

the deployment of nuclear missiles on Cuba but for the political outcry at home. He finally took action at the eleventh hour, only because if he hadn't—as he admitted to his brother Robert—"I would have been impeached."

Even more damaging is the revelation that Kennedy secretly agreed to remove NATO missiles from Turkey in exchange for Khrushchev's removing the Soviet missiles from Cuba. This decision infuriated the Turks, who had been staunch allies, and was probably illegal to boot, since the missiles were deployed by NATO, not the United States. It was, Kagan concludes, "a bargain so embarrassing that [Kennedy] concealed it from the American people and made secrecy about it a condition for the agreement." His inner circle of advisers played along. Kagan quotes one commentator who notes that, as late as January 30, 1963, Defense Secretary Robert McNamara "lied outright to Congress" about the removal of the missiles from Turkey.

The Cuban missile crisis took place at a time when there was a great deal of talk about a "missile gap" that favored the Soviet Union. In fact, the U.S. enjoyed overwhelming nuclear superiority at that time. But real strength inheres not only in the possession but also in the projection of power—and it was here that Kennedy failed dismally. "The Cuban missile crisis," Kagan writes, "demonstrated that it is not enough for the state that wishes to maintain peace and the status quo to have a superior power. The crisis came because the more powerful state also had a leader who failed to convince his opponent of his will to use its power for that purpose."

In the post-Cold War era, the world is more and more a tangle of enmities. The modern notion that peace is natural and war an aberration has led to a failure in peacetime to consider the possibility of another war. The United States and its allies have the greatest interest in preserving the peace. We are also fortunate to possess the military might to do so. Unfortunately, there are many signs that our willingness to maintain and, if need be, to use that power judiciously is faltering. "Nothing could be more natural in a liberal republic," Kagan notes, "yet nothing could be more threatening to the peace" that we have recently achieved. □

MASTERS OF DECEPTION: THE GANG THAT RULED CYBERSPACE

Michelle Slatalla and Joshua Quittner

HarperCollins / 225 pages / \$23

reviewed by EDDIE DEAN

In Sam Peckinpah's *The Wild Bunch*, currently in theatrical re-release, a band of gun-running, gone-to-seed outlaws, led by William Holden's hard-bitten Pike, rages against the dying sunset of an old West now ruled by the railroad monopolies.

Like Pike, the late Peckinpah shared Huck Finn's instinct to "light out for the territory ahead of the rest"; and even though the territory has long since been tamed, this craving for a primitive freedom remains a supremely American trait. It is not surprising that Bloody Sam turned to the underground world of computer crime and hi-tech espionage for the subject matter of his last films.

Just a few years ago, cyberspace seemed to be one of the last frontiers of that freedom, a wide open place where computer hackers roamed at will, jumping security fences and rustling corporate secrets. Unknown to the general public and mostly ignored by authorities, cyberspace sounded as cryptic and futuristic as its name; it possessed a dark, forbidding quality, like some faraway galaxy where evil lurks and no one can hear you scream. (The fact that it's simply a network of computers connected by phone lines does little to demystify its Darth Vader aura.)

Nowadays cyberspace is a prime chunk of virtual real estate, flooded with greedy prospectors and marketed by Al Gore & Co. as "The Information Superhighway," that buzzard of a buzzword endlessly circling its own lack of meaning. And now the feds have begun to round up renegade hackers, citing crimes from industry sabotage and smut peddling to more nebulous offenses that have civil-liberties watchdogs howling about Big Brother.

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This crackdown was sparked in part by the antics of some teenage pranksters calling themselves the Masters of Deception. A group of New York City kids barely out of high school, the Masters pled guilty in 1993 to the most daring and damaging raid of corporate computer systems in history: they cracked AT&T's security codes, rewired phone lines, broke into files, and stole confidential passwords and credit histories.

It was "the crime of the future," according to prosecutors in the U.S. Attorney's Office, but in this account of the kids' fascinating saga, reporters Michelle Slatalla and Joshua Quittner argue that their real crime was youthful curiosity and naïveté. At times, especially when the authors overindulge in annoying Teenspeak to invoke the gang's world, *Masters of Deception* reads like an apology for the supposed martyrs. The reader may be less sympathetic: These are not Peckinpah's grizzled anti-heroes willing to die for their outlaw ways, or even hoodlums with the guts to hold up a liquor store. They are merely clever boys dialing up chaos on the family phone line and raising hell from the safety of Daddy's house, and it's difficult to shed tears when they get caught.

No stereotypical computer geeks, the Masters are working-class city kids—bored with school (though they earn good grades), isolated from their peers, and stranded without girlfriends. Sporting the baggy clothes and bragging slang of street culture, the kids get their kicks in cyberspace, where they reinvent themselves and taste a freedom denied them in their humdrum lives. High on candy bars and sodas, they take their souped-up, cheapo computers on

all-night joy rides without ever leaving their bedrooms:

Just like any schoolyard pack of boys born in the shadow of "The Dirty Dozen," "Hogan's Heroes," and "Mission Impossible," [they] fancied themselves specialists in some dark art. One kid might know how to make a wicked blue box, a device cobbled together from top-secret Radio Shack parts that simulated the tones of coins dropping into a pay phone. Another might be an expert in programming BASIC.

It's only natural that they form a gang, not much different from the ones roaming the mean streets outside their windows. The same rules apply: nicknames and passwords, initiation rites, and, most of all, protection of their turf. There's Scorpion, class valedictorian and resident logician, who got his start cracking kiddie computer games; Acid Phreak, group historian and expert dumpster diver (mining for priceless discarded data); Outlaw, a Bronx cohort who spends his hours on a hacker bulletin board called Phuc the Pheds; and Corrupt, a black computer whiz from Brooklyn whose deft impersonations of white middle-aged telephone linemen enable him to snag security passwords at will.

The leader of this wild cyber-bunch is the whip-smart son of Italian immigrants who holes up in his tiny room in the family row house in Queens. In front of an old TV hooked to his Radio Shack computer, he transforms himself from a shy, skinny nobody into Phiber Optik, one of the most revered hackers in cyberspace. Boasting a ravenous appetite for arcane knowledge, Phiber Optik is a connoisseur of ultra-sophisticated computer networks, especially phone systems.

At first, the Masters perform harmless stunts—exploring and exploiting the local phone company computers, sabotaging rival gangs' bulletin boards, downloading credit histories of cheesy celebs such as Geraldo Rivera. But then they get cocky. Littering systems with MOD-signed taunts, they finally become destructive, crashing a university computer system.

A security specialist for the New York Telephone Company spots their brazen intrusions; he embarks on a four-year hacker-hunt, ultimately enlisting state and federal authorities, including

the FBI and the Secret Service. This wild goose chase makes for some hilarious Keystone Kops vignettes, as the gang outwits the posse of pre-Computer Age geezers at every turn.

Meanwhile, the MOD boys become bona fide media stars after Phiber Optik and Acid Phreak crash an electronic forum hosted by *Harper's*: "Is Computer Hacking a Crime?" Besides spewing a load of puns and jabs at the straitlaced forum, the brash boys from New York had a few answers to the seminar's topic question:

"There is no one hacker ethic," declared Acid Phreak in an off-the-cuff manifesto. "The hacker of old sought to find what the computer itself could do. There was nothing illegal about that. Today, hackers and phreaks are drawn to specific, often corporate systems. It's no wonder everyone on the other side is getting mad. We're always one step ahead."

The problem with this self-righteous declaration is that by now the gang is busy violating the so-called "hacker

occur"), an enraged Phiber Optik responds by posting a copy of Barlow's credit report for everyone to see. Barlow is stunned that this New York City punk could access his most private financial matters. Moreover, he understands the implications of Phiber Optik's deed: Is any information truly safe from plunder in cyberspace? "I've been in redneck bars wearing shoulder-length curls," Barlow wrote later, "police custody while on acid, and Harlem after midnight, but no one has ever put the spook in me quite as Phiber Optik did at that moment."

Meanwhile, Acid Phreak begins the gang's ultimate exercise in hubris, a running on-line narrative of the gang's exploits, "The History of the MOD." The story rationalizes MOD's conversion into destructive vandals, wrapping their exploits in a haze of mythmaking. Even the authors seem seduced by Phreak's self-serving swagger: "The MOD boys," they write, "were definitely riding the ragged regions of the electronic frontier, even as the whole territory was being carved up. It was the Wild West, right?"

Another on-line insult fuels a gang war that ultimately spells the final doom for the gang. Hacking under an assumed name, Corrupt joins an open phone conversation with members of a rival gang based in suburban Texas. He greets them good-naturedly in one of his many put-on voices, but one of the Texans responds, "Get that nigger off the line!"

In the real world, Corrupt is accustomed to racial slurs, but not here in cyberspace, where he could be anyone he wanted to. Plotting revenge he takes an assumed name and infiltrates the rival gang led by a hacker known, after a Viking warrior, as Erik Bloodaxe. Once Corrupt blows his cover, a full-scale racial and regional feud breaks out, as Bloodaxe mocks the "History," which he mistakenly believes to be authored by Corrupt, by distributing a "jived" version pocked with nasty racial slurs.

Ultimately the Texans help the feds trap MOD in their own web. Some of the gang members are by now working their own side deals—even selling computer secrets, an activity Phiber Optik would never condone. Using hi-tech surveillance to record MOD's continued trans-



ethic," as well as the law. They harass rivals with computer-generated crank calls; they download sensitive financial files to use against their enemies. No longer idealistic pioneers, the Masters begin to resemble bullies looking for the next cyberspace rumble.

After one forum participant—cyber-hippie and former Grateful Dead lyricist John Perry Barlow—cracks a joke about the precocious MOD gang's immaturity ("Trade their modems for skateboards and only a slight conceptual shift would

gressions, the feds nab the boys on a laundry list of crimes, including unauthorized access to computers, illegal possession of telephone calling cards, interception of electronic communication, and wire fraud.

The authors mostly pooh-pooh the seriousness of the crimes. Describing the official announcement of the 11-count indictment, they wax sentimental:

[The U. S. Attorney] tells the press corps all about the crimes. He tells them the boys' intrusions have cost companies thousands of dollars in security personnel salaries and lost processing time. But he doesn't tell them that the dangerous hackers are, in effect, just a bunch of teenage boys who got to be friends because they shared a hobby.

Whatever happened to, "Big enough to do the crime, big enough to do the time?"

EDISON: INVENTING THE CENTURY

Neil Baldwin

Hyperion / 531 pages / \$27.95

reviewed by FLORENCE KING

After meeting Thomas Alva Edison on a transatlantic liner, Henry James described him in a letter as "the great bland simple deaf street-boy-faced Edison." True, but nineteenth-century America liked him that way. Descended from Dutch immigrants (the original name was Edeson), he had a sturdy, blue-eyed yeoman look that made him, writes Neil Baldwin, the "incarnation of Ragged Dick," hero of the Horatio Alger stories.

Young Tom was not ragged but he had other drawbacks. Expelled from school after only three months for what our age calls attention-deficit disorder and his

Masters of Deception closes as the gang members (who each pled guilty, their pony-tails drooping like whipped dogs' tails) languish in prison with sentences ranging from six months to a year. Meanwhile, millions are surfing the Internet and other systems that once were as empty and foreboding as a ghetto alley.

The authors have a happy ending to tack onto this American saga, a rah-rah replacement for Acid Phreak's canceled commentary: Through a computer network (where else?), jailbird Phiber Optik finds a girlfriend who patiently awaits his release. And, as the rappers from whom they take a degree of inspiration often boast, the former members of MOD know they have "skills": all of them have cushy computer jobs lined up for life after prison. □

called "addled," he was taught at home by his mother until he went off to seek his fortune at age twelve, working as a "news butch" (newsboy) on the railroad, selling snacks and the Detroit papers to passengers on the Port Huron train.

A compulsive reader who devoured Victor Hugo and technical manuals with equal pleasure, he set up a chemistry lab in a corner of the baggage car. One day his experiment started a fire, providing him with a more Algeresque explanation for his partial deafness. Loath to admit that it was a congenital defect, he blamed the conductor who boxed his ears.

His deafness drew him to the telegraph, a "clattering embrace of dots and dashes he could understand." He rose quickly to be chief telegrapher for Western Union, quitting when he found backers to finance his invention of faster

techniques. Already going gray at 24, he opened his own lab at Menlo Park, New Jersey, and married 16-year-old Mary Stilwell, whom he rarely saw except when he fathered their three children. Unable to pry him away from his lab, where he regularly stayed all night, Mary took to drink and nervous breakdowns while her husband benefited humanity.

This absorbing biography is a perfect blend of art and science thanks to Neil Baldwin's gift for making the technical sections as interesting as the human story. Although nominally a specialist in modern American poetry whose earlier books include a biography of William Carlos Williams, he nonetheless makes an effortless transition to Edison's laboratory, covering the major inventions of the Menlo Park heyday in clear, accessible language, illustrated with reproductions of Edison's own drawings.

One of the earliest inventions was the 1876 Electric Pen. As one wrote in the normal way, the needle tip punctured holes in the surface of a sheet of paper to create a stencil that was then placed over clean sheets of papers and inked with a roller to reproduce as many as fifty copies. Edison's P.T. Barnum streak is evident in the ad: "Like Kissing—Every Succeeding Impression is as Good as the First—Endorsed By Every One Who Has Tried It!—Only a Gentle Pressure Used." He later sold the patent to A.B. Dick of Chicago, who used it to invent the mimeograph.

The phonograph, pioneered in 1837 by a Frenchman, initially used a pig's bristle and a sheet of paper coated with lampblack rotating on a cylinder. Edison's improvement, which he called the Speaking Telegraph, consisted of a brass cylinder covered with tinfoil. One cranked it by hand while shouting into a funnel; the message was engraved as series of bumps in the foil surface, with playback achieved by a spring-held stylus. Edison demonstrated it with "Mary Had a Little Lamb," and Sarah Bernhardt traveled to Menlo Park to recite lines from *Phèdre* into it.

In developing the electric light Edison first used platinum for the filament, but it stayed lit only briefly. He switched to carbon, claiming that he got the idea by absentmindedly rolling lampblack in his fingers. This, says the author, was a lie designed to make the world see him as Archimedes in a "Eureka!" moment.

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