the art of LAW AND
In his essay "How I Work," Paul Krugman points out that the increasing formalism of modern economics leads most graduate students in economics today to acquire the necessary mathematical skills before they enter graduate school.\(^1\) I strongly suspect the converse holds as well: the student who lacks a technical background will be deterred from choosing a career in economics. This was not always the case. Like Krugman, I came to economics from a liberal arts background, picking up technical skills as needed both during and after graduate school. My journey, however, was more circuitous and unplanned than Krugman's. That I ended up a professor of economics and law is the outcome of an unlikely chain of events.

I started out as an art major at the High School of Music & Art in New York City. Although art majors also were required to take the standard fare of academic courses, it was not a strenuous academic program, and it was possible to do reasonably well without much effort. The emphasis was clearly on the arts, and many graduates went on to specialized art and music colleges in the New York area. I ruled that out since I was only an average art student. I also experimented with architecture in high school. But here I fared no better and decided not to pursue it further, in part, because my closest friend had far more talent than I.\(^2\)

When I entered Columbia College at seventeen I was not well prepared for its demanding academic program (which remains largely intact to this day). I had a good background in the arts but undeveloped study habits. Playing tennis and piano, frequenting jazz clubs and just hanging around Greenwich Village with my high school friends held my interest more than studying Western civilization and humanities. But in one respect Music & Art taught me a valuable lesson. It impressed upon me the importance of being creative and imaginative in one's work. I have carried that lesson with me throughout my academic career. I strive to be imaginative both in my choice of topics and my approach to them. Rarely have I come up with a topic by sifting through the economics literature or scouring footnotes hoping to find loose ends to tidy up. I have often stumbled upon a good topic while preparing my classes, participating in seminars and workshops, auditing law school classes, talking to colleagues or just reading the newspaper. The trick is to recognize what one has stumbled upon, or as Robertson Davies wrote in his last novel: "to see what is right in front of one's nose; that is the task..."
my early training as an economist

I took my first economics course in my junior year at college. Two things still stand out in my mind about that course. One was that little effort was made to show that microeconomics could illuminate real world problems. I and my classmates came away from the course believing that the assumptions of microeconomics were so unrealistic that economics couldn't have any bearing on real world problems. The other was the professor's condemnation of advertising as a monstrous social waste, a view shared by most of the economics profession at that time. By default, I became an economics major in my senior year at Columbia and took courses in public finance and money and banking, and a seminar for economics majors. After graduation I went to work on Wall Street at a brokerage firm producing colorful charts (my art background helped) tracking the movements in earnings per share, net working capital, etc. of different companies in the hope that I or one of the senior members of the research department could detect likely trends in stock prices. I soon realized that school was more fun and challenging than work, so after four months on Wall Street I returned to Columbia on a part-time basis. My intention was to get a master's degree in economics and ultimately work for some government agency. Becoming an economics professor or even getting a Ph.D. was not on my radar screen.

Columbia had pretty much an open door policy, admitting large numbers of students and letting Darwinian survival principles operate. There were always a few exceptional students at Columbia who went on to get their doctorates in four or five years but most didn't survive. They either got a master's degree or lost interest after a year or two and dropped out. (At the other extreme, Columbia was also home to a number of professional students who had been around for ten or fifteen years working on a thesis they were unlikely ever to finish.) After my first year of graduate school, in which I continued to work half-time on Wall Street, I realized I had a talent for economics and asked to be admitted to the doctoral program. The chairman of the department looked over my grades and pronounced that "my prognosis was good" and so I became a full time doctoral student.

Success in graduate school requires brains, sustained effort and hard work. Exceptional success at Columbia required a little luck as well. Luck to be plucked from the mass of students by a great economist and placed under his wing. I was lucky.

In the spring semester of my second year at graduate school, I audited Gary Becker's course on human capital, which covered his still unpublished manuscript on that subject. This marked the beginning of my training as a real economist. To be sure, I had already been in graduate school for over a year. Yet, for the first time, I began to appreciate that economics was more than just a set of formal tools but a way of thinking about interesting real world problems. I began to understand the advantages of simplifying and descriptive unrealism, and how a person with imagination could develop a simple model to illuminate a real world problem. Such models provided an approach to thinking systematically about public policy and law. Instead of saying policy X was good or fair, one could use economic principles to spell out the consequences of that policy.

During my third year at graduate school, I completed my course requirements, audited Becker's price theory course, and passed my comprehensive oral examinations. For three or four months before the oral exams I was part of a small group of students (we called ourselves "Becker Bombers") who met regularly to review questions from Becker's prior exams and problems from Milton Friedman's soft cover textbook. Working through this material made it clear to me the difference between knowing economics and thinking like an economist. The former comes from mastering the language and formal principles of economics that are found in graduate textbooks, and articles in professional journals. The latter from applying these tools with varying degrees of sophistication to solving problems. The particular problem might be a conventional economic one (e.g., will a price ceiling on lumber lower the price of new construction) or a problem not ordinarily viewed as an economic one (e.g., does law protecting privacy lead to more unconventional behavior). Any problem involving competing goals and choices constrained by limited resources and available opportunities is fair game for economics. The problem need not involve explicit markets or observable prices for one can derive shadow prices that function like market prices. Frequently, simple economic concepts applied in an imaginative way yield subtle insights. All this may sound commonplace today but thirty years ago it was not. It is a tribute to Gary Becker's pioneering efforts that we now take for granted that the domain of economics is not confined to explicit markets but is a "way of looking at life."

My next stroke of good luck was quickly settling on a dissertation topic. Becker proposed that I study whether state fair employment laws improved the economic position of nonwhites in the United States. I eagerly agreed both because I wanted to work with Becker and the topic was intrinsically interesting. I started out by developing a model to explain the likely effects of fair employment laws on the income, unemployment, and occupational choices of nonwhites. Here I added sanctions against firms that discriminated against nonwhites to Becker's theory of discrimination. I assumed that an employer violating a fair employment law faced a probability rather than a certainty of being caught and a sanction if caught. The greater the probability and the greater the sanction, the greater the cost of discriminating and the more likely the employer would increase its demand for nonwhite relative to white workers. Thus, I had a thesis that not only lent itself to imaginative modeling (by using the expected utility model to analyze law enforcement) but was capable of answering empirically an important public policy question.

Developing a model was the easy part compared to carrying out the empirical analysis. Acquiring empirical skills requires a good deal of "learning by doing." Graduate school had not prepared me for the many months I would have to spend meticulously gathering data state-by-state from census volumes, calculating state averages by race for earnings, years of schooling and other variables, fitting Pareto distributions to open ended Census intervals, and collecting data from state fair employment commissions on the number of prosecutions, enforcement expenditures, sanctions and so forth. I was my own research assistant and I carried out most of these calculations on a mechanical calculator that frequently jammed. Fortunately, computers make it possible today to avoid this kind of tedious work although I don't have the impression that this has increased the frequency of empirical dissertations in economics.
getting started in law and economics

In its broadest sense, “law and economics” is coextensive with a large part of the field of industrial organization. Both cover, among other things, the study of the legal regulation of markets including economic analysis of the business practices described in antitrust cases. These cases provide a rich source of material on such practices as tie-in sales, exclusive dealing, vertical restrictions and information exchanges among competitors. Both fields also include research on the theoretical and empirical consequences of different types of government regulations and laws. Thus, a recent issue of the Journal of Law & Economics (a leading journal in both industrial organization and law and economics) includes articles by economists on the anticompetitive effects of most-favored-nation clauses, the effects on stock prices of regulatory drug recalls, the performance of the airline industry under deregulation, and the impact of collective bargaining legislation on labor disputes in the public sector. For my purposes, however, I want to define law and economics more narrowly. I want to limit it to what is called the “new” law and economics, a field which essentially began with Ronald Coase’s article on social cost over thirty years ago and where most work has been carried on in law schools rather than economics departments.

The “new” law and economics applies the tools of economics to the legal system itself. It uses economics to explain and illuminate legal doctrines in all fields of law including the common law fields of torts, contracts and property, intellectual property, corporate law, bankruptcy law, criminal law, and the legal process itself (e.g., the effects of fee shifting statutes, discovery rules and legal precedent on litigation). The “new” law and economics is not limited to areas of law that only impact explicit markets. It is a theory of both the legal rules themselves and their consequences for behavior. The former is the more controversial of the two. It treats legal rules and doctrines as “data” in order to test the hypothesis that the law is best explained as efforts by judges, often implicitly, to decide cases as if they are trying to promote economic efficiency.

I got started in the “new” law and economics by chance rather than by any well thought out plan to work in this area. Shortly after finishing my thesis on fair employment laws (the “old” law and economics) I came across a newspaper article on plea bargaining in criminal cases. The article pointed out that only a small fraction (probably less than five percent) of criminal defendants actually went to trial. The rest pleaded guilty, often to substantially reduced penalties, I showed that if the parties agreed on the probabilities of winning and losing at trial, they would always settle (unless they had strong preferences for risk) because each party’s utility from a settlement would be greater than his expected utility from a trial. Further, trials would be more likely to occur when the parties were mutually optimistic (i.e., each party believed he had a greater probability of winning a trial than his opponent believed), were risk preferrers, where the cost of trials were low relative to the cost of reaching a settlement, and where the stakes in litigation were greater (for that magnified the difference in expected outcomes for mutually optimistic parties). My paper also has implications for law enforcement for I showed that criminals as a class could be made worse off by plea bargains even though any particular offender was made better off by avoiding a trial (a true prisoner’s dilemma) because settlements freed resources that enabled the prosecutor to pursue more criminals.

I presented a preliminary version of this paper in 1967 to the labor workshop at the University of Chicago. At the time I was an assistant professor in the economics department at Chicago. My talk was not greeted with much enthusiasm. After, one of my senior colleagues in the department took me aside for some friendly advice. He said I was making a career mistake by doing research on problems like the courts that were only of marginal interest to other economists. Professional success, he emphasized, required working on problems of the latest interest to other economists. I asked him how one knew what was of the “latest interest.” He replied that one could gauge interest by seeing what problems other economists were currently working on. In short, see what your colleagues are working on and try to take it a step further. I decided to ask Gary Becker what he thought (though I sus-
pect I already knew what he would say). Becker had just finished his paper on the economics of crime, and one of Becker's students, Isaac Ehrlich, was completing a thesis at Columbia on the deterrent effects of conviction rates and sanctions on crime. Becker disagreed with my Chicago colleague. His advice was simple: law enforcement and litigation are interesting and important social issues that can be illuminated by economics; don't worry so much about whether your work is part of the latest fad in economics; and ultimately good work will be recognized. Fortunately, I listened to Gary Becker.

In 1968 I moved from Chicago to New York City to accept a fellowship at the National Bureau of Economic Research, and a year later I joined the NBER's research staff. The Bureau formally established a program in law and economics in 1971 which was funded by a grant from the National Science Foundation. The program included Becker, myself, Isaac Ehrlich, and Richard Posner (then professor at the University of Chicago Law School and now chief judge on the U.S. Court of Appeals of the Seventh Circuit). Adding Posner filled a critical hole in the program. In order to apply economics to areas of law other than crime and the courts we needed some expertise in law. Posner seemed ideal. He had a strong interest in economics, had already published several widely regarded papers in antitrust, and was starting to apply economics to torts and judicial administration.

It should be mentioned that the early applications of economics to law at the NBER (pre-Posner) and elsewhere required almost no knowledge of law. This was true of Becker's paper on crime, Ehrlich's pioneering studies of deterrence and law enforcement, and my own work on the courts, the bail system, and plea bargaining. That this should be so is not surprising. We were economists applying the theoretical and empirical tools of economics to the systematic study of enforcement. To be sure, we had to develop some basic understanding about the relevant legal terms and institutions under investigation, but that requires far less knowledge of law than becoming familiar and comfortable with legal rules and doctrines in order to analyze them from an economic standpoint.

an economist on a law school faculty

Although the Bureau provided a superb research environment, it could not match the intellectual excitement of the University of Chicago. Chicago was home to the economists I most admired—Becker, Coase, Friedman, and Stigler. Plus it offered me the opportunity to work more closely with Posner. So in 1973 I eagerly accepted a tenured appointment at the University of Chicago Law School. The Law School had a long tradition of having an economist on its faculty starting with Henry Simons, Aaron Director, and Ronald Coase. When I arrived Coase was still an active member of the faculty but taught only an occasional course. Still my appointment was somewhat unusual. I was genuinely interested in explaining legal rules and doctrines from an economic perspective. Coase was not. He believed that knowledge of law and legal institutions was valuable because it helped one understand how explicit markets truly worked. But Coase had little interest in showing, for example, that the various legal doctrines governing liability for accidents or contract damages had an implicit economic logic. It is one of the ironies of law and economics that the person whose pioneering work (cited by the Nobel committee) provided the foundation for the subject has been less enthusiastic about its development. Coase believed that much of law and economics was outside the domain of economics and that, in any event, lawyers rather than economists were better suited for the enterprise. Most law professors went even further. They believed that lawyers would fail in explaining law from an economic perspective.

At the few law schools with an economist on their faculty in the 1970s (as opposed to a law professor who happened to have a graduate degree in economics), the economist was hired to teach price theory, co-teach with a law professor a course on business regulation such as antitrust and serve as a resource to the few law professors who thought economics might have something to contribute to their particular area of law. The economist did not mess with law, nor was he expected to do so. And even when he stuck to economics, the results could be unsettling. One only has to recall the often-told story of the antitrust course at Chicago in the 1950s co-taught by Professors Edward Levi, later Attorney General of the United States, and Aaron Director. During the first four classes of each week, Levi would carefully go over the cases and struggle to make sense of the judge's economic reasoning. On the fifth day, Director would explain why everything that went on during the previous four classes was wrong.

research interests

Twenty years ago there were two options open to an economist who wanted to contribute to the "new" law and economics. He could collaborate with a law professor interested in economics or immerse himself in law and, given enough time and effort, become sufficiently comfortable with legal materials to work on his own. (Today there is a third way. By studying the substantial law and economics literature, one may be able to find promising but often technical problems to work on.) I chose to do both. I collaborated with Posner and I immersed myself in the study of law. Not that I wanted to be a lawyer but I wanted to know enough about different areas of law to see where economics would be most useful. Unlike most other economists, I actually enjoyed reading law cases. I read them with an economist's eye, however. I looked for and often found an implicit economic logic in the outcome of a case. And if I didn't quite get the law right or misinterpreted what the judge said, neither of which was unusual, I always had Posner or one of my other colleagues at the law school to straighten me out.

My first paper with Posner started out as a theoretical comment on Becker's and Stigler's paper on private enforcement. We showed that private enforcement could lead to over enforcement relative to (optimal) public enforcement because a higher fine would lead private enforcers to step up rather than reduce their enforcement activity. But the paper quickly developed into a more ambitious project. We tested the predictions of the analysis against real world observations. We explained why there is a greater reliance on private enforcement in contract, torts and other "private law" areas compared to criminal law; why victims rather than others have the exclusive rights to sue and redress violations; why the budgets of public enforcement agencies tend to be small relative to what private profit maximizing enforcers would spend; and why public enforcers nullify particular laws by declining to prosecute whereas private enforcers would not. We also applied the model to blackmail and bribery as forms of enforcement and the legal rules governing rewards for lost or stolen property—also a
method of compensating private enforcers. In an important sense the paper on private enforcement represented a sharp departure from my earlier work. It systematically applied economics to a large number of legal rules and showed how these rules promoted economic efficiency. Of course, this was mainly due to Posner for I lacked the necessary knowledge of law. But I was determined to remedy this deficiency by auditing law courses—particularly, basic first year courses such as civil procedure, contracts and torts—and by jointly teaching law courses and seminars with law professors.

Over the next twenty years, Posner and I co-authored more than 25 articles and a book on tort law. Our work was truly a joint effort and continues to this day. I have had greater responsibility for the economic modeling andPosner for the law but each of us contributed substantially to both the economics and the law. True, there were substantial gains from trade because we each brought different skills to the enterprise but the final product greatly exceeded the sum of the individual parts. We each raised the marginal product of the other. Looking over the papers, it would be misleading to say "Posner did this" or "I did that" for the ideas, choice of topics, approaches to them and execution were always joint efforts.

the changing role of the law school economist

Over the years I have become much more comfortable with law, and pretty much have become assimilated into the law school culture. That is also true for other economists who have full-time positions at law schools. We spend much more time with our colleagues at the law school than we do with economists in the economics department or business school. Proximity is one reason but there are more fundamental forces at work.

One is that economics departments have become less interested in applied economics such as law and economics. Economics has become more formal and theoretical. Research is increasingly aimed at demonstrating technical skills and solving technical problems rather than at analyzing social problems. Consequently, the law school economist feels less comfortable intellectually on the other side of the campus. Fortunately, this is less true at Chicago. Another is that economists at law schools have more in common with law professors today than twenty years ago because economics has transformed legal scholarship in torts, contracts, securities, antitrust, corporations, environmental law, intellectual property and other business related areas.

There are large numbers of law professors who consider themselves members of the law and economics movement. Another indication of the growing importance of economics at law schools is the appointment of economists (but virtually no other non-lawyers) to full-time positions at all major and many other law schools. Twenty years ago, the economist at a law school was a peripheral figure. Today he occupies a central position. A related factor is the increasing importance of economics in the teaching of law. Law schools are professional schools that view their primary mission as educating future practitioners. For economics to be more than of marginal importance, it must demonstrate its relevance to the education of future practicing lawyers. It has done this by making significant contributions to the practice of law. Economics has altered antitrust; plays a significant role in securities, pension, environmental, unfair competition and discrimination litigation; and is important in valuation and damage calculations in virtually all large scale commercial law suits. Law students are quick to recognize the value of economics in the practice of law. Knowing economics gives them an edge over their competitors. As a result, law and economics courses are increasingly popular at law schools as are our courses jointly taught by lawyers and economists in a variety of subjects. Moreover, it is not uncommon today for an economist to teach a law course alone, which was unheard of thirty years ago. Consider my teaching responsibilities. Although I run the law and economics workshop, I teach copyrights, trademarks and unfair competition and (my favorite) art law. These are not law and economics courses but regular law school courses. To be sure, I add a heavy dose of economics not only because I am an economist but because the cases explicitly discuss and recognize the importance of economic factors and because the use of

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comics (by lawyers) in private law subjects has become commonplace. Indeed, I have become so assimilated into the world of academic law that I am now a professor of law and economics not just a professor of economics (my original title at the law school).

the future

I have been struck by comments made to me on several occasions from young scholars starting out in law and economics today. The gist of their remarks is that "when you started out there were lots of areas of law open to economics but you and others have taken all the interesting problems so now there is nothing left." There is, of course, an element of truth to this but it is greatly exaggerated. Early on, an economist auditing a law school course in torts or contract was like a child in a candy store—there was an interesting topic to be discovered in almost every class. Indeed, the difficulty was not finding topics but deciding which ones to work on. My torts book with Posner is a good example. While auditing Posner's tort course, I worked up
economic notes on the cases and doctrines discussed in class and in the casebook. Then I refined and expanded this material in connection with a course I taught in law and economics. These notes became the starting point for our textbook. But today economic analysis of common law fields like torts and contracts have been so picked over that it would be a mistake for a young scholar to concentrate on them. The same is probably true for litigation models though I am less confident here because recent applications of game theory to litigation have yielded some interesting new scholarship.

What is left? Law and economics scholars have only recently applied the tools of game theory to understanding how legal doctrines may overcome strategic behavior and asymmetrical information. This remains a promising area for future work. Turning to particular fields of law, one observes that constitutional law has been barely touched by economic analysis. And family law, criminal law (as distinct from empirical studies of deterrence), legal procedure, and intellectual property have been relatively neglected compared to torts, contracts and corporate law. These fields also remain promising for future work. But the most neglected side of law and economics is empirical. Most areas of law and economics there is a dearth of empirical studies that are surely worth doing. Recently, I surveyed all articles published in the Journal of Legal Studies (the leading “new” law and economics journal) during the last five years, and found that only about 20 percent had some empirical content. Contrast this with the Journal of Political Economy where more than 60 percent of articles published in the past year contained substantial empirical analysis. This difference cannot be accounted for solely by differences in data availability. There are substantial bodies of data on the number and disposition of criminal and civil cases at both the trial and appellate levels, awards in civil cases, sentences in criminal cases, earnings of lawyers, accident rates, and so forth. Moreover, computerized legal databases make it possible at relatively low cost to extract significant amounts of information from cases in order to develop data sets relevant to the problems at hand.

Finally, there are different approaches to research. One can work productively and imaginatively at either the intensive or extensive margin. The first approach is illustrated by Coase’s work on problems such as marginal cost pricing, the organization of firms, social cost and durable goods monopolies. Before Coase, economists had worked on these problems for many years. Yet Coase was able to say something new and novel about these problems and ultimately to change the way economists think about them. Becker, on the other hand, works primarily at the extensive margin showing the relevance of economics to a wide range of social issues considered beyond economics. These include marriage, divorce, bringing up children, education, altruism, crime, addiction, and preference formation. As Becker and Coase have shown, Nobel Prizes can be won at either margin. The fact that there now exists a substantial body of literature in law and economics makes it simultaneously more difficult to work at the extensive margin but easier to work at the intensive margin.

Concluding remarks

In describing his evolution as an economist, Ronald Coase wrote: “I came to realize where I had been going only after I arrived. The emergence of my ideas at each stage was not part of some grand scheme.” That phrase captures my journey as well. I had no particular career path in mind when I started graduate school. I chose economics rather than something else because I had taken a handful of economics courses as an undergraduate. I got started in law and economics by chance because I came across a newspaper article on plea bargaining. True, I wanted to apply economics to important social issues but law was just one of many possibilities. I worked on a wide range of topics in law that, on looking back, evidence a common approach but not an overall scheme to remake legal scholarship. I never thought I was part of a movement but now it is commonplace to hear about how the “law and economics movement” has transformed legal scholarship and teaching.


2 That friend, Charles Gwathmey, went on to become one of the leading architects in the United States today.
3 The textbook, Price Theory: A Provisional Textbook, was based on Friedman’s graduate course at Chicago, and a number of problems in that book had been suggested by Aaron Director, an economics professor at the University of Chicago Law School.
4 See Becker’s Nobel Lecture entitled “The Economic Way of Looking at Life.”
5 Coase was an exception. He had taken some business law courses, and his social cost paper discusses a number of important early English nuisance cases.
7 The reason there are relatively few empirical articles in law and economics is an interesting question in itself. I recently addressed this issue in a presentation on law and economics at the annual meetings of the American Economics Association. I advanced several explanations including that the initial success of law and economics at law schools came not from empirical studies but from the light that economics shed on legal doctrines; that the law school culture values verbal quickness and analytical skills but not painstaking empirical analysis; that law and economics has been centered at law schools rather than economics departments or business schools; and that law professors, the major contributors to law and economics, are selected for verbal not quantitative skills are. Equally puzzling is why economists on law faculties also tend to avoid empirical analysis. But again this is related to both the reward structure at law schools and the kind of economists who have been attracted to law and economics.