PIRACY, PRIVACY, AND PRIVATIZATION: FICTIONAL AND LEGAL APPROACHES TO THE ELECTRONIC FUTURE OF CASH*

WALTER A. EFFROSS**

A decade ago the popularity of "feudal life" scenarios in science fiction and fantasy literature was attributed to the fact that in such settings "money never has to change hands."[1] Commentators asked:

> When did a fantasy hero ever fish a ten dollar bill from his pocket? When did milady seek alimony? When were travellers' cheques needed in Atlantis or Cathay? When was the lead villain simply slung into prison for debt? When did the mortgage ever fall due on one of those labyrinthine castles?[2]

However, even as these questions were posed a new genre celebrated the cash, criminality, and computerized commerce of a future that has become today's headlines. Indeed, "cyberpunk" denotes more than science fiction that emphasizes the interaction of people with computers;[3] it also refers to an individual who, like the protagonists

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** Associate Professor, *Washington College of Law.* Professor Effross also is the author of *Putting the Cards Before the Purse?: Distinctions, Differences, and Dilemmas in the Regulation of Stored Value Card Systems*, 62 MO. L. REV. (forthcoming 1997); and *High-Tech Heroes, Virtual Villains, and Jacked-In Justice: Visions of Law and Lawyers in Cyberpunk Science Fiction*, 45 BUFF. L. REV. (forthcoming 1997).

In the summer of 1996, I suggested to Dean Claudio Grossman and Editor-in-Chief Mira Vayda that *The Law Review* devote an issue to the Electronic Future of Cash in connection with a Symposium to be held at the Washington College of Law in the spring of 1997. I would like to thank both of them for their encouragement, their advice, and their commitment of the School's resources to these projects. Special thanks are due to Heather Russell, *The Law Review*'s Senior Articles Editor, who oversaw the selection of the articles that appear in this Volume and who, as my research assistant, worked tirelessly and painstakingly to help me coordinate the logistics of the Symposium itself.

1. *See* BRIAN ALDISS & DAVID WINGROVE, TRILLION YEAR SPREE 280 (1986).

2. *Id.* (observing that "the adolescent reader, the typical reader of these fantasies," is most in need of money and "the power that money brings").

3. *See, e.g.*, THE CONCISE OXFORD ENGLISH DICTIONARY 334 (9th ed. 1995) (defining "cyberpunk" as "a style of science fiction featuring urban counter-culture in a world of high technology and virtual reality"); MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 287 (10th ed.

of these novels, "make[s his] living buying, selling and stealing information, the currency of a computerized future."[4] In both of these senses cyberpunk's authors anticipated the challenges posed by the convergence of today's banking, technology, and legal communities.

If other fictional settings allow novelists to avoid mundane financial transactions, cyberpunk not only confronts but glories in the grim and gritty commerce of the street. Indeed, its heroes can escape their physical and economic reality only by plunging into "cyberspace," mankind's "consensual hallucination, . . . [a] graphic representation of data abstracted from the banks of every computer in the human system."[5] It is in this alternate, electronic universe, where multinational corporations hoard their data and where financial institutions store their electronic cash, that cyberpunks practice their esoteric digital deceptions.

In its emphasis on the technological interface between the commercial and the criminal, this literature illuminates many issues central to the current controversies over electronic forms of cash. A survey of these areas is provided in this Book by Richard Field's *1996: Survey of the Year's Developments in Electronic Cash Law and the Laws Affecting Electronic Banking in the United States*, and taken several steps further by Brian Smith's *How Best to Guide the Evolution of Electronic Currency Law.*

To begin, cyberpunk explores the worldwide culture of a society in which traditional forms of currency—bills and coins—not only are outmoded but generally are disfavored.[6] Whether this development

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1995) (defining "cyberpunk" as "science fiction dealing with future urban societies dominated by computer technology"); RANDOM HOUSE WEBSTER'S COLLEGE DICTIONARY 338 (rev. ed. 1996) (defining "cyberpunk" as "science fiction featuring extensive human interactions with supercomputers and a punk ambience").

4. KATIE HAFNER & JOHN MARKOFF, CYBERPUNK: OUTLAWS AND HACKERS ON THE COMPUTER FRONTIER 9 (1991) (chronicling the extra-legal exploits of noted hackers); *see also* MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY, *supra* note 3, at 287 (defining "cyberpunk" as "an opportunistic computer hacker"); RANDOM HOUSE WEBSTER'S COLLEGE DICTIONARY, *supra* note 3, at 338 (defining "cyberpunk" as a "computer hacker").

5. WILLIAM GIBSON, NEUROMANCER 51 (1984).

6. *See* JOHN BRUNNER, THE SHOCKWAVE RIDER 7 (1975) ("Cash didn't circulate much any more . . . except in the paid-avoidance areas, where people drew a federal grant for going without some of the twenty-first century's more expensive gadgetry, but activating a line to the federal credit computers on a Sunday, their regular down-time day, meant a heavy surcharge . . . ."); PAT CADIGAN, FOOLS 24 (1992) (featuring cab-driver who will accept "fare strips and bearer chips" but not currency, because "I don't have an accounting system that works with it"); WILLIAM GIBSON, COUNT ZERO 37 (1986) [hereinafter GIBSON, COUNT ZERO] (observing that protagonist had cash money, but could not pay for food with it, because although cash was not illegal, "nobody ever did anything legitimate with it"); GIBSON, *supra* note 5, at 6 (discussing how protagonist's "total assets were quickly converted to New Yen, a fat sheaf of the old paper currency that circulated endlessly through the closed circuit of the world's black markets like

was the result of governmental collapse, global unification, or the increased use of Internet commerce—and many of the novelists are vague on that point—it raises the questions of whether, when, and how electronic cash might displace traditional currency in a form of Gresham's Law. Moreover, cyberpunk's focus on this transition echoes current concerns over whether the "unbanked" will benefit from or be even more disadvantaged by a widespread shift to electronic payment systems. Professor David Oedel's *Why Regulate Cybermoney?* addresses some of these issues.

To replace cash the cyberpunk canon introduces a panoply of exotic payment mechanisms such as "bearer chips,"[7] "credit chips,"[8] "bearer cards,"[9] debit cards,[10] "credit disks,"[11] "cash cards,"[12] and "credit transactors."[13] The proliferation of these devices, and the abbreviated way in which their operations are described, evokes the debates currently raging over the extent to which stored value cards should be regulated. Do consumers truly understand their rights and potential liabilities when they use the real-life counterparts of these fictional products? Professor Mark Budnitz examines these and

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the seashells of the Trobriand islanders," making it "difficult to transact legitimate business"); *id.* at 98 (noting that character buying cigarettes from a vending machine, "slotting the small dull alloy coins one after another, [is] vaguely amused by the anachronism of the process"); BRUCE STERLING, HEAVY WEATHER 272 (1994) (referring to a past "[w]hen money was still on engraved paper and money still meant something").

Guides for cyberpunk "role-playing games," whose participants manage the persona of a character in such a fictional scenario, typically emphasize that cash is archaic. *See, e.g.*, LOYD BLANKENSHIP, GURPS CYBERPUNK 27 (1990) (observing that "[i]n a cyberpunk world, most wealth takes the form of credit [and l]aw-abiding citizens . . . rarely touch cash at all"); TOD FOLEY, CYBERSPACE 71 (1989) (indicating that "[t]he entire idea of cash is looked down on in many places, where its use is seen as classless, boorish and ignorant").

7. *See* PAT CADIGAN, SYNNERS 148 (1991) (noting that hackers' work "kept them . . . in enough bearer chips to survive").

8. *See* GIBSON, COUNT ZERO, *supra* note 6, at 2 ("His credit chip was a rectangle of black mirror, edged with gold. People behind counters smiled when they saw it, nodded. Doors opened, closed behind him. Wheels left ferroconcrete, drinks arrived, dinner was served."); RICHARD PAUL RUSSO, DESTROYING ANGEL 101 (1992) (referring to "credit chip" keyed to holder's biometric measurements, so someone else can "'[s]ell it back to the originating streetbank for two cents on the dollar'").

9. *See* MELISSA SCOTT, TROUBLE AND HER FRIENDS 252 (1994) (describing "money in a thin stack of bearer cards").

10. *See* WILLIAM GIBSON, VIRTUAL LIGHT 25 (1993) (character uses "his new debit-card").

11. *See* LISA MASON, CYBERWEB 1-3 (1995) (downloading value through automated bank teller onto "credit disk").

12. *See* WILLIAM GIBSON, IDORU 59 (1996) (chronicling character's use of "Cashflow smartcard," the amount of which "represented the bulk of the Seattle chapter's treasury"); JAMES PATRICK KELLY, WILDLIFE 25 (1994) (describing transfer of value in the form of "smart chips," or "cash cards from the Swiss Volksbank, Zurich [that are n]egotiable anywhere"); *id.* at 144 ("The cash card was guaranteed by AmEx to be secure.").

13. *See* BLANKENSHIP, *supra* note 6, at 104 (offering descriptions, strikingly similar to those of modern stored value card, of "credit transactor" device, its method of operation, its levels of privacy and security, and its use by consumers); *cf.* FOLEY, *supra* note 6, at 71 (discussing operation of wrist-borne device that acts as debit card).

related issues from the perspective of a consumer advocate in his article, *Stored Value Cards and the Consumer: The Need for Regulation.* Gary Lorenz contributes the perspective of an issuer of stored value cards in his *Electronic Stored Value Payment Systems, Market Position and Regulatory Issues.*

Like an increasing number of today's consumers and businesses, the characters in cyberpunk fiction conduct transactions over the Internet itself.[14] Their attempts to preserve their privacy and anonymity during these activities[15] foreshadow the analysis of this Book's *How to Make a Mint: The Cryptography of Anonymous Electronic Cash,* by Laurie Law, Susan Sabett, and Jerry Solinas of the National Security Agency. Cyberpunk also predicts the issuance of money by private parties, including multinational corporations and perhaps criminal organizations,[16] and the danger that electronic cash may be used in money-laundering operations.[17] Both of these developments are addressed from a banker's viewpoint in Simon Lelieveldt's *How to Regulate Electronic Cash: An Overview of Regulatory Issues and Strategies.*

Finally, both science fiction and several of the articles in this Book discuss the jurisdictional difficulties inherent in governing a "space that [i]sn't space"[18] in which individuals who may be concealing their identities can conduct instantaneous transactions by means

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14. *See* WILLIAM C. DEITZ, BODYGUARD 30 (1994) (electronic transfer of funds in cyberspace); NEAL STEPHENSON, SNOW CRASH 394 (1992) (transfer of money by transfer of "hypercard" in cyberspace).

15. *See* JOHN BETANCOURT, REMEMORY 27-28 (1990) (indicating narrator's reluctance to receive a large amount of credit, stating that "a cash transaction seemed much more appealing"); MASON, *supra* note 11, at 9 ("The exchange of any form of legal value was accounted for, traced, and regulated down to the last obsessive buck.").

16. *See* GIBSON, *supra* note 12, at 170 (describing bills "[b]igger than American money" with "the comfortingly familiar logo of a [well-known] company"); STERLING, *supra* note 6, at 114 (discussing "global pirate banks that existed nowhere in particular and made up their own laws out of chickenwire dishes, encryption, and spit"); *id.* at 186-187 (stating that criminal organizations "were electronically minting their own . . . electronic, private cash, unbacked by any government, untraceable, completely anonymous, global in reach, lightning-like in speed, ubiquitous, fungible, and usually highly volatile" and noting that "even the governments of powerful advanced countries, had already lost control of their currencies to the rolling floodwaters of currency trading"); *see also* Neil Stephenson, *The Great Simoleon Caper, in* SETH GODIN, PRESENTING DIGITAL CASH 1 (1995) (envisioning, with humor, practical problems involved in encouraging consumers to use private electronic cash).

17. *See* DAVID BRIN, EARTH 294 (1990) (indicating that main character "had witnessed many of the ways [in which] her cousins and uncles sheltered and moved money without letting it show up on the net"); BRUCE STERLING, ISLANDS IN THE NET 43 (1988) (identifying three major corporations as being "monetary banks as well . . . handy for laundering client funds, and a ready source of necessary bribes"); WALTER JON WILLIAMS, HARDWIRED 179-81 (1986) (describing laundering money electronically through series of international transactions over electronic networks); *id.* at 186 (discussing how "[a]stronomical amounts of private-issue currency flash through the files, pour down a thousand chutes, disappear into some nameless laundry and then reappear elsewhere, no clue as to their origin").

18. GIBSON, COUNT ZERO, *supra* note 6, at 39.

of intangible forms of cash. The seminal cyberpunk novel vividly portrays the dilemma of balancing rules and standards: the protagonist asks government authorities, "Do you guys have any real jurisdiction out here?" only to be told, "It doesn't matter . . . . We are at home with situations of legal ambiguity. The treaties under which our [agency] operates grant us a great deal of flexibility. And we *create* flexibility, in situations where it is required."[19]

As today's payments technology nears that of science fiction, the regulatory responses to each of the issues addressed in this Book will shape electronic cash, its application, and its culture for years to come. At this critical point in the history of money, cyberpunk offers a cautionary vision of the transition from "two bits" to megabytes, from a pair of dimes to new paradigms.

19. GIBSON, *supra* note 5, at 162-63.