When your mind changes, your brain changes too. In the saying from the work of the psychologist Donald Hebb: “When neurons fire together, they wire together.” In other words, mental activity actually creates new neural structures. As a result, even fleeting thoughts and feelings can leave lasting marks on your brain, much like a spring shower can leave little trails on a hillside.

For example, taxi drivers in London, whose job requires remembering lots of twisty streets, develop a larger hippocampus (a key brain region for making visual-spatial memories), since that part of the brain gets an extra workout.

As you become a happier person, the left frontal region of your brain becomes more active. In fact, the mind and brain interact with each other so profoundly that they’re best understood as a single, co-dependent mind/brain system.

What flows through your mind sculpts your brain. Thus, you can use your mind to change your brain for the better—which will benefit your whole being, and every other person whose life you touch. You can gradually rewire your own brain, from the inside out, for greater well-being, fulfillment in your relationships, and inner peace.

Imagine each of these disciplines—psychology, neurology, and contemplative practice—as three intersecting circles. The discoveries being made at that intersection are only just starting to show their promise. But scientists, clinicians, and contemplatives have already learned a great deal about the brain states that underlie wholesome mental states and how to activate those brain states.

These important discoveries give you a great ability to influence your own mind. You can use that ability to reduce any distress or dysfunction, increase well-being, and support spiritual practice; these are the central activities of what could be called the path of awakening. By better understanding the mind and brain of people who’ve gone a long way down this path, you can develop more of their joyful, caring, and insightful qualities within your own mind and brain as well.

We all have the ability to change our brains for the better

by Rick Hanson
consciousness, and the path of awakening: call it God, Spirit, Buddha-nature, the Ground, or by no name at all. Whatever it is, by definition it’s beyond the physical universe. Since it cannot be proven one way or another, it is important—and consistent with the spirit of science—to respect it as a possibility.

That said, more and more studies are showing how greatly the mind depends on the brain. For example, as the brain develops in childhood, so does the mind; if the brain is ever damaged, so is the mind. Subtle shifts in brain chemistry will alter mood, concentration, and memory. Using powerful magnets to suppress the emotion-processing limbic system changes how people make moral judgments. Even some spiritual experiences correlate with neural activities.

Any aspect of the mind that is not transcendental must rely upon the physical processes of the brain. Mental activity, whether conscious or unconscious, maps to neural activity, much like a picture of a sunset on your computer screen maps to a pattern of magnetic charges on your hard drive. Apart from potential transcendental factors, the brain is the necessary and proximally sufficient condition for the mind; it’s only proximally sufficient because the brain is nested in a larger network of biological and cultural causes and conditions, and is affected itself by the mind.

Of course, no one yet knows exactly how the brain makes the mind, or how, as Dan Siegel puts it, the mind uses the brain to make the mind.

It could be 350 years, and maybe longer, before we completely understand the relationship between the brain and the mind. But meanwhile, a reasonable working hypothesis is that the mind is what the brain does.

Therefore, an awakening mind means an awakening brain. Throughout history, unsung men and women and great teachers alike have cultivated remarkable mental states by generating remarkable brain states. For instance, when experienced Tibetan practitioners go deep into meditation, they produce uncommonly powerful and pervasive gamma brainwaves of electrical activity, in which unusually large regions of neural real estate pulse in synchrony 30–80 times a second, integrating and unifying large territories of the mind.

So, with a deep bow to the transcendental, we will stay within the frame of Western science and see what modern neuropsychology, informed by contemplative practice, offers in the way of effective methods for experiencing greater happiness, love, and wisdom.

To be sure, these methods will not replace traditional spiritual practices. You don’t need an EEG or a Ph.D. in neuroscience to observe your experience of the world, and become a happier and kinder person. But understanding how to affect your own brain can be very helpful, especially for people who do not have time for intensive practice, such as the 24/7 grinding and polishing of monastic life.
