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The Lab-Grown Meat Industry's Problem With Regulation? There's Not Enough.

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“We came up with the idea to use one feather, from the single best chicken we could find,” says the narrator of a [video](#) for Just, a Bay Area biotech company. Later, a handsome farmer pulls a white feather out of his shirt pocket and puts it in a test tube. It's a promotion for the company's new product: chicken grown in a lab. “You can take just a handful of cells, and keep growing them, essentially infinitely.” Fast forward to the company's research chef seasoning chicken nuggets at an outdoor cookout. A group of young people sit at a picnic table in a grassy backyard while a chicken wanders near their feet. They're eating nuggets, the video claims, made from the cells of that very chicken.

Just has been racing against other biotech start-ups toward a revolution in food science: meat that doesn't require slaughtering animals. By culturing chicken, pig, and duck cells, it's now possible to make chicken nuggets, chorizo, and duck à l'orange—and the products are getting closer and closer to tasting just like traditional meat. The technology holds the promise of being dramatically less land and water intensive compared to conventional animal farming. Just hasn't announced when their products will hit grocery store shelves, but competitor Memphis Meats [expects](#) to sell cultured chicken and duck by 2021.

But there's something that could stand in the way of this rapid progress: government regulation. Not in the way you might be thinking, though. The issue isn't too much regulation—it's too little.

This past October, Josh Tetrick, Just's CEO, sent a letter to Agriculture Secretary Sonny Perdue. He wasn't writing to complain about burdensome rules. Rather, his worry was that there were no clear regulations for his industry at all. “Companies pursuing innovative, sustainable meat technology,” he wrote, “need clarity about regulatory expectations and a defined path to market.” Without oversight from the federal government, it would be impossible to build up the brand—why would anyone feel safe eating the product? Anyone could claim to sell cell-cultured meat, make people sick, and sully the whole idea, bringing responsible companies down with them. And if they tried to just start selling their products, regulations be darned, they could be opening themselves up to a world of lawsuits.

At a public meeting a few weeks later, Perdue admitted the problem. “The industry,” he said, “is already ahead of us.”

The slowest thing in Washington, next to Beltway traffic at rush hour, is the regulatory process. For example, as Barack Obama left office, neither the Affordable Care Act nor the Dodd-Frank

banking bill—Obama’s two signature legislative achievements—had been fully translated into regulations, meaning that parts of the law had not gone into effect seven years after being passed by Congress. These delays are less the result of regulatory agencies dragging their feet than an ever-growing series of roadblocks, checkpoints, tolls, and drawbridges put in their way by elected officials convinced that federal regulations suppress job growth and innovation.

Since the 1970s, the fight against “job-killing regulations,” a phrase made famous by Ronald Reagan, has been a policy obsession of conservative and libertarian think tanks. The American Enterprise Institute went so far as to launch a magazine, *Regulation*, which may be the only publication devoted to trashing the thing it’s named after. (It’s now published by the Cato Institute.) Overall, the idea that regulations are bad for business is perhaps the only issue besides tax cuts that essentially every Republican agrees on.

This obsession has translated into policy: Over the past forty years, Congress and successive administrations have imposed a series of laws and executive orders, often sold on the grounds of making the process more “transparent,” that actually make it more cumbersome and easier for opponents to shut down. They have slashed agencies’ budgets, making it harder for them to do their job, and required that agencies subject proposed regulations to ever more stringent cost-benefit analysis—and have even created *other* agencies to review that analysis.

Donald Trump, a rebel when it comes to Republican dogma on subjects like trade, has long been a doctrinaire conservative on deregulation. On the campaign trail he said he would “cancel every needless job-killing regulation” and once in office added his own obstacle to the rule-making process: an executive order requiring agencies to cut two old regulations for every new one they create.

Adding hurdles to the regulatory process might make sense if, as conservatives claim, federal regulations are nothing but a drag on the economy. But, in fact, there’s little evidence for that claim, and much evidence that it’s dead wrong. A compilation of research edited by economists at the University of Pennsylvania and George Washington University showed that, on the whole, regulations do little to change the number of available jobs. Last year, when Alex Tabarrok, a prominent libertarian economist at George Mason University, set out to see whether the increase in federal rule making had impacted the rate at which businesses grow, he was surprised to find zero correlation.

That doesn’t mean regulations can’t be burdensome to comply with, or that they never cost jobs. But the flip side—and the reason that, on balance, there is no evidence that federal regulations suppress jobs and growth overall—is that regulations often make possible whole new industries that lead to more jobs and economic growth. It was a rule phasing out incandescent light bulbs that spurred the commercialization of alternatives, and now you can cheaply buy LEDs that last about twenty-five times longer than incandescent bulbs and are 80 percent more efficient. The profusion of finance apps like Betterment and Digit are the direct result of regulations that came out of Dodd-Frank, forcing banks to allow customers to give outside firms access to their account information.

The fact that new industries need regulations to grow, however, means that growth can stall when regulators can’t push out those rules in a timely manner. The commercial drone industry is a good example. The U.S. was an early leader in drone research, but the Federal Aviation Administration was painfully slow to give companies clarity on how they could test and sell their

inventions. So American start-ups, like the drone data platform Airware, began doing business in European countries that beat the U.S. to the regulatory punch. Google and Amazon started testing their products in Australia and Canada, respectively, and a company based in China became the clear leader in small commercial drones.

Cell-cultured meat would likely have an even bigger impact than drone technology. Booming global populations, rising incomes, and increasing demand for meat in countries like China and India mean that the world will need to produce 470 million tons of meat per year by 2050—an increase of more than 200 million tons per year from 2007. That will put pressure on the resource-intensive animal farming system we have now, which uses 660 gallons of water to make a single beef patty. As the planet sprints toward catastrophic climate change, animal farming alone accounts for nearly one-sixth of greenhouse gas emissions.

Lab-made meat could circumvent the factory farming and slaughter of billions of animals, a process that consumers increasingly find grotesque, and a cleaner process could result in healthier meat. (Several reports have found disturbing amounts of fecal bacteria in our meat and poultry.) And if companies can perfect cell-cultured fish—which Finless Foods, a San Francisco start-up, is working on—it could alleviate the decimation of fisheries, allowing consumers to eat overfished species, like bluefin tuna, without moral conflict.

One indication of the new industry’s potential is that the two biggest meat-processing companies, Tyson Foods and Cargill, have already invested. “If we can grow the meat without the animal, why wouldn’t we?” then Tyson CEO Tom Hayes said in an interview last August with Bloomberg. If these start-ups are successful in mass production, America could be the leader in selling cell-cultured meat to the rest of the world.

But Washington regulators may already be behind—not just behind the industry, as Sonny Perdue suggested, but behind other countries, too. The European Union added rules for cell-cultured products to one of its major food regulation laws back in 2015; the rules took effect in January 2018. Karin Verzijden, a lawyer for the Dutch firm Axon who advises companies navigating EU food regulations, says the European Commission “has followed developments in the industry and anticipated that this would be needed.”

While the EU has had a clear path to market in place for a full year, in the U.S., formal discussions between industry representatives and regulators didn’t even *start* until last July. Now, agencies are looking at a gauntlet of obstacles that could drag the process out for years.

The first quagmire was deciding which agency would actually do the regulating. The natural choice would have been the Food and Drug Administration, which already oversees cell-culturing techniques. But as with all innovation, there is an incumbent industry that stands to lose if the emerging lab-grown meat industry takes off: livestock ranchers. And in April of last year, that industry, represented by the National Cattlemen’s Beef Association (NCBA), wrote that it wanted the U.S. Department of Agriculture, an agency over which it holds considerable sway, to be the regulator of the cell-cultured meat industry.

Over the summer and through the early fall, the two agencies tussled over the turf. While the FDA made a public announcement laying claim to the industry, lobbyists successfully petitioned members of Congress to get language into a bill requiring the USDA to have oversight responsibilities. Finally, in November, the agencies made a Solomonic compromise: they would

share jurisdiction, with the FDA overseeing cell collection and growth, and the USDA overseeing production and product labeling.

Would it be harder for small start-ups to comply with the rules of two agencies instead of one? Probably. But after months of stalemate, this felt like progress. The industry rejoiced.

That was just the first obstacle, however. The next one is a “public comment” period during which citizens can send in their written concerns, all of which regulators are obligated by statute to review. Industry groups have learned to exploit this process by deluging agencies with thousands of comments. The first comment period was already extended once, and it may be extended again, said Danielle Beck, director of government affairs for the NCBA. Her organization is soliciting comments from its members. One clear bone of contention is how cell-cultured products will be labeled. The NCBA uses unappetizing variations on “fake meat” and “lab-grown meat product” to describe its new competitors, while some start-ups call their products “cell-based meat”—already a concession from their initially preferred “clean meat.”

Next, each agency will have to decide whether the regulations currently on the books suffice, in which case they can just issue “guidance”—detailed language on how to comply with the regulation—or whether they will need to craft a new set of regulations. If they choose the former, industry could conceivably have the regulatory foundation it needs by the end of this year, though it might take longer. If the agencies decide that new rule making is required, however, a whole new set of procedures kicks in. Economists, lawyers, scientists, and other experts must be convened to offer their input on potential regulations, after which the agencies issue a notice of proposed rule making. Cue another statutorily obligated comment period.

Then, after the rule is reformulated based on feedback, it may have to go through the Office of Information and Regulatory Affairs (OIRA), which, among other things, would review the agency’s economic cost-benefit analysis. Studies have found that, since 1981, the amount of time it takes OIRA to review a rule has increased from less than ten days to about two months—before factoring in the weeks or months of extra time regulatory agencies invest to bulletproof their rules against expected OIRA objections. All told, the process could take years.

Regardless of whether agencies go with guidelines or rule making, the end result will be vulnerable to lawsuits. If a group wants to argue, for example, that a guideline is actually acting as a rule, they could take the agency to court—and the federal judiciary is packed with anti-regulatory judges. Half of the judges on the Court of Appeals for the D.C. Circuit, the body most likely to hear cases against federal agencies, were appointed by Republican presidents, with more likely on the way. If the court tosses out a rule, the agency typically goes back to square one. That’s what happened to Obama’s Education Department when it finalized rules in 2011 designed to cut off federal funding for lousy vocational colleges whose graduates earn so little they can’t pay back their loans. The for-profit college industry sued repeatedly, necessitating redrafts of the rules, which finally went into effect in the last weeks of the Obama administration. (Trump’s education secretary, Betsy DeVos, has refused to enforce the rule—for which she, in turn, is being sued.) The looming possibility of lawsuits is a big reason why agencies take so much time drafting the rules in the first place.

Right now, cell-cultured meat companies are optimistic. Most are still a year or two, if not more, from commercializing their products, so there is time for Washington to get its act together and provide a solid regulatory framework. The danger is that if the process drags on, the companies

will move some or most of their operations to countries that already have one. Just CEO Josh Tetrick said regulations are one factor among many, but that “having a regulatory framework that’s clear and rational and science based” would play a role in “where we might want to move manufacturing in the future.”

That’s a worst-case scenario. But when it comes to contemporary Washington, it’s folly to ignore worst-case scenarios.