

# *The Reptilian Brain, Dissociation and Seeing from the Core*

by  
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**A Paper Presented at  
The 17th International Conference for Holistic Vision, Paris, France  
October 2002**

When we are frightened or stressed our instincts give us three options. We can run away, stand and fight, or freeze. These three options are not in our conscious control. The reptilian brain, so named by Dr Paul MacLean, author of "The Triune Brain", governs this response. In essence, a part of all mammals, including humans, is still a reptile. It is the part of our brain which is the deepest and, on an evolutionary scale, the most ancient. It controls our basic needs such as self-defense, reproduction and digestion. It is here that we find the centers that control the autonomic nervous system. This is especially important to us, of course, because the focusing of the eye is an automatic function.

What I want to speak to you about is how the reptilian brain effects the visual system, why it's important for us to understand this effect, and what we, as vision educators, can do about it.

As fear and stress activate the reptilian part of the brain the sympathetic nervous system (SNS) becomes aroused. This causes, among other things, the pupil to dilate, the eyelids to retract, the heart rate and force to increase, the digestive system to reduce its activity and the adrenal medulla to release adrenalin and noradrenalin into the blood stream. These hormones effect every cell of the body, increasing their metabolic rate, preparing us to fight or flee.

In his book "Waking the Tiger", Peter Levine tells the story of an impala running away from a cheetah. They are both racing at 60 to 70 miles (100 to 110 kilometers) per hour. The SNS is highly aroused. Adrenalin and noradrenalin are coursing through their blood streams. As the cheetah leaps to attack the impala, the prey falls to its impending death, although at that moment, it may actually be uninjured. The impala has been overwhelmed; the system, which is in a hyper-aroused state, freezes.

The freezing or immobility response has two survival advantages. One is that the predator thinks its prey is dead and may drag it off to hide it in the bushes for later consumption. The impala may then awaken from this frozen state and escape in a moment when it is not being guarded. The second survival advantage is that when the impala goes into the immobility response, it enters an altered state of consciousness, which allows it to feel no pain if it is torn apart by the cheetah. It dissociates.

Freezing and dissociation are concurrent, but for the sake of clarity, let's separate them. We'll look first at freezing. If you remember back to a time when you were a little frightened; probably the muscles of your body tensed, the heart rate increased and your breathing may have become more shallow or stopped. This is the normal, physiological response to stress; it is the body preparing to fight or run away. But interestingly, it is not just the muscles that constrict, the perceptions also constrict. For instance, if a big truck is coming towards you down the wrong side of the road, you stop looking at the view of the mountains and listening to the music on the radio. Instead, all your senses are directed towards the oncoming truck and how to avoid colliding with it.

As long as the visual system is looking for ways to avoid the truck, (or the impala is trying to escape from the cheetah) we are using the energy of the stress response; adrenalin is flowing as we look for an escape route. If we find an escape and successfully avoid the crash we may pull over and allow ourselves time to quiet down again. Later we may recount the event as an exciting story. If the impala escapes it will shake and shake, "...literally shaking off the effects of the immobility response

and regaining full control of its body. It will then return to its normal life as if nothing has happened.” (Levine) When we are safe after being frightened we often shake too, especially if we are alone or in a loving environment.

If we can't escape, we become overwhelmed and like the impala, we freeze. The whole body goes into the immobility response. In the visual system when the eyes freeze they stare, the pupils dilate, the eyelids retract and the perceptual field shrinks. All of us have experienced this freezing to some extent or another in our lives. Now, the scare does not have to be as great as an oncoming truck for us to experience some or all of these natural, physical responses. Sometimes it's just a little thing like a child jumping out from behind a door. For most of us, the immobility response to a small fright will only be momentary. For others who have been badly traumatized such a fright may trigger a response that lasts much longer. In this paper I am not addressing those who are suffering from severe, untreated trauma. Though they will be helped by these methods, they need to proceed extremely slowly with much support and building of their resources.

As vision educators we are trained to notice when people are staring. They generally stop blinking, their breathing becomes shallower and their eyes often appear to “bug out” from their sockets. Sometimes their whole head will strain forwards. Let's briefly explore why vision is impaired when we stare. “In normal vision the eye is in constant motion. Small involuntary movements persist even when the eye is ‘fixed’ on a stationary object. As a result the image of the object on the retina of the eye is kept in constant motion.” (Pritchard) These movements are called saccadic eye movements. There are three different rates of saccadic eye movements, the fastest being 150 cycles per second. When an image is stabilized on a retinal cell it soon fades and disappears. When the eye muscles freeze these saccadic eye movements are diminished and the image is not seen as clearly.

Let's look at dissociation now. When the impala freezes, it dissociates. Many people, who have been in bad car accidents or other terrifying situations, have reported the experience of looking down on their bodies from the outside. They do not feel the pain of the body, even if they can see that it is badly injured. They are dissociated. They are somehow “out of their bodies.”

People who come to see us will often stare and have a disengaged quality in their eye contact, as if the mind is not really present with what they are looking at. This disengaged quality is some degree of dissociation. In some way this person is overwhelmed and it is showing up in their visual system. The amount of dissociation may not be so much that they wouldn't feel the pain of being dismembered, but it may be enough to avoid hearing their parents arguing yet again, or seeing the sign on the highway indicating their exit, or even noticing the beauty of a flower as they walk by. People may describe this experience as feeling spacey, or preoccupied with something else. It's an experience of not being present, of not being in the here and now.

As Dr. Bates said, poor eyesight is due to mental strain. Mental strain is caused by stress. Stress is a form of fear. As we have seen, our physiological response to fear is automatic and out of our conscious control. When the strain is temporary the system returns to its normal strain-free state. The eyes stop staring, the pupils return to an appropriate size, the muscles relax, the heart rate reduces and the breathing normalizes. When the straining becomes chronic, however, the system may not return to its normal state, but stay frozen. The eyes may chronically stare, vision is impaired and dissociation increases and becomes more common.

This conference is about improving vision. Having discussed some of the problems let's explore what can be done about them. It is my opinion that vision can be improved in a variety of ways, but what seems to be a basic requirement is that the person be embodied.

Being embodied is the opposite of being dissociated. It is about being aware of the body and its sensations, rather than ignoring them. It means being “home behind the eyes in order to see,” as Janet Goodrich said. This is not necessarily an easy thing to do for people who are in the habit of

dissociating from fear or stress. Of course, there are those who dissociate and maintain their good vision. It is not their eye muscles that get frozen. They freeze somewhere else.

About seven years ago I began to teach people a way to be embodied so they could see more comfortably and clearly. I call the experience *Seeing From The Core*. This is a way of seeing and a technique to help you to get there. It is a method that encourages the resolution of habitual freezing and dissociation. It supports our being in the here and now. It is a way to see that helps us be more in touch with what is happening on the inside of ourselves while, at the same time being aware of the outside.

This technique explores the central line of the body. It relates to the spine and spinal cord, as well as to the chakras, the flow of chi and other energetic paradigms. The center or mid-line is especially important in vision because our two eyes need to coordinate around this line in order to work well together. Once the student has learned to find this central, energetic line, she/he finds the place on it that is the most comfortable, and rests there. Most people have a place inside themselves that is familiar and feels like home. For instance, one person may have done a great deal of martial arts, and centering in the belly is easiest. For another, centering in the chest is more natural. We each have our preferences and styles. In addition, vision is not always the primary sense we are using at any given moment. We cannot attend equally to what we are hearing, seeing and sensing. One sense must be the most important, or "the figure", while the others are less important, or "the ground." (Kohler)

As we become familiar with this energetic "line", we notice that the place on this line where we are centering will vary depending on the task at hand. For instance, if we are filled with love while looking at some children playing we may center in the chest or heart area, feeling that love while we watch them. We may experience this as "seeing from or with the heart." When physical movement is the predominant activity, especially if it is strenuous, we center in the belly. When vision is the most important sensory input, many of us naturally center our awareness in the head.

Having this sense of an energetic line allows the student to fluidly connect with the major centers in the body. This is helpful because it connects the eyes to the whole being. It helps allow the student's emotions to be expressed through his/her eyes. When people freeze their eye muscles, they lose touch with them. The eyes become disconnected from the body. Or perhaps it is more appropriate to say that seeing and emotional expression becomes disconnected. Someone with poor vision may be very embodied for other activities, but they "dissociate" for seeing. Seeing is about making contact with the visual world. This safe, kinesthetic base within the body can allow us to stay in contact with the world, so our perceptual field need not shrink. As Anne Morrow Lindbergh says, "Only when one is connected to one's own core is one connected to others." My sense is that only when we are seeing from our own *Core* can we truly connect with the visual world.

Some people know how to be at their *Core*. Others don't, but they can be taught. I haven't known a single student who hasn't liked the experience. It is an experience of relaxing into oneself, of muscles softening, of seeing directly, of sensing a connection with the world. We are more grounded because the *Core* line reaches down into the earth, just as it reaches up to the sky. We know where we are in space and time. From the *Core*, we are the only person who has our particular perspective on the world. What is true for us in any moment is therefore of value. It is our piece of the puzzle. It is our truth. This is empowering.

Levine states that for traumatized people, being aware of the body's physical response to stress is healing. It helps them re-enter their bodies and become more present. I believe the same is true for vision. In my own experience of healing my vision, I noticed how difficult it was for me to relax and allow myself to see. I also noticed that I saw much better when I was present and aware of my body. When I meditated I was aware of sensations of energy up the center of my body that felt good. As I became more aware of that energy while going about my day, I noticed I was more present and relaxed. I began to call it my *Core* and to teach it to students. They found it both comfortable and

useful too. Now, it feels like a blessing. Whenever I find myself lost, when I'm not present, I return to the center of my chest. This is my easiest place of access to my *Core*. As I return, I feel my chest soften as I connect via my *Core* to the inside of myself, up and down the "line" within my body. At the same time I open to what I am feeling. Once this is clear, the emotion connects, still via my *Core*, with all of me, including my eyes and I see much more sharply and with greater depth perception. When I look at my personal history, my trauma involved having to hide my so-called negative feelings. It is very affirming to me to be able to experience those emotions, be present with them from my *Core* and see really well. It is not about being pure and happy, it's about being real and present with what is.

As I said, after wild animals escape they shake and go back to their life. When we allow ourselves to experience the stress response, the system naturally returns to its original non-stressed state when the danger has passed. We may even notice some shaking. But unfortunately, what many of us tend to do is to be afraid we'll be overwhelmed, so we freeze and dissociate again, even in situations where there are other options. In this way we not only repeat the same old pattern, but we build on it so that it becomes a chronic, habitual response.

We can apply this directly to vision improvement. When people are aware of tension around their eyes and are invited to relax it, they often don't know how. In fact, attending to it can often increase their tension. They worry about it. Many people even give themselves a hard time for being tense; they feel they should have some control over it. Telling them about the reptilian brain and the stress response can often relieve this piece of their pattern. At least they don't have to feel stressed about feeling stressed.

As vision educators and as students, *Seeing from the Core* is very valuable. When we are in the place of truth, even when we are in a stressful situation, we are more relaxed. We have a home base. We can notice our real responses to people, events and things. We can be aware of how we experience stress in the body. When we are at the *Core* and attend to the sensations around the eyes we have some distance. It's not about being emotional, it's about being with the physical sensations that accompany the emotion. For example, many people who don't see well dislike reading eye charts. For any number of reasons, they feel afraid. They tense; they stop breathing as fully and stare. If at that point we stop and introduce the *Core*, they relax, breathe and stop staring. When they do this they see smaller letters. Sometimes it's just momentary. But as we know, if they can experience clearer vision for a moment, then with practice, the chances are good that they can experience it for longer and longer periods of time. They begin to have a new relationship with their eyes, the eye chart and their vision.

At first I thought *Seeing from the Core* would only work for myopes, because of the increase in visual field that occurs. However, I've found that presbyopes are also helped, as are people with strabismus. My sense is that it is a place of balance, of safety within the body. It feels right, so one relaxes. A forty-five year old woman came in recently. Her acuity had been excellent until she turned forty. She was wearing reading glasses. When I showed her the *Core* she said, "Oh yes, this is where I used to see from."

Another student called me the other day and said, "When I remember the quiet place inside my head, it really improves my vision." It gives one a little sense of distance from the eyes, a sense of space, so that one can sit back, so to speak, and receive the images. This prevents the habit of straining. We are giving the eyes the opportunity to move freely and see, just as Bates said. Sometimes it's the acuity that sharpens; sometimes it's the visual field that expands and sometimes it's the double images that resolve into one.

All the techniques that we teach or practice are more effective when we are embodied. Whether its edging, sunning, swinging or palming, if we are at the *Core* we are more likely to notice our eyes feeling more relaxed and that we are seeing more clearly. The same is true when we practice other visual skills such as converging our eyes. When we practice from the *Core*, we are less likely to strain,

because we will be aware of the sensations in and around our eyes. What I am proposing is not that we change our techniques but the context in which we teach them. *Seeing from the Core* is not only a way of seeing, it is a way of being: for us as well as for our students.

The reptilian stress response is out of our control. Visually, our muscles tense, our perceptual field shrinks, our pupils dilate and our eyelids retract. If we are overwhelmed, we stare, dissociate and our acuity is diminished. Most refractive errors are caused by stress. We cannot avoid all the stresses of life, nor can we stop our bodies from automatically responding to them, but we can prevent the freezing response from becoming habitual and fixed. When we can stay connected with the body using *Seeing from the Core*, we are less likely to be overwhelmed, whether the cause is physical, mental, emotional or spiritual. As we practice, we can thaw our old patterns, dissociate less, stare less and allow the eye muscles to move freely, so we can see more comfortably and clearly.

### Resources

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