Angus Deaton

On deaths of despair, randomized controlled trials, and winning the Nobel Prize

IMAGE: COURTESY REBECCA WILCOX

When Angus Deaton was an undergraduate in mathematics at the University of Cambridge, he found that the other students were better and more serious mathematicians than he was. He found his attention wandering from his math studies. He later recalled that his advisor, concerned by his lack of focus, finally told him to "take up what they clearly thought of as a last resort for ne'er-do-wells, a previously unconsidered option called economics."

Roughly a half century later, in 2015, Deaton was awarded the Nobel Memorial Prize in Economic Sciences — recognized, in the words of the committee, "for his analysis of consumption, poverty, and welfare." Yet in some respects, the work leading to his Nobel Prize was but an opening act: Within a few weeks of the announcement of the award, he would release news-making research that uncovered a disturbing trend in U.S. mortality. He and economist Anne Case, his wife and Princeton colleague, found that the death rate of White middle-aged Americans, unlike those of other demographic groups in America, had been rising. Case and Deaton attributed the trend to "deaths of despair" — that is, deaths from suicide, drug overdoses, and alcohol.

Others have recalculated Case and Deaton's numbers and argued that the post-1999 increase followed a different curve than they described, but it appears to be generally agreed that the mortality of non-Hispanic middle-aged White Americans increased after 1999 — following a long trend of improvement — and never returned to its previous lower level. Black Americans, Deaton says, have since joined the unhappy company of the people for whom he and Case sounded an alarm in 2015, with deteriorating mortality from deaths of despair.

Deaton has also researched, among other topics, the determinants of health and the extent of poverty in the United States and elsewhere. His most recent book, *Economics in America: An Immigrant Economist Explores the Land of Inequality*, was published in October by the Princeton University Press; NPR's Planet Money blog has called it "sort of like Alexis De Tocqueville's classic *Democracy in America*, but with more numbers, more economics, and more vitriol."

A native of Edinburgh, Scotland, Deaton was knighted in 2016 for his services to economics and international affairs.

David A. Price interviewed Deaton by phone in October.

EF: You and Anne Case were the first to consider deaths from suicide, drug overdoses, and alcohol together as "deaths of despair" and to report that these deaths had contributed to a turnaround in longtime mortality trends. You found that deaths of despair were a major factor in an increase in mortality for non-college-educated middle-aged White Americans starting around 1999. How did your work on deaths of despair originate? What was the detective story behind it?

Deaton: First, I would like to cut a little bit through the controversy. Some people don't like the use of the term "deaths of despair," but there's no doubt at all that the trend of progress — falling mortality rates — stopped for certain people in America in the late 1990s. Drug overdoses are very important, alcohol deaths are very important, and suicide is also a big number, though not as big as the other two. It's also clear that the decline in cardiovascular disease was the main driving force behind increasing life expectancy in the end of the 20th century. That decline has halted for large groups of people.

One of the things we discovered from the very beginning was these rising deaths were happening among people who didn't have a four-year college degree. I don't think anyone disputes that. Mortality from cardiovascular disease is actually rising among people without a four-year degree and is continuing to fall among people with a four-year degree. I don't think that's really disputed, either. A lot of these facts are laid out in our recent Brookings Institution paper.

As for the detective story, Anne and I spend a month or so in Montana in the summers. In the summer of 2013, we were working on different things at different ends of the same room

in a companionable way. I was working on suicide, and I was interested in the question of whether suicide and happiness were correlated geographically. It turns out they are not much actually, which is somewhat surprising. And Anne, who has long suffered from chronic lower back pain, was looking at pain statistics and had noticed there were big rises in pain while I was noticing a big rise in suicide.

The second step was that we wanted to put the suicide rise in the context of all-cause mortality among the people we were looking at, White non-Hispanics in middle age. That's when we discovered the mortality rates for White non-Hispanics in middle age were rising.

That seemed to us like a stunning finding. We thought we must have made a mistake. We thought something like that does not happen to a major group of the population without everybody knowing about it. And so we spent a lot of time checking, and we didn't find anything wrong with our numbers. So we assumed this must be in the literature somewhere.

What was actually in the literature was the fact that Black mortality rates and White mortality rates were converging; the gap between Black and White Americans was going down. That was a very welcome sign, given American history. What no one seemed to have noticed — or if they noticed, they didn't say it — was that that wasn't just because Black mortality rates were falling; it was because White mortality rates were rising, at least in this middle-aged age group.

We also discovered that this increase in the three most rapidly rising causes of deaths — suicide, drug overdoses, and alcoholic liver disease — was happening specifically among people who didn't have a four-year college degree. It's worth remembering that, today, less than 40 percent of the adult population in the U.S. has a college degree. So this was not like a bad thing that's happening to just a few people.

That work has continued. The Brookings paper is basically about the four-year college degree people versus the others and showing how that gap in adult life expectancy, which is life expectancy at 25, is widening and has widened very rapidly, even before the pandemic.

I don't think anyone can dispute those data. Now, how they came about, there's certainly much more controversy over that. Some people object to us lumping these three things together and calling them "deaths of despair." And that, in the original paper, we didn't identify the important slowdown and subsequent reversal in mortality from cardiovascular disease. And our view that they come from despair is obviously an interpretation. Nothing on a death certificate that says this person died of despair; that's not a classification of death.

What we've tried to tell — most fully in our book *Deaths of Despair* — was that the disintegration, the deindustrialization of America, the decline of unions, the increasing powerlessness of working-class people has left them in a fairly desperate strait. Whole towns have closed; social life has been disrupted. We were highly drawn to these long-term changes in people's lives and the narrative of what causes suicide. Suicide seemed like the key part of this because if it's suicide and suicide stands as a metaphor for these other things, and remember that the line between suicide and overdose is often hard to discern, then despair does seem like the right metaphor.

But other people take a different view. One of the critiques has been that the drug overdose deaths are much bigger than suicides and that "all" that is going on is a drug epidemic. The drug overdose crisis started as Big Pharma selling drugs without concern for the consequences. Then that initially legal drug epidemic turned into an illegal drug epidemic once the doctors and the pharma companies pulled back and people substituted heroin for OxyContin and then fentanyl for heroin. Once the pharma companies stopped supplying it, the demand didn't go away. The drug dealers were waiting outside the pain place saying, "Your doctor won't give you any more OxyContin? I've got something cheaper."

But this doesn't take away from the importance of the larger economic picture. You don't get drug epidemics out of nowhere, even when you've got a pharmaceutical company on the loose. There have been few or no similar epidemics in Europe, for instance. And if you look historically at when there have been terrible epidemics, there was one during the American Civil War, which didn't go away until the early years of the 20th century. There was a huge epidemic in China during the Opium Wars brought on by unscrupulous British drug dealers enabled by the British government at a time when the empire was disintegrating. And there are other examples where mass drug overdoses seem to be a symptom of social decline and dysfunction rather than the cause of it.

EF: What is underlying the despair behind these developments? Is it mainly a matter of declining wages? Is it inequality?

Deaton: I believe the central issues are deindustrialization — globalization moving jobs to China — and industrial automation. And the social destruction,

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which we economists are not very good at taking into account. We worry about jobs and income, but we don't worry much about social relations, and we tend to think that even if some people are losing out, other people are gaining more, because that's what trade theory tells us. We think the people who lose will get up, go somewhere else, and get better jobs. And it doesn't really seem that that was happening.

Regarding wages, it's certainly true that if you look at real wages, the inflation-adjusted median wage for men without a bachelor's degree is lower now than at any time in the 1980s. And even if it's perked up recently in the last year or so, that tends to happen in good times and then in the slump it goes back again.

But our thesis isn't about declining wages at a particular moment in time. We think of this as a slow-rolling catastrophe, not a sudden one. In our book, we have a graph of deaths of despair before, during, and after the great financial crash. As it turns out, you don't see anything; they were rising before, during, and after the crash at much the same rate. I think the parallels are more like going back to the Gilded Age or something when labor was on the rocks and working people were being treated very badly. It took 30 years to get some of that changed.

To be sure, material living standards are hard to measure. One of the advantages for us is to say, OK, maybe it's hard to measure living standards, but a large group of people is dying in droves. We regard that as an indicator that something desperately wrong is happening.

EF: You've argued that health insurance is an issue here.

Deaton: Right. Workers who are below the Medicare age or not qualified for Medicaid get their insurance mostly through their employers. And that's a flat tax; essentially, the CEO's health policy costs about the same as his or her driver's health policy. For the driver, that could be half of his or her wages. So this destroys working-class jobs.

Angus Deaton

■ PRESENT POSITION

Senior Scholar, Princeton University School of Public and International Affairs

■ SELECTED ADDITIONAL AFFILIATIONS

Dwight D. Eisenhower Professor of Economics and International Affairs, Emeritus; Senior Scientist, Gallup Organization; Research Associate, National Bureau of Economic Research

■ EDUCATION

Ph.D. (1974), University of Cambridge; B.A. (1967), University of Cambridge

EF: You and Anne Case suggested in *Deaths of Despair* that domestic outsourcing, or contracting out, has played a role. In what way?

Deaton: If you put a flat tax on everyone, as we do with our structure of health insurance, that's going to do terrible things to the bottom of the labor market, including a drive to contract out.

Suppose on day one, somebody is a janitor, let's say, for Ford Motor Company, and on day two, the person's job has been outsourced to a cleaning company. From the worker's point of view, that's bad for a number of reasons. First of all, the wages might not be quite as good, because there was probably a certain amount of rent sharing in large corporations. Also, you're less likely to have health care benefits because outsourcing firms are often structured to avoid paying those.

The other thing is that the in-house people may not be the ones getting the jobs. I don't know any documented evidence for this, but we talked to a CEO whom we mentioned in the book about what happened when their health people came along and said the premiums would be going up 40 percent the following year. In response, they basically got rid of all their low-wage staff and brought them in from outside. According to the CEO, a lot of the new people were illegal immigrants. That is widely believed, though as I said, I have seen no evidence on whether it's true on a large scale.

Another issue is that there are lots of stories of people working their way up from the factory floor or the mailroom. When I was a kid, and we were pretty poor in Scotland, if you got a job with a big company, you thought you were sort of made for life — in part because even if it was a lowly job, if you had the talent, you might work your way up. That's just not possible if you're being outsourced. You're not part of the company anymore.

EF: Has there been a parallel trend in deaths of despair for Black Americans?

Deaton: We should step back to the Black Americans. This is very important because we've been criticized a lot for ignoring them. And the truth is that when we wrote the first paper in 2013, none of this was happening to them. Only later did it come to the Black and Hispanic communities, too. So there has been a parallel but delayed trend for Black Americans, whose mortality rates from suicides, drugs, and alcoholic liver disease are going up. Their picture today looks much more like that of Whites than they did before. And within the Black community, there's the same division between people who have a college degree and people who do not.

I think the most likely explanation is that Black Americans are much less likely to trust the health care system than Whites are. There's also literature on pain that suggests that some physicians don't treat Black patients' pain as seriously as they treat White patients' pain. And so Black communities were not swamped with opioids the way that Whites' were. So the discrimination against Black Americans saved them from this epidemic for a while,

but then when it moved to an illegal epidemic with people selling drugs on the streets, Black and Hispanic communities were no longer exempt.

EF: Much of your work has been in the area of development. In your new book, *Economics in America*, you wrote that your views of foreign aid and of your own personal charity have evolved over the years — in particular, that you've moved away from "cosmopolitan prioritarianism." Please explain.

Deaton: If you try to find out what an economist believes philosophically, they will say it's utilitarianism. What they think that means is diminishing marginal utility, and maybe it does. And so there's a widespread belief in economics that poorer people deserved our attention more than less poor people, because an extra dollar given to someone who is really poor would do more good than an extra dollar going to someone who already had plenty. Philosophers nowadays call that "prioritarianism," meaning people who have the lowest level of well-being are the ones who deserve the most at the margin.

The other dimension is "cosmopolitan," meaning you apply this idea across the whole world, without paying attention to national boundaries. Many do seem to embrace cosmopolitan prioritarianism, in which you metaphorically line up everybody in the world from worst off to best off and you prioritize the people at the bottom — without regard to where they are.

I certainly believed this for a long time, and I spent many years consulting for the World Bank where this view was strongly held. But I now think it's wrong for a number of reasons, which I talk about in the book. One of them is that national boundaries really do matter. I'm a Scotsman, for one thing, and we Scots believe we're different and we like some Scottish traditions; if Scottishness were to vanish in a cosmopolitan sludge, as it were, I think that would be a loss to the world. Not everybody believes that, but I think a lot of people do believe that about their own country.

National boundaries matter in other ways. You pay taxes in America, or I do. We have an obligation to serve in the military in certain age bands if we're called upon to do so. We accept obligations for other people in our country, which we don't accept for other people outside the country. So whether we like it or not, we're locked in this tangle or this system of reciprocal obligation, which we may not like and we may not necessarily agree with. But nevertheless we pay our taxes.

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So that means that there are certain things that we have to pay attention to domestically. Our fellow countrymen, whether we care for them because we feel like them or not, we have a responsibility for in terms of our taxes and welfare systems, such as they are, and so on. So that's part of it.

The other part is my suspicion, and this is deeply controversial, that some of the poorest people in America are every bit as poor in terms of overall well-being as the people in Africa or India or wherever the aid agencies like to hold up in front of us. And again, that's not just money. It's living in a functional society with societal supports.

For instance, if you read some of the ethnographic literature about the Mississippi Delta, there are horrible things going on there in people's lives. I don't know how to estimate those in terms of numbers, because we don't have very good tools for that. But I do challenge the idea that there's no global poverty in America. So I am increasingly drawn to a form of domestic prioritarianism in which I worry a lot about others in my country who have the least.

EF: You have argued for consumer price indexes that give price-level changes by region. Why is that important?

Deaton: If you have $15,000 a year, let's say, you could live quite well in Manhattan, Montana, in a way that you couldn't possibly live in Manhattan, New York, for instance. And we don't have any variation in our poverty lines in the U.S. that takes account of that. My argument is that we should have purchasing power parity exchange rates, as it were, between different places in the U.S., just as the eurozone, even as it has a single currency, has price indices for different countries. The statistical agency Eurostat spends a lot of time calculating those.

The argument against that, I suppose, would be, well, if you're free to move, why does it matter? But it's pretty easy to think of reasons why that could not happen. So I think as a first order, if we're measuring poverty or we're measuring living standards, we should be taking into account what things cost in different places.

EF: You have expressed skepticism about the use of randomized controlled experiments and natural experiments in economics. This has been an area of a lot of excitement within economics. Why are you skeptical?

Deaton: How many hours do you have? I think people have gotten carried away a little bit in that we got tired of standing up in seminars and people

challenging our identification assumptions, and so this seemed like a way out of this. But I'm not entirely sure it solves as many problems as its proponents suggest.

There are a lot of statistical issues, which are less simple than they appear. In the old days, we used to say here's a regression and here's a bunch of regression diseases. There's a bunch of randomized controlled experiment diseases, too, which can get in the way.

People seem to think if you randomize — if you have two groups picked at random and one gets the treatment and one doesn't — they say the only difference between the two groups is the treatment. But it's dead wrong. When I used to teach this class, I would say, if I pick one of you at random with my eyes shut, and I pick another one with my eyes shut, does that make you identical? Of course not. You could argue that's a large-sample or small-sample thing: If you pick a million people at random, then on average, they're going to be the same in the two groups. And that's true. But we don't know how big it really has to be. And a lot of the experiments are pretty small. So it could be that the two groups you're looking at are different at random but still different.

The other thing is that randomization can't control for things that are the same in the two groups. That's the external validity issue. One of my co-authors in the field of randomized controlled trials, the philosopher Nancy Cartwright, has an example that I like to give. There is famous work that Ed Miguel and Michael Kremer did on worms and deworming. They gave deworming pills in Kenya, and the kids who got the deworming pills did much better in school. Nancy lives in Oxford, and she said, "I have my granddaughter living with me and she's not doing very well in school, so now I know what I should do, which is I should give her deworming pills, right?" But somewhere between Kenya and Oxford, the pills stop working.

So then, why and where? Of course, what's on the line is there has to be worms or there has to be lack of sanitation or people are not wearing shoes or something, which is never in the experiment, because everybody in the experiment doesn't have shoes. Or everybody in the experiment is walking around in an unsanitary field or something, and that's not what you get in Oxford, so it's not going to work there. But you have to know what these conditions are if you're actually going to use those results. So sometimes these little experiments are not much more than anecdotes. You don't really know what to take away from them.

To paraphrase Bertrand Russell, you need a deeper view of the structure of reality. You can't solve these things by experiments; we've thrown away all these structural models and in many cases for good reasons, but you can't do without that. You need some formal structure on which to hang these things. And within that, randomized controlled trials could certainly play a role, too.

EF: Much of your work in development has focused on household survey data. What inspired your interest in this approach?

Deaton: I was a visiting professor at Princeton in 1979-1980. For tax reasons, it was advantageous to stay out of Britain for 12 months. And my contract job with Princeton was for nine months. I knew some people who worked in the World Bank, and they said to come to work there for the extra three months. So I did.

They had some data from Sri Lanka. They said, you're an econometrician, do you want to play with these? And I said OK. It turned out to be interesting. Also, I've always been interested in welfare, consumption, savings, all these things. I had never worked with cross-section data before, or very minimally. And at that time, there wasn't all that much work on micro cross-section data, so it was fun.

I tend to be fairly fickle in my research interests. I like playing with shiny new things and often they reveal hidden truths. So I have spent a lot of my life either collecting or analyzing household survey data.

It's actually something I worry about a lot, because in the U.S., our poverty measurement system has been under attack, and the poverty measure was never very well thought out to start with. Maybe we can't measure poverty in America in a way that attracts any consensus anymore or maybe it was always too hard.

We're seeing that elsewhere in the world, too. We've always been a bit suspicious about data that comes out of China, and people have evolved ways of trying to deal with that. But now India isn't making its household survey data available. So the poverty monitoring in India, which I spent a lot of my life trying to do and trying to improve, is now not credible either.

EF: What's it like to win the Nobel Prize?

Deaton: It's a lot of fun. You spend a week in Stockholm in the winter. It was a very mild winter when I was there. We ate a lot of herring. You get treated like royalty, which is an unusual experience for most of us. You know, you get out of the door of the airplane and whisked through customs and there's a driver who stays with you for the week.

For me, the thing that was most completely unexpected was that you could invite friends and family. So I could invite people I'd worked with over the years. And I was the only one of the laureates that year who had grandchildren. So my grandchildren became sort of national celebrities, because they were much cuddlier than the laureates themselves. As my guests, they got invited to the Nobel banquet; they got to be part of the festivities. It was like a family holiday, which was not something that I was expecting. And so it's really a magical thing. To be recommended. **EF**