BOOK REVIEWS

Editor's note: Given the interest in the Enron collapse, the book review editors of The Energy Journal decided that an integrated survey of the resulting literature was desirable to inform our readers. The effort was initiated by Carol Dahl, who reviewed seven studies. I added a review of a more technical effort. We hope that our readers will find this survey helpful at clarifying the Enron debacle and the commentary to date.

Richard L. Gordon

Pipe Dreams: Greed, Ego, and the Death of Enron, by Robert Bryce (New York: Public Affairs, 2002), 394 pages. ISBN 158648138X.

Anatomy of Greed: Unshredded Truth from an Enron Insider, by Brian Cruver (NY: Carroll & Graf Publishers, 2002), 384 pages, ISBN 0786710934. Also 7 X 90 minute tapes published by Grand Haven, MI: Brilliance Audio.

Enron the Rise and Fall, by Loren Fox (Hoboken, NJ: Wiley, 2002), 370 pages. ISBN 0-471-23760-4.

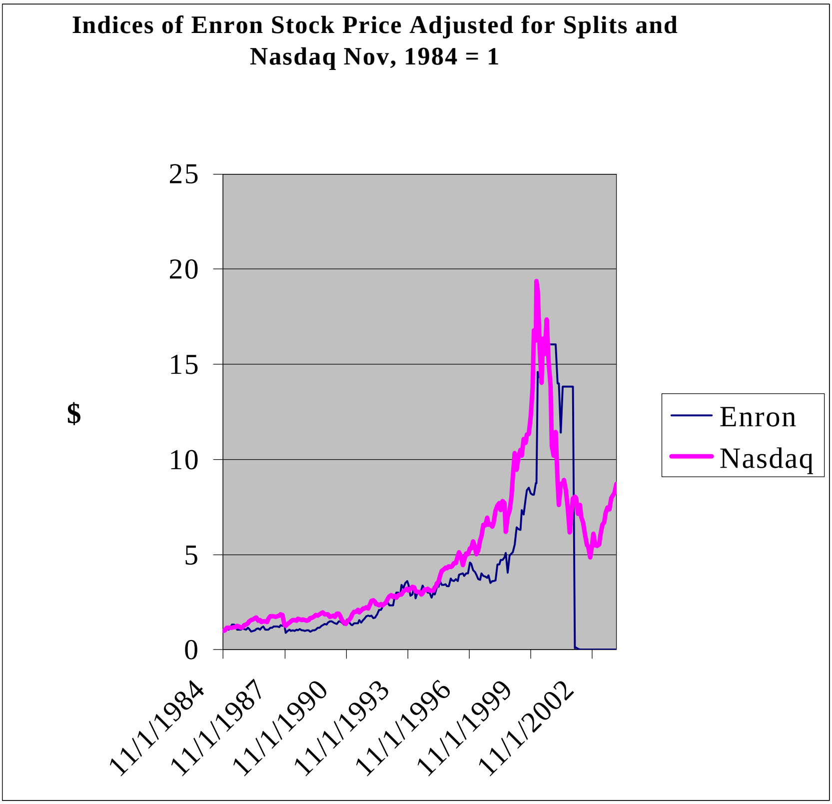
What Went Wrong at Enron: Everyone's Guide to the Largest Bankruptcy in U.S. History, by Peter C. Fusaro and Ross M. Miller (Hoboken, NJ: John Wiley and Sons, Inc. 2002), 240 pages. ISBN 0-471-26574-8.

The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron, by Bethany McLean and Peter Elkind (New York: Penguin, 2003), 435 pages. ISBN 1591840082.

Power Failure: The Inside Story of the Collapse of Enron, by Mimi Swartz with Sherron Watkins (New York: Doubleday a Division of Random House, 2003), 386 pages. ISBN 0385507879. Also 9 X 90 minute tapes published by Santa Ana, Calif.: Books on Tape.

24 Days, by Rebecca Smith and John R. Emshwiller, (New York: Harper Business, 2003), 400 pages. ISBN 0060520736.

Enron went from being the darling of Wall Street with its meteoric stock price rise to its even more dramatic fall from grace as seen in the figure below. It had been voted a *Fortune* most innovative company for six years in a row, a best company to work for two years, only to eventually be delisted from the NYSE exchange because its stock had averaged less than a dollar for 30 days in a row. It filed the up-to-then largest bankruptcy in U.S. history in 2001. Many including me wanted to know – Why? Was it poor regulations and accounting laws, conflicts of interest, greed and dishonesty at the top, a bad business model, an aggressive business culture, short sellers, a reflection of company culture or the wider political and economic culture, jealousy of Enron's creativity, a combination of the above or some completely different reason? Millions of words have been written about this saga and in my quest for truth, I set out to read some of them. Seven books later, I am still puzzled, but I discuss here the points of view, the time frames, an outline of the information and some information about the authors of the books I have read or listened to. I discuss the books in the order in which I read them.



Most of the books cover the basic history of Enron. It started out as a sleepy pipeline company, Houston Natural Gas, before it adopted the crooked E logo and set out on its quest of being the world's best energy company and then the world's best company. Part of the story reads like a Hollywood blockbuster replete with glamour, greed and sex. Is this a case of life mimicking art? Part of the story details boring and complicated financial transactions and business strategies that might not put an accountant to sleep but may give heavy eyelids to many of the rest of us.

There was Skilling's asset light strategy pitted against Rebecca Mark's global asset heavy strategy. When Skilling won, the triumvirate led Enron to the Dark Side or were they already on their way before then? There was Lay – the courtly diplomat who hobnobbed with the political elite and was Enron's face to the outside world, Skilling, who was bright, arrogant and imaginative; and Andy Fastow who juggled the books while filling his own pockets to make Skilling's end of the quarter profit dreams come true.

Fusaro and Miller (2002) was the first book that I read. Fusaro is the founder and president of an energy consulting firm and Miller is the founder and president of a risk advisory consulting firm and has taught finance and economics. The book contains a cast of characters with a bio for the most important characters, a short blurb for what they call the supporting cast, along with a time line of events from Lay's chairmanship of Houston Natural Gas in 1984 to April of 2002 when Jeff McMahon announced he would resign as president and CEO of Enron and the judge overseeing the bankruptcy allowed the Justice Department to appoint independent overseers of the Enron employee retirement accounts. More bio information on the most important characters is also woven through the text.

It is the shortest of the books (150 pages of text plus appendices) but does a nice job of laying out many of the major themes that recur in all of the books as well as in linking the financial innovations of Enron with those of Junk Bond King Michael Miliken in the 1980s; the special purpose entities (SPE's) with those the movie industry used to finance the likes of Star Wars; the marking-to-market of financial markets that became marking to model when there was no market for the assets; the slicing and dicing to securitize the future income flows in the mortgage market; and the option and swap arrangements of the derivative markets applied to Skilling's Gas Bank. The authors include a simple explanation of these financial strategies accessible to the lay audience.

Enron was based on Ken Lay's mantra promoting deregulation and the free market system. In this strategy, debt was prominent. From the hostile take over bids warded off with debt in the 1980s, to the asset heavy strategy of first Wing at the Teesside electricity plant and later Rebecca Mark at the Dabhol electricity plant and Azurix water to Skilling's trading and Broadband efforts, mountains of debt were accumulated that eventually were buried off the balance sheet by Andy Fastow and his financial team. This debt, which accumulated even faster from the absence of cost control after the departure of Rich Kinder as president, surely is a major contributor to bringing the mighty giant down.

The 1987 Enron oil scandal in Valhalla, New York was a harbinger, and the authors argue it was a learning experience in which Lay moved his trading closer to home and hired employees better able to hide any problems. In it lay the seeds of future problems including Lay's inability to fire the guilty culprits. The authors looked further into the evolving company culture – striving for excellence, hiring the smartest people, excessive compensation, their homage to the free market, their rank and yank system that let the bottom 15% go after six months if they showed no improvement,

Things really changed when Louise Kitchen developed EnronOnLine unbeknownst to management and Enron jumped on the Internet bandwagon. Although gas and electricity trading were initially successful, the moves into pulp and paper, broadband and other markets for which the company had no expertise also contributed to the downfall. EnronOnLine traded in 13 currencies and a table includes some of the 1,800 commodity markets in which they traded.

Although the accounting strategies of Enron were also used by other firms, Enron took them to the extreme. Their marked-to-market with lack of proper oversight and SPE's detailed by the Power’s report are briefly chronicled. The book does not contain much information on Lay’s political connections but contains a convenient table of campaign contributions and includes the Congressional hearings in February of 2002. Appropriately enough, the book ends in Chapter 11 with Enron’s Chapter 11. Photos of key players are scattered through the book and an Appendix includes 11 key documents in the Enron tale including Watkins' memos, a memo about some of Enron’s power trading strategies and Cliff Baxter’s suicide note.

The book presents much more on what happened than on why. It ends with questions we all have about how much those at the top knew, how many other Enron’s are out their waiting to happen, and discusses the market in the larger social milieu. They acknowledge the immediate reason for the fall of Enron – the run on the bank – and note that “one who lives by the market can also die by the market.”

The book is short and straight forward with explanations in an academic tone, so if you want the soap opera glitz and glitter or lots of detail it is not for you. I appreciated its brevity as a place to start and what I found most useful was its discussion and explanation of financial practices at Enron and their continuity from the financial excesses of the 1980s.

Power Failure was written by Mimi Swartz, who is an executive editor of Texas Monthly, with the help of Sherron Watkins. This is one of the two books that were either written by an insider or had direct insider input. Sherron Watkins joined the firm in 1993 in the revolving door from Arthur Andersen to Enron. While Vice President of Corporate Development, Sherron wrote an 11 page memo to Ken Lay in August of 2001, expressing her concern about Fastow’s off balance sheet deals and became known as the Enron whistleblower and one of two *Time Magazine*’s Person of the Year in 2002. Her story is woven throughout this book. There was her excitement at getting such a glamorous job, the stress of keeping on top of the politics and being seen with the right people and being in the right place. At corporate management conferences she debated with herself what were the most career advancing recreational activities – choices included salsa making, skeet shooting, and riding with a testosterone crazed traders. She did a stint as a deal maker that allowed her to move upscale to River Oaks where the best and brightest were living. Then we follow her through to the disillusionment and the worry at night over how to pay the mortgage. She had a sinking feeling when Skilling left that finally brought her to write the letters to Lay hoping to save a sinking ship.

The Preface sets the stage with a blurb on Texas billionaire financier Fayez Sarofim, who would not buy Enron stock despite his client's pleas because he could not understand their balance sheets. Although not the only contrarian in the story, he is one of a few skeptics who refused to be swayed by the hype that seemed to grip much of the rest of the market. Later in the book we will see some others including Watkins herself.

The book contains bios on important players, pictures of key characters and the usual chronology of events that gets more complicated and convoluted as the story unfolds. It includes a time line from 1985 to 2001 showing the changing faces of Enron. Lay wanted it to be the premier pipeline company in 1986, the first gas major in 1990, the world's first energy company in 1995 and the world's leading company in 2001. These ambitions along with Lay's philosophy that "rule breakers get to the future first" likely contributed to Enron's horrific collapse.

This book contained information on Enron recreation, deal toys, and skits and how it felt to be near the top as the company went from boom to bust. I first listened to the book on tape and found it entertaining and easy to listen to with quite a bit of detailed information. There is much on what happened but I was not really enlightened on why it all happened.

Fox, the author of *Enron the Rise and Fall*, is a former senior editor of *Business2.0*. He starts with Senate committee hearings of February 2002, which heaped a barrage of criticism at Ken Lay, who expressed his sadness and then pled the 5th amendment to all questions. Then Fox back tracks through the tangled web of achievement and deceit beginning his timeline in the 1980s and ending in August 21, 2002 when the first criminal charge in the case was brought against Michael Koppers, who plea bargained a reduced guilty charge in exchange for cooperation and the return of $12 million of ill gotten gain.

Fox billed the story as one of a corporate culture of innovation, competitiveness, and achievement; arrogance, ambition, and deceit; audit firms who signed off on the shenanigans to keep Enron's consulting business, and of Wall Street's short termism in a story of how "American capitalism worked at the close of the twentieth century." He also noted that Enron was the child of deregulation and detailed the process of Lay's early foray's in encouraging a wholesale spot market while at Transco, of Enron embracing deregulation from the 1988 so called "Come to Jesus Meeting," the launch of Skilling's Gas Bank in 1989, which allowed gas producers to hedge their purchases of firm gas supplies, and an Enron pipeline becoming the first to sell only transportation.

With a coast to coast transportation network, Enron had an information advantage and became the largest North American gas trader by 1992. Just as Goldman Sachs had become a market maker in oil, Enron became a market maker in gas. It also paired with Bankers Trust to get into the derivative trading business beginning in 1989 and striking out on its own in 1991 after the introduction of the NYMEX Henry Hub gas futures contract of 1990. Enron also offered a Hub Pricing Program at 4 points along the pipeline system that same year and their financing of small producers with repayment in gas called

Volumetric Production Payments (VPP). The author points out that this was an early Enron SPE that was quite legal and quite useful. Thus, Enron was moving into being both a pipeline and finance company with financial trading to manage the risk of the real trades. Skilling pitted against each other the three emerging groups, that did not always get along – the financial trading, the financing group of the Gas Bank, and the physical traders. Early Fastow SPE's included Cactus, which securitized the VPP's, and JEDI, which was a 50-50 joint entity with the California Pension Plan (Calpers) to invest in oil and gas projects and Enron stock.

In 1991, Enron got approval for another innovation from finance – marked-to-market accounting. Although this method is quite easily justified in a short term context where markets exist to get marked to, for illiquid physical assets they certainly opened the door to later financial abuse. By 1992, Kaminski was hired to head a research team for derivatives much like their financial counterparts on Wall Street to oversee this complicated process.

The theme of deregulation was not lost on the hard asset side of the company. Rebecca Mark spread "the gospel of deregulation to the developing world" negotiating the soon to be controversial Dabhol power plant in India which would run on LNG as well as other independent power plants worldwide.

Enron employees were highly desired as Enron made it a point to pay top dollar to hire the best and the brightest, putting them through analyst and associate programs and instilling them with the core values of respect, integrity, communication, and integrity (RICE). Well maybe that part of the training did not take. The pressure and politicization of the Performance and Review Committee (PRC) was discussed along with the constant reorganizations that discouraged long term follow up on deals and projects.

With gas trading a success, Enron moved into power trading in 1994. The power market was potentially more profitable because it was larger and more volatile with no storage. Hence, it was even more complicated. Although Enron did not have power plants at that time, it had sold gas to power plants and had experience trading, which the stodgier regulated electricity industry did not. It also later purchased the power company Portland General to leverage hard assets with an asset light trading financial business in a strategy it would pursue later in paper and metals. By 1997, Enron was considering the retail power market as well and lobbying for its deregulation.

The author indicated the `boys club' risk-taking atmosphere of the trading floor and the traders, who came more and more to dominate Enron. Trading energy earned more money than trading stocks and the short termism came also to be reflected in the company and Skilling's obsession with Enron's stock price which was prominently displayed in real time at the entrance to the company.

Kinder's departure in 1996 was marked as a turning point. In 1997, came the first of the illegal Fastow SPE's – Chewco, which bought out Calpers' share of the earlier JEDI but did not have the required 3% external capital at risk and the independence of its management from Enron was questionable. Pitted against the Internet with its focus on earnings not profits along with Skilling's ever more arrogant earnings projections and falling profit margins for trade, the search was on for other markets to conquer. Mark moved into water in England and Argentina – both horrifically bad investments as well as Brazilian power and left the company in 2000. Skilling's asset light strategy appeared to be winning. But many of his group's forays into ever more unfamiliar markets did not fare well either – broadband and retail electricity marketing being among the worst. Earlier bad decisions were coming to haunt the company as well – e.g., over-priced contracts for J-block gas in the North Sea and Dabhol power plant. The need for cash kept growing and Fastow helped out with more SPE's - LJM1 and LJM2 in 1999. Rapters I - IV followed in 2000 to hedge projects. The ins and outs of these transactions are rather confusing and they apparently were not really hedges at all.

A bright spot in the story was the 1999 introduction of EnronOnLine. Its development without upper management knowledge fits in with the innovative ethos that had come to be associated with Enron. However, the short-term nature of the trading, the fact the Enron was a counterparty in every trade and the falling margins from increased market efficiency meant Enron was subject to a large amount of risk. Enron seemed to be riding high. That same year the new stadium was named Enron Field and Lay continued to hobnob with his political connections and influence choices of FERC commissioners and policy agreements.

The author indicates some of the trading antics of Enron in the California power market where it made so much money it apparently tried to camouflage instead of its usual ploy of inflating earnings. The book chronicles the final downward spiral as well – Skilling's resignation, Watkins' letter, the *Wall Street Journal* article questioning the SPE's, the SEC investigation, document shredding, the Dynegy rescue, its fall through and the final run on the bank. Later there was Linda Lay's unconvincing tearful television interview.

The book contains a lot of detail of what happened and appears carefully researched with a relatively dispassionate tone. It contains bios of the important characters as they are introduced and has pictures of a few of them stuck away in the notes. It emphasized the early innovations of the company but makes the interesting observation that the restructured company resembles the company before it became Enron. What I found most interesting was the development of Enron from a pipeline company to a trading and finance company. The epilogue offers some reasons for why the fall happened – Enron extending beyond its own expertise and believing its own hype; lack of executive oversight; accounting rules that are too flexible were pushed to the limit and poorly enforced; uneconomic international decisions; along with the failure of the board of directors, analysts, and investors to take a careful look at what was really going on.

McLean and Elkind, who wrote *Smartest Guys in the Room*, are Fortune reporters. After a tip from some short sellers McLean became one of the early contrarians with her March 2001 *Fortune* story noting the company's impenetrability and asking "How does Enron make its money?" and "Is Enron

Overpriced?" The highly negative response from Enron no doubt piqued her interest even further.

The tone of the book is what undoubtedly many of us feel – outrage and incredulity. They note that Enron was a world of hubris, greed, and self delusion – a "grand experiment in a deregulated world" using "a business model that didn't work" with smart people who "could not admit mistakes" but believed their "next gamble would cover their last mistake."

The introduction begins with one of the many tragic consequences of Enron's fall – Cliff's Baxter suicide in 2002. Then the book backtracks through the complicated web of complex characters and convoluted events. Although it covers the same events, it does so in greater detail and spends more time trying to develop the character and motives of the players. At the end I felt I had a better understanding of each character's foibles and motives and how they painted themselves into corners from which there was no safe exit.

In Lay's bio, the authors indicate how he got the taste for the good life beginning in Washington, DC, then to Florida Power and Light, Transco, and Houston Natural Gas, which he metamorphosed into Enron. Although oil had been the sexy product compared to the more staid and regulated natural gas market, Lay with his deregulation theme wanted to give gas that same glitter. The good life theme carries through to his political contributions and contacts, his shameless nepotism and the use of Enron assets for personal use. The Enron oil trading scandal in Valhalla, New York set the stage for Lay's later hear no evil, see no evil attitude provided the division in question appeared to be making money.

Skilling, joining Enron in 1990, was painted as a super bright gambler with a talent for pattern recognition, who brought McKinsey's cool clinical logic to a chaotic world. He demanded and got marked-to-market accounting. With rewards being given when the deal was made, there came to be a mismatch between profits and cash with problems of how to keep up growth rates. The resulting short term dysfunctionality that ensued eventually spread to the rest of the company.

Wing, referred to as the first Enron prima donna, got Enron into cogen projects and the profitable Teesside plant in the U.K. He was mentor to and was replaced by Rebecca Mark in 1991. It seems that the huge compensation paid to Wing at deal time and his ability to renegotiate as he exited and re-entered Enron seems to be a model consistent with marking-to-market and executive personnel strategies followed over in the financial side of the company. Further, the Teesside take or pay contract on J-block came back to haunt Enron long after Wing had left.

In Mark's bio, the deal mentality, with no one responsible for carrying through after the deal was done to make sure it paid, came through even more clearly. Since deal bonuses were really based on costs, the Enron trait of overpaying for everything was re-enforced. The book details problems with many of the projects on the hard-assets side of the company. The picture the authors paint of the Dabhol project makes it seem incredible that the deal was carried forward and leaves us unsurprised when it fell through. The deal was structured to put much of the risk on the state of Maharashtra, but with a new government, the state refused to pay. (So who was really at risk?) Kinder and the World Bank both had been skeptical of the project as it was unclear who in such a poor country would buy such expensive power. However, the deal makers traveling in style and living the high life did not care as they were specializing in buying and building projects not selling goods. Their overarching theme of bringing deregulation and energy to the masses was laudable but since only deals brought status and reward, no one deigned to carry this theme to fruition.

However, before Kinder left in 1996 there was some semblance of control. From 1989-94, Enron outperformed the S&P 500. Innovation was made on both the hard asset and financial side of the company. The off balance sheet securitizations were legal and above board. However, with Kinder's departure, the authors note that "the inmates began running the asylum" with Skilling in the lead. Lay was devoting full time to being a public figure. However, his dislike for unpleasantness, his poor judge of character, and his inability to say no meant he would probably not have been much of a check on excess anyway.

Trading came to more and more dominate the company along with the traders arrogance and penchant for gambling, sex, and testosterone-favored sports and outings. Their earlier theme of market culture and being on a mission had given way to just making money. However, trading margins fell as competitors entered, states and utilities dragged their feet on deregulation, and existing utilities had informational advantages. Getting rid of hard assets that had a constant income stream did not help the long-term cash flow either. Keeping up accounting profits required fiddling the forward curve in their favor, delay reporting costs, tax avoidance, and inflating equity portfolios.

Management strategy under Skilling had some rather bizarre touches. The authors explained the Performance Review Committee's rank-and-yank strategy which kept the pressure on and became increasingly politicized. Neither the Risk Assessment and Control (RAC) group nor the Deal Approval Sheets (DASH) provided the appropriate control on the excesses. The churning, which was similar to the dotcom culture in which everyone was constantly being moved around, also was not seen conducive to getting anything done.

Fastow was noted for being smart at bending rules but not seeing where it was taking them. When he became chief financial officer for Global Finance, the authors note "wrong job, wrong man, wrong reasons." His strategies of throwing tantrums and bullying financiers worked because they wanted to keep the fees from Enron and he was able to accumulate $38 billion in debt with only about one-third of it on the Enron balance sheet.

Skilling kept looking for the next "Big Enchilada" or "Killer App." But Enron Energy Services to retail power, Broadband, or other commodity trading did not fill the bill. Mark's foray into water was a disaster and caused her to leave in 2000, cashing out quite a substantial amount of Enron stock. For a while, the legendary EnronOnLine and manipulating the California market did the trick. Although there should have been a long-run interest in California deregulation succeeding, traders are short-run kind of guys and no one told them to stop. The signs of success were everywhere. The new building was to be a showpiece and then there was Enron Field. Most of the players were from humble background: - Lay, Skilling, Fastow, Mark, and others had arrived – or had they?

Chinks started to appear. Short sellers started asking questions. Never mind that Skilling called one of them an `asshole' in a conference call. Some employees started to get nervous. Skilling left supposedly for family reasons but, on closer questioning, admitted that the falling stock price was of great concern. The question of whether he bailed out or not is debatable. The authors think not and that he couldn't admit failure even to himself. I'm not so sure. If he was as smart as everyone thought, could he fail to see the writing on the wall.

Lay put his best face forward and tried to call in political favors. But politicians tried to distance themselves, and Greenspan refused to accept his Enron prize and lectured his audience on the importance of being honest. Andersen employees turned the shredders into high gear, and the SEC began an investigation. Dynegy briefly came to the rescue but wisely backed out. A cash crisis, bankruptcy, and suicide along with indictments and pension losses all followed. Lay resigned, and his wife gave a tearful television interview about having lost everything from their penthouse apartment worth millions. Viewers were not convinced. By July 2003, the reorganization is to create Cross Country Energy for the N. American pipelines and Prisma for the 19 international assets.

Bryce, who wrote *Pipe Dreams: Greed, Ego, and the Death of Enron,* appears to be a free lance journalist who has been covering Enron since 1997. The book jacket promises to track "step-by-step, business decision by business decision, extra-marital affair by extra-marital affair, how Enron's leaders were corrupted" telling the inside story of "greed, sex, and excess" with "passion and humor." It delivered on this promise and was the most fun of the books that I read. His take on why it happened was primarily the greed of those at the top or as Bryce puts it "fish rot at the head." Indeed, the preface contains a cast of 30 characters along with their Enron stock sales that total over a billion dollars.

The book is dedicated to the thousands of hard working, honest Enron employees who lost so much from Enron's downfall. Appropriately, it begins and ends with the one of those employees, who begins the book at the farcical job fair in Enron Field for laid off employees and ends the book at her new job at the Houston Medical Center. It also promised not to explain all the legal and accounting issues, but those it did explain were quite easy to follow. Lacking some of the convolutions of the more detailed books along with many clever turns of phrase made for easy and entertaining readings. I had many a smile and chuckle from clever and insightful witticisms and sarcasms. Reading through the table of contents indicates the tone of the book to come – e.g., "Buy or Be Bought," "Sexcapades," "Casino Enron, Broadband Blues," "Sleepless in Houston," and "Buying off the Board." When the Hollywood version rolls around, I'll vote for Bryce to write the screenplay

The author goes back even before the Houston Natural Gas company of 1926 to its parent Houston Oil Company and shows the beginning of the Texas oil industry with the Spindletop discovery in 1901. One of the founders, John Henry Kirby, was not only wheeler dealer but became the Ken Lay of his day with his Houstonian social status and dealings with politicians. Although Kirby went bankrupt in the depression, there is still a street named for him in River Oaks, which is *the* place to live in Houston. The author follows the River Oaks theme (zip code 77019) through the book with the Enron elite as they arrive at the top and move to this posh neighborhood. In the last chapter, he shows a map of where the fabled Enron Royal Oaks characters lived as of June of 2002 when the book ends.

Although Bryce retells most of the same tales as the other books, he gives more detail on the hard asset side of the company beginning with Wing and the money made from cogen plants. He holds up Rich Kinder as the exemplary manager with a head for numbers who asked the hard questions about every deal – How would it make money? Was there an assured cash flow? How was risk to be secured? Kinder sought to raise their credit rating and reduce debt, which seemed to be a perennial problem even before Enron was Enron. While Lay "inspired the troops," Kinder "kept the egos and budgets in balance." The author comes back to Kinder at the end and the book notes his spectacular successes with cost controls in the staid pipeline business after leaving Enron including an even bigger house in River Oaks. Kinder Morgan became Houston's Company of the year in 2002 with Fayez Sarofim a strong investor in the company.

By focusing on the financial and sexual excesses, character foibles, and later managerial dysfunctionality, the author paints an incredible, entertaining but rather damning picture of the whole operation. He refers to Marx as a "size six bottle blond" . . . with "more fancy clothes than an upscale shopping mall," and discusses the impossibility of the whole Dabhol and other international projects. The Board came in for a fair amount of criticism. There was Mrs. Gramm's "dash for cash," with her exemption of derivative trading from regulation while at the Commodity Futures Trading Commission. There were posh board meetings and directors "pigging out at the Enron tank." The author asks "Where was the Enron board while company insiders were making gazillions of dollars?"

Investment bankers, analysts and auditors were critiqued. Arthur Andersen was referred to as "one of the poster children for bad behavior." Although Leavitt, the head of the Securities and Exchange Commission (SEC), was convinced of a need for a change in the accounting culture, the author depicted a graph showing how much faster the SEC case load had increased then its funding.

In this "testosterone-and-espresso steeped culture", "stock and stock options were the cocaine that drove the …bubble," "loyalty become a commodity that was bought and sold," while "management capability was never a prerequisite for advancement" under Skilling. Lou Pai, once head of gas trading, had a penchant for go-go girls and a babe-a-licious girl friend. Ken Rice came up through gas sales. He womanized, had his motorcycle odometer changed to gigabytes per second when he became head of the ill-fated Broadband, and preferred to watch cartoons to participating in business meetings. There were Fastow's temper tantrums, pressure tactics, and ill-fated SPE's. "Enron was cooking the books and Andy Fastow was the chef de cuisine."

Enron was going to commoditize and intermediate everything. Although this seemed to work early on for gas and electricity, its later forays into other commodities and EnronOnLine were not so successful and required an incredible amount of cash. With costs out of control, cash was not so plentiful. There was excessive compensation, travel cost abuses on corporate jets, club memberships, bar tabs, and what seemed to me the most surreal of all – the art buying spree for the new Enron building by Lea Fastow that extended through the fall of 2001.

The author shows how the California trading strategies were counter productive and made Enron a political target. The classic Enron tactic of intimidating those you could not control was wearing thin as events led up to the bankruptcy and beyond.

The author notes a number of suggested reforms – having independently appointed corporate directors, making accounting more transparent by requiring cost accrual also to be reported even if marked-to-market accounting is used, not letting auditors be consultants, regulating derivatives, and increasing the budget of the SEC. Currently, stock options can be deducted for tax but are not charged to costs. The author further suggests that options should be costed but also argues that stock rather than options should be offered.

After pages of looking down at Enron from the top, the next book I read was a look up from the bottom. *Anatomy of Greed* is an irreverent, humorous, romp through Bryan Cruver's job as a trader for the last nine months before Enron fell. We follow him from his getting the job of his dreams and first entering the Death Star (Enron Headquarters). He had joined the best and the brightest and along with the rest of Enron's employee could see a reflection of himself as intelligent and successful in the shiny mirrored surface as he entered the Enron building. Enron stock price and trading volume on the NYSE blinked at him in the lobby and was relayed to us then and throughout the course of the book falling until it eventually winked off amid the lay offs and scandals of the bankruptcy.

We follow him through his first day orientation heavy into the ethics lecture of RICE – the key Enron values. Through later meetings with the leaders of the companies (Darth Vader (Skilling) and the Emperor (Lay)), he was told and believed how great everything was going. The Wall Street analysts reinforced the feelings of euphoria with buy, strong buy, and accumulate ratings. Enron's innovations of commoditization, deregulation, and globalization had become B-School case studies, and the pay and benefits were great. The hype was everywhere – there were inspirational sayings on the 13 levels of the parking garage, and the elevator man on the TV's in the elevator provided infomercials between floors. There was a buzz of excitement when Lay or Skilling came to the trading floor.

Calls from Bickers, his humorous but cynical Wall Street analyst friend, provide input about what the analysts were thinking and we follow their course of discovery as the book unfolds. Indeed it is Bickers who first suggests that Cruver write a book after the fall. Bickers in his first call asserts the company is in deep shit and wants to know about India, Azurix, Broadband, and related parties SPE's.

Interspersed in Cruver's story is the history of the company from the 1920s with the changing faces of Enron, discussion of the connections between top MBA programs, McKinsey, Arthur Anderson and retired military, Enron's competition for hires with Wall Street, and bio's of the key figures along with their passions. The lifestyles of these rich and powerful trickled down through the company, and Cruver could aspire to the fancy cars that dealers parked outside at bonus time.

He includes discussion of RAC, DASH, and PRC (aka rank and yank) with the redeployed area of desks and phones where one could look for a new job inside or outside of Enron. There are some simple explanations of markets for risk, an explanation of weather derivatives, the difference between a perfect and naked hedge, trading floor operations of originators, traders, and marketers, analyst procedures at earnings times, and SPE's.

We get the ambiance of the open trading floor with its open space and the noise of trading and construction. The air sometimes held footballs, at other times million dollar deals. In this high tech world, the number of eye-level flat screen monitors were a measure of status. Cruver had 450 phone lines and could join in any conversation or get instant news by listening to the audio for the big screen TVs around the room. The traders were a cliquish and immature bunch with identical blue shirts and insider jokes and lingo. A buck was a million dollars and there was a lot of snickering when the girls of Enron walked by – i.e., one of the 12 babes that the traders had designated to be worthy of the Enron calendar. They were highly amused when Skilling called Grubman an asshole and even more amused at a cartoon that replaced the Enron on the crooked E with the word Asshole.

However, all was not well in crooked E-land, but most people just didn't get it yet. The June 2001 email to save costs was not taken seriously. Not until Skilling's resignation did things start to sink in. They breathed a sigh of relief when Ken Lay took over, but with revelation after revelation coming in the fall their relief turned to anger at Fastow, Skilling, and sometimes Lay. Some employees thought Lay was blind sided, others thought he knew, but Enron turned into a monster he could not control. Mimi Swartz's article from Skilling's point of view fueled their anger and bar room discussions, which included when to expect layoffs and what kind of severance packages they might get. There were bets when the bankruptcy would occur. We follow the trading floor as it comes to halt, the media hype and confusion of the layoffs with a half an hour to vacate the building, the queries from friends on the name of Enron Field and the outrage at small severance packages compared to the huge retention bonuses. There was his last minute jockeying to take advantage of perks before they went away and his keeping quiet about a financial mix up that kept him on the payroll. Both are indicative that the entitlement mentality at Enron was not only at the top.

We hear a number of the emails that were sent out before and after the bankruptcy, which Cruver subsequently tried to sell on E-bay along with other Enron memorabilia. There are humorous descriptions of his visits to a psychiatrist and half hearted attempts to find a job. For through it all, Enron had been the best place he had ever worked. He liked the challenge and fast pace. He didn't want a place too much like Enron so it would implode, but he didn't want a place not enough like Enron which would be boring.

While Bickers is the questioning voice from Wall Street, Mr. Blue represents the voice from the Enron top and with his resignation tells Cruver the way it was. Described as a mentor and childhood friend of the family, Mr. Blue had been involved in the hard asset side of the company. Among his insights were that the storm had been “brewing for 15 years” when Lay did not punish the Valhalla oil scams, Skilling knew what was going on, that nothing was really meant to work and that all the bad deals were made by “unqualified ego maniacs” whose only thought was their bonus.

As the book commenced, there was less time spent on Cruver himself and more on what was being revealed about the company. Post bankruptcy, there were the 11 Federal inquiries with some information on creditors, campaign contributions, stock sales, some conclusions from the Power’s report, and history of paper shredding. He notes *Business2.0*’s apology for putting Skilling on the cover in August of 2001 and laughs at their picture of Lay with a Pinocchio nose in March of 2002, and a list of some of the dumbest moments in business 2001 – 16 of which were from Enron.

The book ends on March 26, 2002 with some moralizing on the board of directors fiduciary responsibility to shareholders with some speculation on whether the bad thing about unbridled greed was the means of getting there not the end itself. Now that Cruver’s Enron email was no longer accessible, Enron was truly in his past and he took Mr. Blue’s advice to get away and Bickers advice to write a book.

The book’s humor made for a fun read, and it provided an interesting take of the events and the ambiance that only an insider could provide.

So having looked at Enron from the inside top and the inside bottom and from the outside, I move back outside again to *24 Days*, which details the investigation of the two *Wall Street Journal* employees who broke the story of Fastow’s special purpose entities – Rebecca Smith, national energy reporter and John Emshwiller, senior national correspondent focusing on white collar crime. Although not the first to mention the SPE's, Eavis of *TheStreet.com* had mentioned them twice earlier in the year, they were first to really get people’s attention.

The 24 days are October 16, 2001 when Enron announced its devastating third quarter earnings with a stock price of over $35 to November 8 when Enron filed its humbling 8-K report with the SEC restating its earnings back to 1997 and acknowledged the SPE's with the stock falling below $10. About a quarter of the book is devoted to this time when the market lost $19 billion on Enron stock.

The first quarter of the book is the build up to the 24 days. Their story starts with the resignation of Jeff Skilling, which set the press to speculating what might be going on at Enron. Having been covering the California energy crisis, they were assigned to investigate. Neither started out enthusiastic about chasing this story, which would come to dominate their coming months. In a phone call, Emshwiller got Skilling to admit that the stock price was troubling him. Calls to analysts, law suits lists, checking related party transactions brought up Fastow, and some special purpose entities. The hunt was on for "who was he?" and "what were they?"

The story follows their investigation down dead ends, through interviews with the principles, contrarians, and many who had had unpleasant dealing with Skilling and Fastow, as well as their search of documents including SEC filings, released memos, and the media.

Through them, the authors learn of themes that have been encountered in the other books including Kinder leaving when he didn't get top spot, the competition between Skilling's asset light and Mark's asset heavy strategies and their personalities, a portrait of Fastow and his tactics, and the trading mentality, which came to dominate everything with large amounts of highly leveraged unregulated derivative with values determined by marked-to-market accounting.

Although September 11 diverted *WSJ* interest to security issues, the authors were soon back to chasing the Enron story, becoming more and more flabbergasted at the earnings of Fastow and the use of Enron stock to back investments. Their story, however, was not released until day 2 of the 24. Theirs followed two other earlier classic media stories – McLean who months earlier had wondered if Enron was overpriced, and Weil who a year earlier had computed how much marked-to-market had inflated earnings. Yet neither of these earlier stories had the impact of Smith and Emshwiller's. Perhaps only by October 2001 had the market been willing or perhaps forced to stare the truth in the face.

The last half of the book chronicled the events after the 24 days until the summer of 2003. For example, Emshwiller was at a bar with Enron employees after the Dynegy deal fell through and the trading floor went dead. Some still believed they could make a market in anything, others were mad at Skilling for not controlling Fastow, but most supported Lay.

The book has the most detailed report for this later time of all those reviewed. The authors provided a history of Arthur Andersen, followed the document shredding, the interview with head of Arthur Andersen–Beradino–and the Arthur Andersen indictment and trial. They captured the ominous tone of this fall from rectitude to ordinary Americans. They have the most complete discussion of the investigation of the Baxter suicide leaving the reader with more confidence than other sources that he had not met with foul play. They included the Watkins memo coming to light, summarized some of the Powers report and response to it. They followed through the indictments that had come down so far, fines, and corporate promises of better behavior. I especially appreciated the discussion of what it would take to get criminal indictments for those at the top and the strategy of trying to get those lower down in exchange for cooperation.

Although the book was about Enron, it was also about the authors. It included information on the complementarities and tensions of their relationship as well as some insights into *Wall Street Journal* readers, culture and the competition within the media. Unlike Jonathan Knee who reviewed the book and gave much higher marks to *Smartest People in the Room*, I appreciated this look into the media and also thought the book offered a lot of information.

So what are my recommendations? If you want to laugh, read Bryce and Cruver. If you want to cry, read them all. If you want the most information, read

McLean and Elkind and the last half of Smith and Emshwiller. Cruver and Swartz contain the most information about what it was like to work at Enron. McLean and Swartz probably contain the most insights into the characters.

So do I know why it happened? After all my reading, I know a lot more about what went wrong and offer some insights from a former student and former employee at Enron who did not want to be named. Although she declined to do a book review, her take on what went wrong is as follows.

I believe that to really understand what went wrong in the first place, one has to look at several factors.

- Lack of Sustainable Strategy
- Lack of cultural awareness
- Short term focus
- Shark culture
- Compensation structure
- Absence of accountability
- Wall Street expectations, accountability and involvement in structuring insider deals.

Lack of Sustainable Strategy: Enron transformed itself from a pipeline company into a global energy infrastructure development as well trading company gradually trading about 2,000 different products.

The combination of credit requirements to be able to trade products at a profit (even as market maker) with the huge development of energy infrastructure projects on a global scale requires a clear strategy and implementation thereof and a delicate balancing of capital commitments (including personnel and other resources). Enron very successfully developed its trading business, initially in Houston and subsequently in other capitals around the world. (One thing at which Enron was very good at was creating markets where markets could be created, as well as structuring products and risk management tools.) At the same time, however, Enron International had people flying all over the world without a clear idea of what the company's direction was, given the frequent management and strategic changes.

Enron's philosophy was 'change is good' and certainly on the international side, frequent management and structural changes occurred from a regional organization to a centralized structure and back. The apparent strategy could be described as building a business platform that could eventually provide the jump-start to the trading business. However, the approach was that every continent had to be covered, which required offices, people, and other resources. In certain areas of the world, the regulations and infrastructure were such that this could be and was successfully executed within a period of a few years (i.e., the UK, US, certain parts of Europe, Singapore and Australia – in the latter countries even without building assets).

However, development projects in other parts of the world (i.e., Brazil, China, India, Central America) took far longer than anticipated, regulations were immature or changed (and still change) on a frequent basis. In its drive to establish itself as a major player, it generally overbid for assets acquired in privatizations or public bids. All this while, Enron had its offices loaded with resources ready to develop a trading business (as well as develop further infrastructure projects that did not provide the ability to trade either because capacity was fully contracted, counter party issues or lack of access to shipping rights on pipelines). The cost factor of this strategy was enormous and certainly contributed to Enron's downfall.

Lack of cultural awareness: In short, Enron counted heavily on its aggressive, almost military strategy of "we can make it happen." In most of the countries on the international side of the business, the majority of the employees initially comprised of expatriates, while gradually more local people would be employed. Despite best efforts of experienced international expatriates, Houston home-base (with competition for money, salaries, bonuses and prestige between traders and developers gradually increasing) could usually not understand the reason for doing things differently in other countries (such as establishing relationships before getting involved with a third party, or monetize the business as soon as the asset received interest from another party while preaching a long-term commitment to the country and partner in venture). The idea of reinvesting the cash generated in a certain country was rarely considered and as such, the complex but efficient tax structures became more of a barrier to the monetization of assets and repatriation of proceeds.

Short-term focus: In summary, Enron lived from quarter to quarter in order to respond to Wall Street expectations. However, in addition to cultivating change in its own organization, it had a short-term commitment to its assets. While other energy companies were developing a long-term commitment to certain assets and regions, Enron's objective of developing assets was to trade the commodity without any commitment (essential to continue its trading business was the monetization of its assets to maintain credit). Attempts were made to either sell the entire or partial stakes in assets after the construction was completed. However, the way Enron structured its highly complex deals was to leave the asset company with a marginally sustainable income/cash flow and scrape all the value out of the commodity contracts (up front), which were generally held by an Enron controlled company. As such, with little value left over and continuing exposure to local changes in law and regulations, generally little buyer's interest developed in the projects. In certain instances, construction cost overruns or regulatory and counter-party issues left some of the assets either stranded or with no other alternative than a serious restructuring. Consequently, most of the assets that were sold were sold at a price lower than the book value of the investment.

Shark Culture: The rank-and-yank system created a shark culture that placed emphasis on whom you know or who you hang out with (or better, excuse my French, kissed-ass and gossiped with) that determined your eventual performance evaluation and compensation levels. As such, hardly any confidence or trust between employees and their respective superiors existed resulting in a dysfunctional operating environment.

Compensation structure: The way people were remunerated within Enron was based on the 'value' being delivered to the company. However, 'value' as the critical factor had little to do with real value. Value within Enron was determined by earnings and not by cash flow/generation, which both involve timing, the successful execution of a project, as well as the probability of actually generating cash. From personal experience at Enron, until close to filing for Chapter 11, the focus was never on cash but always on earnings. People were rewarded for bringing in earnings, no matter whether any cash eventually was generated. To illustrate, when a bid was won or a deal was closed, revenues/earnings were booked (to satisfy the short term focus and Wall Street expectations) without knowing what the actual cash earnings would be from the contract or investment – always a problem with mark-to-market applied to non-liquid assets.

Booking the earnings up-front and satisfying the requirement to generate more earnings created a need for an increased frequency of deals or projects as little additional value could be abstracted from existing deals. Nonetheless, mark-to-market accounting of non-liquid assets had enough parameters (commodity curves, discount rates, operating variable assumptions) that could be slightly modified to gently squeeze a little more earnings out of the asset at the same time the assets were still under construction. All this created a culture that caused people to do deals that were unsustainable and did not create any value. However, when closing the project/deal, valuation parameters were sometimes modified to be able to book earnings and receive a substantial bonus based on the earnings created. When eventually the deal showed a loss, the contract would either cause Enron to settle with the counter party or continue to incur losses. In any event, the loss to Enron was more than the loss on the deal as it paid out significant bonuses upfront to the people involved in the deal with no accountability if a deal went bad afterwards (nor return of bonus, change in compensation or even dismissal).

So what else did I learn from this exercise? As with the Power's report, I still don't know why it happened. It's hard to explain why such bright people did such stupid things. Then again, though they didn't fool all of the people all of the time, they certainly fooled a bunch of the people a bunch of the time and got very rich in the process. Was it all a scam as Mr. Blue said and never meant to work? It's hard to be that cynical and easier to believe that hubris and greed won out. Did Ken Lay know what was going on? It's hard to believe he didn't, but at a minimum he set the tone that rule breaking was good as long as it was profitable. Did Skilling know what was really going on and bail out? Again it's hard to believe he didn't, but whether the courts agree only time will tell. Was Bryce right? Fish rot at the head. There is something to be said for this opinion but I think it can go even higher to the zeitgeist and what we as a society value and reward.

Was it a case of bad people and good rules, good people and bad rules, or bad people and bad rules? Probably it was some of each. Although I am not an accountant, I find it hard to believe that 3% external capital at risk makes an investment independent. We may need to retake a look at the de-regulation free for all and look for conflict of interests and market power that may have been the reasons the regulations were first implemented. As an economist, I am predisposed to markets but the financial scandals of the 1980s and those of Enron and other large corporations give me pause for thought. I wholeheartedly endorse requirements of transparency and concur with Sarofim – don't buy what you can't understand.

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Corporate Aftershock: The Public Policy Lessons from the Collapse of Enron and Other Major Corporations, edited by Christopher Culp and William A. Niskanen. (New York: John Wiley & Sons, 2003), 321 pages. ISBN 0-471-43002-1

This book, sponsored by the libertarian Cato Institute, presents fourteen evaluations of issues suggested by the crash of Enron and other large companies. The authors are predominantly practitioners in finance, consulting, and law. Part I contains an overview of the Enron failure, a discussion of post-Enron accounting changes, and treatment of alterations of corporate governance. The second part treats effects on the security and commodity markets in which Enron traded. Part III focuses on "structured finance." The book ends with an overview on risk management by Fred L. Smith, Jr., president of the Competitive Enterprise Institute, another libertarian think tank. The article is perhaps excessively far-ranging and only briefly mentions Enron.

The lead article by Culp and Steve Hanke of Johns Hopkins promises a "neo-Austrian" explanation of Enron. [The "neo" indicates that Austrian elements supplement rather than replace conventional theory.] The writers argue that the central problem was Enron's overconfidence in its ability profitably to enter numerous new businesses; the financial shenanigans only delayed discovery of the inevitable failures of ill-advised ventures. These included extending trading activities in areas in which it lacked expertise and undertaking expensive ill-advised investments such as in water and broadband. However, the idea of combining small investments in operations with dealing in financial markets is considered sound when the proper expertise is involved, a proposition they support with a sketch of its theoretic basis.

The non-accountant authors of the accounting chapter argue that the reform efforts may have been unwise. The key is the authors' recognition that accounting is retrospective and Enron's problems were evident to investors using more forward-looking information. The stock was declining long before the disclosures.

Two lawyers did the chapter on governance. It deals with views before and after Enron on what comprises good governance, Enron and other scandals, the changes made, and their probable consequences. The writers fear that the Sarbanes-Oxley law enacted in response to the scandals may undermine the widely-supported goal of securing a strong, independent board of directors.

The trading section contains quick surveys of four issues–the state of wholesale electric markets before and after Enron, the state of regulation of wholesale electric markets before and after Enron, online trading before and after Enron, and whether swaps need regulation. The first article is all description; the next two end with evaluations; the trading chapter argues new regulation is not needed.

The first essay in Part III argues that Enron's use of special entities for off-balance-sheet financing is a perversion of a useful technique; the author of that article (Barbara T. Kavanagh) teams up with Culp to treat the issues of the financial instruments Enron used; the last paper treats appropriate accounting methods.

Part IV then has three articles dealing with different aspects of credit risk management and the effects of Enron.

The book then represents an early effort in what probably will be an extensive analytic literature on Enron. It seeks to cover the diverse aspects of the Enron debacle. The sections differ radically in scope and approach. Part I gives a good overview of the basic issues. The next three sections cover more technical issues. The treatment in part II of energy markets is the most clearly relevant to readers of this journal. The next two sections seem most relevant to the financial community. The book is most useful to the economically literate; the exposition includes a few simple equations but still requires comfort with economics.

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The End of a Natural Monopoly: Deregulation and Competition in the Electric Power Industry, edited by PETER Z. GROSSMAN AND DANIEL H. COLE (JAI/Elsevier Science, 2003), 243 pages. ISBN 0762309954.

For nearly a century, the concept of a natural monopoly was like the co-joined twin of the electric power industry. Introductory-economics textbooks typically would define a natural monopoly and then proceed immediately to an illustration – *electricity*. In fact, so co-joined were electricity and natural monopoly that the industry's edifice of regulatory policies restricting entry and regulating prices was built upon the concept. The separation of these twins began in the 1980s with the liberalization of electricity markets, which was based in part on the belief among some economists that the generation portion of the industry was no longer a natural monopoly.

This collection of nine papers attacks the very foundation of the concept and proceeds to question whether the industry was, in fact, ever really a natural monopoly. The theoretical assault begins in the first paper, by Peter Grossman, titled "Is Anything Naturally a Monopoly?"

Grossman's argument has several major components. First, he questions the use of the word "natural," arguing that the form any industry takes is highly dependent on many factors that may change over time – not just the shape of a firm's average-cost curve. In Grossman's view, a declining average-cost curve does not inextricably lead to a single firm dominating the industry. He points to a common error in thinking: that economies of scale result from high fixed costs, not declining average costs over a sufficient portion of the total industry's supply curve to make entry by a competitor unprofitable.

Second, Grossman uses a transaction-cost framework to note that these types of costs – contracting, enforcing, monitoring, and so on – must be accounted for in any natural monopoly analysis. The efficient size of a firm, therefore, depends on these costs, which themselves depend on the institutional circumstances that form the context for the industry. Since transaction costs are also highly contingent on particular circumstances, it is unlikely that there is never a situation in which an alternative industry structure has less total costs than a monopoly. Grossman concludes: "That is, for total costs to be less in one vertically integrated firm, like electric power monopolies, than in *any* alternative arrangement, there must be some problem with market contracting and some unusual benefit to hierarchical coordination to make it so." [p. 29, emphasis in original]

Rather than his conclusion being the knockout blow, Grossman actually undercuts his own thesis. With electricity, there are substantial costs and difficulties with market contracting, and there are unusual benefits to hierarchical coordination. Why? Because the grid is a complex, non-linear network requiring near-instantaneous balancing of supply and demand. At some point – and reasonable analysts dispute where to draw the line – a system operator is needed to make the whole thing work. If there is not one regulated monopoly running a control area including the system-operator functions, then a whole set of policies, rules, and procedures are needed to ensure reliability and competition. To be fair, the particular institutional factors to which Grossman alludes are one driver of these policies, but they are not the major one. That distinction goes to the technical characteristics of the grid.

There are, to be sure, complex, multilateral contractual arrangements in other industries among market participants, but the electric-power industry has hundreds of documents, consuming tens of thousands of printed pages, like the tariffs, manuals, guidelines, procedures, technical bulletins, and other related documents needed by any U.S. independent system operator. You find many layers of stakeholder committees constantly drafting, interpreting, and revising these rules. Despite (or due to) all of this paperwork, it is common for ambiguities and misinterpretations to occur. Want a real taste and feel for the difficulties of coordination? Attend any one of the many weekly stakeholder meetings at your nearby ISO. If you still have a desire to live, you may realize that it as if the formerly regulated monopoly had been turned inside out and all of its work is now done in public by people who work for competing organizations, using a inimitable mix of Robert's Rules of Order and administrative law.

The remaining papers in this volume are organized chronologically, beginning with the early years of this industry and ending with a prospective look at industry liberalization. Robert Bradley examines the natural-monopoly "creation myth" of the industry, compares it to reality, and finds that it has less to do with a natural monopoly and more to do with business and political opportunism. He then traces the industry's development, its extensive competition and falling prices prior to government intervention, and finally the introduction and rise of the regulatory era. He notes that when the regulatory covenant was implemented, the conditions for natural monopoly were not yet in place. This is certainly consistent with the view that such intervention was motivated by reasons other than the natural-monopoly argument. In contrast to the logical inference, it is also consistent with the natural-monopoly view. If public officials are convinced that regulation will be necessary in the future, the destructive competition and duplication of assets can be avoided by jumping straight to regulation.

The paper on the withering away of natural monopolies and the case of electricity, which points out that natural gas, telephone, and railroads were once assumed to be such, signals the book's transition from a retrospective to a prospective analysis. Like the soldier who is still fighting although the war is over, one paper addresses stranded benefits and costs. Another examines universal service in competitive retail markets, recommending that mandatory service obligations be replaced with a voucher program financed by a state tax to ensure universal service.

The two remaining papers adopt differing views regarding the prospects for electricity liberalization. Andrew Morriss states unequivocally: "Deregulation will fail." [p. 211] He polemicizes that a major cause will be that lawyers will imperfectly implement the economists' solution, thus creating the need for another economic fix – and so the cycle continues. The final paper, also written by Grossman, argues that much of what has happened, particularly in California, is not actually deregulation; if deregulation were to occur, he believes it would most likely provide the highest benefits at the lowest costs.

This text's contribution is to have raised the issue of whether the concept of a natural monopoly, as applied to the electric-power industry, is dead. Although the authors try to kill it, in my view they fail to marshal specific enough evidence, facts, and characteristics of the electric power in their analyses. For instance, by not distinguishing among generation, transmission, distribution, and system operation, they do not address whether these subcomponents are natural monopolies.

It is, therefore, ambiguous when the authors use the term *deregulation*. Deregulation of what? Without specifying what should be deregulated and how, it is impossible to determine whether even properly implemented deregulation is superior to the *status quo*, even with all of its shortcomings.

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