

## In the Service of Empathy, Compassion, and Resilience

In a paradoxical way narrow- focus can bring about precisely the experiences we seek to avoid and open- focus can free us from them. In narrow focus attention style, we resist our experience but stay riveted to an exaggerated version of it. In open focus attention style, by contrast, we allow our experience while inviting our underused senses, including that of space, to surround and diffuse it.

A life lived in flexible attention changes everything. Daily life is more effortless, from waking up and getting dressed to eating, driving, working, studying, enjoying our family relationships, undertaking creative endeavors, and competing in sports. It changes the way we anticipate the future and remember the past. We become more relaxed and less anxious; we sleep better and are more loving. We allow emotions to be experienced and diffused effortlessly, instead of letting our emotions generate resistance and overreaction. Internal negative criticism gives way to a light, clear mind, an inner calm. Problems seem to present their own solutions, relationships of all kinds become more engaging, and the world becomes a friendlier place.

Open focus attention has obvious implications for learning. Without anxiety we can pay attention longer and with less effort and distraction. The human brain is divided into right and left hemispheres. The right brain expresses emotions and perceives facial signals, coordinates singing, comprehends music, reads body language and body awareness, and carries out visual-spatial tasks needed to throw and catch a ball or ride a bike. It facilitates insight and intuitive reasoning and immersion, for example, in the experience of three-dimensional space and relationship. The right brain takes in the big picture and context, in both a literal and metaphorical sense, seeing many things simultaneously rather than in sequence. This is called parallel processing. It perceives a whole face at once, for example, rather than individual features one at a time. Familiarity and recognition are right-brain functions.

The left brain, alternatively, is the dominant hemisphere in our culture. It is generally more objective, separate, and rational than emotional, with a strong positive sense of self. It governs language, speech, reading, writing, and sequential, or serial, information processing, which includes such tasks as understanding grammar, doing arithmetic, typing, and keeping score, all of which are made possible through the use of narrow-objective attention.

The differences between the left and right hemispheres of the brain were first systematically studied in people who had had them separated surgically as a last resort to eliminate seizures. In these subjects it was found that an object seen only by the left eye and conveyed only to the right brain can be recognized but not named because the left brain, concerned with naming, is out of the loop. When seen only by the right eye and conveyed only to the left brain, the same object can be named but not recognized, because the right brain is missing from the mix. Similarly, the right hemisphere, which is responsible for music, can recognize the melody of a song but not its lyrics, while the left hemisphere, with its emphasis on language, can recall a song's words but has no memory of its melody.

Right-brained individuals tend to be creative, with a broader, “big picture,” diffuse-immersed type of attention; they are less concerned about details such as time and deadlines and balancing their checkbook. Artists, performers, and those dealing with imagination and invention are more inclined to be right brained. Left-brainers are usually more narrowly and objectively focused, with rigid, goal-oriented attitudes. We live in a society born of the left hemisphere – two thirds of the population are left-brain dominant. Many occupations and most males favor left-brain function. Our culture – as embodied in our schools, workplaces, government, and military – is left-brain biased. These institutions are concerned with written language, time, deadlines, serial processing, objects, and an outward, objective focus. They reward left-hemisphere dominant people and marginalize those with right-hemisphere dominance. The result is a society that is materially rich but impoverished in many important ways.

One of the big questions in the study of the brain is “the binding question”: How does the brain bring its disparate regions together to create a consciousness that contains many perceptions simultaneously? Synchrony is key, which is mediated by attention. Learning an open style of attention generates synchronous alpha in the major lobes of the brain; this reduces stress and allows fluid communication among different regions of the brain, improving mental function effortlessly and naturally. The complex, carefully timed nature of brain function has been compared to a symphony orchestra. But a brain that works only in narrow-objective focus is like an orchestra trying to play from the lyrics and an absent or incomplete score; the music doesn’t sound as it should. Fully flexible attention brings all lobes of the brain fully online and restores them to a harmonious relationship, creating a symphony of conscious experience. This has implications for everything we do, especially learning.

To function at its best, human consciousness must blend the attention functions of the right and left hemispheres. Narrow objective focus is the province of the left brain, while diffuse immersed focus is the province of the right. The optimal blend is open focus attention; an unbiased state in which all types of attention are present more or less equally. One way we can correct our inclusion in our culture’s left-hemisphere imbalance is to participate in neurofeedback training to activate the right hemisphere in the service of empathy, compassion and resilience.