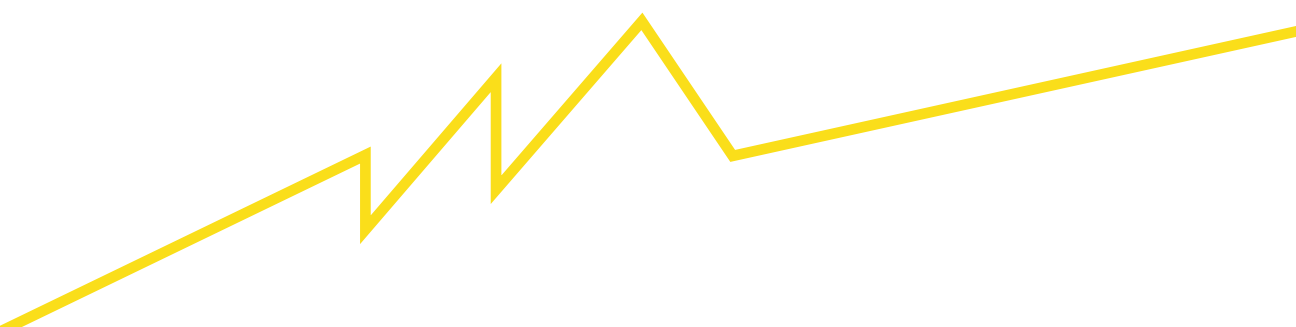


TRUTH'S

STATISTICS AND THE MANIPULATION OF DEMOCRACY

EMPIRE

REPORTING BY CUTTER WOOD



THIS IS A STORY ABOUT money and statistics, and it begins with three nuns. In the early morning hours of June 14, 2016, in General Rodríguez, a suburb west of Buenos Aires, a man named Jesús saw someone park outside Our Lady of Fatima and begin throwing bags over the convent's white concrete wall. June meant it was almost winter in Argentina. The jacarandas over Evita's grave had long since dropped their purple blossoms. The dogs along the highway had begun to look more gaunt. It was cold, and the windows of the buses rumbling down Avenida San Martín were steamed over with the moist heat of the bodies inside. Jesús, thinking of the three Carmelite nuns who lived behind those white walls, did what any neighbor might do and called the police. Just outside the convent's door was a closed-circuit television camera, its angle giving it a slightly fish-eyed view of a small exterior vestibule, floored in red tile and well-lit, with an archway leading out into the night. It was shortly after 3 A.M. when a figure stepped through that archway and out of the darkness.

Smallish, with thinning hair and the broad, beaked face of an owl, he wears an athletic leisure sweater and a pair of sneakers, and in his hands he held a number of duffels of various sizes, as well as an oblong object, black and misshapen. These he left by the convent's door before disappearing back in the direction from which he came. The door then opened a crack, revealing the figure of a crouching nun whose hand snaked out to bring the bags inside. A few moments later, the man returned carrying yet more bags. Along with the nun, he disappeared into the convent, and for roughly an hour and a half they were gone from sight. The camera recorded only that doorway, the night sky, the strange black object lying on the ground.

About half past four, the man emerged again, striding off in the direction of his car, and it was at this moment that the police, having found their way to the scene, encountered him. The confrontation occurred off camera, but he first told them, according to allegations later made in court, that he was a church official. When this failed to allay their curiosity about the timing and circumstances of his visit, he instead offered to pay them \$1 million to forget or ignore the encounter, his presence at Our Lady of Fatima. They declined. Three agents enter the frame soon after, and though its contours are still difficult to make out in the muted grainy world of CCTV, in the real world occupied by flesh-and-blood human beings, it was at this moment that



the oblong object, still lying neglected outside the convent door, must have become painfully obvious to all present: a black SIG SAUER automatic rifle, complete with scope, light, bipod, and a magazine not quite entirely full.

The duffels, as police shortly discovered, were stuffed with shrink-wrapped bundles of bills in various currencies—dollars, mostly, but also euros, yuan, pesos, and even, bizarrely, two Qatari riyals. All told (the damp bills took twenty-two hours to count) there was roughly \$9 million. This alongside the sort of expensive trinkets—iPhones, fat metal wristwatches—that, with their promise of appointments to be kept, lunch reservations to be made, are de rigueur for a certain set of business-minded individuals. The man with the intense owl-like stare, the business-minded individual in question, was José López, secretary of public works under Argentina's previous president, Cristina Fernández de Kirchner.

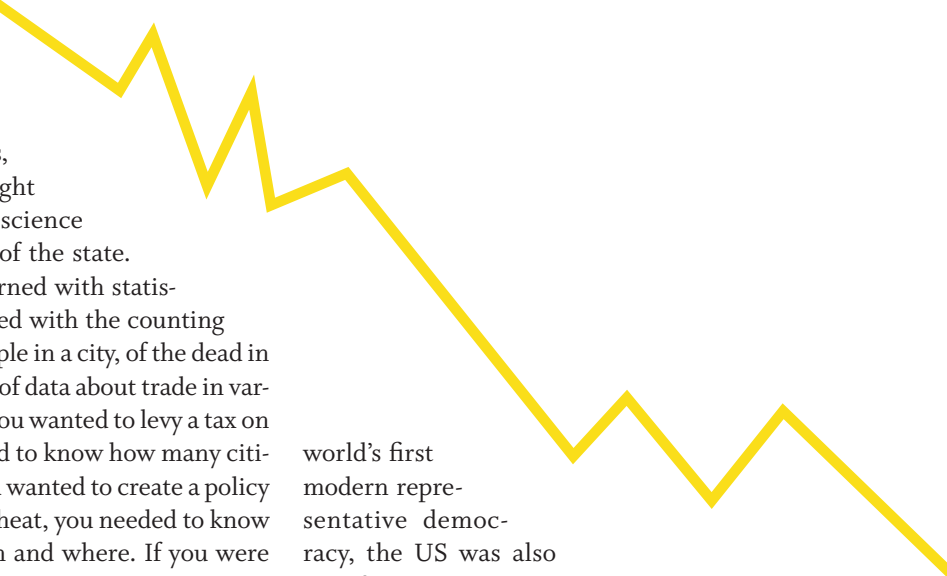
The news of López's arrest, and the circumstances surrounding it, dominated headlines the next day and for many days after. It was said that he was "un hombre muy bueno pero estaba medio loco" (the nun's perspective). It was said that he was a stooge for the ex-president. It was said that it took three guards to wrestle him into the courtroom for his arraignment. It was said that he'd chosen for his defense attorney a sometime cumbia singer, that he'd been unable to remember his own birthday, he was absolutely insane, and heard voices (the cumbia singer's perspective). A lot was said, in other words, about López and the three nuns, and so on the day following López's arrest, June 15, 2016, hardly anyone noticed when El Instituto Nacional de Estadística y Censos (INDEC), Argentina's national statistical agency, did something it hadn't done for nearly a decade: presented accurate data on the cost of consumer goods in Buenos Aires.

STATISTICS, IN ITS MOST elemental sense, is the collection and analysis of data, and depend-

ing on how strictly you define the parameters, it's been around for a while. The collection of data has been a part of human history for as long as human history has been recorded. Writing was invented by the Sumerians not for odes or novels but as a way of keeping track of grain production. Likewise, it is believed that the Incas developed their *quipu*, a device used to encode data in knotted strings, first as a means of bookkeeping. Statistics, albeit in a nascent form, has often gone hand-in-hand with the development of civilization. The Romans, while renowned for their roads, were also some of the first great census takers. Devotees of the Gospel According to Luke will recall that Jesus was born in Bethlehem not to fulfill a prophecy but because Mary and Joseph were on their way to register for the census.

The term *statistics*, conveniently, is derived from the Latin word for *state*, and prior to the

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last few hundred years,
it was generally thought
of as that branch of science
devoted to the study of the state.

When one was concerned with statistics, one was concerned with the counting of populations (of people in a city, of the dead in war) or the collection of data about trade in various commodities. If you wanted to levy a tax on a province, you needed to know how many citizens there were. If you wanted to create a policy about the import of wheat, you needed to know how much was grown and where. If you were debating a counterattack against an enemy, you wanted to know how many men were still alive on the other side of the hill. Sun Tzu's *Art of War* is not a statistical manual, but it reads like one in places. The first step in assessing a situation is measurement, he says, followed by estimation, calculation, and balancing of chances.

Relatively recently, statistics also came to include not just the collection of data but also the use of that data to provide predictions about the future, and in this respect, over the last few hundred years, it has recently merged with that branch of mathematics devoted to the study of probability and begun to play a role in the larger life of the sciences. As acclaimed mathematician John von Neumann said, "The sciences do not to try to explain, they hardly even try to interpret, they mainly make models." For instance, a scientist might model the interactions of gravitational fields at a Lagrangian point, or they might model the effects of a trade war with China on the rural populations whose economies rely on agricultural exports. These models are simplified representations of underlying phenomena, and the operative thing to remember is that the relationship between a model and the truth is often a statistical one: We privilege one model over another by calculating how well it corresponds to the data we gather about the world. Truth, as a scientist once told me, is a statistical phenomenon.

It was with the founding of the United States that statistics took on a central role not just in the affairs of the state but also in establishing the legitimacy of the government itself. As the

world's first modern representative democracy, the US was also the first government to have a statistical operation, the census, embedded in its founding documents. To apportion those representatives of each state in the legislative branch of government (and to tax the citizens of those states), it was necessary to count who was where, and so the census, for all its banality, has been an utterly crucial aspect of our self-governance. So central was it, in fact, that the first census, in 1790, was carried out by US marshals, and the returns were submitted directly to the president.

Over the past two hundred-plus years, the United States has evolved a statistical infrastructure as vast in the scope of its work as it is dizzying in its acronymage. If you want to know how much of the country is powered by coal and how much that coal costs, you rely on information produced by the Energy Information Administration (EIA). If you want to know the literacy rate, you look to the National Center for Education Statistics (NCES). The life expectancy for your given demographic comes from the National Center for Health Statistics (NCHS), and research-and-development (R&D) expenditures come from the National Center for Science and Engineering Statistics (NCSES). There is, seemingly, hardly an assemblage of random letters that does not signify some statistical entity, but this is hardly to say that these organizations don't conduct absolutely vital work. We have grown accustomed to the fact that we can always find the unemployment rate or the average cost of renewable energy, and we don't realize that the most quotidian

acts of our lives—taking out a loan for a station wagon, receiving a cost-of-living increase in our paychecks—have in many ways been made possible by these armies of statisticians.

The statistical infrastructure of a country is similar to a very complex and sensitive machine. It has many interconnected and interdependent parts, each deeply enmeshed in some aspect of everyday life. To keep the whole machine running well, each of these components must be maintained with great care, which is to say that it only takes one fool to mess everything up.



THE STATISTICAL TROUBLE

in Argentina started more than nine years before José López parked outside Our Lady of Fatima. It started in early 2007 when a statistician at INDEC, Graciela Bevacqua, the Technical Director of the Consumer Price Index (CPI), produced a report. Bevacqua oversaw the process of compiling the prices of hundreds of common household goods in the greater Buenos Aires metropolitan area. Each month, these prices were used to calculate the percentage change in average cost from month to month, a task somehow both maddeningly difficult (prices in the city sometimes change so rapidly that vendors have recently begun using electronic price tags) and eminently dull (one can only tabulate the changing cost of dandruff shampoo so many times before an abyss begins to yawn in the soul). In early 2007, using these data, Bevacqua produced a report showing that inflation stood at around 2.1 percent for the month of January. (Nota bene on the significance of that number: Through the power of compounding, 2.1 percent monthly inflation turns into around 28 percent annual inflation, meaning that if you had a salary of 100,000 pesos in January, by December it would only be worth about 78,000, and a year later it would be worth 61,000. To put it another way, with inflation that high, certain economic activities central to the way we live modern life become blandly impossible. Taking

out a mortgage to buy a home involves playing an interest-rate lottery; life insurance becomes laughable when the payout in fifteen years might just cover the cost of a small sandwich. To put all of this into perspective, the inflation rate in the United States for the whole of 2019 was 2.3 percent.) And of course, to complicate this further, inflation has been Argentina's particular bugbear for most of living memory, and the number 2.1 percent, with all its promise of higher and higher inflation, itself promised to drive a further devaluation of the currency, leading to yet higher inflation.

This was a presidential election year in Argentina's political cycle. Néstor Kirchner, to the surprise of many, had chosen to forgo reelection and instead support his wife Cristina's bid for the presidency. Monthly inflation of 2.1 percent was never ideal; in an election year, it was a politically untenable proposition. Faced with the crisis, stemming as it did from a complex host of interconnected social, political, and economic forces, Kirchner tasked a minister to address the problem at its source, INDEC. This minister, with a professional bureaucrat's flair for grasping complexity, first attempted to manipulate the prices of the goods surveyed as a way of disguising the actual rate of inflation. When this failed to have the desired effect, he chose the next most expedient option, replacing Bevacqua and a number of other INDEC employees and reorganizing the office so that it reported directly to him.

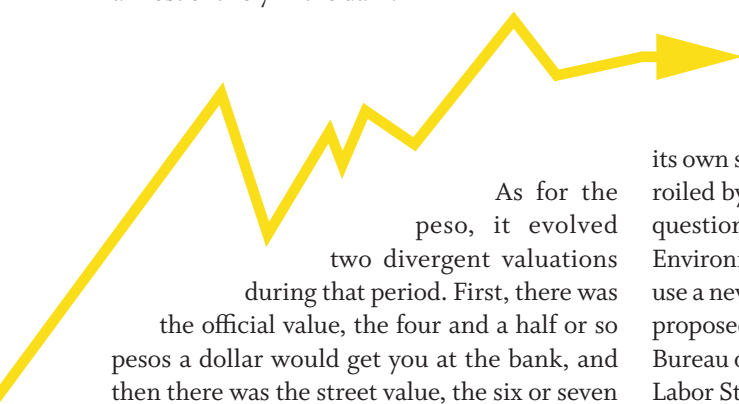
The most immediately notable result of these organizational shifts was that in October of that year, the people of Argentina selected as their next president Cristina Fernández de Kirchner, colloquially known by the acronym CFK. The less immediately notable result, though one that has perhaps had a greater impact, was that from that point on, through both of CFK's terms in office (she won reelection in 2011), the inflation rate stayed strangely low. Because that rate featured into a host of other calculations, there were also knock-on effects in the estimation of other figures. The gross domestic product became suspect. In 2012, the *Economist* decided the country's official figures

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weren't worth printing. In 2013, for the first time in fifty years and only the second time in its history, the International Monetary Fund censured Argentina for tampering with its statistical data. The poverty rate, which of course was closely tied to the cost of consumer goods, became so unhinged from reality that INDEC finally stopped calculating it at all.

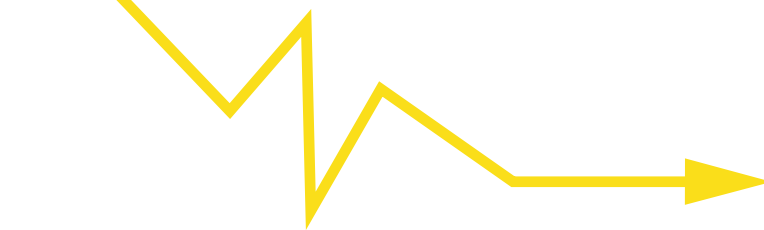
Eventually, the nation's statistical infrastructure was left entirely up to independent organizations. Unions began to use their own inflation data as they negotiated wages. A number of economists began calculating inflation rates as well (always far higher than the government's rates), though they were then fined by the government. Meanwhile, those without recourse to any of this information—tenants signing new leases, divorced mothers litigating child-support payments—were forced to rely on the government's figures, which is to say they were operating almost entirely in the dark.

end of CFK's final term in December 2015 (the peso's black-market value then stood at around ten US cents), when the center-right Mauricio Macri took over, that one began to have a sense of just how much damage had been done. After campaigning on a promise to restore transparency in the economy and independence to INDEC, Macri allowed the peso to "float," the economist's term for letting a currency determine its own value on the market without manipulation. In June 2016, when INDEC—for the first time in almost ten years—published accurate data on consumer prices, the annual inflation rate stood around 35 percent and the peso was trading at fourteen to the dollar, though one could have deduced something similar from the fact that of the \$9 million in López's possession, only a minuscule percentage was in Argentina's own currency. At that point, pesos weren't worth stealing.



As for the peso, it evolved two divergent valuations during that period. First, there was the official value, the four and a half or so pesos a dollar would get you at the bank, and then there was the street value, the six or seven or eight or sometimes even nine pesos a dollar would get you from one of the countless black-market traders downtown. It was not until the

ALL OF THIS IS IMPORTANT now because the United States is at this moment descending into its own statistical crisis. The Census Bureau was roiled by the proposed addition of a citizenship question on the 2020 census. Scientists at the Environmental Protection Agency were asked to use a new air-pollution model. The White House proposed consolidating the Census Bureau, the Bureau of Economic Analysis, and the Bureau of Labor Statistics under the control of the Department of Commerce. The Department of Transportation proposed a realignment of the Bureau of Transportation Statistics, placing it under the



organization's policy-making arm. Budget cuts were proposed across the board. None of this made for exciting news—if statistics has a hallmark, it is its banality—and the most defining feature of the crisis has been just how difficult it is to write about in a way that doesn't send the average reader into some sort of acronym-induced coma.

The appearance of COVID-19 has changed the nature of that statistical crisis, however. Underfunded agencies like the Bureau of Labor Statistics and the Census Bureau have seen responses drop dramatically during the pandemic, meaning that basic data on unemployment and home ownership are becoming suspect. Due to an inadequate number of daily coronavirus tests, epidemiologists and policymakers lack essential data as they try to address the pandemic in the United States, and the state-by-state patchwork approach to gathering these numbers has meant that there are limitations to the data we do have.

To understand where this path of compromised statistics leads, one only has to see what life has been like for the last few years in Argentina. In 2018, unprepared for a historic drought and blindsided by a rout in emerging markets, then-president Mauricio Macri was forced to turn again to the International Monetary Fund, even though many in the nation still blame it for the country's prior economic woes. Macri secured the largest loan in the Fund's history, a \$56.3 billion behemoth, but as part of its guarantee, the loan required the implementation of severe economic-austerity measures. Government budgets and subsidies were slashed; meanwhile, real wages fell and the poverty rate jumped. The cliff, as it turns out, does not disappear just because you close your eyes. Ten years ago, a dollar got you four pesos. Today it gets you seventy-four.

THERE IS, THOUGH, ONE BRIGHT note. It was presumed that the \$9 million in José López's posses-

sion was part of a larger corruption scheme, one that perhaps went to the highest levels of government. For two years, however, he steadfastly refused to cooperate with law enforcement, and without his cooperation, the investigation languished. Then, in early 2018, the newspaper *La Nación* received eight notebooks from an anonymous source. They were not fancy. They were composition books of the sort an elementary school student would use, and they were filled with a cramped schoolboy script. The paper began publishing those notebooks, and since then Argentina has seen a parade of corruption arrests and confessions unlike any in its history, involving ex-ministers taken from their homes still dressed in pajamas and executives rushing to strike plea bargains. All told, more than one hundred businesspeople have been indicted, alongside former government officials and CFK herself. The snowballing of the investigation has even finally convinced López to break his silence.

The notebooks themselves belonged to a man named Oscar Centeno, the driver for an official in CFK's administration, and on page after page of notebook upon notebook, he recorded where he had driven that official, which executives they met, the weight of the cash they picked up, and where they delivered it. They were, in other words, a very basic data set from which a very old and simple story could be deduced—government officials were taking kickbacks for awarding lucrative construction contracts. It was the sort of clear data every statistician dreams of, and the very fact of the notebooks' existence and their power does offer some hope for the future of statistics. So large is the Empire of Truth, as Sir Thomas Browne noted, the Devils themselves are daily forced to practice it. ■

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