



A portrait of Tristan Tzara by an unknown photographer, taken around 1920.

DADA, FROM PAGE 10
“Strange Suns” and “God on a Bicycle.” The underappreciated Swiss artist Jean Crotti wrote nonsense verse on a typewriter, then overlaid it with modern-day geometric forms. They find a visual parallel in an angular gouache by Crotti’s wife, Suzanne Duchamp, which imagines the unconscious as a factory.

As for Suzanne’s brother, living in New York, he did not create new works for the publication. Marcel Duchamp’s submission instead was a photo repro-

duction of “To Be Looked At (From the Other Side of the Glass) With One Eye, Close to, for Almost an Hour,” his small 1918 painting on glass, as well as a mechanistic portrait of his “Bride,” a recurrent figure before he abandoned painting. This show includes both the original works and their reproductions.

That’s what makes “Dadaglobe Reconstructed” especially relevant in our own moment of political disorder and media disruption. Tzara and the Dadaists cared less about artworks as discrete objects and more about how art

could be transmitted across newly developed international networks. Circulation, not value, was the aim. Thinking like Tzara did about how art can circulate beyond the museum — and mutate as it circulates — is no less important for today’s artists, who can exploit a global communication network the Dadaists could only dream of.

“Dadaglobe Reconstructed” runs through Sept. 18 at the Museum of Modern Art, 11 West 53rd Street, Manhattan; 212-708-9400; moma.org.

The islands of the Seine

SEINE, FROM PAGE 9

Other islands have more obscure stories.

About 60 miles southeast of Paris is Île Olive, which was once owned by a certain Doctor Olive, mayor of the local commune in the 1880s. When he died, his widow bequeathed it to the nearby town, and the island is now a wooded park with a nature trail. It can be neither sold nor rented; the sale of refreshments is banned, and no structures can be erected there.

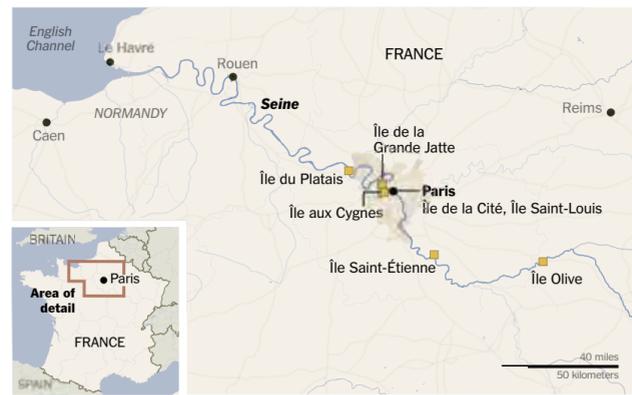
Île des Cygnes, which no longer exists, got its name after Louis XIV populated the island entirely with swans. And not just any swans — his were a special variety imported from Denmark. (The swan, considered pure and regal, was the Sun King’s favorite animal.)

Then there is Île aux Cygnes, site of the mini-Statue of Liberty, on the river not far from the Eiffel Tower.

Île du Platais became a gathering place in the mid-20th century for “naturists” who passed their time relaxing and engaging in various activities wearing minimal clothing. Île Saint-Étienne, by contrast, was the site of a maximum-security prison.

The show also recalls the era when the Seine was clean enough to swim in. A life-size black-and-white cardboard photo montage shows 10 champion swimmers from the early 20th century.

But industrial and human waste polluted the waters and swimming was banned in 1923. The river is cleaner than it once was, and many species of fish have returned. If Paris wins the bid for



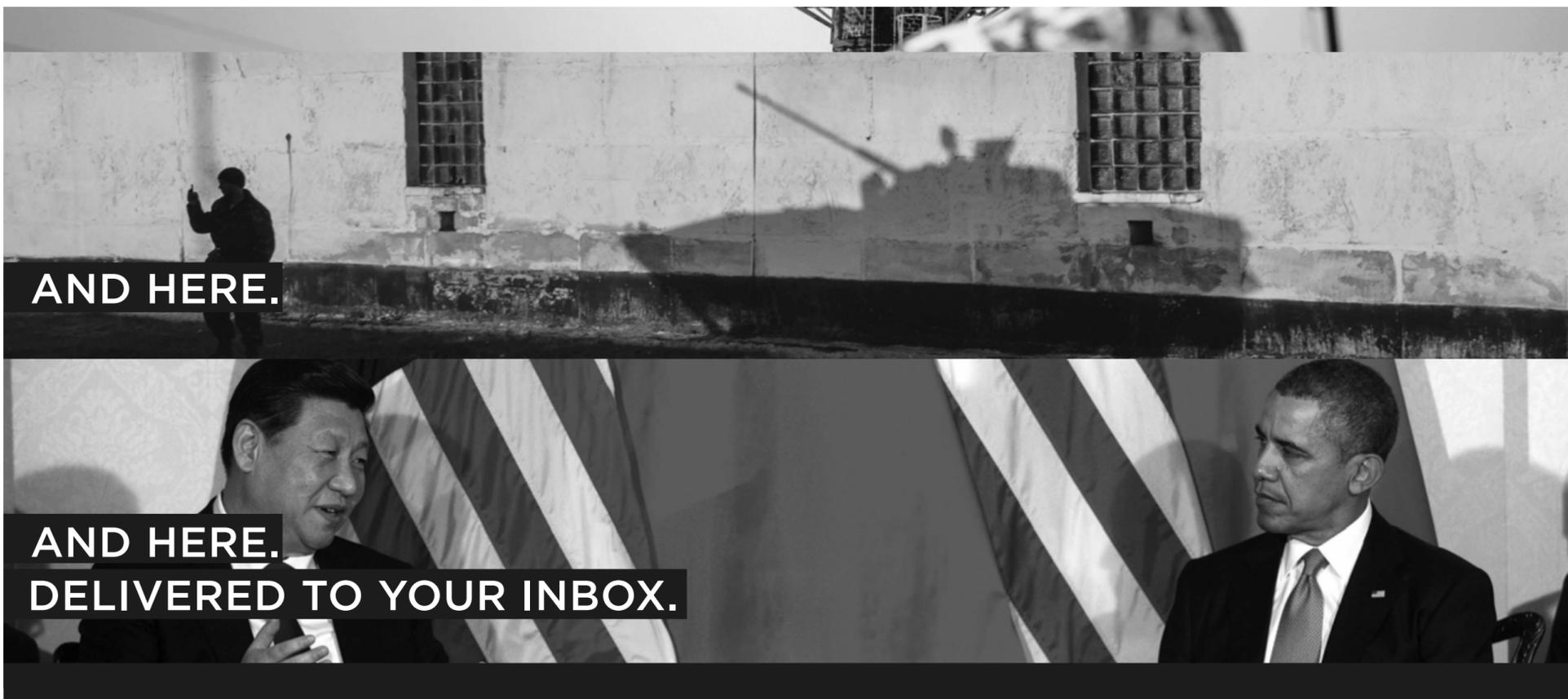
the 2024 Olympic Games, Mayor Anne Hidalgo fantasizes that the city will host some of the swimming events in the Seine.

The Pavillon de l’Arsenal is not the only Paris museum to focus on the Seine this spring. “The Open-Air Studio: Impressionists in Normandy,” an exhibit at the Musée Jacquemart-André until July 25, explores the region of Normandy as the birthplace of impressionism. It includes paintings made in and around Rouen, the Seine port city that offered, according to Pissarro, “the most splendid landscape that a painter could ever dream of.”

Even better is the retrospective show “Albert Marquet, Painter of Time Pending,” at the Musée d’Art Moderne

de la Ville de Paris. The exhibition, which continues until Aug. 21, pulls together 100 paintings and drawings by Marquet (1875-1947), some on view for the first time in France. A close friend of Matisse, Marquet was fascinated by the movements, colors and shadows of water, and spent much of his life traveling between the Mediterranean and the Seine. The show includes a room on “Paris, La Seine,” with a series of paintings done in muted tones of grays and browns.

Elaine Sciolino, a former Paris bureau chief for *The New York Times* and the author of “*The Only Street in Paris: Life on the Rue des Martyrs*,” is writing a book on the Seine.



Two stabs at sexism’s double standards and at online harassment

Sex Object. A Memoir. By Jessica Valenti. 204 pages. Dey Street/William Morrow Publishers. \$25.99.

Shrill. Notes From a Loud Woman. By Lindy West. 260 pages. Hachette Books. \$26.

BY DAYNA TORTORICI

In April, editors at *The Guardian* published the results of a study that analyzed more than 70 million reader comments posted on the news site since 1999. Special attention was paid to the 1.4 million that had been blocked or de-

BOOK REVIEW

leted by moderators for violating community standards. Of the 10 authors who saw the most harassment — whose articles were most routinely met with hostile comments ranging from condescending to life-threatening — eight were women; the two men were black. The No. 1 recipient of such passionate expressions of free speech as “I hope you perish in a gasoline-explosion-induced car crash” was Jessica Valenti. This is not Ms. Valenti’s first rodeo. A longtime blogger and a co-founder of the site *Feministing*, she is, at 37, now among the old guard of professional feminists who made their careers online. Since starting the blog in 2004, she has written four low-threshold-to-entry books on women’s issues aimed at a general readership: “Why Have Kids?,” about parenting; “The Purity Myth,” about society’s fixation on chastity; “He’s a Stud, She’s a Slut,” about the sexual double standard; and “Full Frontal Feminism,” a gateway text for young women who might fear the F-word but still align with its message.

Not exactly cutting-edge stuff, but feminism is equal parts philosophy and praxis, and reactionaries are born every day. Should the thought occur to you that Ms. Valenti’s beat is old news, that

we’ve moved past it and should have more interesting questions to tackle, I suggest you read the comments.

Her commitment to holding the line for a certain common-denominator feminism in hostile territory is admirable. This is thankless work, and after more than a decade of it she is clearly tired. “I know I’m meant to be the bigger person,” she writes in “Sex Object,” her latest, addressing the anonymous men who flood her inbox with threats and insults. “I know you’re not supposed to hate people because hate is bad for your soul.” But so is knowing that “whatever you work on, whoever you are, the nameless horde of random people who go home at night and kiss their wives and children would like for you to disappear.”

Likewise, of the men who approach her after speaking engagements: “I have become too exhausted with men online to interact with well-meaning information seekers in real life.” Of putting on a brave face and laughing off offenses: “This sort of posturing is a performance that requires strength I do not have anymore.” “Sex Object” is Ms. Valenti’s first memoir, and it sets out to tell the story of how women manage the expectation that they exist as vehicles for male desire first and as human beings second, and only once the primary aim is achieved. An ambitious person, a young Ms. Valenti took the perfectionist’s course: “If I was going to be a sex object, I was going to be the best sex object I could be.” But the real story of “Sex Object” is one of burnout.

Colorful material — coke binges, hospitalizations, the discovery that a stranger on the subway has ejaculated on her pants — is told straight, with minimal energy. The men who appear, two-dimensional figures with monosyllabic names, run together in a laundry list of half-sketched disappointments and transgressions. The writing that



Jessica Valenti, the former executive director of *Feministing.com*.

Should the thought occur to you that Ms. Valenti’s beat is old news, read the comments.

feels truest to life describes Ms. Valenti feeling sapped of it.

Nowhere is it written that losing steam, or hope, is a betrayal of the feminist project. But Ms. Valenti is nevertheless on the defensive: “The feminism that’s popular right now is largely grounded in using optimism and humor to undo the damage that sexism has wrought,” she writes. “No one wants to listen to our sad stories unless they are smoothed over with a joke or nice melody. ... No one wants to hear a woman talking or writing about pain in a way that suggests that it doesn’t end. Without a pat solution, silver lining or happy ending, we’re just complainers — downers who don’t realize how good we actually have it.” Maybe, she offers, “it’s O.K. if we don’t want to be inspirational just this once.”

It is O.K., of course, and perhaps there’s no better illustration of the way everyday sexism grinds one down than



Lindy West, an American columnist at *The Guardian* of London.

the fatigue that drags on this book. But Ms. Valenti short-sells her peers when she suggests humor is a pandering concession or a rictus grin women must wear to mask their pain. Humor needn’t be a diluting agent; it can be a Trojan horse. As the saying goes, if you want to tell people the truth, make them laugh, or they’ll try to kill you.

Lindy West, another American columnist at *The Guardian* who built her career writing online, has changed more minds this way than you could count. One of the most distinctive voices advancing feminist politics through humor, Ms. West is behind a handful of popular pieces — “How to Make a Rape Joke” on Jezebel, “Hello, I Am Fat” on *The Stranger’s* blog, “Ask Not for Whom the Bell Tolls; It Tolls for Thee” on “This American Life” — that have helped shift mainstream attitudes about body image, comedy and online harassment over the past several years. Culture molds who we are, Ms. West argues, but it’s ours to remold in turn. Aesthetic excellence and being a good person are mutually exclusive only to the lazy and insincere. We could keep laughing through “edgy” jokes

about race, rape, S.T.I.s and fat people, for instance, but why should we if the jokes aren’t funny, and the laughs only prove to someone, somewhere, that they are unlovable? “Isn’t it our responsibility, as artists, to keep an eye on which ideas we choose to dump into the water supply?”

“Shrill,” Ms. West’s first book, is a director’s commentary of sorts on her most memorable stories, several of which are reprinted here. The later essays, about her father’s death, are the most ambitious as writing, but the hits hold. My favorite is her work on being fat, the word she prefers. (“I dislike ‘big’ as a euphemism,” she writes, because “I don’t want the people who love me to avoid the reality of my body.”) With patience, humor and a wildly generous attitude toward her audience — meeting readers at their point of prejudice so that she may, with little visible effort, shepherd them toward a more humane point of view (it’s worth noting that Ms. West is the only writer to have an internet troll publicly apologize to her on national radio) — she reminds us that “fat people are not having fun on planes. There is no need to make it worse.”

Before you ask, Ms. West knows from diet and exercise: “I know the difference between spelt bread and Ezekiel bread. ... I could teach you the proper form for squats and lunges and kettle bell swings, if you want” — but “the level of restriction that I was told, by professionals, was necessary for me to ‘fix’ my body essentially precluded any semblance of joyous, fulfilling human life.” She decided instead to stop treating her body as a work in progress. Her blood work, if you care to know, is perfect.

As a teenager, Ms. West thought that “chasing perfection was your duty and your birthright, as a woman, and I would never know what it was like — this thing, this most important thing for girls.” Such is the double bind of sex-objecthood: You resent the standards but still want to meet them, because that’s the ticket to love. Ultimately, she did come to know this most important thing, and like Ms. Valenti, saw the double bind thrown back at her in the form of a contradictory threat, issued from deep inside the great male unconscious of the internet: You are too fat and ugly to rape, but I would rape you anyway.

Ms. West’s humor, I admit, is not always my style. At times it feels juvenile, irritating — “a bit much,” as she says. I dislike all caps in print, of which she is fond, because I am NO FUN. Overall, “Shrill” feels hasty and unfinished, less like a book than the assembled material required to consummate a book deal. But no matter, there is good work here that represents a decade of public service for which she deserves years of back pay. If this is the culture industry’s way of thanking Ms. West, so be it. She deserves the moment in the sun.

Dayna Tortorici is an editor of *n+1*.

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HEALTH+SCIENCE

BRIEFLY

Science

CHEMISTRY

For smoother coffee, freeze the beans, study says

Percolator, French press, espresso, vacuum pot — people go to great lengths for a good cup of coffee. But to achieve consistent flavor, you should chill your beans before grinding them.

Colder beans produce smaller, more consistently sized particles, yielding more flavor from less coffee, according to a study in *Scientific Reports*.

Colonna and Smalls, a specialty coffee shop in Britain, worked with chemists at the University of Bath to see how temperature affected the ways in which coffee beans break apart. As it turned out, the colder the bean, the more uniform particles it produced, and the more even the flavor when brewed. The lesson for the home barista: Put the beans, packed air tight, in the freezer to avoid staleness and moisture. JOANNA KLEIN



The meteorite Öst 65, in a limestone block.

ARCHAEOLOGY

'Extinct' meteorite hints at violent cosmic collision

You don't have to be alive to go extinct.

Geologists in Sweden have found what they call the first-ever "extinct" meteorite, buried within a 470-million-year old limestone slab. "No similar meteorite is known on Earth of the 50,000 meteorites that have been found," said Birger Schmitz, a geologist at Lund University.

Half a billion years ago, the theory goes, two asteroids collided somewhere between Jupiter and Mars, spewing celestial shrapnel across the solar system. Some of it crash-landed in Earth's ancient oceans and eventually fossilized.

Over the past 25 years, Dr. Schmitz and his colleagues have collected more than 100 of these fossilized meteorites from a Swedish quarry. All but one were L-chondrites, a common type of meteorite believed to have originated from the larger of the two colliding asteroids.

But one had different chemical signatures and grain patterns.

Eventually Dr. Schmitz and his team concluded that the mystery rock, which they named Öst 65, came from the smaller asteroid. They call the meteorite "extinct" because it can never again rain down on Earth. NICHOLAS ST. FLEUR

BRIEFLY

Health

PREGNANCY

Folic acid may lower risk of childhood obesity

Pregnant women should take folic acid, a B vitamin, during pregnancy to prevent neural tube defects in their babies. Now a new study, in *JAMA Pediatrics*, has found that sufficient folic acid during pregnancy may reduce the risk for obesity in children.

Researchers studied 1,517 mother-child pairs, measuring the mothers' folic acid blood levels at delivery and following the children through average age 6. After controlling for other variables in both mother and child, they found that compared with those mothers who had folic acid levels in the highest three-quarters, those with levels in the lowest one-quarter had a 45 percent higher risk for obesity in their children.

But the senior author, Dr. Xiaobin Wang, a pediatrician at Johns Hopkins, said that there is no perfect correlation between the supplement dose taken and blood levels. NICHOLAS BAKALAR

NUTRITION

Eating whole grains could lead to longer life

Two review studies have reached the same conclusion: Eating whole grains is associated with reductions in the risk for premature death.

One report, in *BMJ*, found that whole grain consumption was associated with a reduction in the risk for death from cancer, coronary heart disease, respiratory disease, infectious disease and diabetes. Using data from 45 studies, researchers calculated that compared with eating none, eating 90 grams of whole grains a day reduced the risk for all-cause mortality by 17 percent.

The other analysis, in *Circulation*, used data from 14 prospective studies with 786,076 participants and found that compared with those who ate the least whole grain foods, those who ate the most had a 16 percent reduced risk for all-cause mortality and an 18 percent reduced risk for cardiovascular mortality. A slice of 100 percent whole grain bread contains 16 grams of whole grains, and dietary guidelines recommend 48 grams or more of whole grains daily.

Dr. Qi Sun, an assistant professor of nutrition at Harvard, cautions: "You shouldn't hope that you will cure diseases with whole grain foods." N.B.

Corals and their mysterious rites of reproduction

Scientists see how reefs are built in synchronized mass frenzy of spawning

BY WILLIAM J. BROAD

At night, just after the full moon, teams of scientists dive beneath the waves to study one of the planet's most prolific and mysterious rites of reproduction.

It's coral behaving badly — or very nicely, depending on your point of view. Warm ocean waters suddenly teem with trillions of eggs and sperm that swirl in the currents and merge to form new life, a profligate frenzy that can leave the ocean's surface awash in pink flotsam.

Globally, hundreds of species of coral engage in primordial rites of mass spawning tied to seasonally warming waters and the lunar cycle.

"It's like an underwater snowstorm," said Emma L. Hickerson, a veteran diver and research coordinator at the Flower Garden Banks, a coral reef 100 miles off Texas in the Gulf of Mexico.

Corals are giant colonies of tiny creatures. Each small animal has a central mouth and feeding tentacles, and secretes a stony substance around its base that binds the colony together. The reefs nurture a riot of marine species and fish stocks that feed millions of people.

Studies of the procreative dance are considered vital for helping save beleaguered coral reefs around the globe, including the Great Barrier Reef off Australia. It has suffered repeated bouts of mass bleaching, mainly attributed to declining water quality and rising temperatures because of climate change.

The hope is that a better understanding of coral reproduction will aid recovery, and strengthen efforts to limit coastal pollutants and sediments that can interfere with successful coral spawning. "A big concern is the ability to recover from the severe bleaching events," said Emily Howells, a coral researcher at New York University who studies the reproductive cycle.

The spectacular nature of the rite can make the research seem all the more urgent. A lucky diver waiting for the annual event might see a coral head laden with individual sex cells that look visibly swollen and ripe for release. "Then, all of the sudden, one goes off and, poof, they all do," said Ms. Hickerson of Flower Garden Banks. "They all release at the same time."

"It's like a wave at a stadium," she added. "You see it start at one side and go across. It's amazing. You can't make this stuff up."

In nighttime dives of recent years, videographers, including Ms. Hickerson, have taken lights and cameras beneath the waves to document the natural wonder, at times zooming in so close that viewers can see the swelling and release of individual eggs.

Shallow reefs are the main venue. But scientists in recent years have also deployed tethered robots to survey deep reefs. Surprisingly, given the diminished light and cooler temperatures, they have discovered that deep corals can also spawn as a group, at times in synchrony with their shallow kin.

"Many people thought mass spawns did not occur in many places," said Sally A. Keith, a coral ecologist at the University of Copenhagen. "It's amazing how little is known about such a large-scale phenomenon."

As often in romance, timing is everything. If corals shed their sex cells just minutes out of sync with neighbors, the odds of reproductive success are greatly reduced.



Acropora millepora coral releasing egg and sperm bundles simultaneously, above. Coral polyps procreating, below. Coral mass spawning is tied to seasonally warming waters and the lunar cycle.

Indeed, scientists have discovered that the group sex can be remarkably punctual, its onset typically at a precise but poorly understood time after dusk. A brain coral at Flower Garden Banks released its gametes within two minutes of its reproductive frenzy the previous year.

The liberated eggs and sperm are buoyant. They float upward through warm ocean waters to merge near the surface and, at times, form giant pink slicks containing millions of coral embryos. Recent studies have shown that



the drifting youngsters can ride surface currents for hundreds of miles and descend to found new colonies and reefs.

While scientists have learned a lot since discovering the rite decades ago, much remains unknown, especially about the exact mix of environmental factors that trigger the synchronized frenzies, which scientists call broadcast spawning.

Some researchers, divers and spectators have waited patiently for coral mingling that, at least during their visits, never materialized. Last month, Dr. Keith and 11 col-

leagues issued a note of caution in *Proceedings of the Royal Society of London*, considered the world's oldest publisher of scientific journals. Disentangling the proximate cues and underlying mechanisms, they wrote, "remains a significant challenge."

For centuries, scientists thought that stony corals reproduced mainly by brooding offspring and bringing forth live young.

That dogma began to crumble when graduate students at James Cook University in Australia followed a trail of clues to a nighttime mass spawning event on the Great Barrier Reef. In 1984, their discovery made the cover of *Science* magazine.

Scientists speculated that the moon's phase was important in the ritual because it controlled the tides. But the tides during spawning events turned out to be low in some places and high in others, and scientists now say the moon most likely acts as a visual stimulus to the choreographed sex.

How do eyeless creatures monitor the moon's phases and determine when the time is right to start mingling?

The breakthrough came after Oren Levy, a young Israeli scientist, traveled to Australia to study at the University of Queensland. Dr. Levy was fascinated by a class of photoreceptors known as cryptochromes. Originally found in plants, they had also been identified among insects and mammals. Dr. Levy wondered if corals might possess the complex molecules as well.

In 2007, he and six other scientists from Australia, Israel and the United States reported in *Science* that corals do have primitive photoreceptors, if not true eyes. In experiments, they found that the photosensitive chemicals responded to moonlight as admirably as, well, human lovers.

Increasingly, scientists track how environmental changes can disturb the procreative dance. In papers in December and February, a team of Swiss and Australian scientists reported that sediment particles from dredging and other ocean disturbances can adhere to eggs and sperm, blocking their journey to the surface and reducing the odds of successful fertilization.

"The potential of sediments to sink coral gametes," the scientists wrote, "highlights the need to carefully manage the timing of turbidity-generating human activities near reefs during spawning periods."

Another recent finding concerns the central role of rising seasonal temperatures. Scientists tracking the rite globally have found that, in the Northern Hemisphere, the reproductive frenzy moves northward in a wave as springtime warmth starts to raise the temperature of normally cool ocean waters.

With notable exceptions, the peak season of mass coral spawning seems to run from January to March in low latitudes, March to May in middle latitudes, and June to October in high latitudes.

Dr. Howells of the New York University branch in Abu Dhabi, joined colleagues to map the latitude effect for reported spawning events in the Indian Ocean and its arms, as well as the Red Sea. The rising warmth, they said in a recent paper, coincided with the northward movement of the seasonal rite.

The team focused its own research on the Gulf of Oman, a northern arm of the Arabian Sea. During 2013, the reproductive whirl began in April. But the next year, it started in May.

Why the monthlong delay? The team reported that the average sea temperature at the study site before the 2014 event was cooler by 1.5 degrees Celsius, or 2.7 degrees Fahrenheit. The repro-

ductive lag, the scientists reported, most likely arose from coral responding to "the optimal temperature window."

The team studies the relatively warm seas of the Middle East as a laboratory for understanding how climate change might affect reefs elsewhere. So, too, NASA this year began flying an instrument-laden jet to map global coral reefs as a means of monitoring their health.

In the Florida Keys, at relatively high latitudes, the reefs tend to go into their reproductive phase in late summer.

Last year, the big day off Key Largo turned out to be Aug. 5, five days after the full moon of July 31. Divers marveled as staghorn corals, a spiky reef builder that can grow as much as eight inches a year, released clouds of eggs and sperm.

Research teams and dive companies try to predict the exact time these love-fests happen, since they've become tourist attractions. "Space Available on One-of-a-Kind Reef Trips to See Coral Spawning," said a headline at reef.org, an environmental foundation in Key Largo.

The prospective full moon this year is Aug. 18, and tentative forecasts for Key Largo point to late that month for the reproductive frenzy.

Ms. Hickerson, of Flower Garden Banks, one of 14 marine parks run by the National Oceanic and Atmospheric Administration and the northernmost coral reef on the nation's continental shelf, expects the big night to be Aug. 25.

"I always breathe a sigh of relief when I make a prediction and the corals actually spawn," she said.

It was roughly two decades ago when Ms. Hickerson first dived beneath the waves at Flower Garden Banks to witness a mass spawning. Despite seeing it many times, she said, she still finds herself getting caught up in the primal thrill.

"To this day, I find myself screaming," she said. "You can't help it."

In a keyboard world, handwriting still matters for children

Whether print or cursive, studies show putting pen to paper engages the mind

BY PERRI KLASS, M.D.

Do children in a keyboard world need to learn old-fashioned handwriting?

There is a tendency to dismiss handwriting as a nonessential skill, even though researchers have warned that learning to write may be the key to, well, learning to write.

And beyond the emotional connection adults may feel to the way we learned to write, there is a growing body of research on what the normally developing brain learns by forming letters on the page, in printed or manuscript format as well as in cursive. In an article this year in *The Journal of Learning Disabilities*, researchers looked at how oral and written language related to attention and what are called "executive function" skills (like planning) in children in grades four through nine, both with and without learning disabilities. Virginia Berninger, a professor of educational psychology at the University of Washington and the lead author on the study, told me that evidence from this and other studies suggests that "handwriting — forming letters — engages the mind, and that can help children pay attention to written language."

Last year in an article in *The Journal of Early Childhood Literacy*, Laura Dinehart, an associate professor of early childhood education at Florida International University, discussed several possible associations between good handwriting and academic achieve-

ment: Children with good handwriting may get better grades because their work is more pleasant for teachers to read; children who struggle with writing may find that too much of their attention is consumed by producing the letters, and the content suffers.

But can we actually stimulate children's brains by helping them form letters with their hands? In a population of low-income children, Dr. Dinehart said, the ones who had good early fine-motor writing skills in prekindergarten did better later on in school. She called for more research on handwriting in the preschool years, and on ways to help young children develop the skills they need for "a complex task" that requires the coordination of cognitive, motor and neuromuscular processes.

"This myth that handwriting is just a motor skill is just plain wrong," Dr. Berninger said. "We use motor parts of our brain, motor planning, motor control, but what's very critical is a region of our brain where the visual and language come together, the fusiform gyrus, where visual stimuli actually become letters and written words." You have to see letters in "the mind's eye" in order to produce them on the page, she said. Brain imaging shows that the activation of this region is different in children who are having trouble with handwriting.

Functional brain scans of adults show a characteristic brain network that is activated when they read, and it includes areas that relate to motor processes. This suggested to scientists that the cognitive process of reading may be connected to the motor process of forming letters.

Karin James, a professor of psychological and brain sciences at Indiana University, did brain scans on children



Typing the letters doesn't seem to generate the same brain activation.

who did not yet know how to print. "Their brains don't distinguish letters; they respond to letters the same as to a triangle," she said.

After the children were taught to print, patterns of brain activation in response to letters showed increased activation of that reading network, including the fusiform gyrus, along with the inferior frontal gyrus and posterior parietal regions of the brain, which adults use for processing written language — even though the children were still at a very early level as writers. "The letters they produce themselves

are very messy and variable, and that's actually good for how children learn things," Dr. James said. "That seems to be one big benefit of handwriting."

Handwriting experts have struggled with the question of whether cursive writing confers special skills and benefits, beyond the benefits that print writing might provide. Dr. Berninger cited a 2015 study that suggested that starting around fourth grade, cursive skills conferred advantages in both spelling and composing, perhaps because the connecting strokes helped children connect letters into words.

For typically developing young children, typing the letters doesn't seem to generate the same brain activation. As we grow up, of course, most of us transition to keyboard writing, though like many who teach college students, I

have struggled with the question of laptops in class, more because I worry about students' attention wandering than to promote handwriting. Still, studies on note taking have suggested that "college students who are writing on a keyboard are less likely to remember and do well on the content than if writing it by hand," Dr. Dinehart said.

Dr. Berninger said the research suggests that children need introductory training in printing, then two years of learning and practicing cursive, starting in grade three, and then some systematic attention to touch-typing.

Using a keyboard, and especially learning the positions of the letters without looking at the keys, she said, might well take advantage of the fibers that cross-communicate in the brain, since unlike with handwriting, children will use both hands to type. "What we're advocating is teaching children to be hybrid writers," said Dr. Berninger, "manuscript first for reading — it transfers to better word recognition — then cursive for spelling and for composing. Then, starting in late elementary school, touch-typing."

I think this may be another case where we should be careful that the lure of the digital world doesn't take away experiences that can have real impacts on children's developing brains. Mastering handwriting, messy letters and all, is a way of making written language your own, in some profound ways.

"My overarching research focuses on how learning and interacting with the world with our hands has a really significant effect on our cognition," Dr. James said, "on how writing by hand changes brain function and can change brain development."

Sports

SOCCER BASKETBALL

Wales climbs a mountain, with Bale leading the way



Rob Hughes

GLOBAL SOCCER

LONDON There was a priceless moment when Gareth Bale showed his swiftness, and his opponents' lack of it, as Wales advanced in the European Championships and Russia was eliminated.

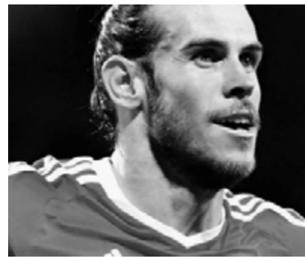
Bale's thrilling athleticism and a burst of speed propelled him between Sergei Ignashevich and Igor Smolnikov as if the two experienced Russian defenders were standing still. A third defender, Denis Glushakov, was two yards away, while a fourth was a blur in the background.

That moment during Wales's 3-0 Group B victory over Russia on Monday made a mockery of the fact that Russia, with 143 million people, dwarfs Wales, which has just over three million.

Here was a reminder that if one team is fit and motivated and the other barely shows up on the field, anything is possible in sports. Russia has departed the Euros, leaving behind only the memories of the extreme violence by some of its supporters.

Wales goes on to the second round of a major soccer tournament for only the second time in its history. Indeed, there is a connection between this year's team and the Wales team that reached the quarterfinals of the 1958 World Cup in Sweden.

Then, as now, a truly exceptional player led the Welsh side. Nearly six decades ago, that man was John



Gareth Bale scored a goal for Wales in each of its three Euro 2016 group stage matches.

Charles, a player of huge power but quite modest in his temperament — as Bale is today.

Big John would never have worn his hair in a topknot the way Bale does. But Charles was a player who could carry a team, and Bale has done that at this European Championship.

Charles was the only Wales player of his time to play abroad, with Juventus in Italy. At 6-foot-2, Charles was known as the Gentle Giant and could play center forward or center half with equal effectiveness. He scored 108 goals in his 155 games in Serie A, the most defensive league in the world at that time.

Bale doesn't play central defense. But he does play abroad, with Real Madrid, where he scores from either

wing or straight down the middle on a club that has won the Champions League twice since Bale joined in 2013.

In his heart of hearts, Bale wanted to be a part of something significant for Wales. "We knew everything was on this game," he said on television after the final whistle in Toulouse, France, on Monday. "We said to each other we wanted to go out there and have no regrets."

No regrets? There are countless Welsh supporters, too young to have seen Charles, who waited all their lives for a night like this. Wales is a country that overachieves for its size when it comes to international rugby, and now it has twice climbed the mountain in soccer.

With Bale scoring in three straight Euro games (putting him in the same company as Michel Platini, Hristo Stoichkov and Ruud van Nistelrooy), it might seem that his country is overly dependent on his prowess.

Dependent, yes. Overly would be unfair to the teammates who contribute to every aspiration that Bale has. "The performance tonight was even better than the goals," said the Wales manager, Chris Coleman. "The players were brave with the ball. They had no fear. And it's not the end of the journey."

Brave players like Joe Allen, who was tireless in midfield. Gifted players like Aaron Ramsey, the Arsenal midfielder who scored one goal against Russia and set up Bale for another.

And unsung fellows like Neil Taylor, a defender who did something on Monday he had never done before: Score for Wales. His goal Monday was the first in nearly seven years over all, covering more than 200 games for both club and country. It was a goal of perseverance, with Taylor shooting once and then running on to shoot again after the Russian goalkeeper Igor Akinfeev blocked the first attempt with his legs.

Poor Akinfeev, he had no defense. And poor Leonid Slutski, the former goalkeeper who was an unpaid coach at this tournament as he doubled up as manager of both C.S.K.A. Moscow, the Russian league champion, and his country's national team.

After Russia's elimination, Slutski gave only one answer to reporters' questions. Russia, he said, needs to find a new head coach, and all other queries need to be directed to the federation.

Indeed, the Russian Football Union goes home to a bleak prospect. Its cash has all been spent paying off its foreign coaches, the last of whom was the Italian Fabio Capello, who could not make Russia competitive in any of the past three major tournaments.

The World Cup of 2018 is coming too fast for Russia, which will host the event. To make matters worse, it has a veteran team that has no more competitive matches for two years and has as little a chance of winning anything as its players did of catching Bale in Toulouse.

The spirit of Russian soccer is low. Its fan base has a history of violence and racial intolerance. And the question of doping, never far from any conversation where Russia is concerned, has yet to be fully examined when it comes to soccer.

It is safe to say that France probably breathed a collective sigh of relief when Wales finally expunged Russia and its fans from the Euros. For Wales, the fun part is now to see how far it can go. For Russia, the games are over.



Winning stretch Mario Gomez of Germany in action against Northern Ireland on Tuesday in the European Championships in Paris. Gomez scored the game's only goal as the World Cup champions won, 1-0, and finished at the top of Group C, ahead of Poland, which beat Ukraine in Marseille, 1-0. Both victors advance to the knockout round.

Dominant, but not on scoreboard

SOCCER SAINT-ÉTIENNE, FRANCE

England again shows inconsistent play and finishes second in group

BY SAM BORDEN

It began in Marseille, a little more than a week ago, with bitterness followed by bellicosity. Then, in Lens on Thursday, there was epic frustration followed by spastic jubilation. Finally, here on Monday night, came strength and speed and, ultimately, the sort of emotional dissatisfaction one might take from a rigorous round of shadowboxing: authority, domination even, but never the hope of a true knockout.

It has been a strange group stage for England at this European Championship, a preliminary stanza that promised much, delivered somewhat less and, after an exasperating 0-0 draw with Slovakia at Stade Geoffroy-Guichard on Monday, leaves the Three Lions in a relative identity crisis. Are they the team that crumbled late against Russia? The one that surged against Wales? Or the squad that could not close against Slovakia?

At present, this much is clear: Wales, and not England, was the best team in Group B, and with Gareth Bale scoring for a third straight game in a 3-0 victory over Russia, the Welsh deservedly finished in first, advancing to a round-of-16 game in Paris on Saturday. England, meanwhile, placed second and travels to Nice for its next game, on Monday.

The opponent is yet to be determined — Hungary, Portugal and Iceland are

among the possibilities — but the biggest issue facing England could be internal. Yet again on Monday, the English created chance after chance after chance only to see passing moves fizzle or crosses fly yards beyond their targets or a shot carom off the leg of a sliding defender.

It was a familiar scene. Against Russia, England controlled long periods of the match and pushed forward more insistently, recording 16 attempts on goal to Russia's six. A defensive lapse in stoppage time allowed Russia to escape with a 1-1 tie — a result that was immediately overshadowed by ugly fan violence in the stands — but England came away feeling as if it should have won.

Against Wales, it was much of the same. Fourteen more attempts on goal. Eight shots blocked. An advantage of nearly 300 in passes completed. And still, it took a frantic Daniel Sturridge goal in stoppage time to secure a 2-1 victory that left Wales crushed and England soaring. After that game, England players talked of a liftoff, a spike from such a dramatic finish. The Wales coach, Chris Coleman, described the defeat as one of the worst of his career, and his team's fans fretted over a hangover they feared would push Wales to the brink.

It turned out to be the exact opposite. Roy Hodgson, the England coach, made six changes to his lineup for the Slovakia game — a combination of resting some players and rewarding others — but little difference resulted. The Three Lions had 27 attempts on goal to Slovakia's four and 11 corner kicks to none for Slovakia, and they recorded about 200 more passes — all of which added up to a zero on the scoreboard.

"Yet again, this is a game we should

have won," Hodgson said. "Everything we did on the field led to us being able to win. But we didn't take our chances. We didn't use all that possession and all those corner kicks and all those free kicks to score the goal we needed to win it. And that's a frustration I'll have to live with and the players will have to live with, too."

All night, the England fans rose as the players poked and prodded and peppered the goal, but the Slovakia goalkeeper, Matus Kozacik, never broke.

"They pressed us, but we managed to hold on," Kozacik said. "They made some changes in the lineup, but they didn't really change anything about their style of play. They can be successful with this kind of play, and I think they

"Everything we did on the field led to us being able to win. But we didn't take our chances."

will get further than just the last 16."

That remains to be seen. The lack of a cutting edge, a striker — or two — who can finish the simpler chances and convert the more difficult ones, has already left nervous England fans worrying about the possibility of another draw and a subsequent penalty-kick shootout in the knockout rounds.

Hodgson was even asked — half-seriously — about how the team's penalty kicks in practice were progressing because England has historically had a woeful track record in shootouts.

"First of all, let's wait and see — we're not doomed to penalties," Hodgson said

through a grin. "I think we're capable of winning a game in normal time."

He added: "All I can say is this: I think the time will come when we will take those chances, and I think some team may be on the end of that fairly soon."

Certainly there is potential. Hodgson already has shifted his captain, the long-time forward Wayne Rooney, back into the midfield. With Rooney starting on the bench Monday, Jack Wilshere did little to impress in his place. But players like Jamie Vardy, who scored against Wales, and Dele Alli and Harry Kane have shown their abilities in front of the goal in the past.

Whoever is on the field, though, the finishing must be crisper. The England players maintained that a change was coming. There is too much skill and there are too many goals on their team sheet for the squibs to continue. On Monday, the misses came in all varieties: Vardy blasted straight at the keeper after breaking in alone; Adam Lallana had a powerful shot palmed away; Alli had a shot saved off the line and blasted another over the bar.

It did not help matters that while this was going on, Bale and Aaron Ramsey and Wales were clinical, with victories over Russia and Slovakia — two opponents England failed to beat.

Nonetheless, England may yet loom largest. The Slovakia coach, Jan Kozak, was asked afterward to compare his British group-stage foes. After only the slightest of pauses, he answered frankly, perhaps belying his belief that at some point, England will break through.

"I think that regarding the football qualities," he said, "England are better than Wales."

In the end, Warriors slipped and fell despite a record regular season

BASKETBALL OAKLAND, CALIF.

BY SCOTT CACCIOLA

As the Golden State Warriors closed in on the record for most regular-season wins by an N.B.A. team, held then by the 1995-96 Chicago Bulls, the team's coach, Steve Kerr, sensed trouble.

"I think they want the record," Kerr said of his players in April, when they were still four wins short of the record of 73 victories. "But I think what they've probably realized is that maybe all the talk and all the focus on the record has gotten us away from our process and what makes us who we are, what makes us pretty good."

His anxiety was so pronounced that over the final weeks of the regular season "slippage" became one of his favorite words.

He saw slippage when the Warriors were blown out by the lowly Los Angeles Lakers on March 6. He saw slippage when the Warriors barely outlasted the Philadelphia 76ers on March 27. And he saw slippage when the Warriors lost two of three games at home at the start of April, a rare stretch of futility that imperiled the Warriors' quest to catch the Bulls of the Michael Jordan era.

Kerr attempted to explain away such setbacks as the byproduct of a long season spent in the spotlight.

They were lauded as perhaps the best basketball team ever. Stephen Curry and some teammates graced the covers of magazines, or were prominently featured in them, even in *Golf Digest*. The



From left, Klay Thompson, Stephen Curry and Harrison Barnes in Game 7 of the N.B.A. finals.

team's record for 3-pointers (1,077), led by Curry, inspired talk of the game's being changed forever.

Kerr expressed confidence that his players would regain their familiar rhythm once the N.B.A. playoffs began. But their poor habits also nagged him: too many loose passes and missed assignments as they tiptoed toward the playoffs.

"I don't think you can just flip the switch entirely," Kerr said at the time. "There is going to be a natural elevation and energy and all that. But it's the

habits you have to clean up, because that stuff doesn't necessarily turn back on."

It turns out the rhythm did not return, not completely, certainly not enough to stop the runaway freight train that the Cleveland Cavaliers became over the final three games of the N.B.A. finals.

The upset — if any series won by LeBron James could be called that — brought Kerr's doubts into sharp relief: a record season, yes, but one achieved through a maze of adversity. The worst of it played out on Sunday night.

Had Golden State survived in the

closing seconds against Cleveland, none of this would matter, of course. The Warriors would have been celebrated for their determination, their moxie, their brilliance. Instead, it is easy to look back now and wonder about the emotional and physical toll of their season. Stalking 73 wins. Going seven games against the Oklahoma City Thunder in the Western Conference finals. Losing Draymond Green to a one-game suspension against the Cavaliers. How much did the Warriors have left by the bitter end?

"It wasn't easy what we accomplished," Curry said after losing to Cleveland, "and it's not an easy pill to swallow what we didn't accomplish."

Klay Thompson, the other half of the duo known as the Splash Brothers, seemed to cast the season's achievements aside.

"It feels like a failure right now," said Thompson, who combined with Curry to shoot 12 of 36 from the field in Game 7. "It stings more than anything I've gone through in my career."

It is difficult to pinpoint one game from the season that said it all, but the defensive shortcomings flared particularly brightly on March 25, when the Warriors escaped with a 128-120 victory against the Dallas Mavericks. Kerr described his team's defense as "horrific."

The Warriors compensated by sinking a preposterous 21 of 45 3-pointers.

For much of the season, the Warriors produced so much offense that they could survive their lapses on defense.

But their margin for error narrowed — because of fatigue, because of injur-

"It stings more than anything I've gone through in my career."

ies, because of waning focus. Kerr harped on his team to keep things simple instead of trying for the home run all the time. The players did not always listen.

More problems surfaced once the playoffs began. In the first round against the Houston Rockets, Curry injured his right ankle and sprained his right knee. Once he returned, he was spectacular at times — he had 40 points in his first game back, against the Portland Trail Blazers in the conference semifinals — but he lacked his usual consistency. Questions about his health would linger all the way through the finals.

And then there was Green, whose volatile style had so often fueled his teammates. But in the playoffs, he skirted a fine line between being emotional and reckless. It caught up with him. After he collected too many flagrant fouls, he was suspended for Game 5 of the finals — a game that the Warriors, with a chance to clinch back-to-back titles, lost at home.

"If I don't put myself in that position and I don't get suspended for Game 5, are we sitting here champions? Maybe. Maybe not," Green said late Sunday. "I don't know. We'll never know the answer to that question. But the answer that I do know is I won't put myself in that position again, and that's all I can really do."

Kerr was asked whether he felt his team had played its best at the start of

the season, when it reeled off 24 straight wins. He dismissed the question.

"That's really tough to judge how you play and compare November to June," he said. "I mean, it's totally different. It's a physical game. You're playing great teams."

Sure enough, for all their challenges in recent weeks, the Warriors still had a chance against the Cavaliers: Game 7 was tied in the final minute.

So close to basketball nirvana. Cleveland fans might see poetic justice in how the Warriors were denied it: a 3-pointer, this one heaved by Kyrie Irving with 53 seconds remaining. It put Cleveland ahead for good.

There would be no magical comeback, and not much magic at all from Curry, who was 6 of 19 for 17 points — one of his most muted performances of the season.

In the waning moments of their final game, with their dream of forever greatness dangling by a thread, the Warriors became the team that could not shoot straight.

They missed their final nine field-goal attempts, a stretch of futility that included seven errant 3-pointers.

The Cavaliers were not much better, finishing the game by shooting 1 of 8. But the one they actually made — Irving's — well, it was enough.

Enough to lift the Cavaliers to a 93-89 victory and the first championship in franchise history. Enough to cement James's rightful place as an all-time winner. And enough to dismantle much of what Golden State had worked to achieve this season.

SPORTS OLYMPICS

I.O.C. seeks review of antidoping system

OLYMPICS

Olympics chief amends ban by track body of Russians from Games

BY REBECCA R. RUIZ

The president of the International Olympic Committee called for a "full review of the antidoping system" on Tuesday, expressing support for last week's decision to bar Russian track and field athletes from the Rio Olympics while amending a key detail of that ruling and distancing the I.O.C. from further decisions about who might be eligible to compete at the Games.

Following a summit meeting of global sports officials in Lausanne, Switzerland, where the I.O.C. is based, Thomas Bach, the organization's president, said he respected the sovereignty of the International Association of Athletics Federations, the ruling body of track and field. Last week, the I.A.A.F. said that only Russian track and field athletes who had been living outside the country and subjected to rigorous drug-testing could petition to compete in Rio — and for a neutral team, not for Russia.

But Bach said on Monday that Russian athletes who cleared that high hurdle would compete under the Russian flag, defending Russian Olympic officials.

"The Russian Olympic Committee is not suspended," he said, calling the organization "very helpful in clearing up the difficult situation in Russia."

Laughing, Bach said he had not spoken with President Vladimir V. Putin of Russia in recent days.

Russia has been accused of a far-reaching government-run doping program extending across sports, although most investigations have been contained to track and field. Russian sports officials have apologized for doping problems but denied state involvement.

As recently as this month, the World Anti-Doping Agency, the global regulator of doping in Olympic sports, said Russian sports officials had helped athletes evade drug testing, and that federal customs agents and members of Russia's federal security service had tampered with doping samples and intimidated drug testers.

Responding to outcry from athletes wanting broader inquiries, Bach on Tuesday called on the 27 other organiza-



Thomas Bach, president of the International Olympic Committee, said on Tuesday in Lausanne, Switzerland, that some Russian track athletes could compete in Rio under the Russian flag.

tions overseeing summer Olympic sports — from gymnastics to weightlifting — to individually scrutinize athletes from Russia and Kenya, another country whose antidoping system has been called into question, and assess their ability to compete in Rio in six weeks.

The allegations against Russia and Kenya, he said, "put very serious doubts on the presumption of innocence for athletes coming from these countries."

Any athlete who may take issue with a sports federation's decision can appeal to the Court of Arbitration for Sport in Switzerland. Bach said he had learned on Tuesday that Russian athletes or the Russian Olympic Committee would likely file an appeal regarding the track

and field decision. "That is the good right of everybody," he said.

Acknowledging "deficiencies" in the broader antidoping system, Bach said various organizations' responsibilities needed to be more clearly defined.

WADA, the global regulator, disciplined the national antidoping programs in Russia and Kenya following media reports that called their integrity into question.

A New York Times investigation found that WADA was hampered by politics and possible conflicts of interest — with half of its money coming from sports organizations, including the I.O.C. — such that the agency's leadership failed to pursue allegations of widespread cheat-

ing for years. Many within WADA had varying views on the organization's fundamental purpose, with some seeing it as more a passive coordinator of national antidoping programs and others seeing it as a proactive police authority.

"We're not going to turn to people and say, 'These are the rules; obey them,'" WADA's current president, Craig Reedie, told The Times.

"Everybody has to understand better who is doing what and who is responsible for what," Bach said on Tuesday, specifically calling for improvements to WADA's investigative unit, which announced it had hired a second full-time staffer last week, after The Times report. WADA's decision-making body com-

prises government and Olympic representatives, and Reedie is also a vice-president of the I.O.C. Such a structure presents possible conflicts because Olympic officials might not be inclined to reveal doping transgressions that could mar the integrity of the Games, while government officials might be more inclined to protect athletes from their own countries.

"We want to make the antidoping system independent from sports organizations," Bach said.

He said an Olympic summit meeting on Oct. 8 would focus on how to improve the system, and he called on WADA to convene an international meeting on the topic next year.

SPORTS

Roundup

SOCCER

Ibrahimovic announces plan to end international career

Zlatan Ibrahimovic, the 34-year-old striker and Sweden captain, said Tuesday that he would stop playing for his country after the European Championship.

Sweden plays its final Group E game against Belgium on Wednesday and needs a victory to advance to the next round. "The last game for Sweden in Euro will be my last game with Sweden, so I hope it will not be tomorrow," he said. "Let's hope it goes as long as possible."

Ibrahimovic, who was named to a provisional Swedish Olympic squad, added that he would not travel to Rio de Janeiro for the Games. "I want to take this moment and thank all the supporters, because they make it possible for me to achieve what I have achieved," he said. (AP)

Russian fan deported for a 2nd time

The leader of a Russian fan group is being kicked out of France, again, days after he was deported for alleged involvement in hooliganism and slipped back in to the country illegally. The leader, Alexander Shprygin, who is suspected of ties to the extreme right, was among several Russian fans detained last week and barred from French territory after violence around a match in Marseille. (AP)

BOXING

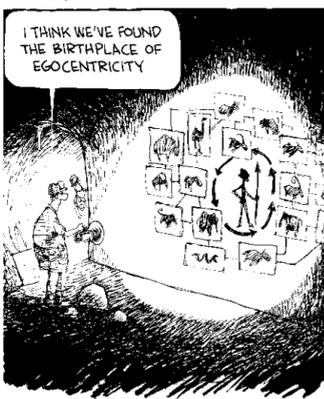
I.B.F. will punish fighters who compete in Olympics

The International Boxing Federation, a sanctioning body, said that it would punish boxers who compete in the Rio de Janeiro Olympics by removing them from its rankings or vacating their titles.

The International Boxing Association recently decided to allow professional boxers to qualify for the Olympics, but no major fighters have accepted the invitation. The I.B.F. has joined other governing bodies, fighters and trainers in strongly condemning the plan, citing serious health risks in pitting seasoned pros against amateurs.

The I.B.F. said it would remove any Olympic fighters from its rankings for a year. The federation would also take its title belt away from any champion fighting in the Olympics. The World Boxing Council had already announced its intention to impose a two-year ban on Olympic fighters. (AP)

NON SEQUITUR



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SUDOKU No. 2206

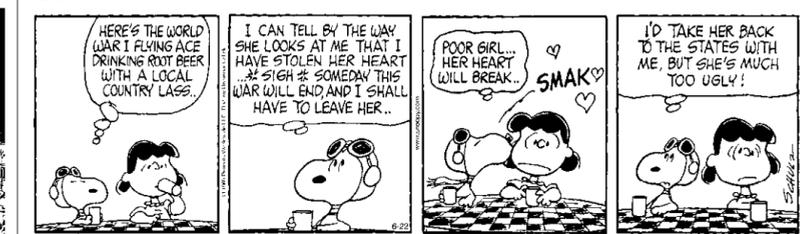
Sudoku grid with numbers 7, 9, 8, 5, 2, 8, 1, 6, 4, 2, 5, 4, 9, 7, 3, 1, 9, 5, 9.

BRIDGE | Frank Stewart. Includes a 3x3 grid puzzle and a text-based bridge game scenario.

JUMBLE THAT SCRAMBLED WORD GAME. Includes a 4x4 grid puzzle and a cartoon illustration of people playing a board game.

Yesterday's Jumbles: NEWLY ANNEX DIVERT WALLOT. Answer: The real estate agent who specialized in selling large tracts of property, had a — LANDLINE.

PEANUTS



GARFIELD



WIZARD OF ID



CROSSWORD | Edited by Will Shortz

Crossword puzzle grid and clues. Includes 'Across' and 'Down' sections with clues like 'Airline with "flying boats" in the 1930s-'40s' and 'Source of the Beverly Hillbillies' wealth'.

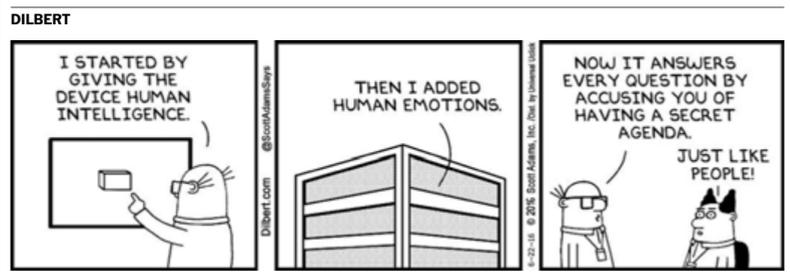
DOONESBURY CLASSIC 1986



CALVIN AND HOBBS



DILBERT



Large crossword puzzle grid with numbers 1-67 indicating clue positions.

PUZZLE BY FRED PISCOP. THE NEW YORK TIMES. Includes a list of crossword clues and answers.

Business

Americans seek gold in Cuban agriculture

HAVANA

BY KIM SEVERSON

Being an agricultural official in Cuba these days is like living in a resort town that all your friends want to visit. You rarely get a moment to yourself.

For months, Havana's government offices and its prettiest urban farms have been filled with American bureaucrats, seed sellers, food company executives and farmers who spend their evenings eating meals made with ingredients often imported or smuggled into restaurants that most Cubans can't afford.

They seek the prizes that are likely to come if the United States ends its trade restrictions against Cuba: a new supply of sugar, coffee and tropical produce, and a new market for American exports that could reap more than \$1.2 billion a year in sales, according to the United States Chamber of Commerce.

But for some, the quest is less about the money than about what they say is the soul of Cuban agriculture and how people eat.

"The Cubans are not enthusiastic about a Burger King on every corner or Monsanto being here," said Representative Chellie Pingree, a Democrat from Maine and an organic farmer.

In May, Ms. Pingree led a coalition of organic industry leaders, chefs and investors on a five-day trip here. Their mission, in part, was to encourage Cuban officials to resist the enticements of larger, more conventional American food and farming interests and persuade Cubans to protect and extend the small-scale organic practices that are already a part of their daily life.

Cuba, it turns out, is a rare oasis of organic and sustainable agriculture. For reasons of politics, geography and philosophy, the nation had to abandon much of its large-scale, chemical-based farming and replace it with a network of smaller farms and more natural methods.

Shortly after the revolution in 1959, Cuba began sending sugar, tobacco and research to the Soviet Union in exchange for a steady supply of goods that included food, agricultural equipment and farm chemicals. But 30 years later, when the Soviet bloc crumbled, the shipments ended.

Without gasoline and spare parts, tractors sat idle in fields. Crops rotted and cattle died. Studies show that the average Cuban lost more than 12 pounds of weight during what President Fidel Castro called the "special period in time of peace." With many large government-owned farms failing, Mr. Castro told the nation to learn to grow food without chemicals. Oxen replaced tractors. Smaller, cooperative farms and new markets emerged.

Cuba still imports 60 percent to 80 percent of its food, the United States Department of Agriculture estimates, and little or none of it is organic. Agricultural chemicals are imported from other countries without trade embargoes. The Cuban government owns about 80 percent of the land the nation could use to grow food, but more than half remains fallow. It is unclear how much of the produce Cuba grows would qualify as organic under United States standards.

Still, a cohesive organic movement is growing. By its own estimates, Cuba has almost 400,000 urban farms, among them about 10,000 small organic ones. The government continues to turn land over to independent farmers to lease, although it requires most to grow food for the state.

For the group of organic true believers who traveled to Cuba in May, the dream is to help the country stay loyal to a sustainable style of agriculture that rejects chemicals and genetic modification. They point to an incentive: an American



Finca Marta, the leading organic farm in Cuba, where 25 different crops are grown in a system of tiered beds. After Soviet aid dried up, Fidel Castro told farmers to stop using chemicals.



The New York celebrity chef Tom Colicchio, center, visiting the ArteChef cooking school in Havana last month as part of a group exploring Cuba's organic farm systems.



A Havana market called The Boutique is known for offering the best — and most expensive — produce in the city. The rules for doing business, even for farmers, seem to shift weekly.

market hungry — and willing to pay a premium — for organic produce.

Although only 5 percent of all food sold in America is organic, those sales last year grew three times as fast as those of the overall food market, according to the Organic Trade Association. Cuba offers a new source to feed the demand for organic sugar, honey, fruit and other raw ingredients.

Yet Cuba also offers 11 million potential new customers for conventional agriculture. Just days after Ms. Pingree's group left, the U.S. Agriculture Coalition for Cuba, which had already been working in the country, returned.

Founded in 2015 to promote normalizing relations with Cuba, the group has more than 100 members, including corporations like Butterball and Cargill,

commodity associations like corn refiners and soy growers, and several state farm bureaus. The delegation returned home holding an agreement with Cuba's Grupo Empresarial Agrícola to re-establish Cuba as a market for American agricultural products. In a follow-up stroke, Gov. Jay Nixon of Missouri announced on May 30 that Cuba had accepted a 20-ton donation of long-grain rice grown in his state. The last official shipment of United States rice to Cuba was in 2008.

Although many in the organic industry see the coalition as a threat to their cause, its leaders say they share the same goal: to help Cuba feed itself and improve its agricultural practices.

"There's no tension, because at the end of the day, this is about how the Cuban farmer is going to raise their pro-

ductivity and make their own choices," said Devry Boughner Vorwerk, a former Cargill executive who is now the group's director. "The key point here is that there is room enough for everyone."

Doug Schroeder, a soybean farmer from Illinois, came along on the coalition's trip. His state ships about \$20 million worth of corn and soy to Cuba every year under the complex set of rules governing trade between the two countries. If the United States ends its financial embargo with Cuba, that figure could jump to \$220 million. "You multiply that for the entire country and all agriculture sales, and it's a big deal," he said.

He anticipates a big market for organics, too, but one in which Cubans provide food for America. The organic industry, he said, "may be going into the back

door of a gold mine here. It would be interesting if they could ship organics to the U.S. to satisfy our demand, and we could ship them the goods we do well."

The United States secretary of agriculture, Tom Vilsack, seems to be walking the middle of that line. The agreement he signed with his Cuban counterpart, Gustavo Rodríguez Rollero, during President Obama's historic visit in March included a nod to sharing research on both styles of agriculture. And when Mr. Vilsack took Mr. Rollero on a tour of Iowa this month, they visited both an organic farm and DuPont Pioneer, the nation's largest producer of hybrid and genetically modified seeds.

"We have a tremendous opportunity CUBA, PAGE 18

Yellen hints that Fed will defer raising interest rates

WASHINGTON

Central bank chief points to sluggish labor market and weak productivity

BY NELSON D. SCHWARTZ

Weak economic growth in the United States could force the Federal Reserve to hold off on any imminent interest rate increases, the Federal Reserve chairwoman, Janet L. Yellen, told Congress on Tuesday.

While Ms. Yellen said that the American economy's long-term prospects remain favorable, she signaled that headwinds, including slower employment gains in recent months, weak productivity growth and the persistence of a sluggish pace of inflation have prompted the Fed to adopt a more cautious stance.

"The latest readings on the labor market and the weak pace of investment illustrate one downside — that domestic demand might falter," Ms. Yellen said in testimony before the Senate Banking Committee.

Ms. Yellen's message on Capitol Hill echoed her comments at a news conference last week after the Fed's decision to hold rates steady. But her tenor suggested that there was little chance of an increase in the benchmark federal funds rate at the Fed's next meeting, in July, and that a move when policy makers meet in September is hardly guaranteed.

"Proceeding cautiously in raising the federal funds rate will allow us to keep the monetary support to economic growth in place while we assess whether growth is returning to a moderate pace," she said.

Mirroring the habit of Fed leaders going back decades, Ms. Yellen hedged her bets, emphasizing her positive outlook for the years ahead, if not the coming quarter or two.

But she acknowledged influential voices in academia and elsewhere who have warned that long-term growth could be substantially below the pace achieved in the decades before the Great Recession.

"Although I am optimistic about the longer-run prospects for the U.S. economy, we cannot rule out the possibility expressed by some prominent economists that the slow productivity growth seen in recent years will continue in the future," she said.

In the question-and-answer portion of the hearing, Ms. Yellen termed recent productivity growth "disappointing," and pointed out that business investment had been similarly weak during the recovery. She added that the productivity issue was something Congress needed to address by improving policies for workplace training and other issues.

Ms. Yellen's appearance is part of two days of testimony before Congress that the Fed leader is required to present twice each year. Another session is scheduled on Wednesday before the House Financial Services Committee.

Her previous testimony on monetary policy was in February, so this week's appearance before Congress is Ms. Yellen's last before the presidential election in November.



Janet Yellen's tenor suggested that there was little chance of a rate increase in July.

As a result, Ms. Yellen received a barrage of questions on everything from the course of interest rates and banking regulation in the United States to the potential fallout if British voters decide in favor of leaving the European Union when they go to the polls on Thursday.

Responding to opening questions from Senator Richard C. Shelby, the Alabama Republican who is chairman of the Senate Banking committee, Ms. Yellen emphasized that until recently, the job market had held up well despite "mixed developments in the economy."

Noting that the jobs data for May was disappointing, she nonetheless said that "it is important we don't overblow the significance of single report."

"If the slowdown is a reflection of weak growth earlier in the year, I'm hopeful we will see stronger job gains going forward," she added.

Ms. Yellen called the possibility of a so-called Brexit "significant for the United Kingdom and Europe," and said that if Britain left the European Union it could usher in a period of uncertainty and volatility "that could affect market conditions and the U.S. economic outlook."

Late in the hearing, Ms. Yellen said that while the Fed was closely monitor-

FED, PAGE 18

'Brexit' or not, Europe is flawed



Eduardo Porter

ECONOMIC SCENE

Is "Europe" finished?

The latest polls and political odds-makers this week suggest that Britons will vote on Thursday to stay in the European Union. The "Leave" campaign, led by Boris Johnson, the former mayor of London who tried to whip up a surge of resentment against immigrants, looks set to fail.

But even if the pro-Europe "Remain" cause pulls out a victory, the popular hostility against the decades-long process of European integration — evident not only in Britain but across the Continent — underscores a defining weakness. Europe itself lacks a firm democratic foundation.

Europe's leaders face a clear-cut choice: For their integration agenda to succeed — preserving the free movement of people within the bloc, forging

ahead with the euro and the single market, keeping doors open to outsiders — the European Union must figure out how to overcome the narrow national interests and mistrust that tie it up in knots every time a collective response is needed.

That will require democracy on a European scale. If Europe's national governments remain unwilling to cede political power to regional institutions that have democratic legitimacy, the European Union will slide backward.

"We need pan-E.U. politics," said Mary Kaldor, professor of global governance at the London School of Economics. "I don't know how we get there."

For all the complaints about the Brussels bureaucracy, the discontent in Britain on Thursday will probably have little to do directly with Europe's institutional shortcomings. "This is about frustration of the working class about a long period of deindustrialization," Professor Kaldor said. Mr. Johnson is Britain's Donald J. Trump. Europe is a stand-in for globalization.

"Popular discontent with globalization — in its many forms has been building up in the West for many years now," said Kevin O'Rourke, an economic historian at Trinity College in Dublin. "We are seeing its effects everywhere."

Still, the European Union's hapless response to its current social and eco-

nom challenges has made it an easy target. With no real European institutions of democratic accountability — the European Parliament serves little more than a decorative function — the only way voters can express their dissatisfaction is by pushing to leave and by supporting extremist political movements.

"In many countries the perception is that national governments are powerless and that there is nothing at the European level to address problems,"

If national governments remain unwilling to cede political power, the European Union will slide backward.

said Paul De Grauwe, a former Belgian member of Parliament now at the London School of Economics. "Both Europe and national governments lose legitimacy."

What could the European Union have done better? Things would be a lot easier if most of Europe were growing at more than a snail's pace. The inability of countries in the eurozone — which does not include Britain — to stop the slow-motion implosion of Greece and other deeply indebted countries gives integration a bad name. ECONOMIC SCENE, PAGE 18

Credit Suisse chief blunt in defending his strategy

BY LANDON THOMAS JR.

Another downturn in the stock price of Credit Suisse has put Tidjane Thiam, the Swiss bank's embattled chief executive, on the defensive — again.

On Friday, Mr. Thiam sent employees a memorandum that said hedge funds were betting against shares of Credit Suisse — taking the view that Mr. Thiam would have to raise more capital from investors. Credit Suisse officials say the chief executive regularly sends updates to employees.

Mr. Thiam called these concerns unfounded and said they were a reflection of how market conditions have become difficult for Credit Suisse and other European banks.

Since he took over last summer as chief executive at Credit Suisse — which has large operations in New York and London — its stock has sunk about 50 percent. Last week, it touched a new low of 11 Swiss francs, or \$11.45.

Mr. Thiam has been forceful and blunt in describing how the bank's previous model of relying on riskier, capital-intensive trading and banking businesses needed to be revised. Instead, he has said, the focus should be on providing a range of financial services to wealthy clients in fast-growing emerging markets.

But the chief executive's brusque manner and a perception among bankers that he is not subjecting himself to the same sacrifices that he is asking of them has created tension within the bank — made worse by the stock's continuing slump.

In his memo, Mr. Thiam said that in the next month he would be embarking on a trip that would include stops in New York, London and Singapore to meet with clients and investors to talk about his plans for the bank.

In that vein, he met last week in Zurich with one of his largest investors, David Herro of Harris Associates, which owns nearly 10 percent of Credit Suisse.

Mr. Herro said in an interview that he saw Mr. Thiam as part of a broader tour of the other companies that his mutual fund owns in Europe, but added that they did have a discussion about the new strategy, which Mr. Herro endorsed.

"I think he is absolutely right in what he is doing, and you don't alter it just because people are wailing," Mr. Herro said. "If a trader makes money, they get a bonus — if they lose, the shareholder bites it. These changes have been long overdue."

As he has done in meetings with investors and clients, Mr. Thiam has blamed upset investment bankers for a BANK, PAGE 18

BUSINESS MEDIA COMPANIES

President of Softbank says he will step down

TOKYO

BY JONATHAN SOBLE

Nikesh Arora, a former Google executive who became president of SoftBank Group Corporation of Japan and was long seen as its eventual chief executive, will resign over what the company said was a disagreement about the timeline of when he would take over the technology conglomerate.

The surprise disclosure late Tuesday in Japan comes after SoftBank had endured criticism from some shareholders over its strategy and over Mr. Arora's conduct. SoftBank acquired a majority stake in Sprint Nextel for \$21.6 billion three years ago, but it has since struggled to turn around the American wireless carrier.

In a statement, SoftBank said that Mr. Arora had disagreed with the company's powerful chairman and chief executive, Masayoshi Son, over when he would take control of various parts of the company.

According to the statement, Mr. Son "had been considering Arora as a strong candidate for succession."

"Son's intention was to keep leading the group in various aspects for the time being, while Arora wished to start taking over the lead in a few years' time," the statement said.

"The difference of expected timelines between the two leads to Arora's resignation" as a director, the statement added.

Mr. Arora could not immediately be reached for comment. On Twitter, he characterized his departure as amiable.

"All good," he tweeted. "Masa wanted to be C.E.O. for longer, I did as promised, time to move on."

The announcement of Mr. Arora's departure comes just a day after SoftBank said an internal panel had rejected claims of misconduct by Mr. Arora. The statement did not describe those claims. News reports have said that they pertained to a potential conflict of interest over Mr. Arora's role as an adviser for the private equity firm Silver Lake.

Mr. Arora's departure was also announced shortly after SoftBank said it would sell its majority stake in Supercell, a maker of games for mobile devices, to Tencent Holdings of China for about \$8.6 billion.

Tencent expands its empire with Clash of Clans

HONG KONG

BY PAUL MOZUR AND MARK SCOTT

In the world of Clash of Clans, Hou Dai has played — and paid — enough that he now leads his own clan of 50 online players.

The 22-year-old recent college graduate at one time played the smartphone game as much as six hours a day. He estimates he spent about 40,000 renminbi, or roughly \$6,000, on the game over the past three years.

Mr. Hou's spending habits show why the Chinese internet giant Tencent just paid Japan's SoftBank Group \$8.6 billion for a controlling stake in Supercell, the Finnish games company that created Clash of Clans.

The deal will help Tencent bolster its status among global tech companies that are figuring out how to make money from mobile. The company has already successfully integrated into its popular Chinese chat apps functions like shopping and money transfers.

The transaction adds to Tencent's collection of video games that are popular around the world. That makes it a rarity in the Chinese digital and media world, where companies have often struggled to acquire valuable foreign names and ideas.

Many devotees of Clash of Clans and Supercell's other games spend real money on fake currency and other resources to build up their in-game power and heft. With the help of dedicated players like Mr. Hou, the small in-game fees, known as micropayments, have added up to a huge revenue stream that makes Supercell a big player in mobile games.

Supercell said in filings with the Finnish government that it posted \$2.4 billion in revenue last year. In April, Supercell was making just under \$4 million a day in revenue from Clash of Clans, SuperData Research estimates.

"Tencent makes about \$1 billion from its gaming operations outside of China," said Peter Warman, chief executive of Newzoo, an Amsterdam-based games analytics company. "With Supercell, they will more than double that. It's a very strategic move for them."

The Supercell takeover is Tencent's largest to date. Over the past five years, the Chinese company — which has a market value of \$210 billion — has made methodical strategic investments and acquisitions in games across the world. The company controls Riot Games, which created the hugely popular League of Legends, and the European mobile game maker Miniclip. It also has a stake in South Korea's CJ Games.

A sort of internet conglomerate, Ten-



Ilkka Paananen, left, chief executive of Supercell, and Martin Lau, president of Tencent, held a news conference Tuesday at the Helsinki headquarters of Supercell, creator of Clash of Clans.

cent has no real analog in the United States. Because internet advertising has been slow to grow in China, the company has used games to make money from its hugely successful messaging and social media products. Its messaging app WeChat has more than 700 million monthly active users.

One of the key challenges for Tencent is retaining the engineering talent at Supercell. The Finnish company has been able to chalk up a string of successes mostly by giving top talent a greater level of independence to develop projects, experts say. But a change in ownership could lead to an exodus of the company's engineers if they are not given the same level of independence that they enjoyed under SoftBank.

To that end, executives at Tencent and Supercell stressed in a conference call that Supercell would keep its autonomy.

"We would say it makes a lot of sense for them to stay independent," Tencent's president, Martin Lau, said on the call. "What is making them great, we want to preserve those elements."

Tencent also said that Supercell employees would be offered long-term incentive plans.

Supercell's chief executive, Ilkka Paananen, said Tencent's track record of allowing Riot to build out League of Legends on its own was reassuring.

The deal highlights the evolving nature of the worldwide mobile games market, where combined revenue topped almost \$35 billion last year.

Companies like Supercell and Rovio of Finland, the creator of the Angry Birds franchise, once were able to score hit after hit with new smartphone games. But the increased competition for consumers' attention, analysts say, has made it more difficult to break through with new games.

"You need very deep pockets to play in this field," said Mr. Warman, of Newzoo. "So if Tencent wants to play in this area, it has to be willing to pay top dollar."

King Digital, the Anglo-Swedish company behind the Candy Crush franchise, for example, was bought by Activision Blizzard last year for \$5.9 billion, in part to help the larger games company expand its global reach.

Mr. Hou said he was excited at the

prospect of new Chinese features, but warned that players are also concerned because Tencent has a reputation for wringing money out of games.

A Hong Kong college student, Juliana Wu, who plays another popular Supercell title, Clash Royale, with her boyfriend for about two hours a day, echoed those worries.

"Tencent buying the company may not be good for poor users like me who don't have money to spend," she said. "I'm worried it will become a game that only rich users are good at."

Paul Mozur reported from Hong Kong, and Mark Scott from Rome. Charlotte Yang contributed reporting from Hong Kong.

Rules ease Apple's path in India

SAN FRANCISCO

Foreign firms exempted from having to produce 30% of content locally

BY VINDU GOEL

After months of delays, Apple is likely to open its first retail stores in India, a fast-growing market for smartphones where the American technology giant has little presence.

New rules issued by the Indian government on Monday exempt foreign-owned companies that want to open stores selling a single brand of products from requirements that 30 percent of the content of those products come from India.

The exemption, which lasts three years, can be extended to eight years in the case of "cutting edge" items, such as Apple's iPhones and Macs.

Apple, which makes virtually all of its devices in China, lobbied for months for the restriction to be loosened, and Timothy D. Cook, the company's chief executive, discussed it with government officials during his first visit to India last month.

An Apple spokesman declined to comment on the issue on Monday. The company had not yet received any formal response from the Indian government on its application to open stores.

By themselves, new stores will have little impact on Apple's small share in India, beyond serving as a marketing tool. Although Indians will buy an estimated 139 million smartphones this year, Android models that cost less than \$120 dominate the market, according to the Gartner research firm. Apple says its sales in India grew 56 percent in its last quarter, but its cheapest phones typically cost at least \$400. It sold around two million units in India last year, Gartner said. Apple products are sold through thousands of retail outlets in India.

The changes, which also affect other sectors like the military and aviation, are the latest effort by the government of Prime Minister Narendra Modi to make India more predictable for foreign technology companies — even if the rules do not always work exactly as planned.

In March, the government declared that online retailers that sell many brands, including Amazon, are legal under Indian law, which had been a gray area. It also said, however, that such retailers could not sell goods directly to consumers, but instead must serve as marketplaces for third-party merchants. That threatened to upend the business structure of Amazon as well as local competitors like Flipkart while



Apple's chief executive, Timothy D. Cook, in Mumbai, India, last month. During the visit, he announced plans for a technology center in Hyderabad that would create up to 4,000 jobs.

protecting local merchants.

Last month, after years of threatening to impose stiff taxes on venture capitalists and other foreign investors in India, the Indian government struck a new treaty with Mauritius, a tax haven used by many foreign companies to move money in and out of India tax-free, to phase out the tax breaks. Foreign investors will soon have to pay a modest tax on capital gains in India, but the uncertainty is over.

Apple, which makes virtually all of its devices in China, lobbied for months for the restriction to be loosened.

Kanwal Rekhi, the managing director of Inventus Capital Partners, a venture capital firm that has invested in India, said that the series of clarifications had been a long time in coming. "These are not things that require change of law," he said. "Modi is an improvement over what we had, but he is still hesitant."

Mr. Rekhi said that the policy announcements would have little impact on the overall technology industry in India, which is already open to start-ups as well as giants like Facebook, Google, Microsoft and Oracle. But it will certainly help Apple open its first stores in the country. Analysts said the new rules effectively would give Apple — as well as major Chinese phone makers like Xiaomi and Lenovo — the ability to set up shops in India to showcase their wares.

Opening stores will allow Apple to deliver to Indian customers the full Apple experience — artful displays staffed by

informed sales representatives, "genius bars" to help solve problems and a carefully curated set of accessories.

"People feel pride after buying an iPhone, that's what Apple is all about," said Anshul Gupta, a personal technology analyst with Gartner in Mumbai, India. "That's how they maintain the premium image."

The Indian government has not yet acted on Apple's request to address the low end of the market by importing and selling used phones with a new warranty. The company has indicated it would do some of the refurbishing in India, creating local jobs.

Mr. Gupta said that Indian consumers were becoming more affluent, and that if Apple could capture the top 5 to 10 percent of India's smartphone sales, that would be a large new market. "It is not an overnight story, but there is a huge potential," he said.

Apple is making other commitments to India. During Mr. Cook's visit, he announced that the tech giant would be opening a new development center in Hyderabad, focused on map technology, that would create up to 4,000 jobs. The company also opened a tech accelerator in Bangalore to encourage more local app developers to write software for Apple products.

Apple, slow to warm to India, "now wants to catch up its lost ground," said Arvind Singhal, the chairman of Technopak, a business consulting firm in New Delhi.

Ayesha Venkataraman contributed reporting from Mumbai, India, and Paul Mozur from Hong Kong.

A talk with Cablevision's new owner

WASHINGTON

BY CECILIA KANG

The European telecom operator Altice completed its \$17.7 billion deal for Cablevision on Tuesday, its second major acquisition in a year and a step toward its goal of becoming a leading cable and broadband internet provider in the United States.

After its purchase of Cablevision, which includes Newsday and a television station, the Altice subsidiary Altice U.S.A. will have 4.6 million broadband and cable television subscribers, making it the fourth-largest cable and broadband operator in the country, with customers in 20 states. Last year, it acquired a controlling stake in the regional cable provider Suddenlink Communications for \$9.1 billion.

Altice is a global telecommunications firm based in the Netherlands that was started 15 years ago by the French-Israeli entrepreneur Patrick Drahi. In addition to the United States, it operates in Europe, the Caribbean and Africa. The company wants to keep expanding in the market for a utility service — broadband — that consumer advocates fear is controlled too few firms. (Comcast, Charter and Altice now control 52 percent of the cable market in the United States.)

In an interview, Dexter Goei, chairman and chief executive of Altice U.S.A., talked about the company's plans. Below are edited excerpts from the conversation.

Q. In one year, you have closed acquisitions of Cablevision and Suddenlink. What next?

A. We are going to take our time and be thoughtful about next steps, but fundamentally we are in the business of get-



Dexter Goei is chairman and chief executive of Altice U.S.A., which is expanding rapidly.

ting larger. Scale drives better economics and better strategic flexibility. When we will do something more, I don't know.

Q. In what ways do you want to get larger?

A. We would like to do more of what we have. Are there things to be done in other revenue streams, whether in content or mobile or technology? Maybe. It is worthwhile knowing that every single one of our businesses in other markets are quad-play, both fixed and mobile broadband (and television and phone).

In places where we have big market share positions, we have invested in media and content. Way too early to tell, but we will be ambitious. We have been built by a prescient entrepreneur who has not been shy to continue to grow our business and we've moved quickly when we want to move quickly.

Q. Can you afford to take your time? Your United States cable and telecom competitors are buying content and ad technology.

A. I don't necessarily agree that our competitors are out there doing a lot of

stuff on content. I would say obviously Comcast for sure, but Verizon is very focused on its mobile content strategy. To invest in content is a big word, but you have to be very specific as to what you are talking about. We aren't at the scale to do what Comcast does. Everything else is beating around the edges. We can be thoughtful.

Q. It would seem like this is a bad time to invest in the United States market. Cable companies complain about too much regulation from the Federal Communications Commission.

A. It's too early to tell if we have a strong point of view on any issues. These are, as you may suspect, in other markets we are in. On net neutrality, we have the same directives in Europe that are percolating. On the all-vid, or set-top box proposal, this is a very American type of issue that we aren't smart enough around today. We don't have that issue today in other markets.

Q. How about cost-cutting? How is that going to affect customers and employees of Cablevision? Is there concern about how cost-cutting will hurt service and jobs?

A. I don't think end users will expect anything but continued great service and even greater service. We've said we'll invest significant amounts of capital in customer service and the network.

On the Cablevision employee side, people are unbelievably energized and excited about what we are bringing to the table. There is no fear on the cost side. There is a clear understanding that there is a new management team in place that will be very thoughtful about how we deploy our capital going forward.

Boeing signs deal to sell jets to Iranian airline

REUTERS

Boeing has signed an agreement to sell jetliners to Iran Air, the company said on Tuesday, confirming Iranian statements about the deal and sending its shares up sharply in early trading.

Boeing said in a statement that it had signed a memorandum of understanding with the state-owned Iran Air "expressing the airline's intent to purchase Boeing commercial passenger airplanes."

Boeing's statement said it had held talks that led to the memorandum of understanding "under authorizations from the U.S. government following a determination that Iran had met its obli-

gations under the nuclear accord reached last summer."

Two senior Republican members of Congress raised concerns last week that the sale could threaten the security of the United States.

The company said it would "continue to follow the lead of the U.S. government with regards to working with Iran's airlines. It added that "any and all contracts with Iran's airlines will be contingent upon U.S. government approval."

Boeing declined to provide details about the number or type of planes it would sell, nor the timetable for delivery of the aircraft. But a large order is expected following Iran's agreement in

January to purchase 118 Airbus aircraft worth \$27 billion at list prices.

Iran disclosed the agreement with Boeing on Friday, the first purchase of Boeing jetliners since the Islamic Revolution in 1979. Boeing shares rose nearly 2.78 percent following that news.

The head of Iran's Civil Aviation Organization, Ali Abedzadeh, told the state-run daily newspaper Iran that a written agreement had been signed with Boeing to buy 100 aircraft.

Boeing shares were down 0.56 percent at \$132.00 in late morning trading on the New York Stock Exchange. Earlier in the day, the stock had climbed to \$133.18 from a low of \$132.25.

Flexibility is no panacea in labor markets

More prime-age workers leave work force in U.S. than in France or Spain

BY NEIL IRWIN

What if the very thing that is often viewed as one of the United States' sources of dynamism — flexible labor markets — is the driving force behind the economy's greatest weakness: millions of people who are neither working nor looking for a job?

That is a provocative idea that Obama administration economists explore in a

The Upshot
More at nytimes.com/upshot

new report looking at one of the crucial flaws in what on the surface is a healthy job market. Even as the unemployment rate has fallen to 4.7 percent — low by historical standards — millions of working-age Americans have pulled out of the labor market entirely. They neither work nor count as unemployed.

These missing workers are predominantly less-educated men, and their numbers have been mounting for decades. The White House Council of Economic Advisers calculates that in 1964, 97 percent of men with a high school degree or less in the so-called prime-age working years of 25 to 54 were working or seeking work. That is now down to 83 percent.

In the United States, there is less standing in the way of an employer who wants to hire someone and a person who wants to work than in most Western European countries or Japan.

Many economists have traditionally viewed this as positive. Yes, it means that workers are more vulnerable to being fired in a downturn, and many jobs come with fewer benefits. But that should help the economy adapt to a changing world more quickly and ultimately lead to higher incomes. A mainstay of American and British economic commentary is preaching to countries like France that they need more flexible labor markets. In theory, this flexibility should create more opportunities for anyone who wants work to find it, in contrast with European countries where companies are more reluctant to add jobs because regulations and union rules make it costly to fire people or sometimes even change their jobs.

Yet in the United States, 12 percent of



Commuters in New York City. White House research suggests that a successful labor market requires more than just easy hiring and firing.

25- to 54-year-old men were neither working nor looking for work in 2014. That number was 7 percent in Spain and France, and 4 percent in Japan. And that's despite a more generous social safety net in those countries that would, you might think, make it easier to drop out of the work force.

In other words, whatever the costs and downsides of European-style labor markets, they don't seem to inhibit the number of prime-age men who work. They may even make less-educated men more likely to remain part of the work force.

Perhaps men without much education are more likely to seek work when positions offer job security and when regulations and unions push wages higher than they would be in a more open market. And perhaps that effect counteracts the economic negatives of these policies in terms of fewer jobs and less dynamic businesses.

"One traditional defense of American-style labor market arrangements is that though they may result in more unequal-

ity, the labor market will function better as a result," the White House economists write. But the international comparisons "suggest that a successful labor market requires, at the very least, more than just flexibility but also policies or institutions that help connect workers with jobs or facilitate their taking jobs through subsidized child care or flexible workplaces."

The data, they add, "suggests that the American labor market has room to improve when it comes to creating conditions for meaningful employment."

What would those be? The Obama administration emphasizes policies to increase "connective tissue" in the job market. Those include improving community college and job training programs. The report also advocates reforming unemployment insurance so that employers have less incentive to lay people off, and wage insurance programs that would provide income to people whose pay gets cut.

The economists also note some other factors that could explain the United

States' poor showing, particularly astronomical incarceration numbers. The male population in the United States includes many more former prisoners than in other advanced democracies, and they are disproportionately likely to be out of the labor force.

The White House study is part of a broader conversation that is only beginning about the failures of the American economy to create opportunities and well-paying jobs for less educated people, especially men. And it's not just about economics. The absence of those opportunities has coincided with rising rates of depression, opioid abuse, early death and a range of social dysfunctions among this same demographic group of less-educated, working-age men.

There is no guarantee that a more European-style labor market would solve America's problem of missing male workers, let alone solve those much bigger problems. But the international comparisons suggest less flexible labor markets might have some advantages.

'Brexit' could dampen enthusiasm for I.P.O.s

LONDON

BY CHAD BRAY

Britain has been one of the most active markets for initial public offerings in Europe in recent years as a flurry of companies have sought to list their shares in London — far outpacing the level of activity in Paris, Frankfurt and other European financial capitals.

A vote by Britain to exit the European Union, however, could change all that, at least for the short term. Investors have been reluctant to invest in new London listings, and several companies have delayed announcing their intention to file until after the vote on Thursday.

Uncertainty over the outcome of the vote has kept many in the market on the sidelines as the margins in the polls have seesawed between the "leave" and the "remain" camps in recent weeks.

The most recent polls, however, pointed to growing support to stay in the European Union. On Monday, global stock markets rallied and the British pound strengthened against the dollar. The pound continued to rise Tuesday but stock markets were mixed.

Edward Sankey, the co-head of equity capital markets for Europe, the Middle East and Africa at Deutsche Bank, said he expected little activity in new stocks for a while. "If there is an exit, a number of issuers will take time to figure out the market reaction before deciding to press ahead," he said.

Bankers here say that several companies that had privately planned to go public have put such plans on hold until after the outcome of the referendum, to avoid the uncertainty that can lead to wild swings in the financial markets.

Although the London market has had relative success — Jimmy Choo, World-Pay and Pets at Home are among its most notable listings in recent years — it has already been a challenging year for initial public offerings globally.

Turbulent markets in the first quarter, driven in part by uncertainty about the Chinese economy, weighed on I.P.O.s in Europe and around the world.

"Between now and end of July, the pipeline is not huge," said Tom Johnson, the co-head of Barclays' equity capital markets business for Europe, the Middle East and Africa. "I think the second half will be materially larger."

A handful of European companies

have warned that a Brexit could affect their listing plans. The chief executive of Enav, the state-owned Italian air traffic control company, told a parliamentary committee in Rome this month that it had delayed its listing until July to avoid any distraction from the Brexit vote, according to Reuters.

The number of new listings in Europe this year is at its lowest level since 2013. There were 77 initial public offerings that generated \$15.7 billion in proceeds in Europe through June 17, according to data from Thomson Reuters. That compared with 113 offerings that generated \$32.7 billion in the period last year.

London accounted for 34 percent of all listings and has been home to two of the top 10 biggest deals in Europe this year, in terms of proceeds. The five largest offerings this year, however, have all come in Continental Europe.

The biggest listing this year, by far, was Dong Energy, the Danish utility and the world's largest offshore wind power operator. It generated about \$2.6 billion in proceeds as the signature transaction in what has been a down year for initial public offerings in Europe and could stand as the biggest listing in the region this year.

The offering on Nasdaq in Copenhagen valued Dong Energy at about \$15 billion.

The next three largest deals, in terms of proceeds, were the Dutch's government's sale of a stake in the insurer ASR Nederland, the sale of the lighting business of the Dutch electronics giant Philips and GE Capital's sale of Moneta Money Bank, its former banking business in the Czech Republic.

Moneta listed in Prague, while ASR and Philips Lighting had their offerings in Amsterdam.

The biggest deal in Britain this year has been the spinoff of National Australia Bank's British unit, Clydesdale Bank. That transaction generated about \$570 million in proceeds.

Globally, the I.P.O. market remains well above the level where it was during the financial crisis as private equity firms exit investments they made in the years before the crisis.

And privatizations by European governments and companies seeking to separate noncore businesses are expected to drive initial public offerings this year, but an uptick in activity might not come until the fall, no matter how Britain votes, financial industry experts say.

Justices side with tobacco giant

WASHINGTON

Supreme Court denies E.U. the right to sue over a smuggling enterprise

BY ADAM LIPTAK

The United States Supreme Court has sided with the R.J. Reynolds Tobacco Company in a lawsuit filed by European countries accusing it of complicity in an international money laundering scheme.

The court, by a 4-to-3 vote on Monday, found that the company could not be sued under the federal Racketeer Influenced and Corrupt Organizations Act, or RICO, over its conduct abroad.

The case, R.J.R. Nabisco Inc. v. The European Community, No. 15-138, was brought by the European Union and 26 of its member states. They accused R.J.R. Nabisco and several associated companies of being part of a sprawling cigarette smuggling enterprise that deprived them of billions of dollars in customs and tax revenues.

Justice Samuel A. Alito Jr., writing for the majority, summarized the accusations against R.J.R. Nabisco, which ceased operating as a united entity in 1999. "Greatly simplified," he wrote, "the complaint alleges a scheme in which Colombian and Russian drug traffickers smuggled narcotics into Europe and sold the drugs for euros that — through a series of transactions involving black-market money brokers, cigarette importers and wholesalers — were used to pay for large shipments of R.J.R. cigarettes into Europe.

"In other variations of this scheme, R.J.R. allegedly dealt directly with drug

traffickers and money launderers in South America and sold cigarettes to Iraq in violation of international sanctions," Justice Alito added in the ruling. "R.J.R. is also said to have acquired Brown & Williamson Tobacco Corporation for the purpose of expanding these illegal activities."

The European Union filed the case about 15 years ago, and R.J. Reynolds said at the time that any suggestion that it had been involved in smuggling was untrue.

In 2014, a three-judge panel of the United States Court of Appeals for the Second Circuit, in New York, allowed the case to proceed. The full appeals

In general, the court has said that a law should be presumed not to apply abroad unless Congress has said it does.

court declined to rehear that decision by an 8-to-5 vote; dissenting judges asserted that the panel had been unfaithful to Supreme Court precedent.

In general, the Supreme Court has said that a United States law should be presumed not to apply abroad unless Congress has clearly said it does. On subjects like securities fraud and human rights abuses, the court has limited the power of American courts to hear cases based on foreign activities.

Justice Alito said parts of the racketeering law overcame that presumption. The law requires proof of violations of underlying state and federal laws, he wrote, and at least some of those laws apply to conduct abroad.

At least one applies only abroad, he wrote, referring to the crime of killing a United States national outside the

United States.

"Short of an explicit declaration," Justice Alito wrote, "it is hard to imagine how Congress could have more clearly indicated that it intended RICO to have (some) extraterritorial effect. This unique structure makes RICO the rare statute that clearly evidences extraterritorial effect despite lacking an express statement of extraterritoriality."

All seven justices hearing the case agreed on that analysis. But they parted ways about whether the part of the racketeering law authorizing private civil suits, as opposed to ones brought by the United States government itself, applied to conduct abroad. The majority said no.

"It is not enough to say that a private right of action must reach abroad because the underlying law governs conduct in foreign countries," Justice Alito wrote. "Something more is needed, and here it is absent."

"There is a potential for international controversy that militates against recognizing foreign injury claims without clear direction from Congress," he added.

Chief Justice John G. Roberts Jr. and Justices Anthony M. Kennedy and Clarence Thomas joined the majority opinion. Justice Sonia Sotomayor, who sat on the Second Circuit before she joined the Supreme Court, recused herself from the case.

In dissent, Justice Ruth Bader Ginsburg, joined by Justices Stephen G. Breyer and Elena Kagan, said the suit should have been allowed to proceed because of its ample connections to the United States.

"All defendants are U.S. corporations, headquartered in the United States, charged with a pattern of racketeering activity directed and managed from the United States, involving conduct occurring in the United States," Justice Ginsburg wrote, summarizing the complaint. "In short, this case has the United States written all over it."

She added that the majority had acted inconsistently by creating "a domestic-injury requirement for suits by private plaintiffs nowhere indicated in the statute's text," while imposing "no such restriction on the United States when it initiates a civil suit."

"Unsupported by RICO's text, inconsistent with its purposes, and unnecessary to protect the comity interests the court emphasizes," she added, "the domestic-injury requirement for private suits replaces Congress's prescription with one of the court's own invention."

Justice Ginsburg said the decision was as likely to exacerbate as to ease international tensions. "Making such litigation available to domestic but not foreign plaintiffs is hardly solicitous of international comity or respectful of foreign interests," she wrote.



Pall Malls, an R.J. Reynolds brand. Dissenting jurists felt the suit had ties to the United States.

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BUSINESS ECONOMY

Americans rush to Cuba seeking gold in organics

CUBA, FROM PAGE 15

in Cuba to expand exports of soybeans, rice and poultry at some point," Mr. Vilsack said during that visit. "They in turn have a tremendous opportunity to import into the U.S. organic production. Trade must be a two-way street."

Those who support organic farming say there is something larger at issue than just trade. Adopting chemical-based farming methods used by large agricultural companies that have been visiting Cuba may seem a lucrative proposition, they say, but it would threaten the organic potential of thousands of acres of fallow farmland in Cuba.

"That is a system of the past," Gary Hirschberg, the chairman of Stonyfield Farm yogurt company and a leader in the effort to label food with genetically modified ingredients, told Cuban officials during the May trip. "We are the industry of the future."

Still, that future, organic or not, is most likely a long way off. Cubans interviewed during the trip organized by Ms. Pingree said their country was not prepared to handle a flood of new trade. Cuba's agricultural system remains so antiquated that even seeds and wheelbarrows are in short supply. The rules for doing business, even for farmers and people trying to start wholesale markets, seem to shift weekly.

"Everybody is adequately sober about the realities of this," said Laura Batcha, the executive director of the Organic Trade Association.

Mr. Schroeder, the soybean farmer, had the same impression. "I got the feeling they don't want a Starbucks on every corner," he said. "They don't

"The Cubans are not enthusiastic about a Burger King on every corner or Monsanto being here."

want to be Hawaii. They want to maintain their heritage, but at the same time, they realize they have a lot of need."

There are other complications. Farmers in Florida and other states who grow food suited to tropical climates are already pushing back against a potential competitor. American shoppers with anti-Castro views are probably not going to embrace Cuban products.

The agriculture department has yet to even secure office space in the new United States embassy in Havana. And despite Mr. Obama's push, efforts to lift trade sanctions are moving slowly in Congress and are bogged down in the run-up to the election.

On Monday, Nespresso announced that it would be the first company to sell Cuban coffee in America since the revolution. Through a deal brokered with help from TechnoServe, a nonprofit development organization, pods of Cuban-grown Arabica coffee that Nespresso is calling Cafecito de Cuba will go on sale for a limited time in the fall.

People who trade in organics say they, too, are likely to start small. Coffee is a possibility, as is charcoal made from marabú, a thorny, invasive tree that has stymied farmers trying to clear land. The high-quality charcoal has caught on in Europe.

And then there is sugar, especially organic sugar, which is in high demand by American processors. What if raw, organic Cuban sugar became an indispensable ingredient for craft cocktails, Ms. Pingree asked during a stroll through a Havana neighborhood. That could turn public opinion enough to sway Congress.

"It sounds frivolous, but some doors open in moments," she said. "At this point, we are looking for little paths to move this forward. It's hard to know which ones they will be."

Ultimately, the future of Cuban agriculture will be decided in Cuba. Despite their reliance on imported, often poor quality food supplemented with state-issued rations, Cubans have long associated food and farming with health, and have a deep love of cooking — especially with anything grown in Cuba, said Imogene Tondre, an American culinary researcher living in Cuba.

Cuban chefs are already seeking out better quality food and exchanging ideas with American peers. One of them is Tom Colicchio, the New York chef and television personality who has become active in American food politics and traveled with Ms. Pingree to Cuba.

In meetings during the May trip, he urged Cuban officials to build on the nation's extensive organic research and the cultural desire for local food, and to resist the monetary lures of big agriculture. "We ask that you have the political will to reject that and continue to do what you are doing and know that there is a market for it," Mr. Colicchio said in an impassioned plea.

Moraima Céspedes Morales, director of international affairs in Cuba's Ministry of Agriculture, told him to stay calm. "We are trying to produce the healthiest food possible," she said. "All the pressures, they don't matter."

What matters to Cubans, she told the group, is neither American market pressure nor the battle over which style of farming is better. "The most important program for us," she said, "is still one of self-supply."

'Brexit' or not, Europe has a weakness

ECONOMIC SCENE, FROM PAGE 15

The two are related.

Germany's resistance to share in the costs of a collective solution to seriously write down the debts that Greece and other South European nations will never be able to pay off — insisting instead that the indebted countries and their beleaguered citizens bear nearly all the cost — has prolonged and deepened Europe's stagnation.

"Britons contemplate the crisis of the euro as a little bit of proof that they were right not to join," said Giancarlo Corsetti, a professor of macroeconomics at the University of Cambridge.

Britons have more control over immigration than the Leave campaign would have them believe. Refugee policies are decided in London. And it was the Labour government of then-Prime Minister Tony Blair that chose not to take advantage of a seven-year phase-in period to limit the entry of citizens of new members from Eastern Europe. Many of the Polish plumbers that so inflamed the British populace showed up because Britain — unlike, say, Germany — chose to let them in straight away.

Immigration, however, can easily be deployed as an argument to leave the rest of Europe. More than half of the 333,000 immigrants who arrived in Britain last year were European Union citizens, free to be there as a matter of right under European law.

"The Leave campaign made an argument that the only way to reduce this part of immigration is to leave the E.U.," noted Jacob Funk Kirkegaard, an expert on immigration at the Peterson Institute for International Economics in Washington. "And they struck a chord with the electorate."

Dealing with hundreds of thousands of refugees fleeing war will never be easy. But Europe's reaction was notoriously unproductive. The European Union's institutions again appeared irrelevant, as governments retrenched into their corners and failed to devise a collective, burden-sharing approach.

In May, a group of European scholars proposed a set of collective financing mechanisms to reduce debt burdens along the European Union's periphery and to pay for a Union-wide refugee policy. Their report concluded: "The sovereign debt and refugee crises prove that Europe has failed to design institutions that are robust enough to weather difficult times."

How much integration do Europeans need? Dani Rodrik at Harvard's Kennedy School of Government notes



A "Remain" campaigner in London. Whatever the vote's result, European Union governance must come into line with what its people want.

that the European Union's initial major goal — preventing France and Germany from drawing the world into another war — has been achieved. The Union also served as a democratic, capitalistic anchor for East European countries to hang onto after the collapse of the Soviet bloc.

But Europe's current integration effort has lost sight of its political and social dimensions, Professor Rodrik argues, narrowing into a raw effort to reduce market barriers. That's not enough to inspire popular support.

There might be areas where collective action at the European level could make a difference — as a counterweight to colossal multinational companies that can challenge the authority of individual nations, or to prevent capital from effortlessly zipping across borders in an effort to avoid taxes. Indeed, the European Union has taken a leading role confronting the world's most daunting collective action

problem: climate change.

An aging Europe is going to need more immigrants. Smart collective strategies would surely help the Continent deal with what are likely to be decades of intense migration from the many poor countries in its extended neighborhood.

The critical question is whether Europe will be able to achieve the kind of integrated decision-making needed to address these challenges. So far, it hasn't shown it can rise to the occasion. "There is not much appetite for further political integration," Mr. Corsetti said. Solutions to Europe's challenges must navigate around this constraint.

The free movement of people inside the European Union might be the first to go into reverse. "Restricting the free movement of labor is not a taboo," Mr. Kirkegaard said. "Another way freedom of movement will be restricted is you will see more and more restrictions placed on the ability of citizens

from other E.U. countries to claim welfare benefits."

Maybe the European Union's future is more "à la carte" — a set of coalitions of the willing, as it were. Rather than insisting on all or nothing, said Richard N. Haass, president of the Council of Foreign Relations in New York, it might be better to consider "a Europe that is not one size fits all, where the balance between national governments and Brussels is more flexible."

This may come as a disappointment to Europe's current leaders. But one way or another, the project's governance must come into line with what its people want. That's called democracy.

"Europe must either roll back the economic integration or roll ahead the political integration," Mr. Haass said, "so people feel they have a say over the politicians who are driving changes that affect their lives."

Yellen suggests that Fed may defer rate move

FED, FROM PAGE 15

ing the Brexit vote and the possible consequences of a vote to leave, she was not offering advice on how to vote.

Although the decision "is a unique event that has no close parallel," she said, the Fed "is not attempting to take a stand. I am not providing advice in that sense."

Under questioning from Senator Bob Menendez, a New Jersey Democrat, Ms. Yellen took aim at a recent suggestion from Donald J. Trump, the presumptive Republican presidential nominee, that one option in managing the federal debt might be to force investors to accept less than the face value of what the government owed.

So-called haircuts aren't unusual for bondholders of troubled companies, or for businesses going through bankruptcy, like the ones Mr. Trump controlled as a businessman. But she made clear such a strategy could prove disastrous for the government and the economy alike.

"I feel the consequences for the United States and the global economy for defaulting on Treasury debt would be very severe," she said, avoiding mentioning Mr. Trump by name. "At a minimum, it could result in much higher borrowing costs for U.S. households and businesses."

Despite the Fed's first move to tighten monetary policy in a decade in December, interest rates remain extremely low by historical standards and not too far above the so-called zero-bound.

That kind of accommodation provides support for the economy, Ms. Yellen said, but it does rob the Fed of what she called a "tried and true" tool in the face of an economic shock: a rate cut to spur growth.

For now, though, Ms. Yellen saw little reason to fear an impending crisis and she dismissed fears among some on Wall Street that the Fed has contributed to imbalances in the markets. "I don't see any evidence," she said, "of those broad-based financial stability concerns."

And for all her caution about the outlook for the economy, Ms. Yellen said she did not see a recession on the horizon.

"The odds of a recession are low," she said. Even as the Fed chairwoman listed headwinds like a weak manufacturing sector, lower commodity prices and job losses in the energy sector, she said, "I remain quite optimistic."

Recessions are usually preceded by the threat of rising inflation and tightening monetary policy, she said. "We don't have any such conditions in play right now."

Exercise is the real wonder drug

BY AARON E. CARROLL

After I wrote last year that diet, not exercise, was the key to weight loss, I was troubled by how some readers took this to mean that exercise therefore had no value.

Nothing could be further from the truth. Of all the things we as physicians

The Upshot
More at nytimes.com/upshot

can recommend for health, few provide as much benefit as physical activity.

In 2015, the Academy of Medical Royal Colleges put out a report calling exercise a "miracle cure." This isn't a conclusion based simply on some cohort or case-control studies. There are many, many randomized controlled trials. A huge meta-analysis examined the effect of exercise therapy on outcomes in people with chronic diseases.

Let's start with musculoskeletal diseases. Researchers found 32 trials looking specifically at the effect of exercise on pain and function of patients with osteoarthritis of the knee alone.

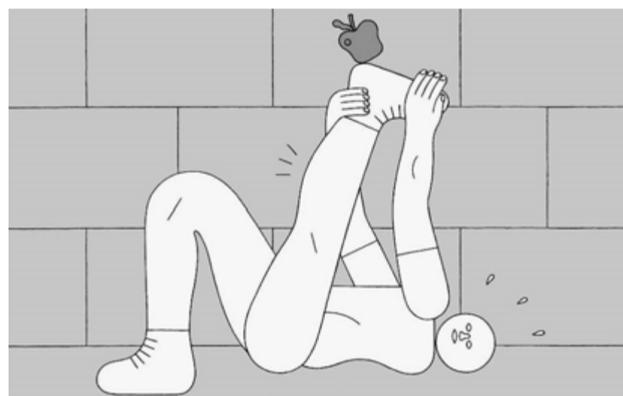
Exercise improved those outcomes. Ten more studies showed, over all, that exercise therapy increases aerobic capacity and muscle strength in patients with rheumatoid arthritis. Other studies proved its benefits in other musculoskeletal conditions, like ankylosing spondylitis, and even some types of back pain.

For people (mostly middle-aged men) who had had a heart attack, exercise therapy reduced all causes of mortality by 27 percent and cardiac mortality by 31 percent. Fourteen additional controlled trials showed physiological benefits in those with heart failure. Exercise has also been shown to lower blood pressure in patients with hypertension, and improve cholesterol and triglyceride levels.

People with diabetes who exercise have lower HbA1c values, which is the marker of blood sugar control, low enough to probably reduce the risk of complications from the disease. Twenty randomized controlled trials showed that patients with chronic obstructive pulmonary disease can walk farther and function better if they exercise.

Multiple studies have found that exercise improves physical function and health-related quality of life in people who have Parkinson's disease. Six more studies showed that exercise improves muscle power and mobility-related activities in people with multiple sclerosis. It also appeared to improve those patients' moods.

The overall results of 23 randomized controlled trials showed that exercise most likely improves the symptoms of depression. Five others appear to show



DOMINIC KESTERTON

that it improves symptoms in patients with chronic fatigue syndrome. In trials, exercise even lessened fatigue in patients having therapy for cancer.

What other intervention can claim results like these?

Even studies of older, hospitalized patients show a beneficial effect from multidisciplinary interventions that include exercise. Those randomized to such interventions in the hospital were more likely to be discharged to go home, and to spend less time in the hospital over all — and at a lower cost.

Although we don't think of it this way, you can make a pretty good argument that exercise is as good as drugs for many conditions. A 2013 meta-analysis of meta-analyses (that's how much data

What other intervention can claim results like these?

we have) combined and analyzed the results from 16 reviews of randomized controlled trials of drug and exercise interventions in reducing mortality. Collectively, these included 305 trials with almost 340,000 participants.

Diuretic drugs (but not all drugs) were shown to be superior to exercise in preventing death from heart failure. But exercise was found to be equally good as drugs in preventing mortality from coronary heart disease. Exercise was better than drugs in preventing death among patients from strokes.

Many people will be surprised at how little you need to do to achieve these results. Years ago, in an effort to get in shape, I tried the P90X routine. It proved too hard for me. Later, when I tried the Insanity workout, it beat me so badly that people at work kept asking me if I was ill. Two years ago, I tried P90X3. It was a bit more manageable, but I still couldn't keep it up.

E.U. nations tighten rules to fight tax avoidance

BRUSSELS

REUTERS

Multinational corporations may find it harder to escape taxation after European Union states tightened rules on Tuesday to counter tax avoidance.

Public anger has grown since news reports revealed how companies such as Amazon and Starbucks have used legal means to vastly reduce their tax bills and since the Panama Papers scandal exposed the extent of problem.

"Today's agreement strikes a serious blow against those engaged in corporate tax avoidance," said Pierre Moscovici, the European commissioner in charge of tax issues.

The measures include powers for governments to tax profits shifted by companies based in the European Union to low-tax countries where they have no real business activity, and to tax assets developed in the European Union and then transferred outside the bloc.

The measures will turn nonbinding international standards into binding rules and go beyond what has been agreed to by the Organization for Economic Cooperation and Development.

But the compromise — which had to be approved unanimously by the 28 European Union states — was reached after some of the most contentious provisions were scrapped or delayed.

The humanitarian organization Oxfam, which says tax avoidance exacerbates global poverty, called the watered-down rules "wastepaper."

"It is outrageous that governments have been unable to agree on an effective approach against parking profits in tax havens while repeated tax scandals are calling for immediate and efficient action," Oxfam said.

European Union countries that have tax policies intended to attract multinationals had feared that companies would leave if the rules were too severe. To quell concerns, a proposal to tax dividends and capital gains that European firms pay to companies they control in low-tax countries was dropped.

National governments were also granted leeway to be able to keep some of their own rules in place until 2024, rather than the 2019 deadline first proposed.

Chief defends his strategy for Credit Suisse

BANK, FROM PAGE 15

negative environment, and he has said repeatedly that he will not backtrack as a result of their complaints.

In his memo, though, Mr. Thiam did strive to strike a positive tone in terms of the effort to turn around the global markets division. "Significant progress with the accelerated restructuring, not only in terms of de-risking and cost reduction but also in reinvigorating our client franchise," he wrote.

Nevertheless, Mr. Herro did say that it is important for Mr. Thiam to do better in terms of getting his message across internally. "If change is going to happen, it has to be done with good communication and empathy toward employees," he said.

Mr. Herro said in the interview that he saw no need for Credit Suisse to raise new funds. "With the cash generation they have now, their capital position is fine," he said.

More than most investment banks, Credit Suisse relies on company stock to compensate employees.

There are few analysts or investors who think that Mr. Thiam is mistaken in his strategy, which is in line with what other banks in Europe are doing.

But even his biggest supporters have started to express some concern that he could be doing a better job communicating his message — unpleasant as it may be — to his employees.

And while the board has recently said that it supports Mr. Thiam, directors have also been asked numerous questions by shareholders about Mr. Thiam's ability to push through difficult changes in light of his poor relationship with bankers in the global markets division.

A recent report by Switzerland's central bank found that Credit Suisse and its larger rival, UBS, would each need to raise an additional 10 billion francs in capital to meet stringent bank safety rules being put in place in Switzerland.

Mr. Thiam has rejected speculation that the bank's losses are escalating and that the bank would need to go to investors once again for a fresh round of cash.

Last fall, Mr. Thiam raised about \$6 billion, or 6 billion francs, from the market at a price in the low \$20s per share. Coming to investors again for cash, so soon after the first effort and with the stock trading at current levels, would be difficult for Mr. Thiam, analysts and investors say.

Since hitting a low, the stock has recovered somewhat in recent days, closing 0.4 percent higher on Tuesday at 12.54 francs.

Aaron E. Carroll is a professor of pediatrics at Indiana University School of Medicine.

DEALBOOK

In official inquiry, cooperate or be fired

White Collar Watch

PETER J. HENNING

When a company learns it is the focus of a government investigation, the first step is to start an internal investigation to figure out what happened. To determine any potential exposure for wrongdoing, it needs the cooperation of its employees who were involved with the conduct.

Most workers will tell the internal investigators what they know, perhaps in the naïve belief that the company will look out for their best interests. But if they do not cooperate, a recent decision by a United States appeals court makes it clear that the company can fire them with little fear that the termination will be considered improper.

The case arose out of an investigation of the Marsh & McLennan Companies in 2004, when Eliot Spitzer was the New York State attorney general. Seeking to take on the mantle of Wall Street's top cop, Mr. Spitzer started headline-grabbing inquiries into a number of companies for real and perceived misconduct. One issue that came under his scrutiny involved "contingent commission" arrangements in which brokerage firms like Marsh steered clients to certain insurance companies in exchange for larger payments from them, as The New York Times described in a 2004 article.

As part of the company's internal investigation, two executives, William W. Gilman and Edward J. McNenney Jr., were interviewed by an outside law firm retained to look at the commission payments. A few months later, it emerged that there were allegations of bid-rigging by agents at different insurance brokers. Two employees of the American International Group pleaded guilty to state antitrust charges in September 2004, with one identifying Mr. Gilman and Mr. McNenney as co-conspirators.

At that point, Marsh's lawyers shifted the focus of their inquiry to the bid-rigging and tried to arrange new interviews with the two executives. With Mr. Spitzer breathing down the company's neck, it was crucial to complete the inquiry and turn over the results quickly to appear as cooperative as possible.

Rather than submit to questioning, Mr. Gilman and Mr. McNenney refused to speak with investigators. Mr. Gilman even tried to retire before meeting with them so that he could not be fired for refusing to cooperate. That was a good strategy from a legal standpoint because their statements were sure to be given to prosecutors, who could use them to build a case against the two executives.



Eliot Spitzer, the New York State attorney general, sued Marsh & McLennan in 2004, accusing the company of bid-rigging and price-fixing.

But their refusal resulted in Marsh's immediately firing the two men "for cause," refusing to accept Mr. Gilman's retirement. That meant the executives lost stock awards and severance pay they would have received if there had been an ordinary termination.

Marsh reached a civil settlement with Mr. Spitzer's office before the men were fired, but it continued its internal investigation to show continuing cooperation, something that is often a condition of any settlement.

Mr. Gilman and Mr. McNenney were later convicted of one count of fraud, although they were acquitted of a number of other charges. Their conviction was later overturned because the government failed to turn over 700,000 pages of documents, and New York State prosecutors decided in 2011 to dismiss the case rather than retry it.

The two executives sued Marsh in 2010 to recover employment benefits denied to them because of the firing. They asserted that the company breached its contract and that it was acting as an agent of Mr. Spitzer's office when it sought to force them to speak with investigators, violating their constitutional right to silence.

The United States Court of Appeals for the Second Circuit in Manhattan agreed with the conclusion of a federal district judge that their termination was not a breach of contract because the company had good reason to de-

mand that they provide information or face the consequences of their refusal. The appeals court found that when a company finds itself under scrutiny for potential violations, "it did what any other company would do, and (arguably) what any company should do."

Marsh's interview demands were reasonable and it had cause to fire Gilman and McNenney for refusing to comply.

That language effectively recognizes a broad right for companies to use the threat of termination to obtain information from employees because of the potential for shareholder lawsuits and government enforcement actions.

The power to fire an employee is rarely an effective method to gather evidence because employees who possibly engaged in misconduct will expect to pay a price at some point, and speaking with investigators will provide little protection from dismissal.

What the power to terminate an employee does give a company is a means to show the government that it has tried to obtain evidence of wrongdoing and took measures to punish those unwilling to cooperate.

Adopting an aggressive approach with a recalcitrant employee has become even more important since the Justice Department announced a new policy in 2015 that conditions any credit for corporate cooperation on providing information about misconduct by individuals in the company. Sally Q. Yates, the deputy

attorney general of the United States who issued the policy directive, said in a recent speech before the New York City Bar Association that "our goal is not to collect corporate heads."

That may not be the government's goal, but showing that a few heads were lopped off for refusing to cooperate in an internal investigation can go a long way toward making the case that a company tried its best to provide the information that the Justice Department policy demands. If a company cannot furnish all the information the government would like, it can at least show it got rid of anyone who did not help its investigation.

The appeals court also refused to find that a company's decision to conduct an internal investigation in response to government scrutiny turns it into an agent of the prosecutors, and therefore subject to important constitutional limitations, such as the Fifth Amendment privilege against self-incrimination. Corporations have good reasons to investigate potential violations, and so the appeals court concluded that "a rule that deems all such companies to be government actors would be incompatible with corporate governance and modern regulation."

The appeals court's message is clear in corporate internal investigations: cooperate or else. If you ever wondered who has the upper hand in the employment relationship, you don't need to think long to come up with the answer.

2016: A year of waiting dangerously



James Saft

INSIDE THE MARKETS

This may go down as the year "it" didn't happen.

Britain looks increasingly unlikely to leave the European Union; the wheels are coming off Donald J. Trump's comic opera of a quest for the presidency; and the Federal Reserve may prove simply unable to raise the price of credit.

Investors are pleased with all three, in varying degrees, with growing conviction that Britain will vote to stay in the European Union particularly helping to underwrite a recent rally in riskier assets worldwide.

All of this of course is another way of saying that investors may alternatively face a crumbling European Union, tightening monetary policy and a joker in the White House.

Yet given recent developments, and some realistic alternative scenarios, an ongoing relief rally may be in the cards.

Beginning with the killing of Jo Cox, a member of the British Parliament, financial exchanges, betting markets and polls have sharply changed direction and are now strongly indicating a growing probability that Britain will choose on Thursday to remain in the European Union. Having digested opinion polls released since Ms. Cox was killed, Betfair on Monday put the implied probability of a vote to remain at 72 percent, up from 60 percent before the assault.

A vote to leave the European Union would be deeply unsettling for financial markets as well as likely to send riskier assets sharply lower. A political fracture would not only hurt the British economy, it might also lead to the further dissolution of the European Union and signal a new tide pushing against globalization.

Mr. Trump, the presumptive Republican presidential nominee, is also losing ground rapidly in polls, and on Monday he fired his campaign manager. Having been neck-and-neck with his presumptive Democratic opponent, Hillary Clinton, as recently as May 24, Mr. Trump is now a full six percentage points behind, according to an average of polls compiled by Real Clear Politics. Mr. Trump is the candidate whose

policies, to the extent that they can be understood as policies, are a recipe for a global trade war. Mr. Trump, who has also indicated a wavering commitment to honoring American debts in full, has played the role of cannon careening across the deck of United States politics. Very few long-term investors are likely to view his rise positively, and many would welcome his fall.

It may not be that Mr. Trump's slide is driving financial markets now, but were he to go into November with a reasonable chance of winning the election, the resulting volatility would be frightening.

The final risk to subside in the past week is that of the Federal Reserve raising interest rates, either sharply or any time soon. The central bank left rates on hold at its meeting last week and signaled, in word and forecast, that recent expectations of a near-term increase as part of a campaign that began in December were misplaced. Not only did the Fed indicate that what it saw as short-term economic headwinds may be sustained, it raised the possibilities of new ones from abroad.

The Fed chairwoman, Janet L. Yellen, said should could not "specify a timetable" for another increase after last week's decision. "We are quite uncertain about where rates are heading in the longer term," she said.

Financial markets are pretty sure in the short term that lending rates will stay where they are, assigning an 11 percent chance of an increase in July and a 53 percent chance by the end of the year. Many investors are increasingly convinced that the Fed may have to ease monetary conditions before it is able to raise rates once again.

A vote in Britain to stay in the European Union would remove one threat to the Fed's outlook. But a host of indicators, from capacity utilization to corporate inventories and profits, are all flashing the types of signals that often precede a downturn.

This dramatic development cuts both ways, as it both ensures continued easy financing terms but also serves as striking notice that the utility of the tools the Fed has in hand is doubtful.

What was striking last week was that a dovish Fed did not produce the usual rally response from financial markets. With interest rates now at 25 to 50 basis points, the Fed has little room to cut should matters deteriorate. That's especially true when it comes to political and economic concerns over the impact of negative interest rates.

So if 2016 is the year "it" didn't happen, we may get first a powerful rally and then an extended turn downward in financial markets. The global economic malaise that contributed to political upheavals in Britain and the United States is still with us, and with it, popular discontent.

Dodging bullets and being safe are two different things, investors may learn.

James Saft is a Reuters columnist.

World markets Tuesday, June 21

United States	Last	Chg	12 mo.%
Dow Jones indus.	17,827.10	+22.23	-1.0
S.&P. 500	2,087.38	+4.13	-1.1
S.&P. 100	3,211.56	+22.29	-0.7
Nasdaq composite	4,836.55	-0.66	-5.5
U.S. NYSE composite	10,479.34	+29.31	-6.1
Russell 2000	1,149.39	-8.31	-10.5

The Americas	Last	Chg	12 mo.%
Mexico IPC	45,610.21	-169.45	+1.4
Canada S.&P./TSX	14,022.08	+6.94	-4.3
Brazil Ibovespa	49,950.94	-378.43	-7.1
Argentina Merval	13,553.59	+490.21	+20.9
Chile Stock Market select	3,968.43	-12.52	+1.9

Europe and Middle East	Last	Chg	12 mo.%
Euro zone Euro Stoxx 50	2,967.34	+24.46	-14.1
Britain FTSE 100	6,226.55	+22.55	-7.2
Germany DAX	10,015.54	+53.52	-9.3
France CAC 40	4,367.24	+26.48	-9.3
Italy FTSE MIB	17,431.17	+77.72	-23.2
Spain IBEX 35	8,667.30	+20.20	-20.8
Switzerland SMX	7,935.75	+35.53	-10.5
Sweden OMX 30	1,344.59	+4.30	-13.9
Russia RTS	937.22	+2.18	-3.1
Czech Rep. Prague Stock Exch.	842.31	+3.37	-13.7
Asia TA25	1,429.00	-1.39	-15.2

Asia	Last	Chg	12 mo.%
Nikkei 225	16,169.11	+203.81	-19.9
H.K. Hang Seng	20,668.44	+158.24	-2.8
Australia All Ordinaries	5,353.25	+17.68	-4.3
China Shanghai composite	2,878.90	-9.91	-36.7
S. Korea KOSPI	1,982.70	+1.58	-3.1
S.&P. CNX Nifty	8,219.75	-18.75	-0.1
Taiwan TAIEX	8,684.85	+58.93	-5.8
Singapore Straits Times	2,789.45	-11.42	-15.5
Thailand SET	1,431.41	+9.42	-4.0
Indonesia Jakarta composite	4,878.71	+15.18	-2.1

Exchange rates

Major currencies	\$1	Chg.	€1	Chg.	¥1	Chg.
Euro	0.888	0.004	-	-	1.302	0.004
Dollar	-	-	1.126	-0.005	1.467	-0.002
Pound	0.682	0.001	0.767	-0.002	-	-
Swiss franc	0.959	-0.003	1.180	-0.008	1.487	-0.020
Yen	104.55	0.630	117.71	0.190	153.32	0.630

World 100

The companies with the largest market capitalization, listed alphabetically by region. Prices shown are for regular trading. A ▲ or ▼ indicates stocks that reached a new 52-week high or low.

Company	Last	Chg.	12 mo.%	52-wk price range
Abbott Laborat.	37.78	+0.03	-24.3	36.34 ●●● 51.20
Amazon.com	715.0	+1.0	+64.4	423.7 ●●● 728.2
Apple	96.23	+1.13	-24.0	90.34 ●●● 132.07
AT&T	41.10	+0.32	+17.4	31.80 ●●● 40.38
Bank of America	13.54	unch.	-21.1	11.16 ●●● 18.45
Berkshire Hath.	214,420	+1790	+1.0	187,001 ●●● 221,400
Caterpillar	76.52	+0.09	-12.6	57.91 ●●● 88.45
Chevron	103.0	+0.4	+3.5	70.0 ●●● 103.9
Cisco Systems	28.83	+0.03	-4.0	22.51 ●●● 29.36
Citigroup	42.74	-0.06	-24.0	34.98 ●●● 60.34
Coca-Cola	45.11	+0.13	+11.7	37.99 ●●● 46.89
Comcast	62.28	-0.18	+2.9	53.55 ●●● 64.59
ConocoPhillips	44.84	+0.15	-28.1	31.88 ●●● 63.51
Exxon Mobil	91.38	+0.26	+4.7	62.71 ●●● 91.22
General Electric	30.97	+0.14	+13.7	23.87 ●●● 31.93
Google	694.5	+0.8	+29.4	516.8 ●●● 776.6
Home Depot	127.9	+0.3	+13.7	110.0 ●●● 137.5
IBM	154.1	+0.5	-7.7	117.9 ●●● 173.2
Intel	32.23	+0.06	+0.5	25.87 ●●● 35.44
Johnson & John.	116.4	-0.2	+16.5	90.7 ●●● 117.1
JPMorgan Chase	62.45	+0.08	-8.3	53.07 ●●● 70.08
MetLife	85.79	+0.29	+17.6	69.20 ●●● 86.34
McDonald's	122.6	-0.8	+27.6	91.2 ●●● 131.6
Merck	56.32	+0.18	-3.0	48.42 ●●● 59.71
Microsoft	51.10	+1.03	+10.8	40.47 ●●● 56.55
Occidental Petrol.	76.84	+0.74	-1.4	59.59 ●●● 79.37
Oracle	39.81	+0.06	-4.3	33.94 ●●● 44.91
Procter & Gam.	62.28	+0.53	+3.8	68.06 ●●● 83.81
PepsiCo	104.2	+0.8	+28.9	89.9 ●●● 106.6
Pfizer	34.68	+0.18	+1.5	28.56 ●●● 36.15
Philip Morris	101.0	-0.6	+22.1	77.3 ●●● 102.2
Qualcomm	53.79	-0.10	-19.6	42.06 ●●● 67.36
Schlumberger	78.28	+0.69	-9.6	61.96 ●●● 90.15
United Technol.	101.6	-0.1	+11.6	84.7 ●●● 117.6
UPS	106.6	+0.5	+5.7	87.7 ●●● 106.8
Verizon	54.21	+0.45	+14.2	42.84 ●●● 54.42
Visa	77.35	+0.01	+12.6	66.72 ●●● 81.65

Interest rates

10-year gov't	Ask yield	Chg	12 mo. ago
Britain	1.253%	0.12	2.095%
France	0.421	unch.	1.235
Germany	0.054	0.04	0.878
Japan	-0.146	0.01	0.416
United States	1.663	0.01	2.373

1-year gov't	Ask yield	Chg	12 mo. ago
Britain	0.461%	0.09	0.486%
France	-0.500	0.01	-0.191
Germany	-0.592	0.01	-0.299
Japan	-0.272	unch.	-0.012
United States	0.527	0.03	0.225

Futures	City	Units	Delivery	Last	Chg
Corn	Chicago	\$bu	July	4.02	-0.19
Cotton	N.Y.	\$/lb.	July	0.63	-0.02
Soybeans	Chicago	\$/bu	July	11.34	-0.10
Wheat	Chicago	\$/bu	July	4.65	-0.08
Rice	Chicago	\$/cwt	July	11.02	-0.09
Cocoa	N.Y.	\$/ton	July	3,166.00	-4.00
Coffee	N.Y.	\$/lb.	July	1.37	-0.02
Sugar	N.Y.	cts./lb.	July	19.39	-0.30
Orange juice	N.Y.	cts./lb.	July	165.40	-1.50

Metals, energy	City	Units	Delivery	Last	Chg
Aluminum	London	\$/m. ton	3 mo.	163,300	+1800
Copper	N.Y.	\$/lb.	July	2.11	+0.02
Gold	N.Y.	\$/tr.oz.	Aug.	1,273.00	-19.10
Palladium	N.Y.	\$/tr.oz.	Sep.	548.55	+0.10
Platinum	N.Y.	\$/tr.oz.	July	981.00	-6.20
Pt. Pd.	N.Y.	\$/tr.oz.	July	18.75	-0.15
Silver	N.Y.	\$/tr.oz.	July	17.30	-0.21
Brent crude	London	\$/bbl.	Aug.	49.74	-0.11
Light sw. crude	N.Y.	\$/bbl.	July	48.33	-1.04
Natural gas	N.Y.	\$/m.BTU	3 mo.	2.76	+0.02

3-month gov't	Ask yield	Chg	12 mo. ago
Britain	0.465%	0.02	0.465%
France	-0.518	unch.	-0.206
Germany	-0.653	-0.01	-0.333
Japan	-0.266	unch.	-0.010
United States	0.289	0.02	0.008

Benchmark rates	1 (Mar. 0)	Latest chg	0.5%
Britain (bank)	0.15%	1 (Mar. 0)	0.5%
Canada (overnight)	0.5	0.75 (Jul. 16)	0.8
Euro zone (refinancing)	n.a.	0.05 (Mar. 16)	0.1
Japanese (overnight)	0.1	0.1 (Jun. 25)	0.1
United States (prime)	3.5	3.25 (Dec. 17)	3.3

Cross rates	\$1	€1	¥100	One franc	One Swiss franc	One Canadian
Australia	1.340	1.509	1.965	1.281	0.021	1.396
Brazil	3.405	3.834	4.993	3.255	0.053	3.547
Britain	0.682	0.767				

BUSINESS



Travis Kalanick, the Uber chief, has said he wanted to put off an initial public offering as long as he could. In all, Uber has raised \$15 billion.

Why Uber piles up billions



Andrew Ross Sorkin

DEALBOOK

It feels like almost every other week there is a new headline about Uber raising more money. “Uber Closes \$1.6 Billion in Financing.” “Uber Turns to Saudi Arabia for \$3.5 Billion Cash Infusion.” Last week, we got this one: “Uber to Raise Up to \$2 Billion in Leveraged-Loan Market.”

If you add up all the money Uber has raised since it started in 2009 — the idea was born when its founders became annoyed that they could not get a cab in Paris — the ride-hailing app company is on its way to amassing a colossal \$15 billion. That’s real cash, not some funny-money, paper-based valuation. (That figure is \$68 billion.) It has done all this while still managing to remain a private company, and its chief executive, Travis Kalanick, has insisted that a public offering is not coming soon. “I’m going to make sure it happens as late as possible,” he has repeatedly said.

Consider this: When Amazon went public in 1997, it raised \$54 million and was valued at \$438 million.

So what exactly is Uber doing with all that money? And what does it say about Uber — and the financial markets — that the company has turned most recently to selling the equivalent of junk bonds?

Yes, Uber has to finance an all-out war to gain market share in China and India. But there is more to it than that: Uber’s money grab is seemingly part of an unspoken strategy to mark its territory.

Every time Uber raises another \$1 billion, venture capital investors and others may find it less attractive to back one of Uber’s many rivals: Didi Chuxing, Lyft, Gett, Halo, Juno. In other words, Uber’s fund-raising efforts have seemingly become part of the contest: It’s not just a rivalry over customers and drivers; it’s a war of attrition, a mad scramble to starve the competition of cash.

At the moment, Uber’s success has had the opposite effect: It has spawned a long list of rivals, big and little guys who say, “We can do it too.” But over time, as the smaller competitors run out of cash — after heavily subsidizing riders in an effort to steal business from Uber — venture capitalists should be less inclined to put up even more cash to go up against Fortress Uber.

Uber’s fund-raising arms race comes against the backdrop of falling valuations for many Silicon Valley unicorns — private companies worth \$1 billion or more. So there’s clearly a rush to take the money while it’s still available.

“It’s not the second inning or even the sixth, it’s the 14th inning in a five-hour baseball game,” Bill Gurley, the famed venture capitalist who has a stake in Uber and sits on its board, warned on his blog about the state of Silicon Valley. He alerted investors about unicorns that come to them seeking funds: “You are not being invited to a special dance, you are being approached because you are the lender of last resort.”

The ride-sharing industry has long been seen as a zero-sum game because of the “network effect”: The more customers sign up for Uber, the more drivers sign up, making it tougher for rivals to mount competition. There will most likely be only one or two significant players in any given market. (More on that in a moment, because there might be some cracks emerging in that point of view.)

The question is whether the financing game is zero-sum too. And the even larger question is whether Uber’s eye-popping capital investments could ultimately act as a deterrent to investors who might consider supporting Uber’s competitors: Will they look at Uber’s balance sheet — it has some \$6 billion in cash just sitting there — and throw up a white flag?

So far, Uber is clearly winning the valuation game: It is virtually worth more than all of its rivals combined. But Uber still has formidable competition in the fund-raising arena: Didi, the market leader in China that is engaged in a money-losing battle with Uber, just raised \$7 billion, some of which came from Apple. (Mr. Kalanick,

too, was hoping to raise money from Apple and had planned to meet with executives at the iPhone maker the same week Apple announced its investment in Didi.)

Perhaps strangely, several of the same investors that have backed Uber are also backing Didi in China, including BlackRock and Tiger Global, so it is hard to say that one service is deterring investment in the other — at least not yet. (It is worth noting that among the investor class, some may be hoping that Uber might one day merge its Chinese operation with Didi.)

Uber’s most recent fund-raising effort — focused on the leveraged loan market — aims to avoid diluting the current base of shareholders. It has hired Morgan Stanley, Barclays, Goldman Sachs and Citigroup to sell about \$2 billion in loans. By avoiding a traditional round of financing, the company also avoids the company having to risk trying to sell itself at an even higher valuation.

Given the remarkably low interest rates, investors looking for yield may buy into Uber.

Uber says it is profitable in North America, Europe, the Middle East, Africa and Australia — if you factor out taxes and interest payments. The challenge for Uber is breaking into China and India, perhaps the two largest markets in the world. Uber is currently on track to lose about \$2 billion annually in those markets as it heavily subsidizes customers and drivers to gain market share.

Uber will have to pay up for the loan financing. But if Uber’s valuation continued to grow, it would be a bargain compared with the value of the equity. Uber is hoping to sell debt with a yield of about 4 or 4.5 percent.

Uber’s I.P.O. will probably come to pass in the next three to four years. That’s because some of the convertible debt it previously issued provides investors with a special discount if the company has not gone public by then.

But by 2018 or 2019, at the rate Uber is going, who knows how much money Uber will have raised. It may need none.

The question is whether it will have starved all of its competitors along the way.

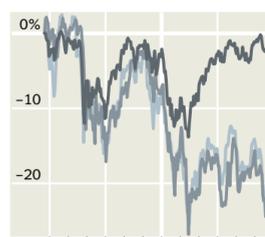
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FEDERAL RESERVE HINTS IT MAY DEFER RATE MOVES

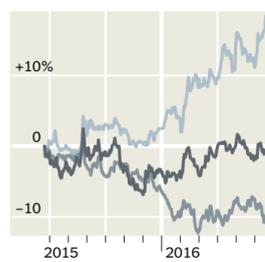
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STOCK INDEXES



INDEX	Value	Change	52-week
UNITED STATES S&P 500	2,087.38	+4.13	-1.1%
EUROPE Euro Stoxx 50	2,967.34	+24.46	-14.1
JAPAN Nikkei 225	16,169.11	+203.81	-19.9

CURRENCIES



CURRENCY	Value	Change	52-week
EURO €1 = \$1.13		-0.005	-0.7%
YEN ¥100 = \$0.96		-0.006	+18.1
POUND £1 = \$1.47		-0.002	-7.3

COMMODITIES



COMMODITY	Value	Change	52-week
OIL Nymex light sw. crude	\$48.33 a barrel	-1.04	-20.8%
GOLD New York	\$1,272.90 a tr. oz.	-15.60	+7.4
CORN Chicago	\$4.02 a bushel	-0.22	+11.7

Data as of 1600 U.T.C.
Source: Reuters
Graphs: Custom Flow Solutions

REUTERS BREAKINGVIEWS

Draghi wins a round, by a squeak

Germany has capitulated to the European Central Bank’s “whatever it takes” mirage. The country’s highest judges grudgingly agreed with a European Court of Justice ruling that a never-used E.C.B. bond-buying plan was legal. The verdict spares the eurozone turmoil. The power of the promise was always more psychological than practical.

The pledge by the central bank’s president, Mario Draghi, to buy bonds halted a crisis in 2012 by persuading investors to stop betting against weaker eurozone countries. While markets never tested this Outright Monetary Transactions program, German litigants argued that it breached the E.C.B.’s rules against monetary financing and blurred the line between monetary and economic policy. The constitutional court seemed to agree in an initial assessment in 2014 but also sought an opinion from the European court, which found the transactions program legal.

Had the courts found themselves at odds, a crisis could have erupted. Critics of Mr. Draghi’s policy in Germany would have seen it as proof that the eurozone was flouting national law. A rejection by

the German court could also have destabilized markets. The E.C.B. is currently buying up to 80 billion euros, or \$90.7 billion, of assets a month, but this program is shielded by its need to fight deflation. That defense might not always hold.

The German judges bowed only grudgingly to the European Court of Justice. They criticized the court for taking the E.C.B.’s word that the transactions program is a monetary tool, rather than a quasi-fiscal one. Its acceptance of emergency bond buying is also subject to the E.C.B.’s abiding by certain rules.

Some of these points are naïve. How, for example, is the need for governments to maintain market access defined? And a hard cap on purchases could weaken the transactions program. Yet as long as the program is legal and hypothetically possible, investors should assign value to it, government bonds will benefit, and the rules will go untested.

The German court has spared the eurozone a big headache, but also paid tribute to Mario Draghi’s ability to move markets.

NEIL UNMACK AND OLAF STORBECK

Bolloré’s recipe might not work with Ubisoft

Vincent Bolloré is a master of taking stakes in companies and slowly gaining influence over them. Through Vivendi, the French media conglomerate he controls, Mr. Bolloré did just that with Telecom Italia this year. He is playing a similar game with the video game maker Ubisoft. Vivendi now owns 20 percent and is seeking board seats.

Mr. Bolloré seems determined to make video games the third pillar of Vivendi’s music and pay-television empire. He recently took over the much smaller, mobile-centric company Gameloft — which was, like Ubisoft, founded by the Guillemot family.

Yet Mr. Bolloré’s usual playbook may not work well at Ubisoft. True, Ubisoft lags behind rivals like Activision Blizzard (once controlled by Vivendi) and Electronic Arts in profitability and digital sales. It’s not as adept at getting players to pay for extras. But it has come up with a plan to almost double its operating margin by March 2019. The Guillemot family, which owns 10 percent of Ubisoft’s shares and about 15 percent of the voting rights, is fighting hard to keep the company independent.

And it’s hard to see why minority shareholders, who own around 70 percent of Ubisoft, should welcome Vivendi. The company was a poor steward of video games: After it sold its majority stake in Activision in 2013, Activision shares soared. Mr. Bolloré can argue that Vivendi has fresh management, but Ubisoft’s new strategy has gained traction with investors. Ubisoft’s latest franchise, Tom Clancy’s The Division, is a hit. Meanwhile, giving Vivendi board seats would reduce Mr. Bolloré’s incentive to acquire all of Ubisoft at a premium. There aren’t obvious synergies with Vivendi’s other assets, either.

Mr. Bolloré will keep Ubisoft management on its toes. But Vivendi says it doesn’t plan to bid for Ubisoft, and with a market value of 3.7 billion euros, or \$4.2 billion, it’s a mouthful. A hostile bid for a talent-driven business like Ubisoft is risky, since the creatives could walk. In other words, Vivendi shouldn’t get too eager. FIONA MAHARG-BRAVO

REUTERS
For more independent commentary and analysis, visit www.breakingviews.com



Reporters outside the home of the actor Anton Yelchin, below. The car model that killed him in his driveway had known gearshift issues.

Jeep that crushed actor had been recalled

BY CHRISTOPHER JENSEN

The 2015 Jeep Grand Cherokee that rolled backward down a driveway and killed the actor Anton Yelchin early Sunday was a model that Fiat Chrysler had recalled for a gearshift issue that has confused drivers, leading them to accidentally leave the car in neutral when they think it is safely in park.

Los Angeles Police investigators and the carmaker said on Monday that it was too soon to determine the cause of the accident. But Mr. Yelchin was killed after he got out of his Jeep and it rolled down his steep driveway, crushing him against a concrete-reinforced mailbox, said a police spokeswoman, Lilianna Preciado.

Ms. Preciado said she did not know if the vehicle’s transmission had been in neutral. But Mr. Yelchin’s Jeep was part of a recall by Fiat Chrysler in April of almost 812,000 vehicles including the 2014 and 2015 Grand Cherokee models. That recall was prompted by an investigation by the United States National Highway Traffic Safety Administration, after complaints by car owners and reports of dozens of related injuries.

Fiat Chrysler has been a prime target of the government’s efforts to penalize automakers for lax safety practices. Last year, federal regulators accused Fiat Chrysler of failing to conduct recalls and complete repairs in a timely fashion, and hit the company with \$105 million in penalties. The safety administration released a statement on Monday



TONY GENTILE/REUTERS

evening saying, “This the first fatality we’re aware of that may be related to this safety defect and vehicle recall.”

The regulator also said it was “in contact with local authorities and Fiat Chrysler to understand all of the facts related to this tragic crash, including whether or not this was caused by the current issue under recall.” And it urged owners to “take extra care to make sure their car is in park and turned completely off before exiting” until their vehicles can be fixed.

It was not yet known whether Mr. Yelchin had been aware of that recall or the issue, for which the company has not yet come up with a remedy.

The affected vehicles use an unconventional lever to shift the automatic transmission. Instead of moving to a different position with each gear, the lever returns to a center position. The driver must look to make sure the proper gear is selected. In a statement on Monday, Fiat

Chrysler said that it would be premature to speculate on the cause, but that officials “will be conducting a thorough investigation of this tragic incident.” The automaker also said it “extends its deepest sympathies to the family and friends of Mr. Yelchin.”

When the recall was announced this year, the automaker said it was aware of 41 injuries related to the gearshift problem. After the April recall, Fiat Chrysler said in a notice sent to owners that “a permanent remedy for this condition is currently under development” and that the automaker hoped to “finalize” it by the fourth quarter. It warned owners, in the meantime, to use the parking brake and to always check to make sure the vehicle was in the correct gear.

Since the recall was announced, the agency has received at least eight additional complaints from owners of Grand Cherokees who said their vehicles had rolled away and crashed, although no injuries were reported.

This month, an owner from Bowling Green, Ky., wrote to the safety agency to report an incident in which his wife got out of the Jeep to take their 3-year-old child out of the back seat “and the Jeep began to roll away.” According to the owner’s account: “She ran and jumped into the driver’s seat to stop it and in the process her foot slipped from the brake to the gas pedal, driving the car through a house. Significant damage was done to the vehicle and the home, but no one was injured.”

Traveler’s forecast

High/low temperatures, in degrees Celsius and degrees Fahrenheit, and expected conditions.

C..... Clouds Sh..... Showers
F..... Fog S..... Sun
H..... Haze SS..... Snow
I..... Ice SN..... Snow showers
PC..... Partly cloudy T..... Thunderstorms
R..... Rain W..... Windy

	Wednesday	Thursday	Friday
	°C	°F	°C
Abu Dhabi	45/29	113/84	S
Almaty	22/14	72/57	Sh
Athens	34/25	93/77	H
Bangkok	33/26	91/79	C
Barcelona	25/17	77/63	S
Beijing	37/22	99/72	T
Belgrade	32/22	90/72	T
Berlin	25/15	77/59	PC
Boston	26/15	79/59	PC
Brussels	26/19	79/66	T
Buenos Aires	16/5	61/41	S
Cairo	39/24	102/75	S
Chicago	26/19	79/66	S
Frankfurt	26/16	79/61	PC
Geneva	28/17	82/63	T
Hong Kong	34/27	93/81	PC
Istanbul	30/23	86/73	S
Jakarta	32/25	90/77	T
Johannesburg	17/5	63/41	S
Karachi	34/28	93/82	PC
Kiev	29/19	84/66	T
Lagos	29/23	84/73	T
Lisbon	30/17	86/63	S
London	22/17	72/63	T
Los Angeles	28/16	82/61	PC
Madrid	36/19	97/66	S
Manila	32/26	91/79	T
Mexico City	23/12	73/54	T
Miami	32/26	90/79	T
Moscow	24/14	75/57	PC
Mumbai	31/26	88/79	Sh
Nairobi	20/13	68/55	T
New Delhi	38/28	100/82	PC
New York	29/18	84/64	S

