the focus had to be on controlling outcomes, not necessarily on racism.”

Yet many current leaders are wedded to what Dickerson considers an obsolete paradigm. “To hear it from the traditional black—and white—left, you would think it’s still 1950,” she says. “If you run in leftist circles you are pretty much pelted with pessimism all the time. Can a security guard really make a black neurosurgeon feel inferior or like he’s ‘not a citizen,’ just by following him around a drugstore? We have to stop hanging our identities on getting other people’s [i.e., white people’s] approval—which is actually a very strange form of white supremacy. We’ve outgrown ‘the Negro problem,’ but it’s blacks who still want to see themselves as the Negro problem. At the turn of the twentieth century, Du Bois grappled with the ‘strange meaning’ of race. Today, he’d be amazed that we are still grappling with it. Next, he’d be thinking about the strange meaning of contemporary blacks’ unalterable resistance to claim the prize we’ve struggled for centuries. Now we’re in the final stage of the movement, the stage where blacks consciously inhabit their freedom.”

In her book, Dickerson writes, “The last plantation is the mind, and through those magnolias blacks can’t see that they have the ultimate power in post-movement America—the power to disregard nonsense and refuse to be sidetracked from accomplishing what’s important...” She says, “It’s incumbent on us to go for the gusto; I don’t think a person who has inherited what I have has a right to fail. I’m not saying racism is over, but I’m going to lay that burden down. Let’s not try to fix white people, and not spend time pointing fingers at what Trent Lott said when we need to fix the inner cities. In Europe, I knew hairdressers who spoke three languages and were doing interesting things with their lives. Here, we have poor people trying to fill up holes in their souls with big-screen TVs and $300 sneakers.”

Dickerson asserts, “We need bus drivers and we need astrophysicists. If someone is driving a bus who could be an astrophysicist, we all lose. I don’t think that anything can be good for black people that isn’t good for America, and vice versa. You win not by beating the other faction into submission, but by talking about transcendent values—American values, human values.”

STEP ON THE GAUSS AND WIPE THAT TEAR AWAY

Magnetically Lifted Spirits

Near the end of the first act in Mozart’s Così Fan Tutte, after the two handsome Albanians have collapsed from apparent arsenic poisoning, the chambermaid Despina—disguised as a doctor—pulls a large iron magnet from her bag and holds it above the writhing bodies at her feet. “Very soon now you’ll see, by virtue of magnetism’s power,” she declares, “the end of this paroxysm.” Since this is opera buffa, the horseshoe-shaped magnet and its attendant hocus-pocus are as hilarious as they are absurd. But 200 years later, scientists are discovering that magnets—albeit magnets exponentially stronger than Despina’s—can have powerful and demonstrable effects on our bodies. And minds. Researchers at McLean Hospital’s Brain Imaging Center have found that the oscillating magnetic fields of an MRI scanner (a machine commonly used in medicine to produce high-resolution images of internal organs and tissues) can immediately improve the moods of depressed patients suffering from bipolar disorder, a psychiatric illness characterized by alternating periods of mania and depression. A controlled study recently pub-
lished in the *American Journal of Psychiatry* indicated that 23 out of 30 bipolar patients (77 percent) reported an improved mood after receiving the scan—and that 100 percent of the patients who were not taking antidepressant medication indicated a better mood. “It is striking that this happened to so many,” says professor of psychiatry Bruce Cohen, president and chief psychiatrist of McLean. “But the brain is an electromagnetic organ. It is believable that there would be some effect.”

The type of MRI scan used in the study was an EP-MRSI (echo-planar magnetic resonance spectroscopic imaging), which sent 20 minutes’ worth of uniform pulses of electromagnetic fields through the subject’s brain from right to left. What distinguishes this scan from others, according to Cohen, is a new and different pulse sequence that had been used recently to image brain chemistry, MRI’s more conventional application.

In fact, researchers first noticed the scan’s mood-enhancing effects by accident, while conducting an unrelated study of medications’ effectiveness on bipolar subjects. During that study, many subjects emerging from their EP-MRSI exams remarked to the technician on how much better they felt than before the scan. Some were even cracking jokes as they departed. “There were enough patients who told us—and these were unbiased observations—that we thought we ought to pay attention,” Cohen explains. For some, the elevated mood lasted for hours; for others, it persisted as long as a week.

In the ensuing study, both bipolar and healthy subjects received either authentic or sham EP-MRSI scans. Before and after their scans, the subjects rated their immediate moods on a 7-point scale. While the authentic scans improved mood in bipolar subjects, they had far less effect on healthy subjects (only 29 percent reported improved mood), and the 10 sham scans were ineffective overall.

At this early stage, Cohen can only speculate on brain activity during the scan. “And what is happening,” he adds, “is not easy to prove.” However, it seems likely that the EP-MRSI’s electromagnetic pulses change mood by altering electrical impulses in neurons, the brain’s nerve cells. In turn, the neurons release neurotransmitters, the chemicals that transmit information about everything we do, from our muscle contractions to our emotions.

In a healthy brain, the impulses related to mood seem to vary between good and bad; in a bipolar person’s brain, these impulses aren’t so balanced. “These billions of nerve cells are chattering at one another,” Cohen explains, “and in a depressed bipolar person, the cells chattering the most are those associated with bad moods.” The EP-MRSI’s electromagnetic fields, it seems, restore the balance by waking up the inactive neurons. “This particular pulse sequence may increase the activity of those cells associated with good moods,” Cohen says.

What makes EP-MRSI particularly promising are its apparently minimal side effects compared with other treatments for depression, which include a wide array of drugs and electroconvulsive therapy (ECT), which, though often effective, requires general anesthesia and entails memory loss. Another treatment, an emerging technology called repetitive transcranial magnetic stimulation (rTMS), delivers electromagnetic pulses to a patient’s brain using a hand-held device; rTMS, whose magnetic fields are 100 to 1,000 times stronger than those of EP-MRSI, often causes scalp pain and entails a small risk of seizure. In contrast, “[The EP-MRSI] scan is very gentle, and uses very small electromagnetic fields,” says Cohen. “We have no initial reason to believe that there are ill effects.”

Cohen emphasizes that this is a pilot study that demands much further examination, so McLean researchers will continue EP-MRSI studies this spring. “We need to find out what happens if we change the direction of the pulses, or change their strength,” he says. “And we need to repeat the study with more sophisticated [mood-rating] scales, and determine how long the improved mood lasts.” The investigators also want to control for confounding factors: as Cohen puts it, “Everyone feels better after getting some attention.” ~catherine dupree

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