas that do this regulation enable us to turn off defensive strategies.

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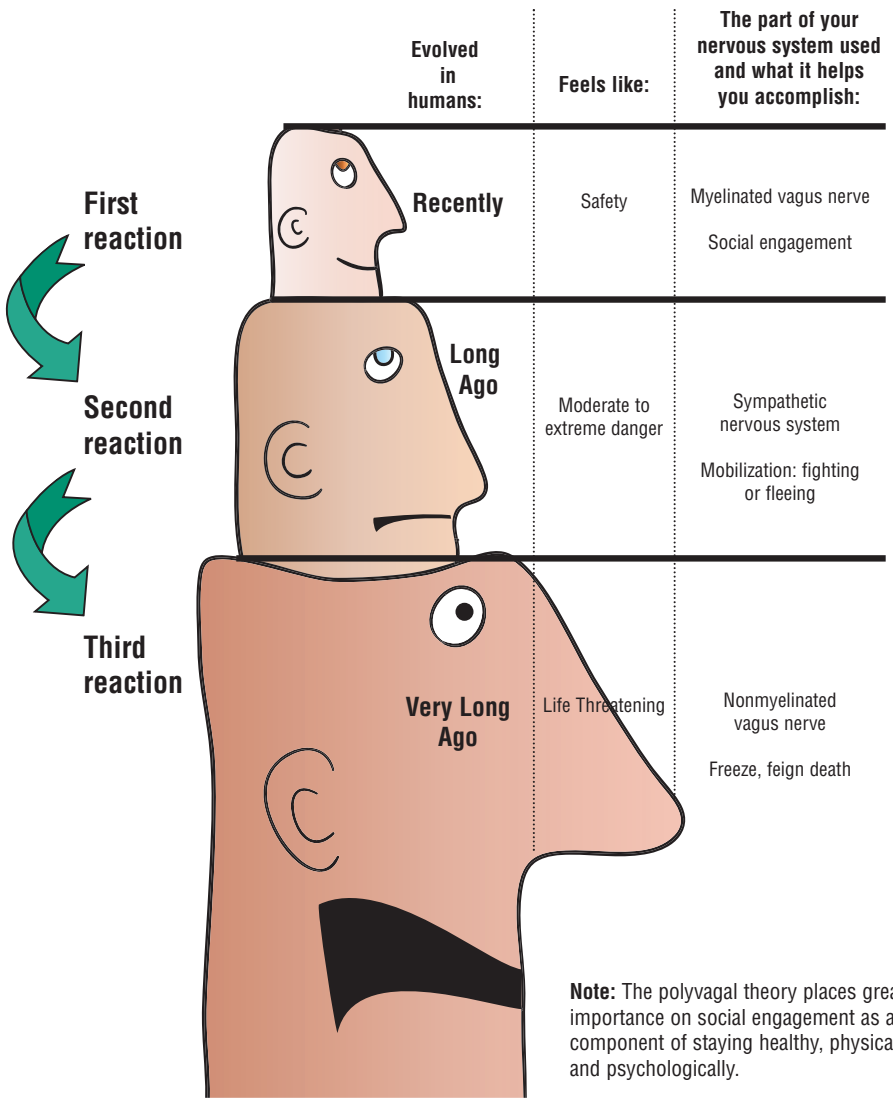
POLYVAGAL THEORY

By Ravi Dykema

Events trigger you to react. If your first reaction doesn't make you feel safe, you revert to the second, then the third:



Note: The polyvagal theory places great importance on social engagement as a component of staying healthy, physically and psychologically.

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Here's one thing I didn't discuss: how do we distinguish between friend or foe? There's an area in the brain that picks up biological movement and intentions. That area detects familiar faces, familiar voices and familiar movements. So hand gestures, facial expressions and vocalizations that appear "safe" turn off the brain stem and the limbic areas that include fight, flight and freeze responses.

RD: The sympathetic nervous system?

SP: It's actually even more than that. The limbic system "grabs" the sympathetic nervous system (as well as what's called the hypothalamic-pituitary-adrenal-axis) to turn on defense systems including the fight-or-flight mobilization system and the freeze immobilize system.

RD: Where's the "freeze" response in all this?

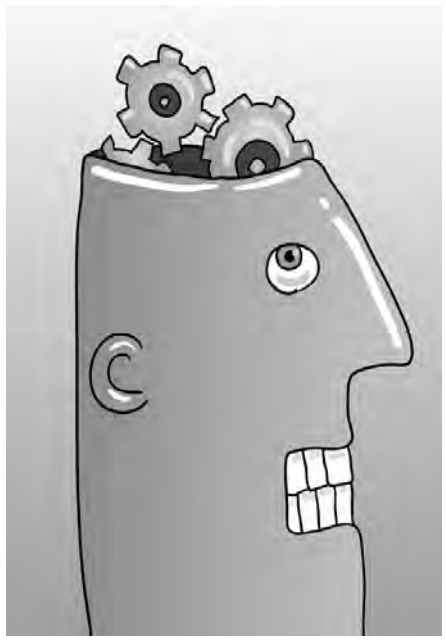
SP: Fight and flight are actually programmed in different areas in the brain. Even though they generate the same autonomic responses, like sweaty hands and increased heart rate, they are actually different programs of movement, and they're programmed in different areas of the brain. But the freeze response is totally different; where fight and flight are mobilization, freeze is immobilization, and immobilization is potentially lethal for mammals.

RD: It's like being scared to death?

SP: Exactly. The metaphor would be the cat-and-mouse game. When a mouse is confronted by a cat, it may freeze into a death-like faint, where it will be floppy and unresponsive. Actually, about 20 percent of the small mammals who use this death-feigning strategy will die, just by going into that state. It is not a voluntary behavior, in which they are pretending to die. It is a reflexive, adaptive response. They're literally in a dissociative state. Their pain thresholds are raised.

RD: Does this happen in humans?

SP: Well, this may be part of the post-traumatic stress disorder (PTSD) syndrome. PTSD may be about raising pain thresholds; it may be a preparation to be killed. Many mammals have this mechanism. In a sense, it's a beautiful strategy; if you're going to die, raise your pain thresholds and just say goodbye. There's another kind of immobilization, an immobilization without fear that is positive and enjoyable. Often immobilization without fear is required to enjoy sex. This state of immobilization without fear is common for female mammals. Actually, men may immobilize after sexual activity as well. There is an important link between immobilization without fear and being in a safe environment. What's the saying? If you want to steal something from a



man, do it right after sex. They're just totally helpless. And to really enjoy sex, women, in a sense, have to feel safe with the man and to immobilize without fear.

RD: How does polyvagal theory relate to all this?

SP: The theory has two important parts. The first is the link between the nerves of the face and the nerves that regulate the heart and the lungs. The second is the phylogenetic hierarchy that describes the evolutionary sequence from a primitive, unmyelinated vagus related to conservation of metabolic resources, to a sympathetic-adrenal system involved in mobilization strategies, to a myelinated vagus related to modulating calm bodily states and social engagement behaviors. The hierarchy emphasizes that the newer "circuits" inhibit the older ones. We use the newest circuit to promote calm states, to self-soothe and to engage. When this doesn't work, we use the sympathetic-adrenal system to mobilize for fight and flight behaviors. And when that doesn't work, we use a very old vagal system, the freeze or shutdown system.

So the theory states that our physiological responses are hierarchically organized in the way we react to challenge, and the hierarchy of reactions follows the sequence in which the systems evolved. Additionally, the linkage between the nerves that regulate the face and the nerves that regulate the heart and lungs implies that we can use the facial muscles to calm us down. Think about it: when we're stressed or anxious, we use our facial muscles, which include the ears. We eat or drink, we listen to music, and we talk to people to calm down.

RD: So we could use dramatic facial expressions to calm down?

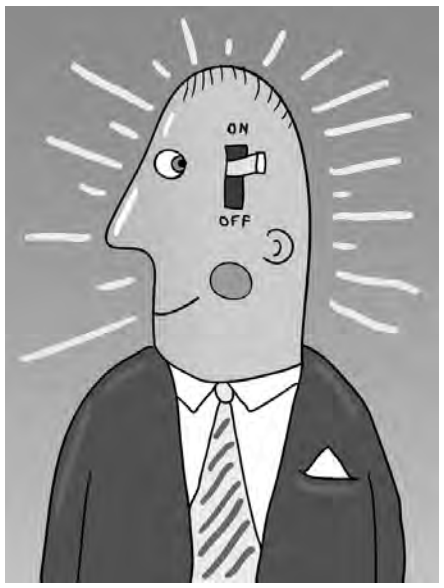
SP: Absolutely. Think about how pranayama (a yogic breathing technique) works. When you do these breathing exercises, you're actually "exercising" both the sensory and motor nerves regulating the facial muscles; you are controlling breath and maneuvering the oral motor cavity. It's a very efficient way of working on the system. A lot of people don't like to teach pranayama because they think it's too powerful. Polyvagal theory explains how pranayama might work and how other methods of stimulating the same system, including social interactions, can result in similar benefits to our health and mental state. The social engagement system includes the nerves regulating the face and the myelinated vagus regulating the heart and bronchi. The power of the social engagement system is amazing both in terms of its effects on behavior and mental state, but also in terms of the speed with which it works.

RD: So do humans have the ability to consciously access our more recently developed neurological systems, instead of reverting automatically to our reactive systems? If so, can we use them to override the vague anxiety with which many of us live?

SP: Let's take a very optimistic viewpoint. Let's say that some of these behaviors—at least the shutting down of social engagement to facilitate defensive behaviors—are not voluntary choices. However, often when this occurs, it is as if the nervous system has betrayed us.

To cope with these apparent betrayals, we need to recognize when our nervous system is failing us and to learn to compensate with voluntary behaviors. What does that mean? It means that if I'm in this state of activation and arousal, when my nervous system detects that I am in danger, I can use voluntary behavior—I'll move myself into a quiet room or go to what I perceive as a safe environment.

Some people believe that you don't have that option; if you have a job, you have to perform even at times when your nervous system wants out. For example, you have to



lecture, teach or see clients. You can't remove yourself from the situation, because you have responsibilities that define you as a professional. What are your alternatives?

First, listen to your body. Your body is telling you that it's in an unhealthy state. Your body is not well adapted for prolonged periods of stress and anxiety. And while you can't control all of your surroundings, you can control some of them. We also need to recognize and honor our individual differences. Just because our significant other enjoys a noisy party, doesn't mean that our nervous system can handle it. So with this understanding, we can arrange our lives so that our surroundings are more harmonious and peaceful, so that our neural circuits aren't being triggered.

RD: So let's say I've just arrived at a party where I don't know anybody, and I realize I'm underdressed for the occasion. I'm embarrassed, but it's an important business function and I can't leave. How would I use the listening-to-my-body approach to calm myself and feel safe?

SP: I think the essence of what you're describing is the feeling of being trapped. You can't leave. It's like being in a situation where there's too much noise, it's too hot,

there's an abusive conversation going and, for whatever reason, you can't leave. That's very difficult. But, in general, we have to learn to navigate situations and find ways to make ourselves feel safe.

In this case, you have to do something; your visceral state has shifted because of something that cognitively is not very important--your clothing--but your body may have reacted in the way that destabilizes your ability to be social. What I'm saying is we have to respect that. We can't minimize that because to us it appears to be inconsequential.

RD: So staying at the party—pushing through the situation—is not the solution.

SP: Absolutely not. The solution is in respecting and honoring the body's responses. When this feeling of being trapped comes up, we have to deal with it by saying, "How can I modulate that?" Children like autistic kids are feeling trapped all the time, because their physiology is saying, "Get the hell out of here." And they're being forced to sit, to make eye contact, to do things that are terrifying to them. To treat them, we must first respect what their bodies are saying.

The bottom line is that our nervous system is evaluating risk and safety in the environment. It's automatically doing that all the time. It's like a radar system, constantly sensing whether we're safe or not. We can use many metaphors. For example, someone may say, "I don't like the energy in this room." Let's investigate what that means. It may be that people are not making eye contact, they're not inviting, and there may be a lot of background noise. There are many features that we can now decode.

RD: But in the sequential order, if we're feeling that the environment is unsafe, then social interaction could either make us feel safe, or make us feel threatened, right?

SP: Right. But we don't make the determination. The person engaging us is actually triggering our system, one way or another. So let's say you go into this strange room. You don't know anyone. You're hypervigilant. Your body is saying to you, "I'm not comfortable here, because I don't know anyone." There's no familiar face, there's no familiar voice, so you're unable to turn off the brain structures that regulate defense strategies. Then someone comes up and makes eye contact with you and says, "Oh, I've heard so much about you. I get your magazine." And he says, "Can we sit down and talk, because I have some ideas." And then you go into a quieter place, you have a drink, and suddenly you feel fine. Now if someone doesn't engage you, and you stand there in the periphery, the way you were feeling continues to radiate and you formulate a strategy to get the hell out of there as soon as you can.

Do's and Don'ts

Derived from the polyvagal theory

By Ravi Dykema

DO	DON'T
Do make eye contact when you feel safe.	Don't combine intimate conversation with hard exercise; you'll misread all the other person's cues.
Do express with your face.	Don't always isolate yourself in order to feel safer; try connecting with others too.
Do modulate your voice (use expression).	Don't push yourself harder to be social when you feel unsafe; seek safety first.
Do listen to voices, separate them from background sounds.	Don't ignore your gut reactions; adapt to them and learn from them.
Do adjust your circumstances to feel safer, e.g. move to a quieter place.	Don't use fighting or fleeing with loved ones; instead, find a way to get to safety.
Do adjust your focus to things that will make you feel safe, e.g. feel your sensations or focus on something familiar.	Don't adopt a flat, expressionless affect with people who you want to feel safe with you.
Do play a musical instrument.	Don't substitute internet relating for face-to-face or phone contact.
Do try moving into social relationships instead of away, as a way to reduce slight anxiety.	Don't assume other's outbursts reveal their "true" attitudes or motivations. Their calmer social capacities (like empathy) are "true" too.

RD: That's exactly how I feel when I go into a business setting, and I don't know anybody. And then as soon as someone I do know arrives, everybody else seems to be friendlier.

SP: Ah. Now you've brought up a very interesting feature, because when you're in a state of this arousal or this danger evaluation...

RD: ...everyone seems to be judging me.

SP: Oh, but not necessarily. You are misreading their cues.

RD: But that's what I'm feeling.

SP: Absolutely, because what happens is when you're in that physiological state, neutral faces appear to be angry, so you misread everything on a conservative level related to survival. In this conservative state, your nervous system evaluates anything that may be neutral as dangerous, rather than pleasant. But once you become calm and engaged, you see neutral as being neutral, and then you engage people and they start reacting back to you.

RD: It seems counter-adaptive. If I go into an environment like that and my well-being depends on my making a good impression, I could blow it.

SP: No, because you're too smart to go that direction. You've been in similar situations and know what to expect and how to regulate through appropriate behaviors. What we're really talking is how the mammalian system evolved to maximize survival. We really only want to be in groups with people we know. But you're not considering your behavior from a motivational model in which your success and professional survival is dependent on you making connections. This motivational model involves much higher brain structures that can modulate the more "primitive" defense strategies.

RD: Maybe, but it's the people who are willing and able to go into those threatening environments over and over again who are leading corporations and governments.

SP: Maybe, but those people may also have some features that would not result in strong interpersonal relations. They may start veering toward what we might call sociopathy. They may not discriminate among whom they like or interact with, since they are always socially engaging. It is possible that these people don't develop very good close relationships.

RD: Any closing words?

SP: Yes, I think it is important to remember that we can use our higher cognitive processes to help maintain important and positive connections with people, even during stressing situations. When we are in a mobilized anxious state and want to communicate or relate on a calmer personal level, we need to put the brake on our sympathetic-adrenal system and recruit the neural circuit that promotes social behaviors. We can do this by using our facial muscles, making eye contact, modulating our voice, and listening to others. The process of using the muscles in our face and head to modulate our social engagement will actively change our physiological state by increasing vagal influences on the heart and actively blunt the sympathetic-adrenal system. Then we can be more in contact with reality, more alert and engaged. The social neural circuit also supports our health.