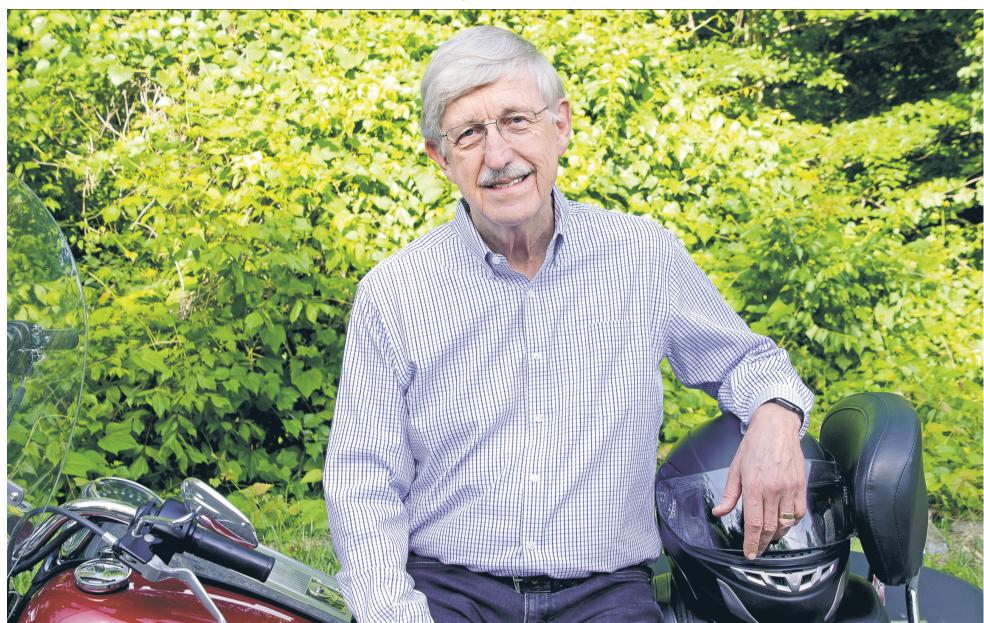
**C6** | Saturday/Sunday, August 8 - 9, 2020

## REVIEW



t takes no time for Francis Collins, the director of the National Institutes of Health, to recall the moment when he knew he wanted to be a scientist. "Tenth-grade chemistry class," he says over the phone from his home office in Chevy Chase, Md., where he has been working since most of the NIH campus in Bethesda, Md., shut down in March. Much of the science he had learned before then was "descriptive" and uninteresting, he explains—but for this class, students used experiments to figure things out. "It became clear to me that science is like a detective story," says Dr. Collins, 70. "If you're good at it, you'll discover something that no one ever knew before. What's not to love about that? I was hooked."

The stakes for Dr. Collins's detective work have never felt higher. As the head of a \$42 billion biomedical research agency, he is working 15hour days to help fight the raging Covid-19 pandemic. Coordinating public and private players to create faster tests, new treatments and a vaccine demands lots of Zoom calls, he says. "Getting different pharmaceutical companies at the same table as government officials is something I've done before, but it usually takes around two years to put together. In this case, it took two weeks," he says with a chuckle. The speed may be paying off. In Senate testimony in early July, Dr. Collins expressed optimism that there will be a vaccine "that works and is safe" by the end of the year.

But it is one thing to generate a groven vaccine in record time, another ≝ to produce enough doses and another still to get people to take it. Dr. Collins is alarmed that in a May poll by the Associated Press-NORC Center for Public Affairs Research, only around  $\Xi$  half of all Americans said that they

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# Francis Collins

During the pandemic, the head of the National Institutes of Health relies on both science and faith.

would inoculate themselves against Covid-19. "We could potentially save hundreds of thousands of lives," Dr. Collins says. "And yet so many Americans have been affected, or infected, by outrageous, outlandish conspiracy theories that have no foundation at all." He notes that the antivaccination movement, which has gained steam in recent years, is already responsible for the return of once-eradicated childhood diseases, such as a spike in measles cases last year. "This deep distrust does not serve us well as a nation that wants to have a bright future," he says.

To help inspire public confidence, Dr. Collins says that he and Anthony Fauci, the director of the NIH's National Institute of Allergy and Infectious Diseases, are working to broaden coronavirus vaccine trials to include people of different races, ages and risk profiles. "If we say it's safe, we need to make sure it's safe and effective for everyone," Dr. Collins says.

Such outreach is particularly vital since the pandemic has exposed deep health disparities in the U.S., further eroding public trust in the medical establishment. Black Americans, for example, are dying of Covid-19 at 2.5 times the rate of white ones, according to the Atlantic's Covid Tracking Project. "These are differences that have nothing to do with the biology of individuals but with health inequities that were already there," Dr. Collins

says. The NIH is now working to get more virus testing in high-risk neighborhoods, and he is involved in "serious discussions with senior leadership" at the NIH to figure out how best to address the medical legacy of centuries of racism. "You can't survey these circumstances without feeling a call to action," he observes.

Meanwhile, the U.S. death toll is approaching 160,000, with new Covid-19 cases surging across the

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country. Although other countries across Asia and Europe have found ways to allow businesses and schools to reopen without new outbreaks, many U.S. states are shutting down, and President Trump's reluctance to wear a mask helped turn mask-wearing into a contentious issue, "Americans are individualists," Dr. Collins says. "They are also people who have sacrificed when it's necessary, and at great personal cost. I think they're capable of doing that now, but they

are getting a lot of mixed messages from leaders."

Dr. Collins's extraordinary scientific credentials helped make him a rare top-level appointee from the Obama administration who has stayed on under Mr. Trump. A physician and geneticist, he helped isolate the gene for cystic fibrosis in the late 1980s and led the NIH's Human Genome Project to its completion in 2003, among other feats. Dr. Collins has managed to shield the NIH's budget from threatened cuts. (It helps, he notes, that Congress decides what gets funded: "In terms of our fortunes, we are much more dependent on the House and Senate than the White House.") Still, the increasing politicization of science distresses him. Science "is based on finding the truth," Dr. Collins says. "The idea that these answers are somehow more acceptable to one party or another is deeply troubling."

At a time when it can feel like he holds the fate of millions of people in his hands, Dr. Collins can still find "fun distraction" in a spin on his Harley-Davidson motorcycle, sometimes with his wife on the back. (Unfortunately, the pandemic has kept him from playing guitar with his band, the Affordable Rock 'n' Roll Act.)

He also finds comfort in his evangelical faith. "Even in a dark moment. I have some confidence that there's a plan," he says. A Bible sits on his office desk, and he finds it a source of

"anchoring and reassurance" when he arrives at 5 a.m. each day. He is particularly steadied by a verse in 2 Corinthians in which Paul hears God say, "My Grace is sufficient for you, for my power is made perfect in weakness." "I can't tell you how much that helps me when it is not clear what path to take," Dr. Collins says. "I can do the best I can, but if there's some weakness in me, that's OK."

Dr. Collins sees faith and scientific reason as natural complements, not adversaries. In his bestselling 2006 book "The Language of God" and elsewhere, he elegantly argues that science answers "how," whereas religion answers "why."

He arrived at his worldview while in medical school in his 20s, after witnessing the way faith soothed many of his dying patients. When one of these patients asked Dr. Collins what he believed, he was embarrassed to discover he had no answer. "It's the most important question that anyone ever gets asked, and I was utterly unprepared," he recalls. Reading C.S. Lewis helped persuade him that a belief in God is not just possible but rational. He says this perspective can leave him feeling somewhat lonely in both scientific and theistic circles, but this spring, it earned him the prestigious Templeton Prize, awarded to those who recognize the role science can play in probing the thorniest questions of the universe.

Dr. Collins attributes his optimism in part to his faith and the comfort he feels in knowing that "God is in charge." But working among selfless, devoted medical researchers also fills him with hope. "You can't be in this community without feeling grateful and inspired by the dedication and altruism that defines this work," he says. "It is nice to know when we wake up in the morning that we are doing something that matters."

### **MOVING** TARGETS

JOE QUEENAN

> It's time to get creative about what can be done remotely.

# Fishing, Acupuncture And Other Newly Virtual Jobs

**AMERICA SEEMS RESIGNED** to having a two-tiered workforce, where "knowledge workers" stay home and work via computer while the *hoi polloi* slave away in the trenches. If you are lucky enough to work for Google you can carry out your duties (whatever those are) remotely until next July. If you work for McDonald's—or the police force, or the hospital or the nursing home—you can't.

Or so it is widely assumed. But this is where the American people need to get creative.

Important jobs that we long thought could only be done in person can—with a little ingenuity—be accomplished remotely. A case in point: sheet rocking.

All through human history, good sheet rockers have been

almost impossible to find. But now, anyone sheltering in place can work on their shelters, with the help of remote sheet rockers. A sheet rocker can do good business by going on Zoom conferences and showing customers step-by-step how to expertly repair cracked walls and disintegrating ceilings. Yes, the sheet rocker has to be meticulous and patient. Yes, the clients have to possess minimal motor skills. But if everybody pays attention and does their job, there is absolutely no reason that sheet rocking cannot be done remotely. Try it! And the same for plumbing and basic carpentry.

Admittedly, guiding amateurs remotely is not an option for electricians and roofers; those jobs are too dangerous. One glance away from the screen

and it could be all over. And just because of the expensive, cumbersome machinery involved, lawn service companies are probably going to have to continue putting in a physical appearance for the foreseeable future. Large quantities of leaves simply cannot be blown remotely. Not yet.

But there are candidates beyond home maintenance. Contrary to popular belief, there is no reason that acupuncture cannot be done remotely, if clients are willing. The acupuncturist simply uses a sharpie on her lower back to show where the needles go in, and the patients can do the rest themselves. It's not magic. It's technique.

To foster the illusion that the acupuncturist is in the room

with the patient, it helps to have soothing, atmospheric music playing in the back-

ground: waterfalls, wind chimes, gongs. Scented candles will not work remotely; patients will have to provide their own.

In theory, people who ply their trade on the open seas have to leave the house to do their jobs. But an enormous amount of deep-sea fishing can be done remotely using robots. Most fish are not particularly hard to catch. Lobsters are a layup. With the aid of a reasonably priced aqua-robotic unit, most fishermen can haul in their catch from the safety and comfort of their living rooms. Obviously, this does not apply to anything that involves har-

After several unsuccessful experiments, it has become clear that bouncers and repo men cannot work from home. But other people who rely on their intimidating personalities can. Mobsters whose work involves leaning on slow payers

are just as scary on Skype as they are in person. They set up the virtual meeting, they invite all those behind on the juice or the vig to attend, they point to which leg will get broken if they don't pay up, and everybody goes home happy. Well, mostly everybody.

While we're on the subject of intimidation, what about dental hygiene? Cleaning teeth and gums is actually not that hard; it simply requires grit, persistence and a vindictive personality. Virtual teeth-cleaning can be accomplished via FaceTime with the dental technician patiently explaining to the patient how to safely manipulate a sharp surgical knife and peel away noxious tartar.

And because so many tough, suck-it-up-soldier dental technicians seem to derive perverse delight from the obvious discomfort of their patients, it is entirely possible that less painful, self-administered, non-sadistic virtual teeth cleaning may be the wave of the future.

But virtual root canals? Probably not.