

## IN MEMORIAM

# The Fruits of a Failed Dissertation

## ED CLARKE 1939-2013

◆ BY IKE BRANNON

With the recent announcement of the 2013 winners of the Nobel Prize for Economics came the sad news of the passing of Ed Clarke, who likely was on the award's short-list. While Clarke is virtually unknown to the public—and even many of his fellow economists—he is well-known to the Nobel Committee members, who referenced his path-breaking contribution to the discipline when awarding the prize in previous years.

Clarke conceived of the idea of “revealed demand,” which became a crucial part of the corpus of public choice economics. Put simply, he postulated that many of the perceived market failures that supposedly indicate the need for government provision of some good or service at no fee, with taxpayers at-large financing it, could instead be paid for by consumers who actually benefit from the investment. The implication is that such goods as roads, bridges, tunnels, and airports (and sports stadiums, as this magazine has taken pains to point out) can often be financed by those who use them—and if they can't be financed that way, then perhaps they shouldn't be built at all. Clarke's work also came to have important implications for all manner of government auctions involving such goods as spectrum and oil leases, and later came to be relevant to the ubiquitous Internet auctions.

The Nobel Committee cited his research when it awarded the 1996 Economics Prize to William Vickrey for his work on what has come to be known as “Vickrey auctions” (in which the winning bidder in a sealed-bid auction is obligated to pay the amount of the next-highest bid). Vickrey's work paved the way for the peak-

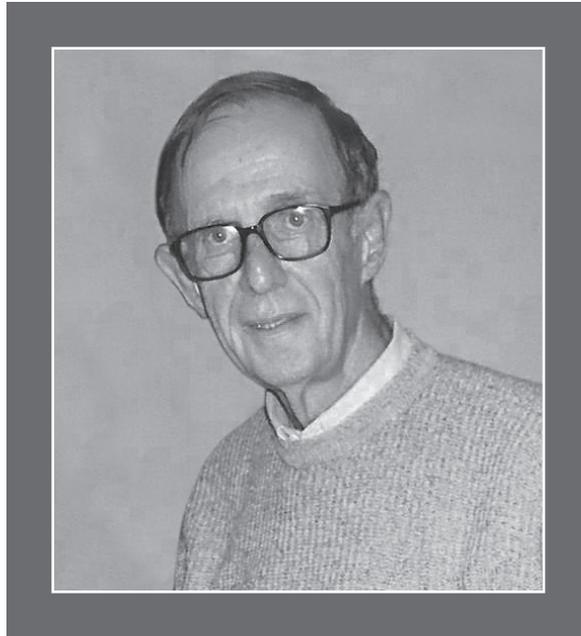
load pricing models used across the world (though they are rarely used in the United States) to reduce congestion on highways and at airports. James Buchanan, who won the Nobel in 1986, often remarked that Clarke's work contributed to the canon of public choice economics just as much as his own.

The juxtaposition of Clarke's significant contributions to economics and the obscurity in which he toiled are revealing—a manifestation that the efficient market theory for which the Committee honored the 2013 winners does not yet apply to the market for economists.

### THE CLARKE AUCTION

Clarke's graduate work at the University of Chicago focused on how the market could be used to finance some of the goods and services that taxpayers traditionally paid for. Governments do all kinds of things for the citizenry, justifying many of those activities by claiming that they are public goods. A public good is one that the market would supply at a suboptimal level because the good is non-excludable, meaning that many consumers can “free-ride” on other consumers who do pay for the good. The result of this free-riding is that less money is paid for the good overall, and a less-than-optimal amount of the good is therefore supplied to consumers.

The common examples of public goods typically given are roads, bridges, and tunnels, because historically it has been costly to collect a user fee for those goods from each consumer (a problem that technology has now largely solved with devices like EZ Pass). However, even if a fee could be collected at zero additional cost, there could still be socially efficient infrastruc-



ture investments that would not be made because the cost would not be recovered.

For instance, what if the total consumer surplus from building a new bridge outweighs its costs, but there is not a uniform price that can be charged that would generate enough revenue to pay for the bridge? Clarke offered an example of a community with three voters that is contemplating building a bridge that would cost \$3,000 to construct. Voter 1 is willing to pay \$1,500 to build the bridge, Voter 2 is willing to pay \$1,000, and Voter 3 is willing to pay \$750. That is more than enough to cover the construction of the bridge, but if we can't charge people close to the price they are willing to pay and are forced to charge a single price to all users, tolls alone can't pay for the bridge because at a price of \$1,000, Voter 3 won't use the bridge. Hence the bridge would not be built, even though the aggregate benefits from building it would exceed its costs.

To overcome this problem, Clarke conceived of an auction mechanism that would allow the market to pay for the bridge by achieving something close to perfect price discrimination. In this example, each voter confidentially expresses how much he or she would be willing to contribute to build the bridge. If the sum of the bids covers the cost of the bridge, then the bridge is built and the bidders are charged their submitted amounts; if not, then the project is forgone. The worry, of course, is that people will underbid, hoping that they can get away with some consumer surplus. To eliminate that incentive, Clarke would have each voter's offer evaluated to determine whether or not the bid's existence would change the outcome. For instance, suppose there is a Voter 4 who expects to never use the bridge and who thus might only bid \$1. It's unlikely that dollar would determine whether the bridge is

built, and so it's ignored by the analysis and Voter 4 would not be charged \$1 if the bridge is built. However, some larger bids *would* change the outcome, and so if the bridge is built, the bidders would be obligated to pay their bid amounts—thereby covering some of the smaller expected benefits of other voters like Voter 4.

To appreciate the genius of Clarke's proposal, consider what would happen if Voter 1 were to submit a low-ball bid of just \$1,000: the bridge would not be constructed and the voter would lose out on his gains from having the bridge. On the other hand, if Voter 1 submitted an excessive bid of \$3,000—above his expected gains—to ensure the bridge is constructed, then he would end up unhappily paying more than what he expects to gain from the bridge. Thus, the Clarke auction disincentivizes both overbidding (because bidders don't want to pay more than they expect to benefit) *and* underbidding (because voters don't want to risk a meritorious bridge project falling through so long as they are guaranteed not to pay more than their bid). In this way, Clarke auctions are superior to Vickrey auctions.

### LEAVING CHICAGO

Clarke's work solved a decades-old problem that was considered unsolvable by many respected economists, including Nobel laureates Paul Samuelson and George Stigler. Stigler was Clarke's adviser at Chicago; however, after reading Clarke's dissertation, Stigler was unconvinced that he had solved the problem and refused to give him a doctorate for the thesis. Clarke had a young family to support and could not spend another couple of years in graduate school developing a new dissertation, so he left Chicago without the degree.

## IN MEMORIAM

His first job after graduate school was in the White House, where he was point man for Nixon administration treasury secretary George P. Schultz (himself a former University of Chicago economist) on the administration's recently implemented, now-infamous wage and price controls. Neither Clarke nor Schultz liked the controls and they struggled to come up with ways to lessen their impact.

With an office in the West Wing, Clarke found the job daunting at first, remarking that during his first month he would return home each night exhausted and thankful that no one had yet caught on to the fact that he had no business working in the White House.

Soon after he arrived in Washington, he was introduced to Henry Paulson, an assistant of Nixon domestic policy adviser John Ehrlichman and later treasury secretary for George W. Bush. Clarke and Paulson would meet for coffee each morning and discuss the price controls and other goings-on in the White House. A few months after becoming acquainted, Paulson came in to Clarke's office and leveled with him: the Watergate crisis would soon metastasize into something that would take down the president, put people in jail, and ruin careers. Paulson planned to escape the administration for Wall Street, but he promised to help get Clarke a job in government that was far away from the White House. Clarke took the deal and decamped to the Office of Management and Budget, where he spent most of his career, with pit stops along the way at the Council of Economic Advisers, the U.S. Agency for International Development, and the Woodrow Wilson Center.

A few years after leaving Chicago, economists began to recognize the importance of Clarke's doctoral research. A few notables took it upon themselves to point out to Stigler—who was then being mentioned as a possible Nobel recipient—that Clarke was also thought to be a possible recipient and that if Clarke were to receive the prize for an idea Stigler rejected as a dissertation topic, it might take some of the sheen off Stigler's reputation—as well as the University of Chicago. Stigler relented and Clarke finally was awarded his doctorate in 1978.

By then it was too late to help Clarke's academic career; the chance for a sinecure at a top university had all but disappeared, as he had spent most of his professional life trying to nudge government policy in the right direction rather than writing academic papers.

**Demanding better analysis** / Clarke retired from OMB in 2004, where by all accounts he excelled. After spending his early years helping to implement airline deregulation, he spent the latter part of his career analyzing regulations. In the close-knit world of regulatory economists he became a leading authority, possibly

doing as much there to tamp down government overreach as he achieved with his early research. He was a leading voice within the regulatory world for the need for better analysis of proposed regulations, and his unquestioned intellectual authority and genial personality helped push the ball in that direction.

One example illustrates his sway: In the early 2000s the U.S. Environmental Protection Agency embarked on a quest to dramatically increase the value it assigned for each life saved via regulation.

The higher the value, the greater the estimated benefits of a proposed regulation and the easier it becomes to implement more regulations, the *sine qua non* of a regulator. The EPA commissioned a plethora of studies that estimated the value of a statistical life using various methods, of which the agency cherry-picked a handful of high estimates to justify using a value range (\$7.5–\$9 million) far in excess of what the overall body of work in this area would support.

Shortly after the EPA boosted its value, officials at the federal Department of Transportation informed the OMB that they intended to increase their agency's value to the EPA's level. Clarke studied the issue and asked me to help him put together a short analysis. Duly armed, he then called the DOT's chief regulator to say that he felt the agency's current value was the correct one based on his research. I was on the call and waited for the regulator to push back or simply announce that the agency would go ahead and increase the value anyway, as the OMB had no legal authority to stay the DOT's hand. Instead, the regulator thanked Ed for studying the issue and said the agency's value would remain at its current level. "If Ed spent some time looking at it, we know he got the right answer," he told us. Such deference to an oversight authority doesn't come easily from a regulator.

### THE FRUITS OF RESEARCH

The marketplace of ideas isn't perfect. It can take a long time for brilliance to be discovered, and the people who reap those fruits aren't always the same who planted the seeds. Clarke's research helped pave the way for governments across the world to privatize previously public assets, allowing them to be run more efficiently and inexpensively, and contributed to the explosion in auction markets that we see in commerce today. As a government economist, he also played a leading role in the deregulatory efforts of the 1970s and served as a leading light in those efforts for the rest of his career.

It is a shame he never got the acclaim and academic recognition he deserved. But the people who knew and worked with Ed realize that he did more to advance the cause of limited government and economic prosperity than nearly any other economist of his era. **R**



# the CATO JOURNAL

AN INTERDISCIPLINARY JOURNAL OF PUBLIC POLICY ANALYSIS

“Exceptional in consistently publishing articles that combine scholarly excellence with policy relevance.”

—MILTON FRIEDMAN

**C**ato Journal is America's leading free-market public policy journal. Every issue is a valuable resource for scholars concerned with questions of public policy, yet it is written and edited to be accessible to the interested lay reader. Clive Crook of *The Economist* has called it “the most consistently interesting and provocative journal of its kind.”

Cato Journal's stable of writers constitutes a veritable Who's Who in business, government, and academia. Contributors have included James M. Buchanan, Richard Epstein, Kristin J. Forbes, Milton Friedman, Robert Higgs, Vaclav Klaus, Justin Yifu Lin, Allan H. Meltzer, Charles Murray, William Niskanen, Douglass C. North, José Piñera, Anna J. Schwartz, and Lawrence H. White.

Three times a year, Cato Journal provides you with solid interdisciplinary analysis of a wide range of public policy issues. An individual subscription is only \$22 per year. *Subscribe today!*

## SUBSCRIBE TODAY— BY PHONE OR ONLINE

For more information call (800)767-1241 or visit [www.cato.org/cato-journal](http://www.cato.org/cato-journal)

Save more with multiple years	1 YEAR	2 YEARS	3 YEARS
Individuals	\$22	\$38	\$55
Institutions	\$50	\$85	\$125

