

WE'LL GET SMARTER ABOUT THE BRAIN

► MEDICINE WILL HELP REGROW BRAIN CELLS

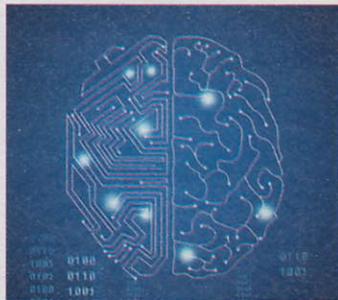
Next-generation medications that act on glutamate receptors—the docking ports for the main chemical transmitter involved in communication between brain cells—will rapidly reduce symptoms of depression and other disorders. One of these medications, ketamine, also seems to increase levels of brain-derived neurotrophic factor (BDNF), which promotes brain cell connections.

—CAROLYN RODRIGUEZ, M.D., assistant professor of psychiatry and behavioral sciences at Stanford University

► A BLOOD TEST WILL SCREEN YOU FOR ALZHEIMER'S

There will almost certainly be an inexpensive, rapid blood test available in your doctor's office to screen for early signs of Alzheimer's disease decades before symptoms develop. Tests in research now, such as the one developed in our lab, measure protein levels associated with disease in the brain such as the buildup of amyloid beta plaque.

—RANDALL J. BATEMAN, M.D., Alzheimer's disease researcher and professor of neurology at Washington University in St. Louis



► AI WILL MONITOR YOUR MEMORY

The conventional paper tests that measure your brain function against a general standard have a real limit, referred to as the ceiling effect. With machine learning/artificial intelligence-based tests we can measure in real time how long it takes for you to answer a question. And then we can redo the same test in a year. This tests you against yourself, and you get a much clearer picture of your level of memory loss over time. This could be revolutionary.

—ARDESHIR Z. HASHMI, M.D., director of the Center for Geriatric Medicine at the Cleveland Clinic

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TRANSPORTATION

"WE NOW HAVE THE TOOLS TO END TRAFFIC. SHARING RIDES, DRIVER-LESS VEHICLES, AND DRONE SHIPPING WILL BE PART OF THE ANSWER."

—JOHN ZIMMER, president of the ride-hailing service Lyft



LEG POWER WILL STILL BE IN VOGUE

1 ELECTRIC BIKES WILL FILL CITIES

Traveling by bike will no longer mean arriving at work with a sweaty shirt. Urban bike sharing systems will be stocked with electric-powered bicycles with regenerative technology that charges their batteries while the rider coasts. The technology will expand bike sharing to a broader group of commuters, including older Americans. Bike shares will be tied in with other systems. A universal fare stored on a smartphone that works on buses and subways will also rent a bike.

—PAUL DEMAIO, head of MetroBike, a bike sharing firm based in Washington, D.C.

2 WE MAY WALK MORE ...

Why do we need autonomous cars? The push to create more livable, all-encompassing downtowns has the potential to lessen the need for vehicles. The future of walking is the future of mixed-use development, which is the future of bringing more attainable housing into our city centers.

—JEFF SPECK, city planner and urban designer

3 ... YES, IT'LL BE SAFE ...

We are executing our Vision Zero plan aimed at eliminating pedestrian deaths. Older people make up a disproportionate number of pedestrian fatalities. We have already seen an over

40 percent reduction in pedestrian deaths since we began Vision Zero, and hope that in a decade we will be even closer to ending pedestrian fatalities.

—BILL DE BLASIO, New York City mayor

4 ... AND YOU WON'T HEAR PLANES OVERHEAD

We'll see further advancements in aircraft engine design, making for greater fuel efficiency and less noise. That's good for travelers and good for our environment. Electric-powered aircraft will open up new, more affordable ways of flying shorter regional routes.

—ROBIN HAYES, president and CEO of JetBlue Airways