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MESSAGE:

Hi Kevin —
Here is the summary of the report that is being released today. Hope it is helpful!
— Alice

P.S. Also attached is a "preview" of the national report we're releasing later this month. It uses the same 5 levels as the International report.

lit er a cy

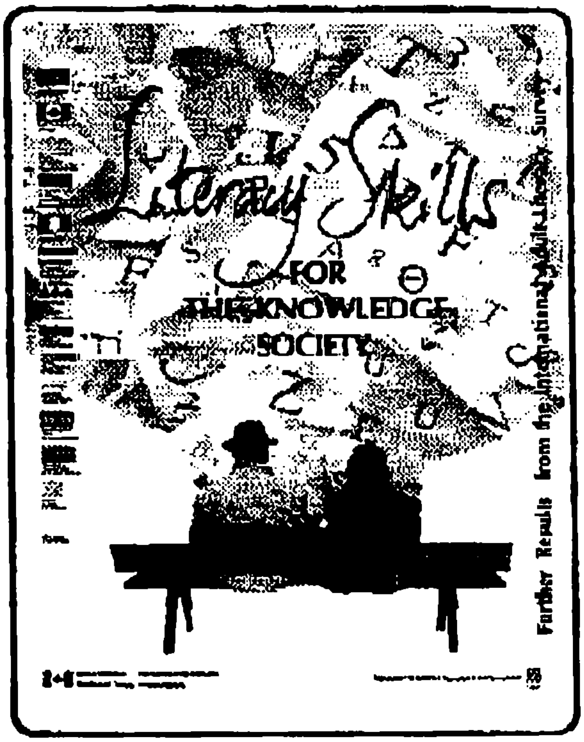
n., Ability to read
and write; progress;
self-sufficiency;
hope;
the shortest distance to
individual,
social,
& economic development.

OECD and Statistics Canada
Highlights of Results from IALS
International Adult Literacy Survey

Those now in the labour force are faced with new economic conditions and constraints. Demand for skills is still evolving, and low-skill workers, in particular, are at risk of unemployment, or of being locked into precarious, low-wage jobs. In order to adapt successfully, they must meet a minimum level of proficiency in reading and writing. But reliable and comparative information about the level and distribution of literacy skills in the adult population was, until recently, lacking.

The International Adult Literacy Survey was undertaken by governments, national statistical offices and international organisations with the purpose of supplying new data on adult literacy in OECD countries. Representative samples of the adult population aged 16-65 were tested on a literacy skills test, at their homes, in 1994 and 1995, depending on the country.

The results of the survey appear in two volumes, jointly published by the OECD, Statistics Canada and Human Resources Development Canada. The new volume, *Literacy Skills for the Knowledge Society*, builds on the results presented in 1995 in *Literacy, Economy and Society*, in two major ways. First, it incorporates previously unavailable data for several new countries. Findings are presented for Australia, Belgium (Flanders), Canada, Germany, Ireland, the Netherlands, New Zealand, Poland, Sweden, Switzerland (French- and German-speaking), the United Kingdom and the United States. Second, it presents the results of new studies and analyses of the IALS dataset; these analyses offer a number of new insights concerning the economic and social importance of literacy skills in OECD countries.



Also available

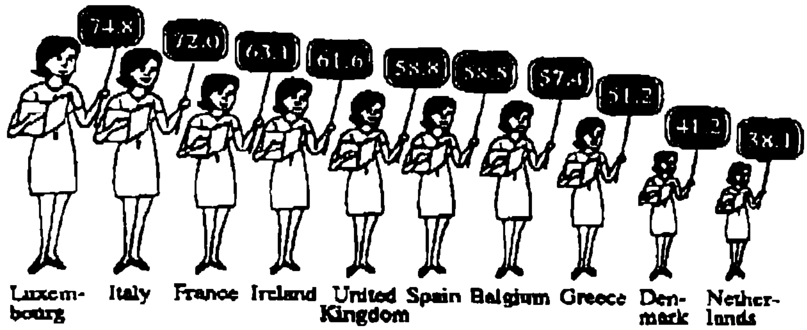
Literacy, Economy and Society
Results of the first International Adult Literacy Survey
December 1995, 200 pages

Key findings include:

- Of the many skills that an individual acquires during his or her education, literacy plays perhaps the greatest role in determining financial compensation on the labour market. Educational attainment is a poor proxy measure of skills, and education, work experience and skills are rewarded differently in various OECD countries.
- The role literacy plays in the determination of wages is greater in economies that are more flexible and open.
- Literacy outcomes vary considerably according to socio-economic status in some, but not all, of the countries investigated.
- Differences in the population distribution of literacy skills, both within and among countries, are large enough to matter both socially and economically.
- While the economic return to literacy is significant everywhere, some labour markets reward reading skills more than numeracy.
- The relationship between literacy proficiency and educational attainment is strong, complex and paradoxical. Many adults have managed to attain a relatively high level of literacy proficiency despite a low level of education; conversely, there are some who have low literacy skills despite a high level of education. Objective skill testing is a tool for more rigorous evaluation of workforce skills.
- Adults with low literacy skills do not usually consider that their lack of skills presents them with any difficulties. This may reflect the fact that many respondents are in jobs that do not require them to use literacy, a situation that is likely to change as the knowledge society becomes more competitive.
- Literacy skills are maintained and strengthened through regular use. While schooling provides an essential foundation, the evidence suggests that only through using literacy skills in daily activities – both at home and at work – will higher levels of performance be attained.

FEW DUTCH WOMEN AT THE BLACKBOARD

There is a low percentage of women teachers in the Netherlands compared to other countries. In most of the other countries, the majority of teachers are women. However, if we include the figures for inspectors and school principals, the proportion shrinks considerably and women are in a minority everywhere.

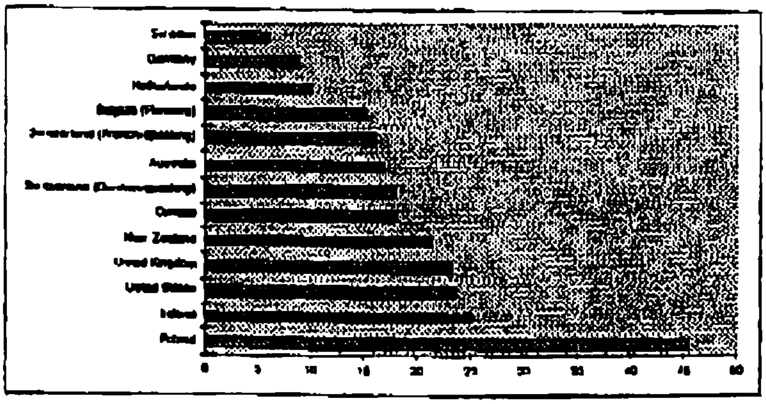


Percentage of women teachers (kindergarten, elementary, and secondary).

The above document task (Level 1) directs the reader to identify from a chart the percentage of teachers from Greece who are women. The chart displays the percentages of women teachers from various countries. Only one number appears on the chart for each country.

Percentage of population aged 16-65 scoring at Level 1 on the document scale, 1994-95 (standard error in parentheses)

Australia	17.0 (0.5)
Belgium (Flanders)	15.3 (1.7)
Canada	18.2 (1.9)
Germany	9.0 (0.7)
Ireland	25.3 (1.7)
Netherlands	10.1 (0.7)
New Zealand	21.4 (0.9)
Poland	45.4 (1.3)
Sweden	6.2 (0.4)
Switzerland (French)	16.2 (1.3)
Switzerland (German)	18.1 (1.0)
United Kingdom	23.3 (1.0)
United States	23.7 (0.8)



How to interpret the survey results?

The IALS was unusual because it combined the techniques of household-based survey research with those of educational testing. In each case, the test was accompanied by a background questionnaire that allowed the interviewers to collect information about demographic and other characteristics of the respondent. Records for 45 000 individuals have been collected in the 12 countries surveyed so far.

The survey assessed literacy proficiency in terms of three domains, each encompassing a common set of skills relevant for diverse tasks:

- *Prose literacy* — the knowledge and skills needed to understand and use information from printed texts including editorials, current events, poems and fiction.
- *Document literacy* — the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and charts.
- *Quantitative literacy* — the knowledge and skills required to apply arithmetic operations, such as balancing a cheque-book, figuring out a tip, completing an order form or determining the amount of interest on a loan.

All 101 common test items used for the assessment were open-ended and taken from "real-life" situations; they reflect the literacy requirements encountered in everyday life. In each of the three domains a scale was constructed, upon which tasks of varying difficulty were placed. A person's literacy ability was then expressed by a score in each domain, defined as the point on the scale at which he or she had an 80 per cent chance of successfully performing a given task.

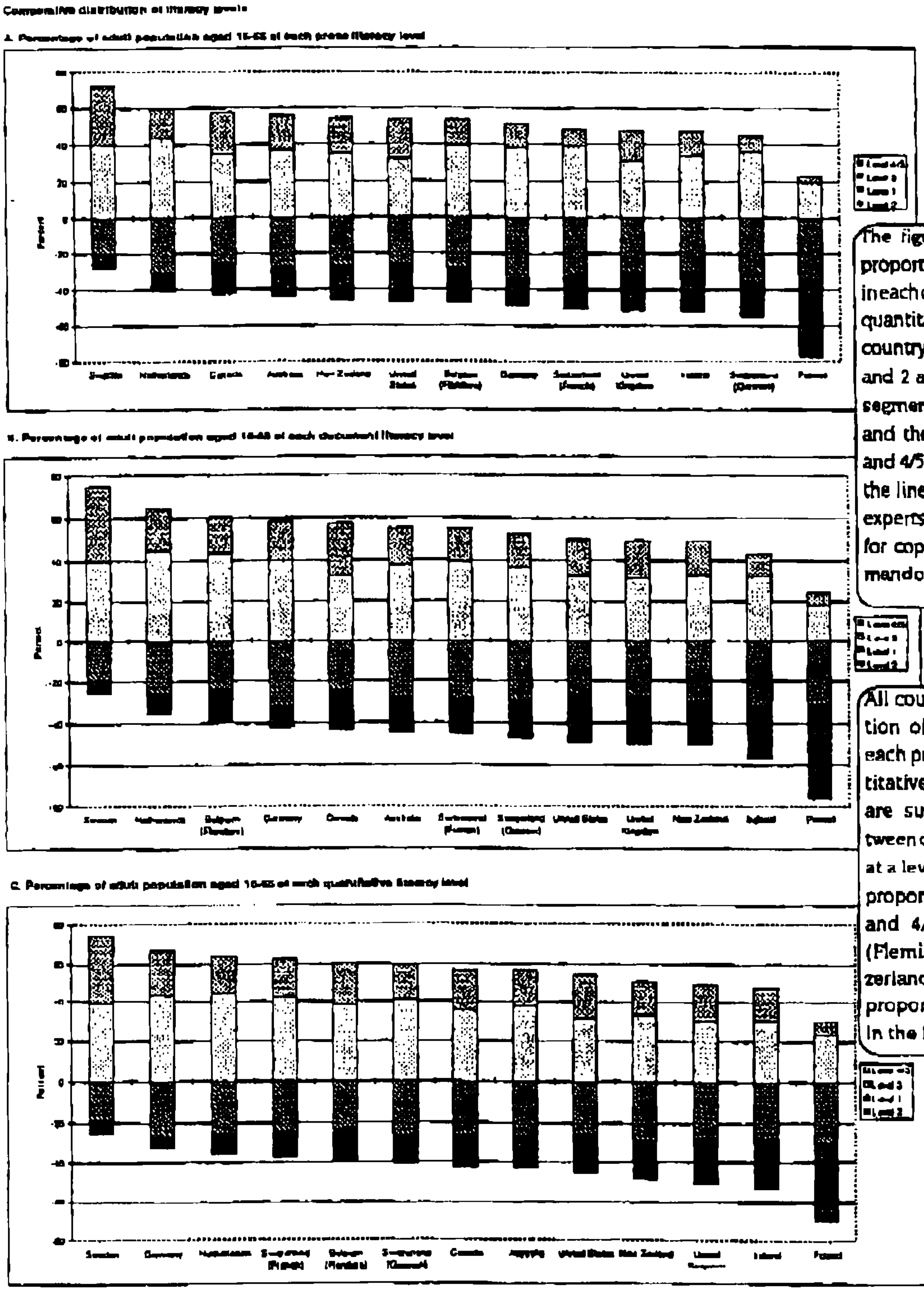
For analytical purposes, the ranges of scores achieved were grouped into five proficiency levels, reflecting the empirically determined progression of information-processing skills and strategies:

Level 1 (0-225 points) indicates persons with very poor literacy skills;

Level 2 (226-275 points) identifies individuals who, although they can read, can deal only with material that is simple, clearly laid out, and in which the tasks involved are not too complex;

Level 3 (276-325 points) denotes people with the ability to integrate several sources of information and solve more complex problems. This is the level of skill regarded by many experts as a suitable minimum for coping with the demands of everyday life and work in a modern society.

Levels 4-5 (326-500 points) describe respondents who demonstrate the capacity to use higher order thinking and information-processing skills. Since the numbers performing at the highest skill level are small (under five per cent in most countries), Levels 4 and 5 are combined for the purposes of the data analysis.



The figures show the estimated proportion of the adult population in each of the prose, document and quantitative literacy levels for each country. Proportions in Levels 1 and 2 are represented by the bar segments below the reference line and the proportions in Levels 3 and 4/5 by the bar segments above the line. Level 3 is considered by experts to be a suitable minimum for coping with the complex demand of modern work and daily life.

All countries have some proportion of the adult population in each prose, document and quantitative literacy level, but there are substantial differences between countries in the proportions at a level. For example, while the proportion in quantitative Levels 3 and 4/5 is similar in Belgium (Flemish community) and Switzerland (German community), the proportion at Level 4/5 is greater in the former than in the latter.

Source: International Adult Literacy Survey, 1994-95.

Understanding literacy

The new approach to measurement recognises that the emerging knowledge society has changed both expectations and demands, and that literacy skill requirements have increased, by some measures dramatically so. In the new perspective, literacy is seen not as a minimum level of reading ability mastered at school by almost all those growing up in developed countries. Educational attainment, by itself, is considered an inadequate proxy measure, because literacy skills once acquired in school can deteriorate rapidly if not used in the post-education years, and because such skills can be acquired and improved later on, even independently of the training programmes organised by adult education institutions. Because literacy is a "moving target", a single cut-off in terms of "literates" and "illiterates" cannot meaningfully be set. For the purposes of the IALS, the term "literacy" is instead used to refer to a particular skill — namely the ability to understand and employ printed information in daily activities, at home, at work and in the community — and its usage in order to achieve one's goals, and to develop one's knowledge and potential. Thus a much more complex picture of literacy emerges, one of individuals placed along a continuum of ability.

What's new?

Literacy Skills for the Knowledge Society should be taken not as the last word on literacy, but rather as a contribution to an evolving body of work. A number of additional countries are collecting literacy data, and IALS results for some 25 OECD countries will become available over the next two years. Much is already known about the population distribution of literacy and about the consequences of low literacy; all countries will need to respond to the problem as a matter of priority

More information

For more information about the IALS and its findings, the OECD Secretariat member to contact is Mr. Albert Tuijnman. The contact person at Statistics Canada is Mr. T. Scott Murray.

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%

A. Percentage of adult population aged 16-65 at each prose literacy level, 1994-1995

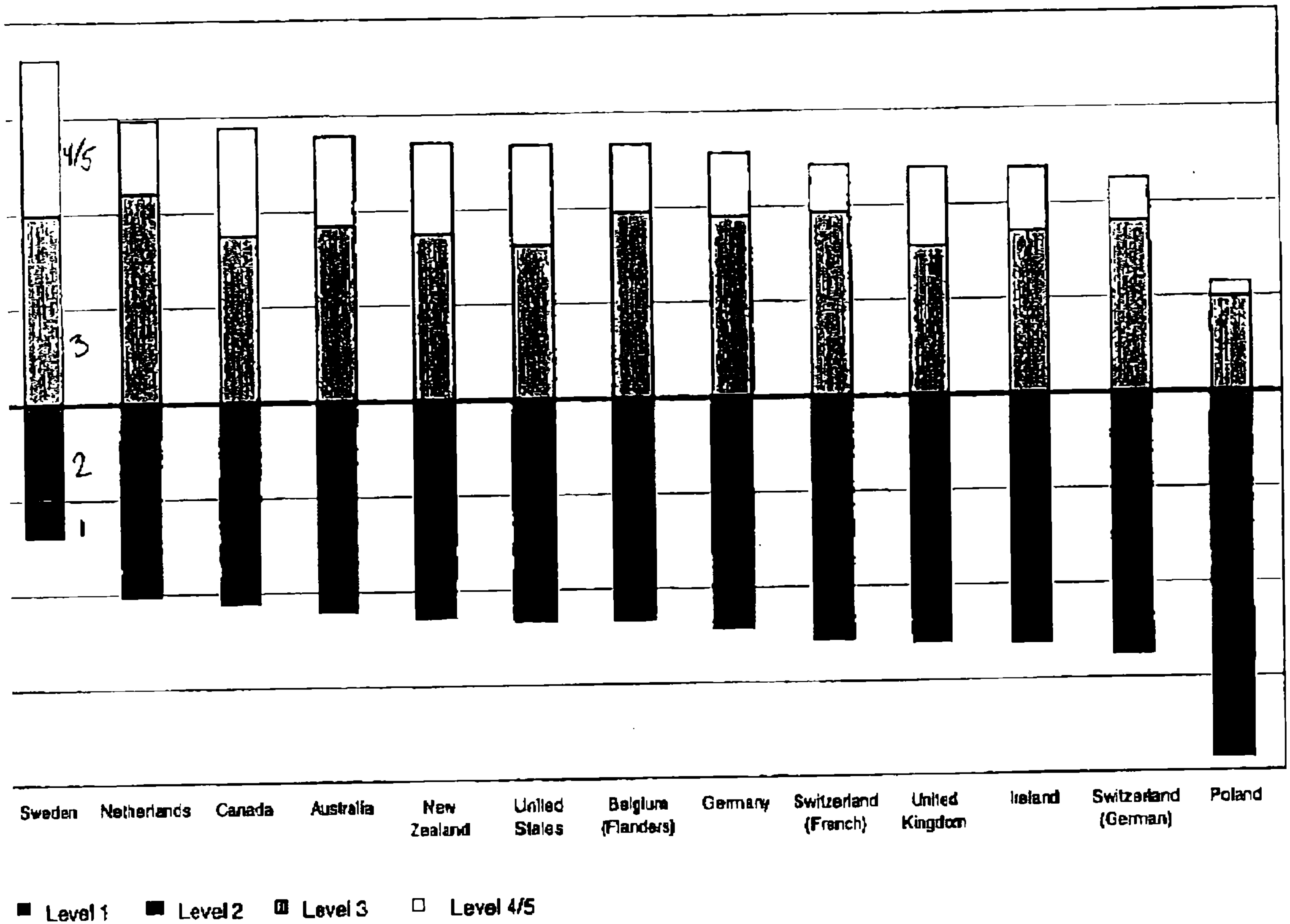

Figure 1.2 Comparative distribution of literacy levels

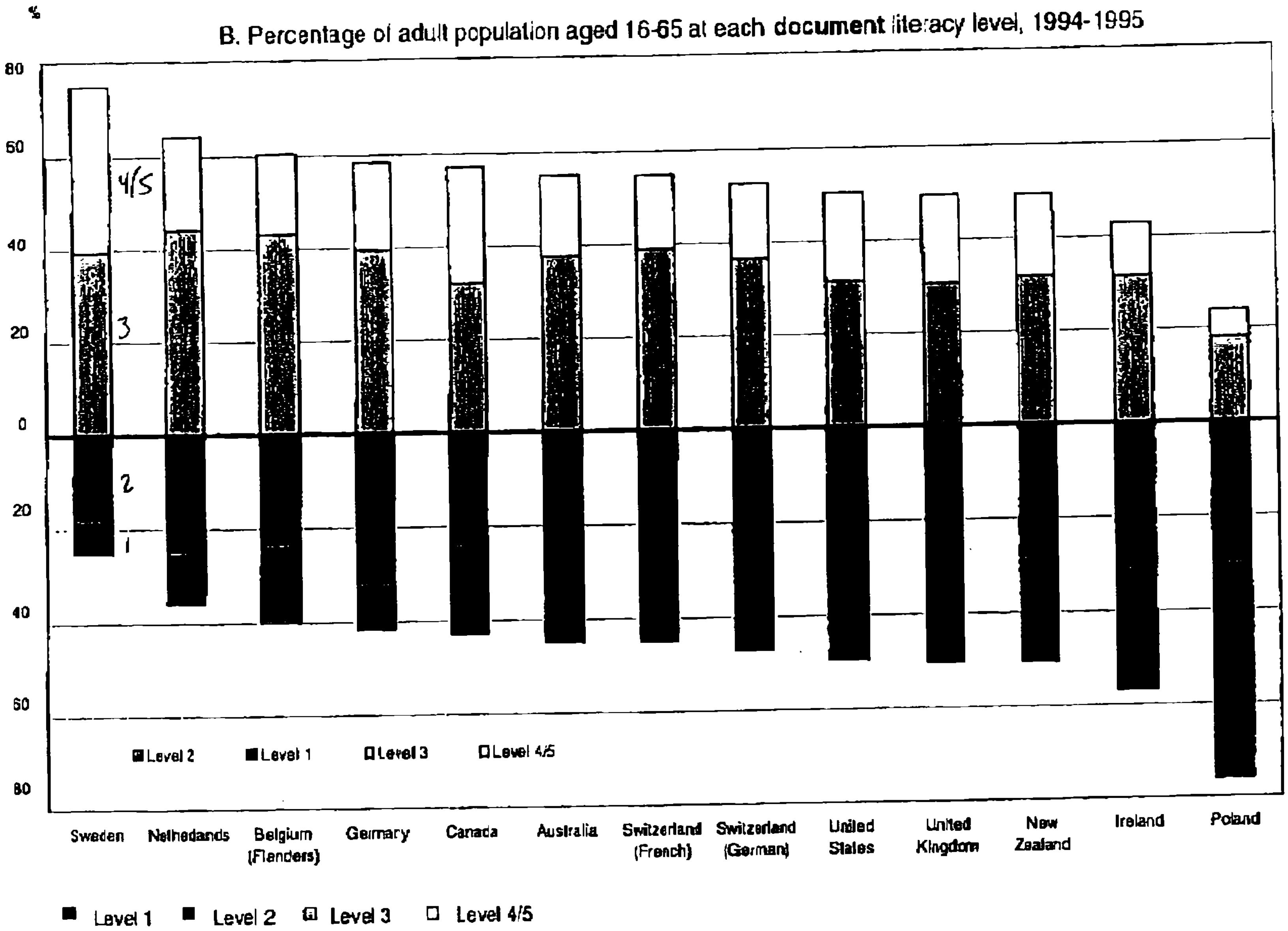

Figure 1.2 Comparative distribution of literacy level

C. Percentage of adult population aged 16-65 at each quantitative literacy level, 1994-1995

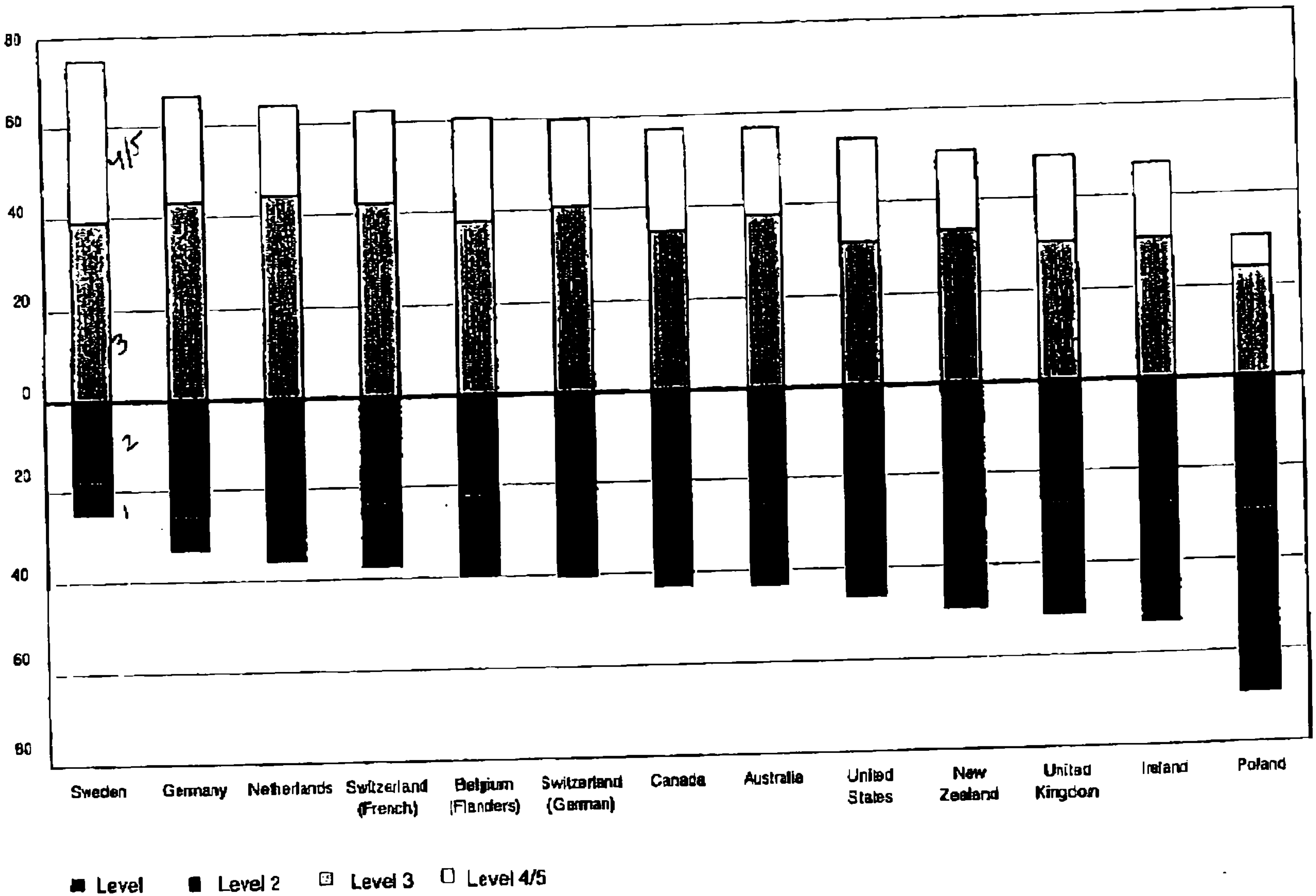

Figure 1.2 Comparative distribution of literacy lev

The State of Literacy in America

Level 1 Adult Literacy Rates, by State

Kevin -
This is from the "State of Literacy in the U.S." report we are releasing in 2 weeks. - Mice

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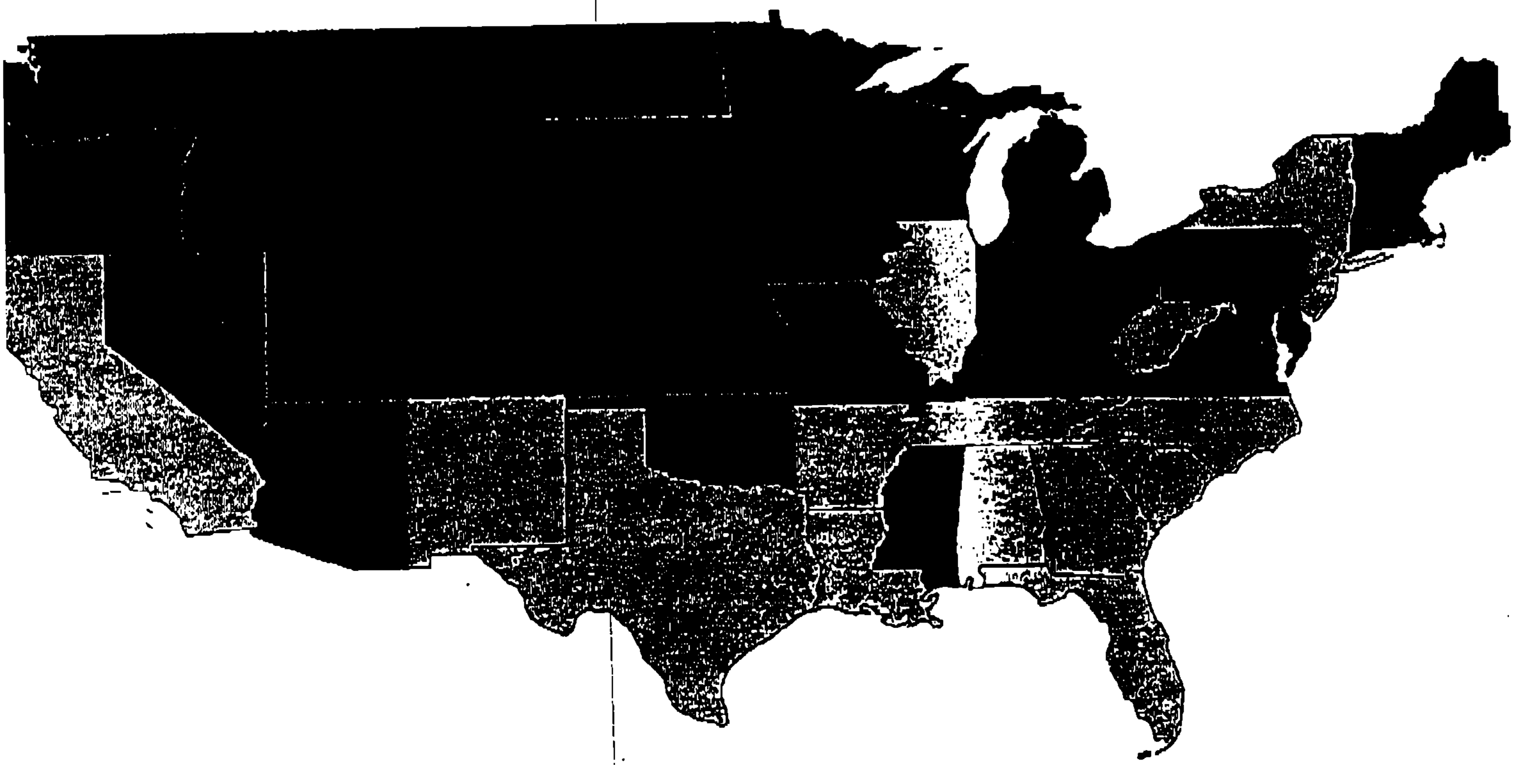


Percentage of adult population with Level 1 Literacy skills

■	30.0% or greater	(2)
▨	20.0% to 29.9%	(15)
■	15.0% to 19.9%	(18)
■	10.0% to 14.9%	(16)
■	9.9% or less	(0)
☐	no estimate available	(0)

e: U.S. Department of Education
n of Adult Education and Literacy

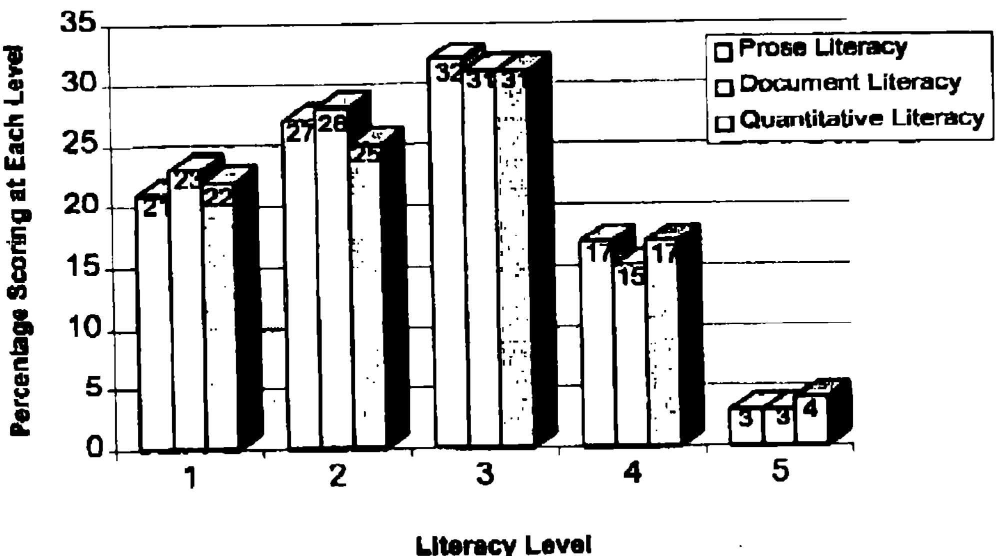
12/97 DRAFT --NOT FOR PUBLIC DISSEMINATION

INTRODUCTION

In recent years, policymakers have asked many questions -- but received few real answers -- about the extent of our national adult literacy problem. Some have even wondered whether low literacy is a national problem at all. Very little was known about the skills of the adult population as a whole.

Recognizing this need, Congress in 1988 directed the Department of Education to carry out an assessment of the literacy skills of American adults. The result was the National Adult Literacy Survey (NALS), a monumental report that remains the most comprehensive, statistically reliable source of data on literacy in the United States. Through an exhaustive process that included interviews with approximately 26,000 individuals, data were collected and, in 1993, reported at the national level. Thanks to the NALS, we now have a comprehensive an up-to-date profile of the literacy skills of American adults.

Literacy Levels of Adult Americans



1 represents the lowest level of proficiency; 5 the highest.

Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

Following the NALS release, policymakers and adult literacy workers were eager to find out exactly what these numbers meant to their own states, counties, and cities. They wanted to know where their adult population stood and how far they had to go. They were especially curious about the scope of the problem for adults with the lowest level of literacy skills – those in the greatest need of remedial services. This report provides that information, and offers the best estimation of how many adults have low levels of literacy skills that these areas have ever had at their disposal.

Through the efforts of researcher Stephen Reder of Portland State University, and made possible by the U.S. Department of Education's Office of Vocational and Adult Education's Division of Adult Education and Literacy, the National Institute for Literacy presents here an extrapolation of NALS data for states, counties, Congressional districts, and cities with adult populations over 5,000. Dr. Reder used sophisticated statistical modeling techniques to calculate synthetic estimates of adult literacy proficiency for these areas. (For details on the process, see "Frequently Asked Questions About Synthetic Estimates of Adult Literacy Proficiency.")

It is the hope of the National Institute for Literacy that presenting this new geographic breakdown of the lowest levels of adults' literacy abilities will fuel a discussion of and new ideas about lifelong learning for <u>all</u> adults as the 21st century approaches.

What is Literacy in the 1990s?

As the world changes and the demands on individuals, families, and businesses increase, the definition of literacy also continues to shift. While concerns about inadequate literacy skills are not new, the nature of the concerns is evolving. In the past, literacy was considered the ability to read and use printed materials at an extremely basic level. For example, during the mid-1900's, "functional literacy" was defined as possessing skills typically provided by a sixth grade education. By the 1970's, the criteria for being considered "functionally literate" rose to a 10th to 12th grade education level.

Today, adults need higher levels of basic skills to function effectively, and literacy is defined more broadly to include problem-solving and higher level reasoning skills. Literacy is a range of tools that help people help themselves – and their children. It is not an end in itself, but a means to a better quality of life. In its 1991 National Literacy Act, Congress defined literacy as:

> ***an individual's ability to read, write, and speak in English, and compute and solve problems at levels of proficiency***

necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential.

NALS reflected this new concept of literacy. Rather than classifying individuals as either "literate" or "illiterate," NALS created a literacy scale with five levels. This approach represents the true nature of literacy as a continuum. Those with the highest educational skills were rated at Level 5; the lowest, Level 1. The levels are based on an assessment of individuals' ability to perform real-life literacy tasks that include completing forms, interpreting graphs and charts, and finding information in texts.

What Does "Level 1" Mean?

The NALS found a total of 21-23 percent -- or 40-44 million of the 191 million American adults -- at Level 1, the lowest literacy level. Although many Level 1 adults *could* perform many simple tasks involving uncomplicated texts and documents, all adults scoring at Level 1 displayed limited skills and an inability to use certain reading, writing, speaking, and computational skills considered necessary for functioning in everyday life.

A chart with details about what activities mot adults at Level 1 usually can and cannot perform successfully follows:

SKILLS OF ADULTS AT LEVEL 1

CAN USUALLY PERFORM	CANNOT USUALLY PERFORM
Sign one's name	Locate eligibility from a table of employee benefits
Identify a country in a short article	Locate intersection on a street map
Locate one piece of information in a sports article	Locate two pieces of information in a sports article
Locate the expiration date information on a driver's license	Identify and enter background information on a social security card application
Total a bank deposit entry	Calculate total costs of purchase from an order form

Why Focus on the Lowest Literacy Level?

While we are concerned about the literacy of all adults – particularly those at Levels 1 and 2, who face the most obstacles as a result of their low basic skills --we consider those scoring at the lowest level (Level 1) to be most urgently in need of nationwide attention. We want to emphasize that most of these adults are not illiterate and that they do have the ability to perform a variety of tasks that life requires of them. But the background data profiled in the original NALS report clearly demonstrate that these adults tend to be at a great disadvantage in our society. They do not have the full range of economic, social, and personal options that are open to Americans with higher levels of skills.

What Is the Impact of Low Literacy?

Literacy is closely connected to the social problems related to poverty. Nearly half (41-44 percent) of all adults in Level 1 live in poverty. This contrasts with only four to eight percent of those at the two highest literacy levels.

IMPACTS OF LOW LITERACY

- Workers who lack a high school diploma earn 60 cents for every dollar earned by a high school graduate, and 34 cents for every dollar earned by a college graduate.
- Three out of four food stamp recipients performed in the two lowest literacy levels.
- Seven in 10 adults in prison performed in the lowest two literacy levels.
- Adults on welfare who have stronger literacy skills become self-sufficient, on average, several years sooner than those with low literacy skills. *(Source: The Urban League)*

The Future of Literacy and Public Policy

Americans can and should be doing more to address these basic educational needs. Nationally, fewer then 10 percent of the adults who could benefit from literacy programs are currently being served. Public policies created at the state, local, and federal level have a tremendous impact on the number of people served and the overall quality of programs. In addition to the most urgent needs -- more funding, better coordination among service providers, and greater collaboration with a range of other services – the quality of programs could be improved through better teacher and tutor training; greater availability of essential support services, such as child care and transportation; and higher quality instructional materials that include new technologies.

The literacy skills of American adults and families affect every other aspect of American life, and the education, labor, human services, and health care communities have begun to think about literacy across agency lines. But much more attention is needed. One thing is certain: our success as a nation demands basic literacy skills for all. As an adult literacy student in Jackson, Mississippi explains, "Without an education in the year 2000, we the people will be in serious trouble. Because now everything is moving forward fast and without an education you will be moving nowhere."

The State of Literacy in America

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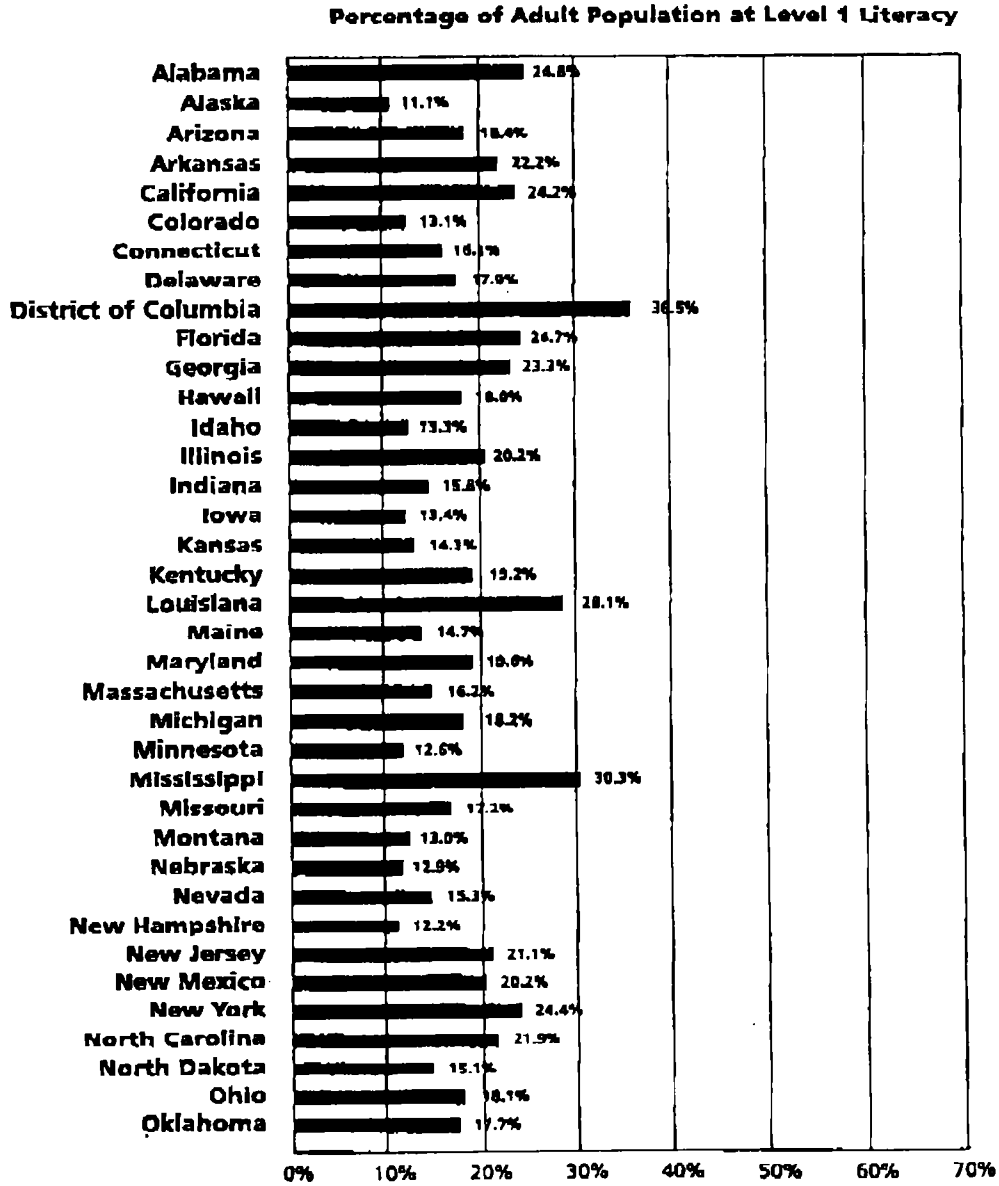
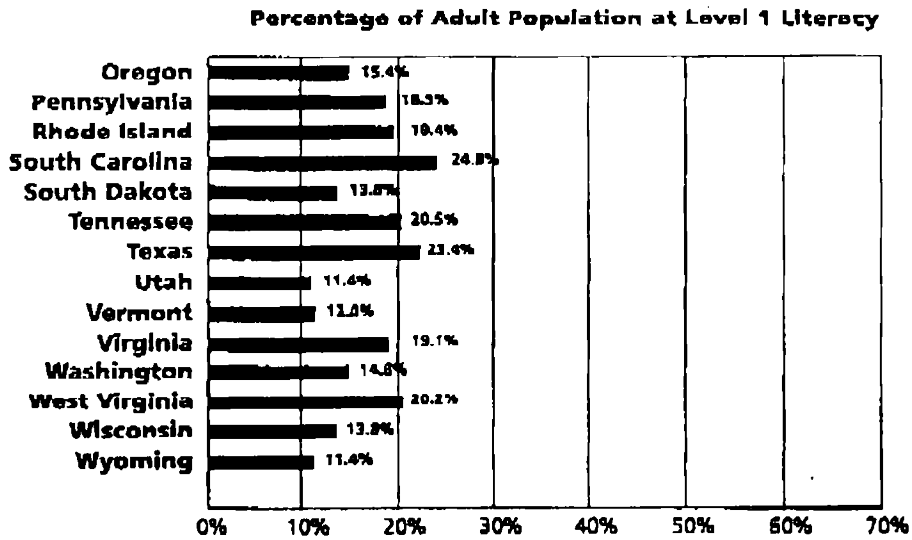
Individual States



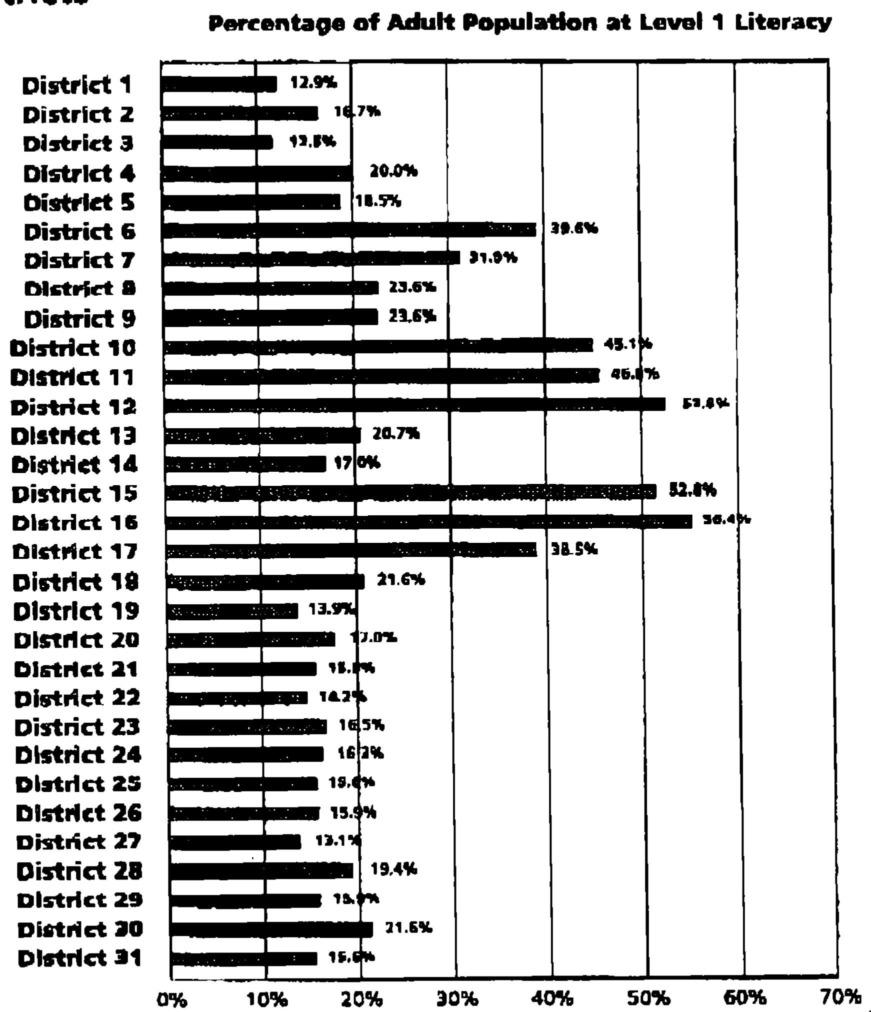
Individual States (cont.)



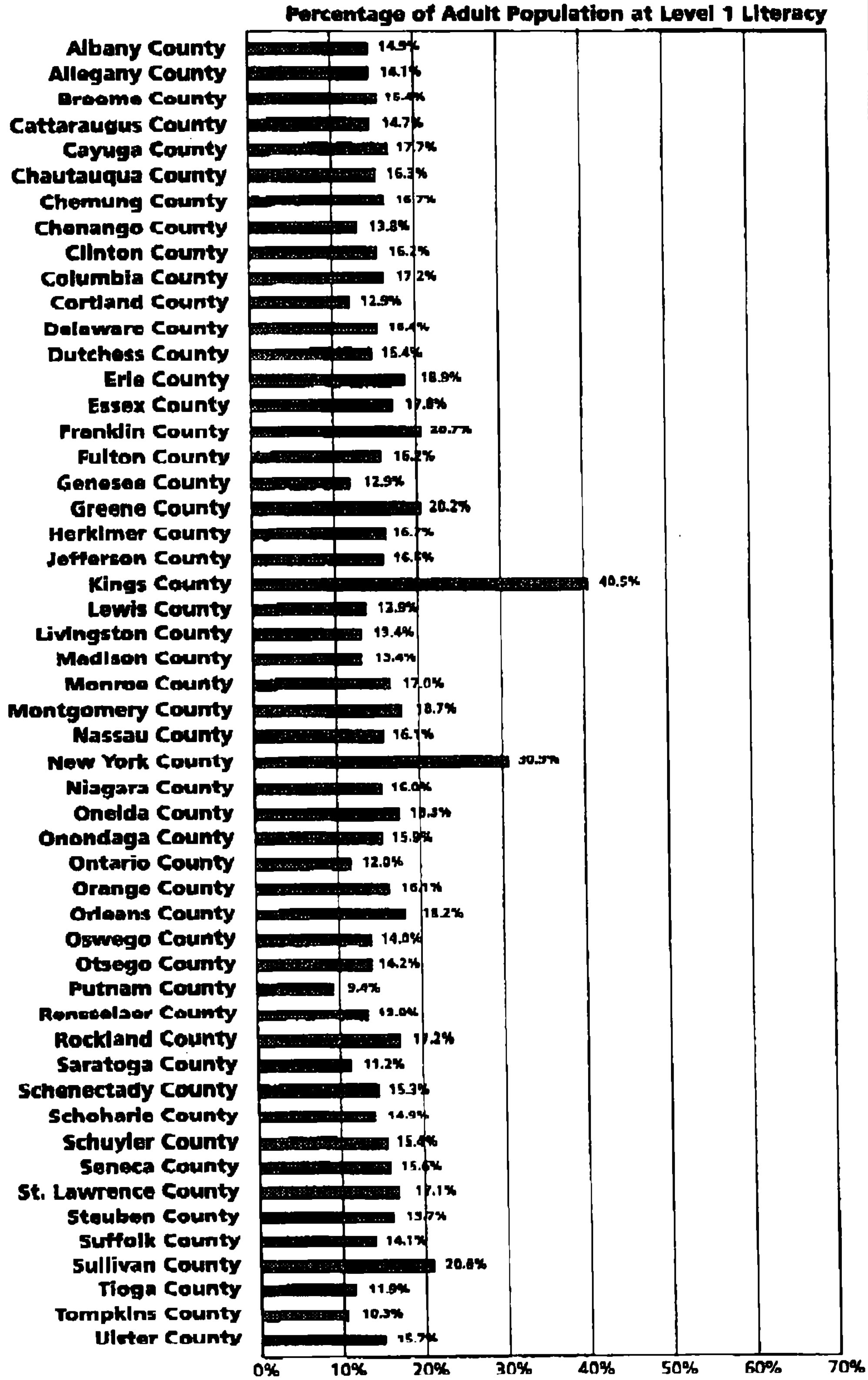
New York

24.4% of adult population is at Level 1 Literacy

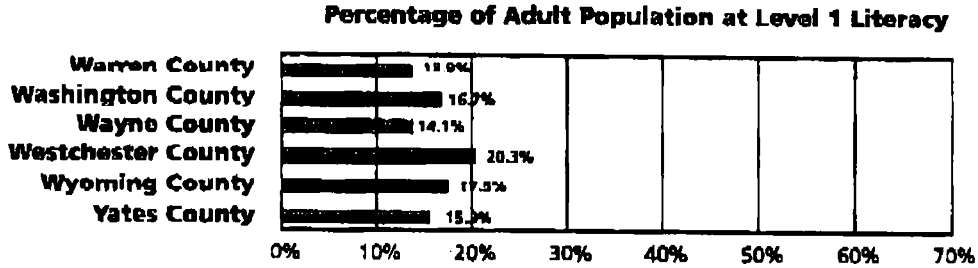
Congressional Districts



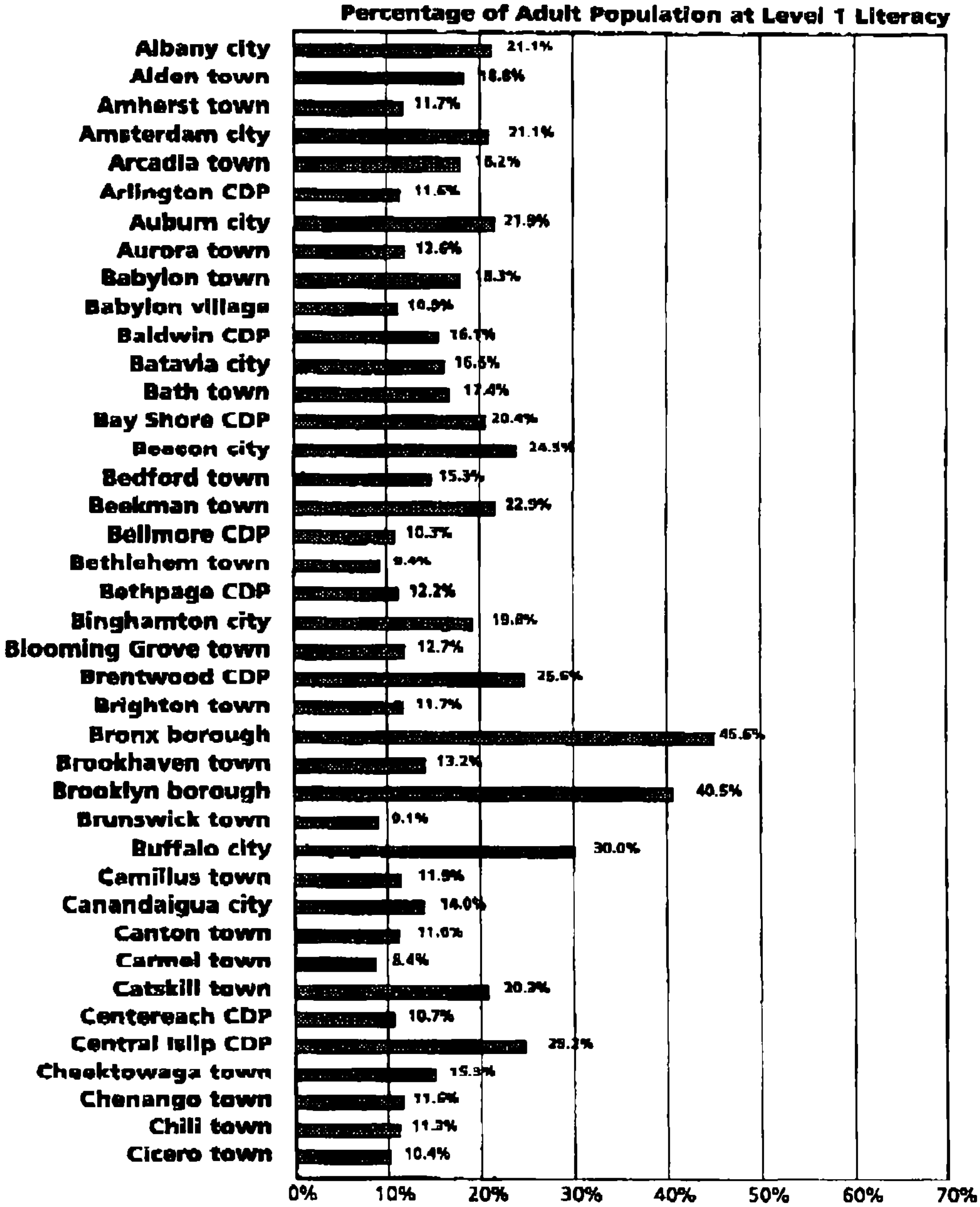
Counties (with adult populations of at least 5,000)



Counties (cont.)



Municipalities (with adult populations of at least 5,000)



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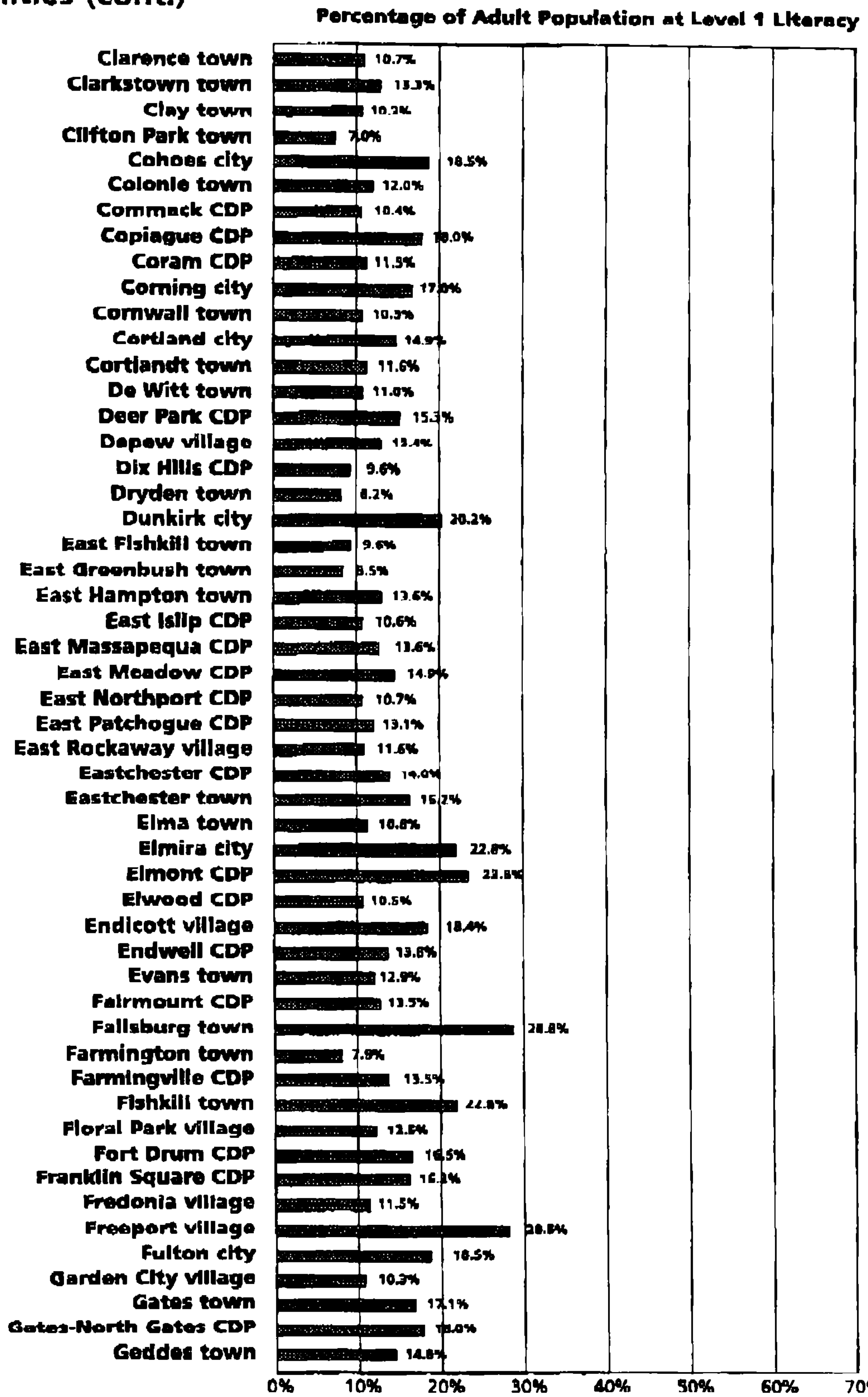

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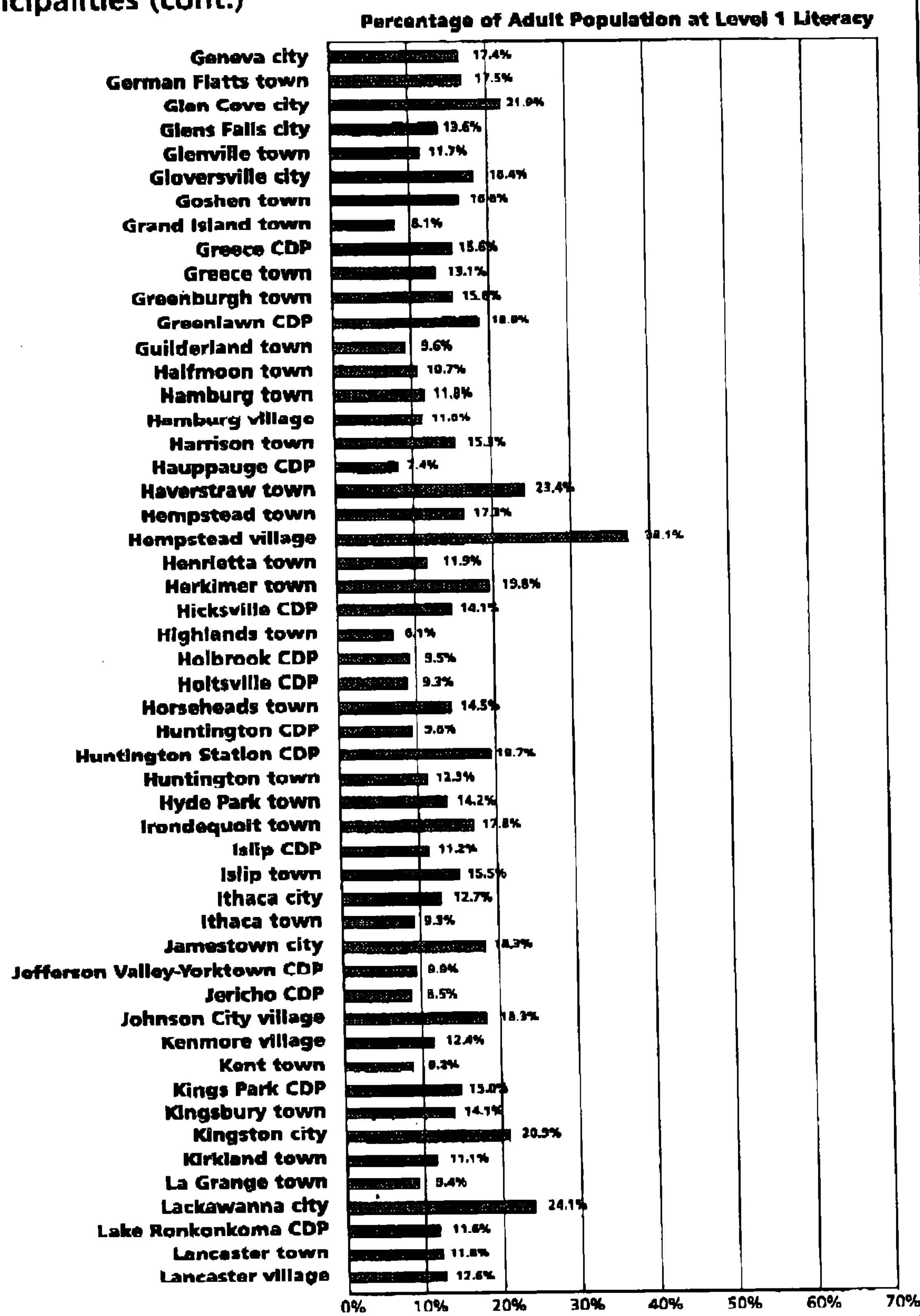

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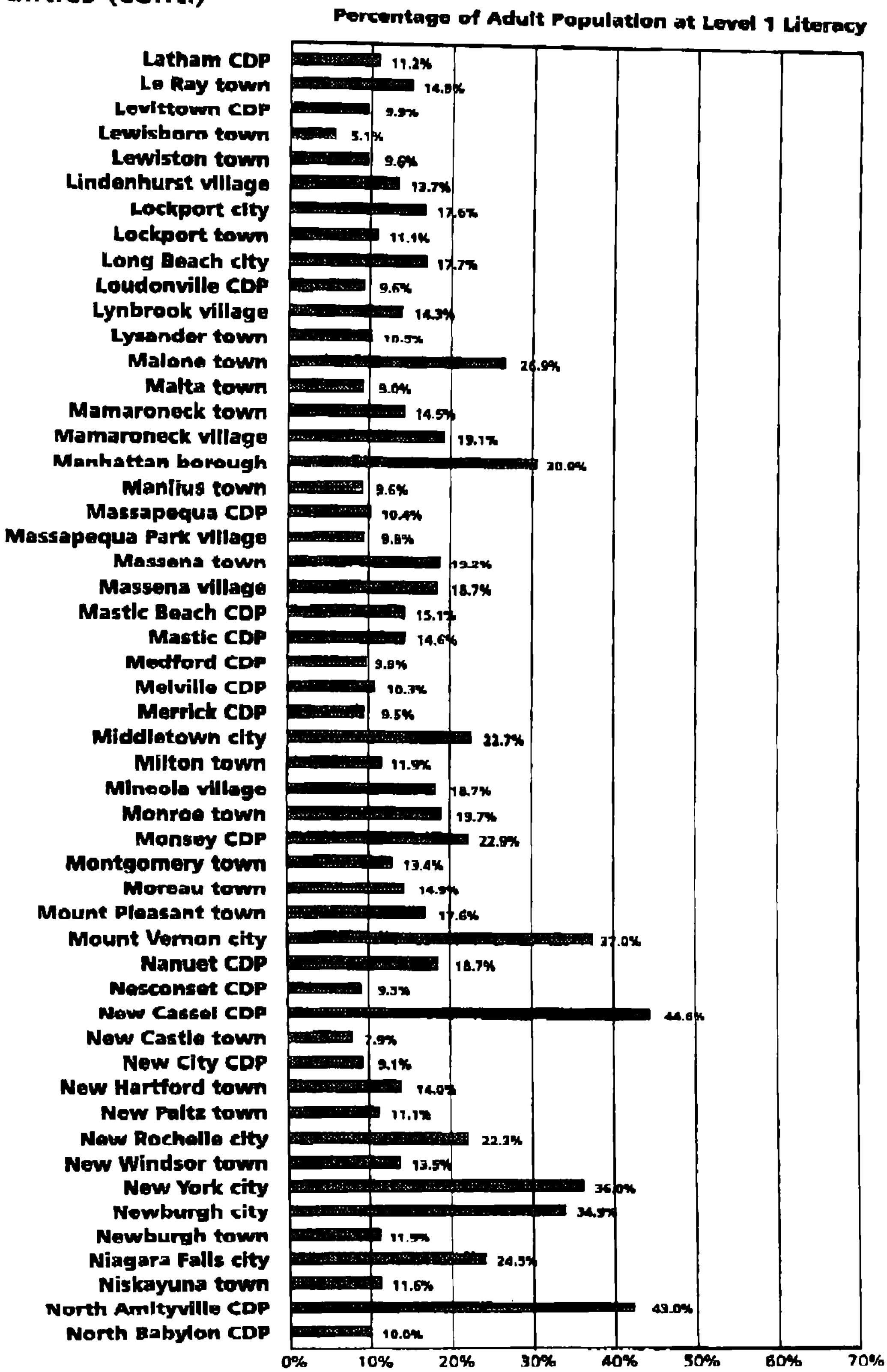

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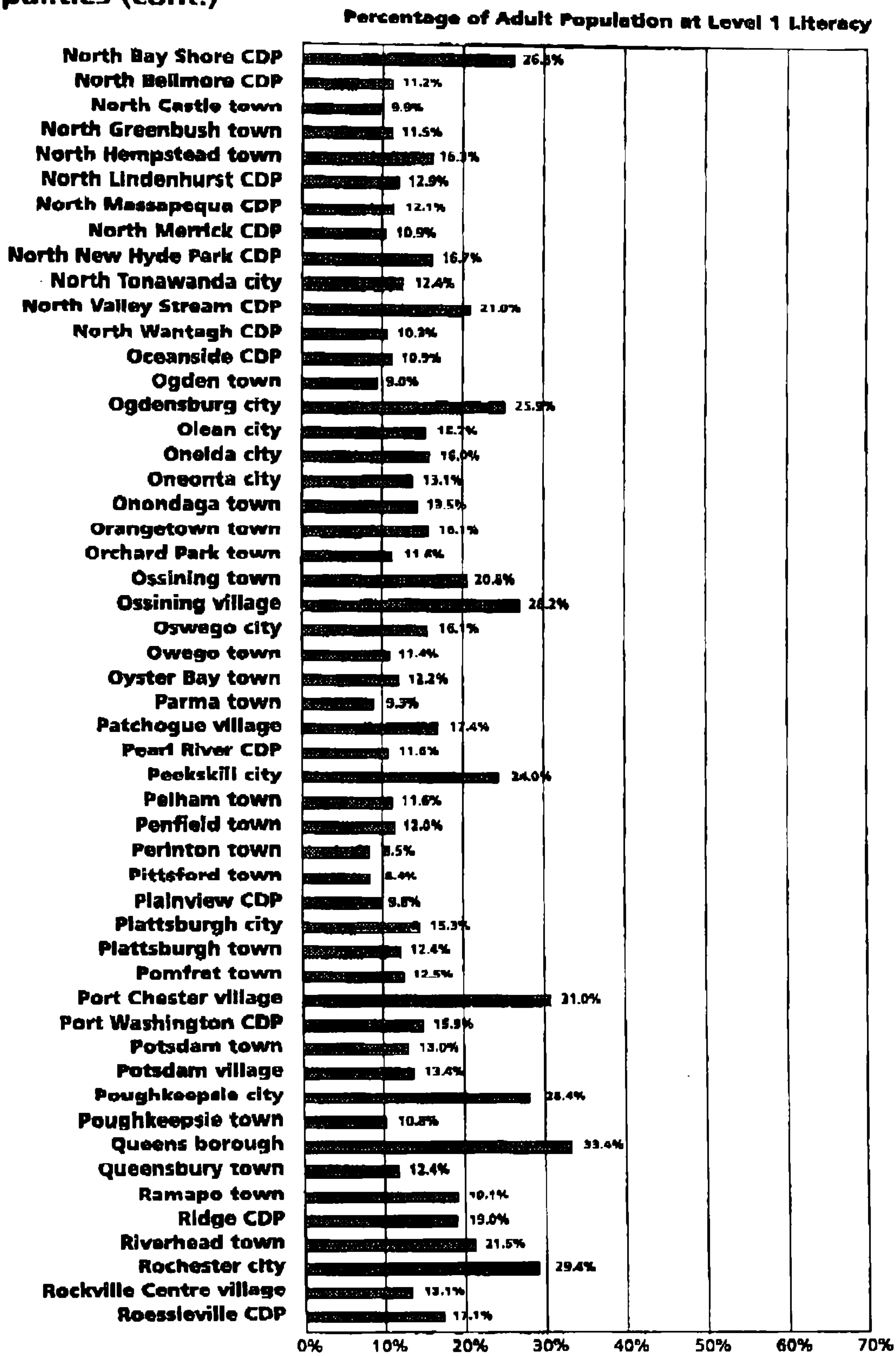

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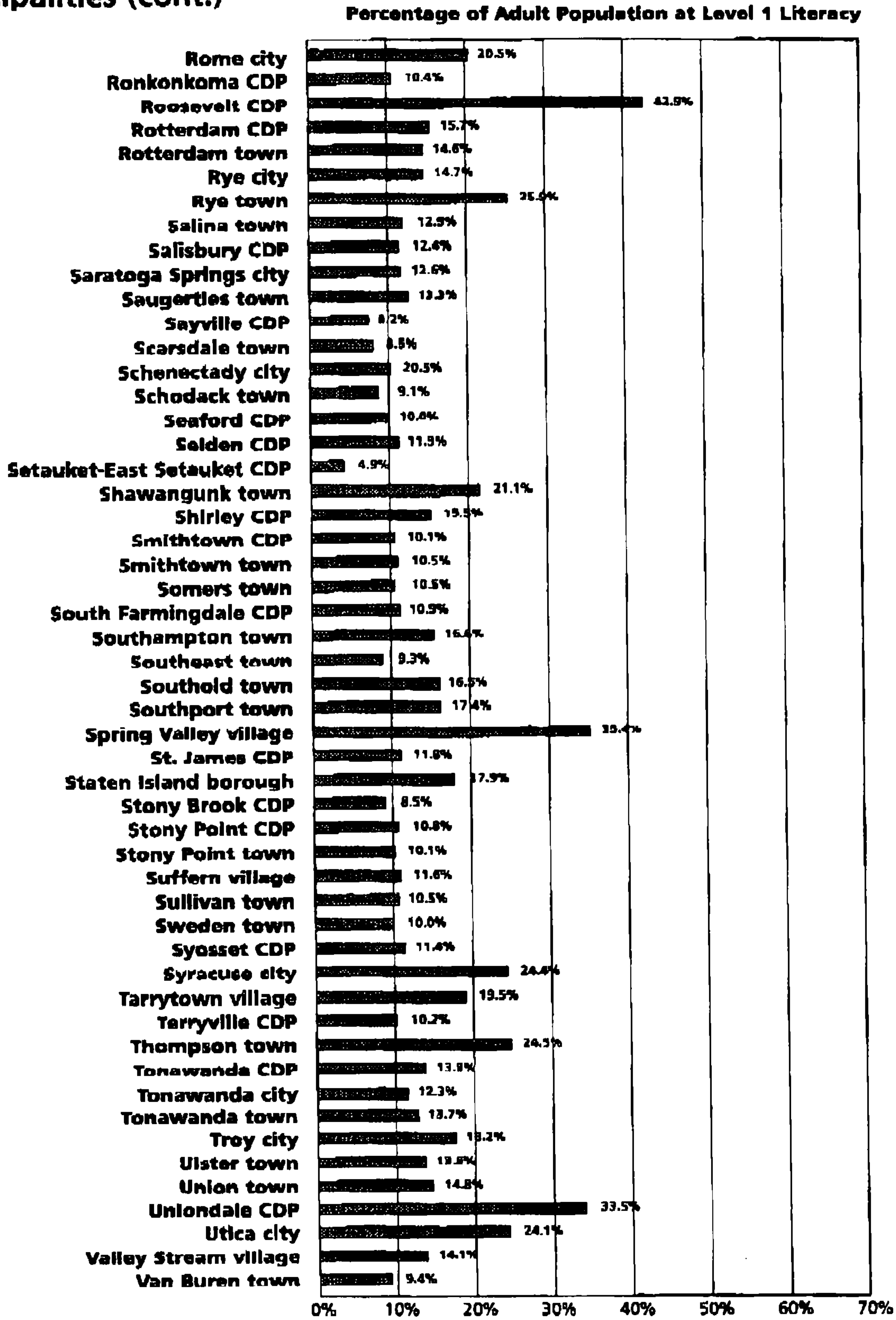

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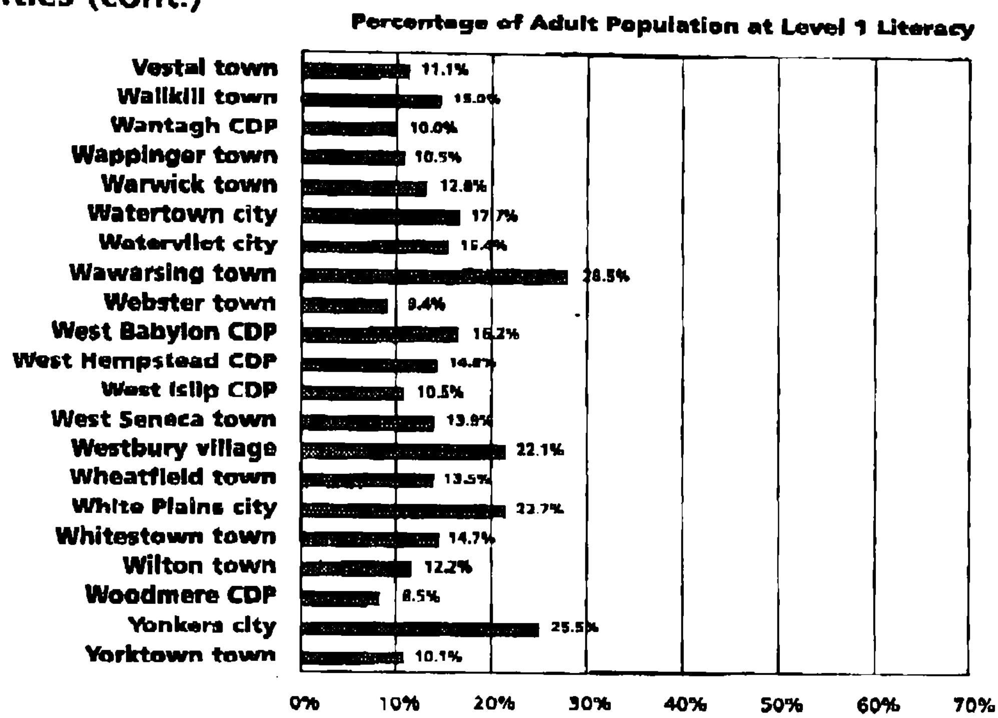
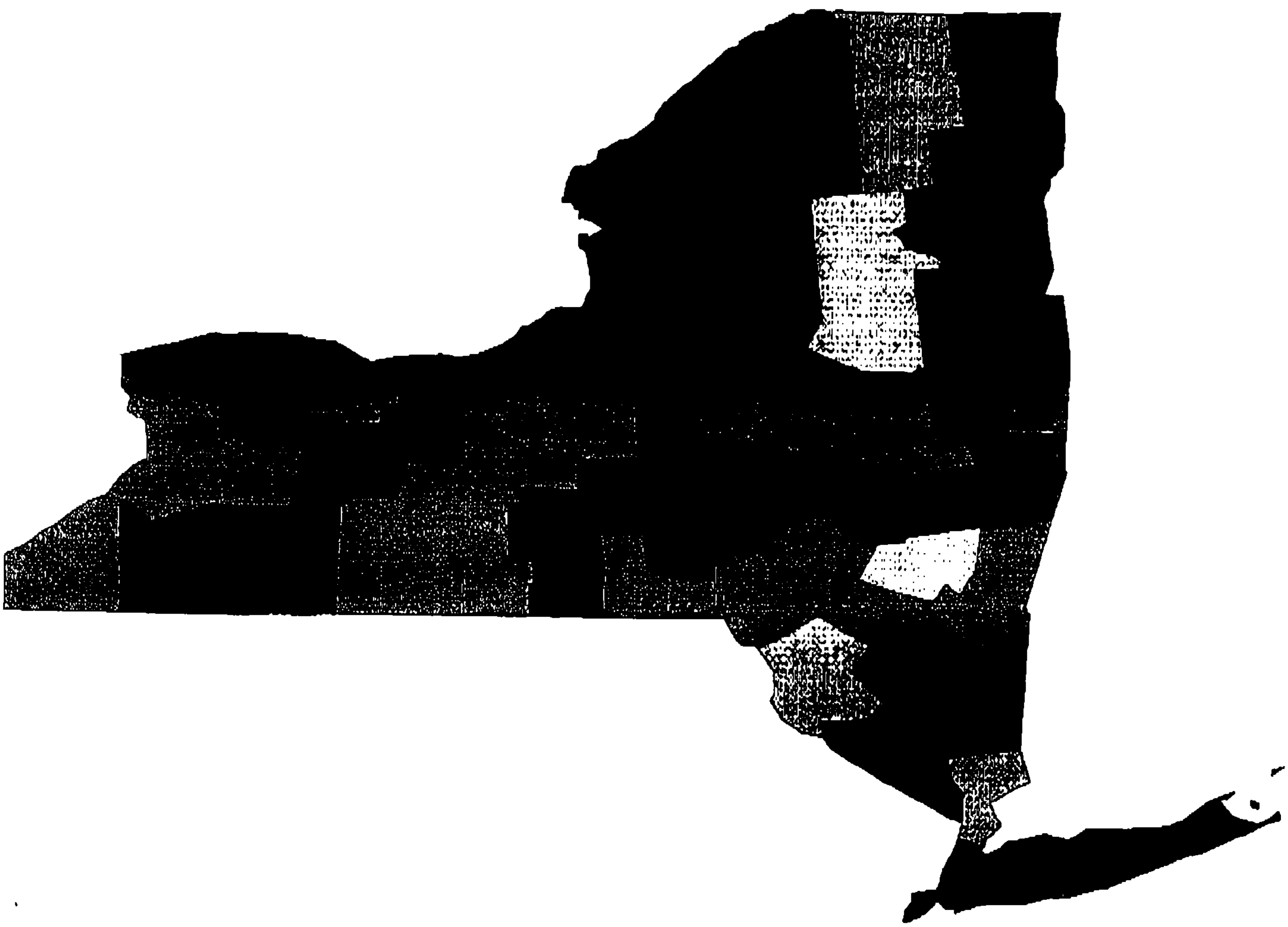


The State of Literacy in America: New York

Level 1 Adult Literacy Rates, by County



Percentage of adult population with Level 1 Literacy skills

30.0% or greater	(4)
20.0% to 29.9%	(4)
15.0% to 19.9%	(32)
10.0% to 14.9%	(20)
9.9% or less	(1)
no estimate available	(1)

ce: U.S. Department of education
ion of Adult Education and Literacy

The State of Literacy in America: New York

Level 1 Adult Literacy Rates, by Congressional District

Percentage of adult population with Level 1 Literacy skills

■	30.0% or greater	(8)
▦	20.0% to 29.9%	(6)
■	15.0% to 19.9%	(12)
■	10.0% to 14.9%	(5)
■	9.9% or less	(0)
□	no estimate avilable	(0)

rce: U.S. Department of education
sion of Adult Education and Literacy

Weekly

MEMORANDUM

TO: TOM FREEDMAN, MARY SMITH

FROM: DREW MYLER

RE: ISSUES FROM WEEKLY AND MONTHLY MAGAZINES

DATE: DECEMBER 12, 1997

MAGAZINES CONSULTED: *Business Week* (December 15), *U.S. News & World Report* (December 15), *Newsweek* (December 15), *The Economist* (December 6), *The New Republic* (December 15).

ATTACHMENTS: Table of contents for all of the above; "A Matter of Faith," *Newsweek,* December 15; "Investors Beware: Chop Stocks are on the Rise," *Business Week,* December 15; "Toyota's Green Machine," *Business Week,* December 15; "The Cat Sat on the Tam," *Business Week,* December 15; "Tragedy in a Small Place," *Newsweek,* December 15; "Road Runner v. Coyote," *U.S. News & World Report,* December 15.

"A Matter of Faith," *Newsweek,* December 15, pp. 49-54

More and more interfaith couples are springing up across the country. As they raise their families, questions arise regarding the children's faith. "As these families raise their children, they are creating, in effect, a new form of religious identification in America, analogous to the 'mixed race' category that some people want to add to census forms." From Jewish-Catholic couples to Hindu-Christian, each family deals with these questions on a daily basis.

"Investors Beware: Chop Stocks are on the Rise," *Business Week,* December 15, pp. 112-128

"Vast, interlocking networks of brokers are managing to obtain shares in hundreds of companies at dirt-cheap prices and are unloading them on the public. Among the people who make their living by pushing them on the public, the rogue brokers and stock promoters and mobsters, there's a name for these stocks: chop stocks... This is a problem that goes well beyond the Mob on Wall Street."

"Toyota's Green Machine," *Business Week,* December 15, pp. 108-110

Toyota's environment-friendly Prius makes its debut in Japan this week to varying reactions. Critics claim that the underpriced vehicle (at $16,900, its price is half as much as its cost) will not sell, resulting in more than $100 million losses per year for Toyota. However, the car uses "a gasoline engine and electric motor to cut emissions dramatically and get as much as 28 kilometers per liter-- equivalent to 66 miles a gallon." The Prius poses a possible pollution solution to concerns raised in Kyoto, Japan, at an international summit on global warming held in early December.

"The Cat Sat on the Tam," *The Economist,* December 6, pp. 91-92

A new study at the University of California, San Francisco reinforces psychologist Paul Tallal's hypothesis from 20 years ago -- that "children might learn to read better if they could be taught to hear better... Children must hear the basic sounds, or phonemes, of their language before they can become skilled readers... All this suggests that a problem with hearing or processing speech could be the underlying cause of dyslexia."

"Tragedy in a Small Place," *Newsweek,* December 15, pp. 30-31

Police continue to investigate into the horrific high-school shooting in Paducah, Ky. 14-year-old Michael Carneal walked into Heath High School last Monday morning and randomly opened fire on a group of students involved in a prayer session, killing three and wounding five more. No particular motive is evident; Carneal's response to questions asking why is, "I don't know;" the boy did not have a dysfunctional upbringing, knew the prayer group leader well, and was apparently friends with one of the three victims. Meanwhile, the town works to heal its wounds, and to forgive Michael for his act.

"Road Runner v. Coyote," *U.S. News & World Report,* December 15, pp. 58-59

As the Justice Department slowly brings the Microsoft case to court, Bill Gates and his Microsoft crew continue to rake in the cash from the cause of the commotion. By "requiring computer makers to bundle [Internet browsing program] Explorer along with the Windows 95 operating system," Microsoft threatens to topple Netscape's stronghold on Internet browsing. The DoJ believes the marketing scheme is a violation of a 1995 consent decree. However, "that's not to imply Microsoft is guilty of anything more than shrewd marketing. Whatever the outcome, the case highlights the inadequacies of an antitrust system first created more than 100 years ago."

"Living Longer -- And Staying Fit," *Business Week,* December 15, p. 30

Life expectancy in the U.S. has reached an all-time high at 75.9 years. "Aside from a continuing decline in infant mortality (34 straight years), a major factor behind the rise in life expectancy has been a relatively sharp drop in mortality rates among men 65 and over since 1990-- a period during which the mortality rates of older women have hardly budged." Healthier lifestyles have also contributed to Americans' longevity.

"Outlaw Online Betting? Don't Bet On It," *Business Week,* December 15, p. 44

While lawmakers will be considering legislation to make Internet gambling illegal, casinos are scrambling to develop their own technology. "'We'd be crazy not to view this as an opportunity for the company,' says Phil Cooper, a vice president with Caesars Palace in Las Vegas." Instead of making online gambling illegal, Australian politicians are trying to regulate the process. "'The attitude here is that it's going to happen, so we may as well be in the best position when it does,' says Michael Toohey, managing director of Australasian Gaming Specialists in Sydney."

BusinessWeek

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COVER PHOTO ILLUSTRATION BY WILLIAM DUKE

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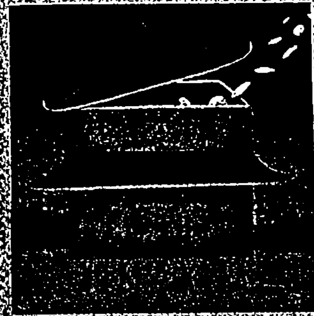

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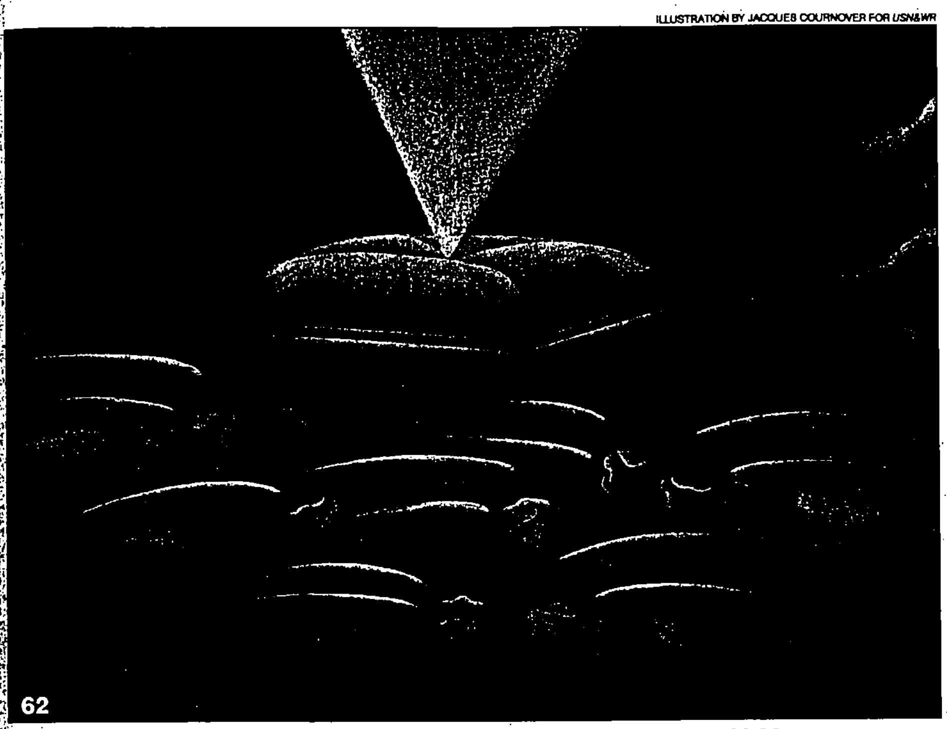

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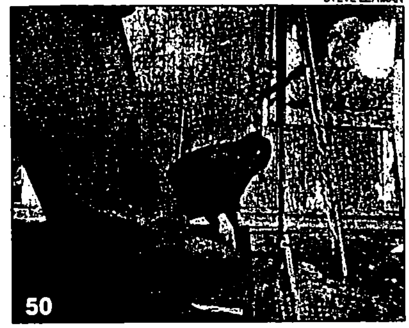

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COVER: *Angel with a Sword* (oak panel) by Hans Memling (c. 1433-94), Wallace Collection, London/Bridgeman Art Library, London

 U.S.News & World Report (ISSN 0041-5537) is published weekly, except for one combined issue mailed in August and a second combined issue mailed in December, $44.75 per year, by U.S.News & World Report Inc., 1290 Avenue of the Americas, Suite 600, New York, NY 10104. Periodicals postage paid at New York, NY, and at additional mailing offices. POSTMASTERS: Send address changes to U.S.News & World Report, PO Box 55929, Boulder, CO 80328-5929. *U.S. News* may allow others to use its mailing list. If you do not want your name included, please contact our Subscription Department by mail or phone. U.S.NEWS & WORLD REPORT® U.S. NEWS® WORLD REPORT® NEWS YOU CAN USE® SCANDOMETER™ WASHINGTON WHISPERS® Canadian Post International Publications Mail (Canadian Distribution) Sales Agreement No. 545643, Canadian Goods and Service Tax No. R124481334 U.S.News & World Report uses automatable polywrap Printed in the U.S.A.

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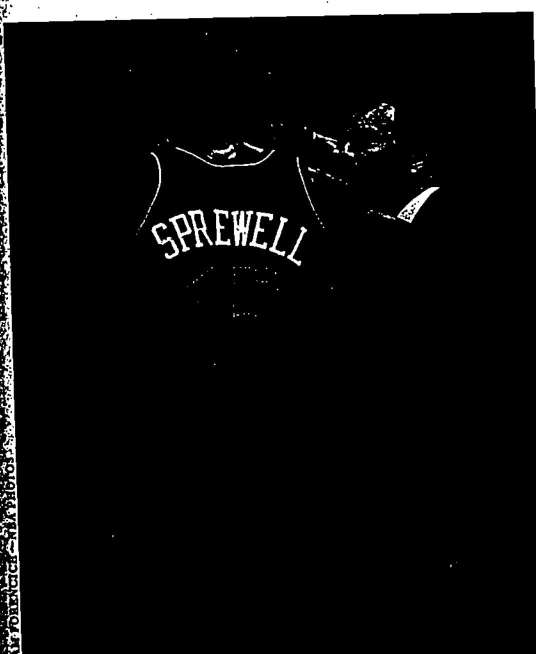

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Newsweek *Letters to the Editor should be sent to* NEWSWEEK, *251 West 57th Street, New York, NY 10019-1894. In the U.S. send subscription inquiries to* NEWSWEEK, *P.O. Box 59967, Boulder, CO 80322-9967.* NEWSWEEK **(ISSN 0028-9604),** *December 15, 1997, Volume CXXX, No. 24. In Canada send subscription inquiries to* NEWSWEEK, *Inc., P.O. Box 4012, Postal Station A, Toronto, Ontario M5W2K1. Canada Post International Publications Mail (Canadian Distribution) Sales Agreement No. 546593. Canadian GST No. 123-321-309. For all changes of address call 1-800-634-6850. For all other inquiries call 1-800-631-1040. Unless otherwise indicated by source or currency designation, all terms and prices are applicable in the U.S. only and may not apply in Canada.* NEWSWEEK *is published weekly, except for 2 issues combined into one at year-end, for US $41.08 a year and Canadian $61.88 a year, by* NEWSWEEK, *Inc., 251 West 57th Street, New York, NY 10019-1894. Richard M. Smith, Editor-in-Chief and President; Stephen Fuzesi Jr., Chief Counsel and Secretary. Periodicals postage paid at New York, NY, and at additional mailing offices. To order reprints (minimum order required: 500 copies) or request permission to publish a* NEWSWEEK *article, please call 212-445-4870 or fax 212-445-4929.* **POSTMASTERS: send address changes to NEWSWEEK, P.O. Box 59968, Boulder, CO 80328-9968.** *Printed in U.S.A.*

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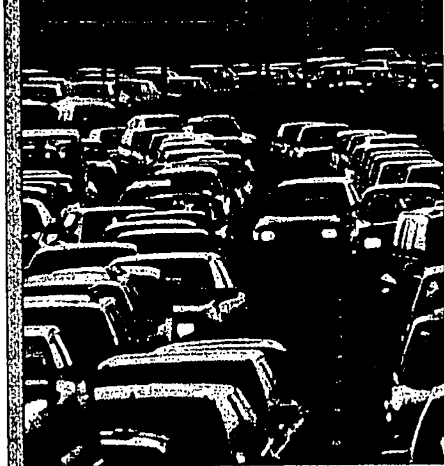

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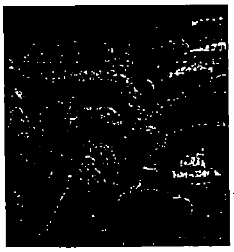
THE NEW REPUBLIC

A Weekly Journal of Opinion

DECEMBER 22, 1997

FOUNDED 1914
WASHINGTON, D.C.
ISSUE 4,327



Cover by Eric Baker for THE NEW REPUBLIC. Artwork by Tom Feelings from his book *The Middle Passage*, published by Dial Books. Articles on pages 16, 24, 25, and 34.

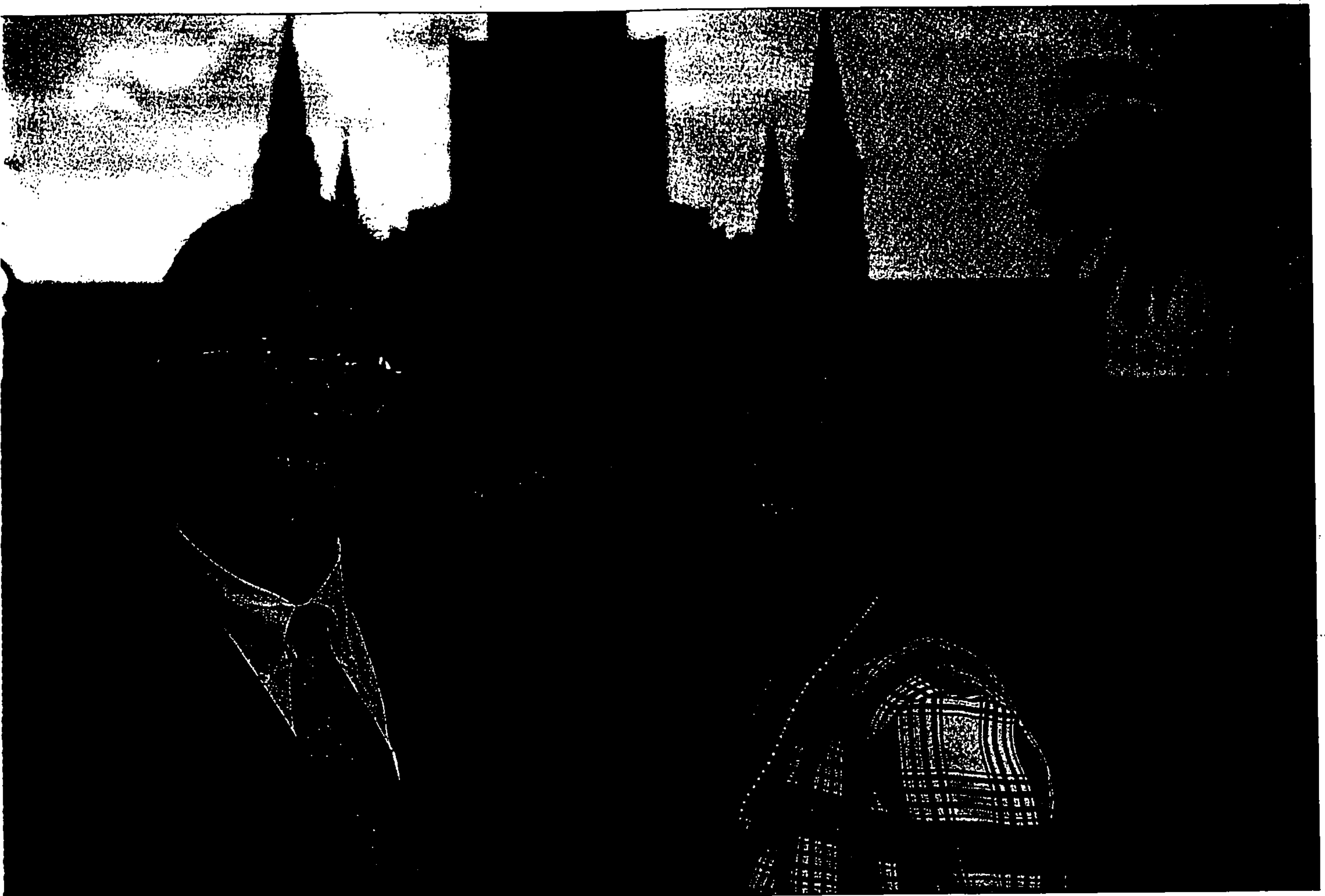
THE NEW REPUBLIC, Vol. 217, Number 25, Issue 4,327, December 22, 1997. (Printed in the U.S. on December 3, 1997.) Published weekly (except for combined issues dated Jan. 6 & 13, July 14 & 21, Aug. 11 & 18, and Sept. 8 & 15, 1997) at 1220 19th Street, NW, Washington, DC 20036. Telephone (202) 331-7494. The New Republic Advertising Sales Office (212) 702-4882. Yearly subscriptions, $59.94; foreign, $99.94 (U.S. funds); Canada, $79.94 (U.S. funds). Back issues, $3.50 (includes postage & handling). © 1997 by The New Republic, Inc. (ISSN 0028-6583). Periodicals postage paid at Washington, DC, and additional mailing offices. Rights and permissions: fax 202-331-0275. Indexed in Readers' Guide, Media Review Digest. Microform, Canadian Periodical Index, CD-ROM, issue and article copies are available through University Microfilms Intnl., 300 N. Zeeb Road, Ann Arbor, MI 48106. Telephone 1-800-521-0600. Internet mail address: tnr@aol.com Member, Audit Bureau of Circulations. Unsolicited manuscripts can be returned only if accompanied by a stamped, self-addressed envelope. Subscribers: Please send all remittances, changes of address, and subscription inquiries to Subscription Service Dept., The New Republic, P.O. Box 37298, Boone, IA 50037-0298. For subscription problems call 1-800-827-1289.

SOCIETY

The all-American holiday in this age of intermarriage: Mom's in church, Dad's in temple. What do they teach the kids? **By Jerry Adler**

A Matter Of Faith

DRIVING HOME FROM THANKSgiving dinner in New London, Conn., to Spencertown, N.Y., the Kirsch family talked about the tree. They've had one every Christmas since Claudia Ricci and Richard Kirsch got married in 1978—even though a rabbi helped marry them, and even though their three children are being raised as Jews and even though Claudia herself, baptized a Roman Catholic, became a Jew eight years ago. Over that time the tree has come to seem increasingly out of place in their home. "How would I feel if the rabbi saw this?" Ricci wondered.



Two Services On Sunday

But in the car, Lindsay, 11, remembered coming down the stairs on a weekend morning to watch TV by the twinkling lights, and her younger brother, Noah, who started out the trip opposed to a tree, said quietly, "Couldn't we just have a little one?" Of all the difficult emotional, theological and familial issues raised by Ricci's conversion, this one alone remained unsettled. In one small part of Ricci's soul, it's Christmas, and she wants her tree.

"There are many paths to God," Ricci's Catholic mother complacently observed last month after participating in her granddaughter Jocelyn's bat mitzvah. But for most of the last 2,000 years, most people lived in villages where those paths almost never intersected, and if they did, the outcome might as easily have been a holy war as a wedding. Their religious traditions did not prepare them for a society in which the handsome boy next door might be any of three different kinds of Catholic, let alone a Shiite.

We have always been a nation of seekers, and now not one bound by the religious fault lines of the past. The proportion of Jews who married Gentiles, around one in 10 for the first half of the century, according to the American Jewish Committee, doubled by 1960, doubled again by the early 1970s, and in this decade has leveled off at just over 50 percent. To put it another way, by some estimates one out of three American Jews lives in an interfaith household and faces some version of Ricci's dilemma every December. The comparable figure for Catholics, according to a 1990 survey cited by psychologist Joel Crohn, an authority on mixed marriages, is 21 percent; for Mormons, 30 percent, and for Muslims, 40 percent. This year, when the first day of Chanukah happens to fall on Dec. 24, the December quandary may be especially anxiety-provoking. When Ricci's parents arrive for the traditional Christmas Eve dinner at her home, they may not see a tree, but they will unquestionably see a menorah.

And as these families raise their children, they are creating, in effect, a new form of religious identification in America, analogous to the "mixed race" category that some people want to add to census forms. Dilip Viswanath and Carmen Guerra, both doctors raised in New York City, were married twice on Labor Day weekend—Friday night in a Hindu ceremony in Queens, and Saturday by a Catholic priest in Manhattan. Carmen wore a sari for the Hindu service, which involved colorful rituals such as circling a fire and pouring milk over the couple's joined hands. She wore a

Christianity: Most interfaith couples, according to surveys, say they put up Christmas trees at home

JAMES D. WILSON. ICONS BY RICHARD PIERCE

white gown for the Catholic ceremony, an occasion so decorous that it had to be held at the Plaza Hotel, because the church wouldn't allow Vivaldi to be played during the service. They plan to have children, Dilip says, and "we want to expose them to both religions."

By the time they're in college, a Hindu-Catholic child will hardly be a novelty in this country. Perhaps one of them might even marry Rabia Asghar, the 3-year-old daughter of Cynthia and Tariq Asghar of Chicago, who is being raised in both her mother's Methodism and the Islam of her Pakistani-born father. Or Karenna Meredith, 2, who is learning about God from the perspective of her Mormon mother, Christine, and her Catholic father, Tony, with a little "free-form prayer" adopted from both faiths thrown in each morning. "We're going to position it as 'Daddy likes this and Mommy likes that'," says Tom Clark, 35, a management consultant who was raised a Methodist in a Wisconsin farm town. His wife, Amy Rosenbaum Clark, 33, grew up Jewish in New Jersey. Their 4-month-old son, Graham, had neither a ritual Jewish circumcision nor a baptism, but a "dedication" at a Chicago church, with a rabbi and minister in attendance. "He'll get exposed to both, and won't be overdosed in either," Clark says confidently. Like other parents raising their children in two faiths, they expect him someday to look inside himself and find there either a Jew or a Gentile.

Clark's system of letting Mommy's and Daddy's religions speak for themselves is less demanding than the alternative of immersing the whole family in the practice of both faiths. This is the approach of Chicago lawyer Stephen Smith, 47, who was raised an Orthodox Jew, and his Catholic wife, Eileen, 46. The couple, who are active in the large

Pledging The Kids

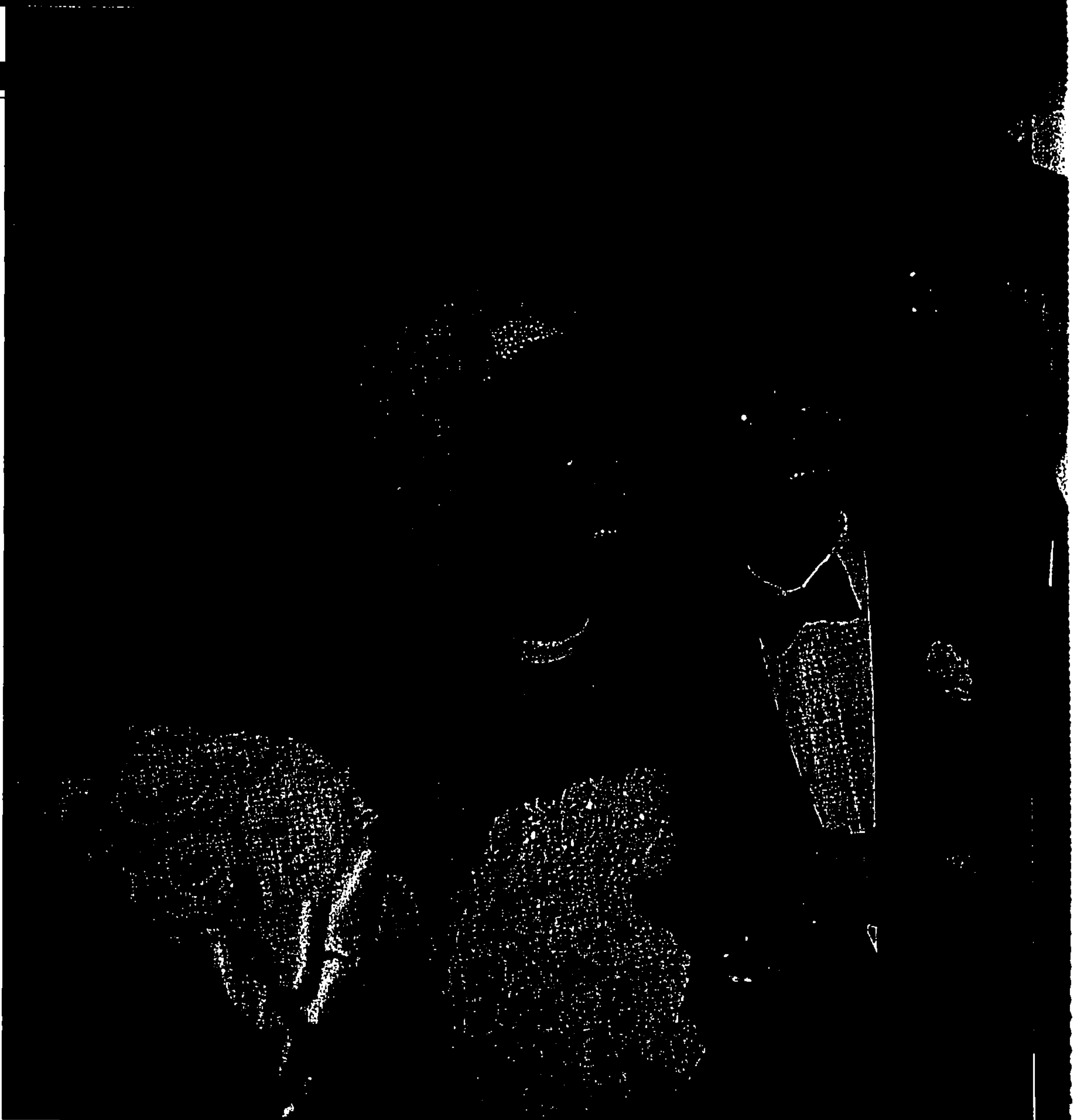
interfaith support group that often meets at Old St. Pat's Church, aren't just "exposing" their children to both faiths, Smith insists; "we're raising them as both Catholics and Jews, and insist that they do what they need to in our view, and later on it's likely that they'll make a selection." Bringing three children under the age of 11 to Jewish and Catholic services every weekend "is very labor-intensive, as you can imagine," says Eileen. "We don't do soccer. We do church." And intellectually intense as well. Sometimes, she says, her 10-year-old daughter, Nora, will plaintively ask, "Can we not talk about religion tonight?"

Raising children in two faiths promotes one of the most favored values of the Zeitgeist, diversity. The problem is, the diversi-

Judaism: Chanukah, celebrating an ancient victory over assimilation, has blossomed in America

RON HAVIV – SABA

ty occurs within the same individual. Expecting children to choose between their mother's and father's religions "puts them in the position of rejecting one of their parents," says Leslie Goodman-Malamuth, who was raised "as nothing" by her Jewish and Christian parents and wrote a self-help book called "Between Two Worlds." "Children of intermarriage often feel they're not as good as their all-Jewish or all-Christian cousins. They feel like damaged goods." Moreover, to be both Jewish and Christian is the theological equivalent of squaring the circle. Judaism and Christianity don't complement each other, they exclude one another. You cannot believe in salvation by Christ if you're still awaiting the Messiah.



RON HAVIV—SABA

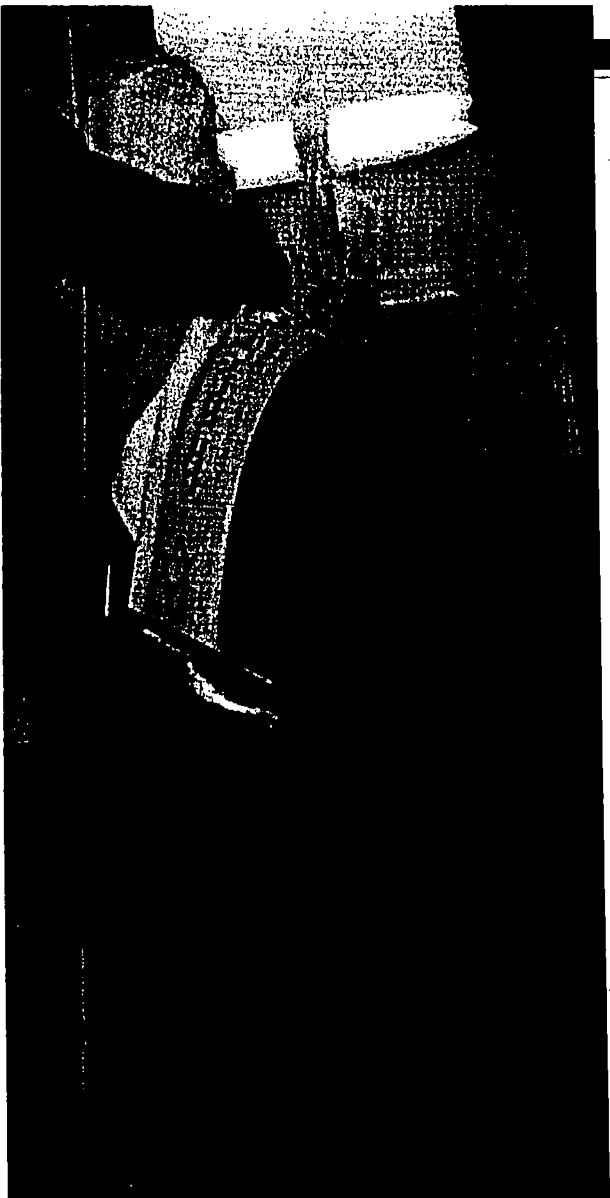
The position of organized Jewry, according to Steven Bayme of the American Jewish Committee, is that "we would rather that children were raised in one faith, even another one, than in both." For Beth and Michael Berkowitz of Sudbury, Mass., the moment of truth came when their son Jared raised his hand at temple preschool to answer the teacher's question "Who loves you?" "Jesus," the toddler replied, which is what he'd been told at church the previous week. At their unaffiliated "post-denominational" temple, where 60 percent of new members are in mixed-faith marriages, this was considered an amusing faux pas rather than a scandal. But the aftermath is that the Berkowitzes now go only to temple, and Beth, the daughter of a Presbyterian pastor, has stopped attending church.

Who Will Marry Us?

Meanwhile, out of concern for just that kind of confusion, the Union of American Hebrew Congregations, representing Reform temples, passed a resolution in 1995 against enrolling children in temple school if they were also taking instruction in another religion. For the most assimilated of the three major branches of Judaism in the United States, this move was so controversial that former senator Howard Metzenbaum resigned from the organization's board in protest.

You might expect that most families, facing a tossup choice between Judaism and Christianity, would opt for the majority religion, which also is the one with Santa Claus and the Easter Bunny. But Rabbi Lewis Mintz of Temple Beth Elohim in Acton, Mass., sees the opposite happening all the time. The religious identity of a Christian is defined by faith, he reasons. But Judaism, in America, is a culture and an ethnic identification as well. The Jewish partner in a mixed marriage will feel drawn to those elements and want to reassert his Jewishness. That's what happened to Jeff Bornstein, a San Francisco lawyer, but with this difference: he was forced into becoming a better Jew by his wife, Veronica Sanchez. Veronica, a Catholic, took a class in Judaism before their marriage in 1992, although she chose not to convert. At dinner the night before the wedding, she was appalled to see that her future mother-in-law didn't know the Hebrew blessing over the Sabbath candles, which she had been forced to memorize. She elbowed her fiancé in the ribs. "How come you put me through this?" she demanded. When their son, David, was born, Sanchez made Bornstein go back and relearn all the stuff he'd forgotten from Hebrew school. By the same token, Joan Hawxhurst, editor of Dovetail, a magazine for Jewish-Christian families, believes that marrying a Jew has made her think more about her own Christianity. "If I had married another United Methodist, it would have been really easy for me never to question what I did every Sunday in church."

Amazing how a child, or the prospect of one, evokes in people such strong, almost tribal, feelings of solidarity. Sitting in church without her family for Sunday



Buddhism: Depending on their tradition, some will celebrate Dec. 8 as the day the Buddha achieved enlightenment

mass, Sanchez feels very lonely. "When I see the little altar boys, and realize my son will never be one, I feel a deep wound inside me." These emotions transcend even the most deeply held secular convictions. When Constance Baker, a Baltimore lawyer, told her college-age son that, all things being equal, it wouldn't be so bad, if he could possibly arrange it, not to, please God, bring a Gentile fiancée home from college, he exploded in outrage. "It was kind of the exact opposite of everything else she had tried to teach me, about valuing people for what kind of person they are rather than by some label," Chuck Baker argued. His mother can't exactly dispute that but, by way of explanation, says the issue came up only recently, "as the children have grown older, and I've begun thinking about their families. It occurred to me that my son didn't know that I felt that way." If Chuck happens to fall in love with a Gentile girl, she notes, "conversion is fine."

But Baker's attitude is a long way from one that was common a generation or two ago, when Jewish parents would, literally, rend their garments in mourning for a son lost to the Gentiles through intermarriage. Finding a rabbi to marry a mixed couple sometimes meant a trip to another city. But last year a survey of 325 American rabbis by the Jewish Outreach Institute of the City University of New York found that acceptance of intermarriage was growing, albeit very slowly. Even 11 percent of Orthodox rabbis said they would refer a mixed couple to a Reform rabbi to perform the ceremony. One possible explanation for the shift: nearly three fifths of the rabbis themselves had relatives who had married Gentiles.

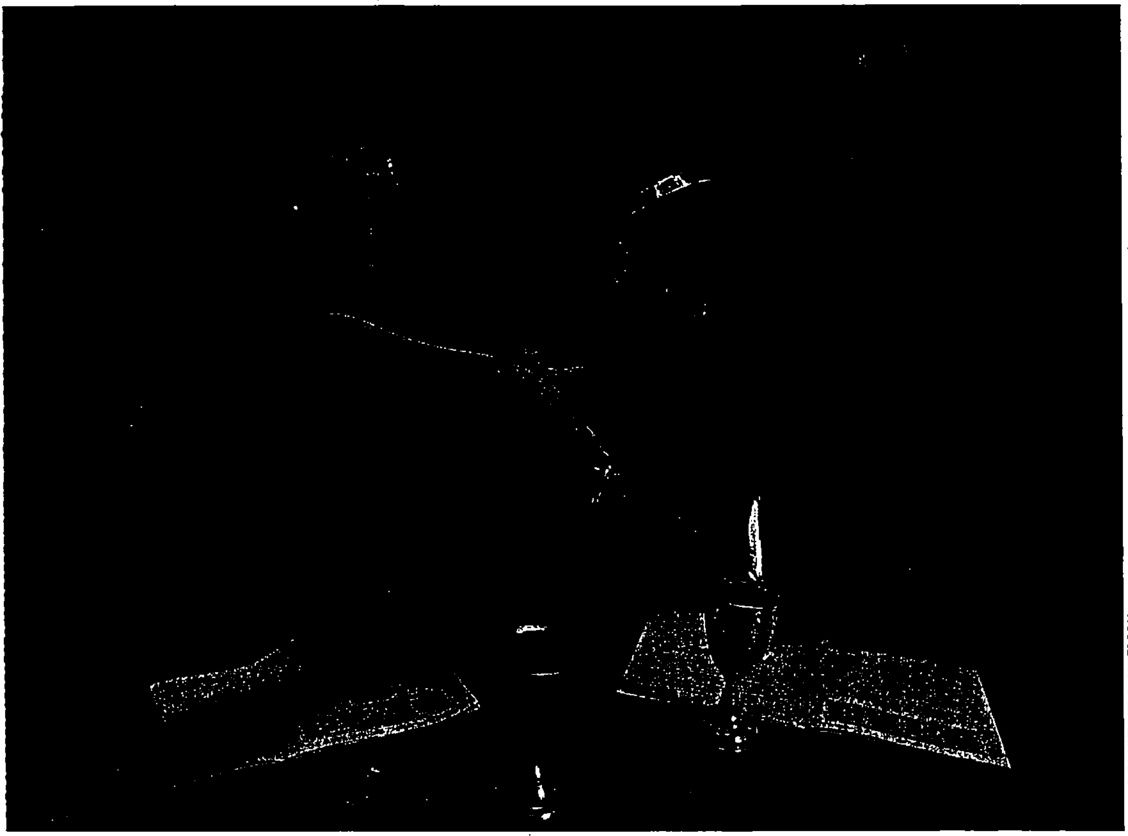
The interfaith movement even has its own model wedding ceremony, created 18 years ago by Father John Hester and Rabbi Charles Familant of San Francisco. (Catholics are allowed to participate in interfaith marriages under a dispensation from their diocese, which requires the Catholic partner to promise to try to raise the children as Catholics.) The ceremony retains certain religious customs, but "universalizes" them. The Jewish tradition of trampling a wineglass at the end of the ceremony is universalized into a generic reminder of how grief and joy mingle in the world. (The Jewish interpretation more specifically evokes the destruction of the Temple in Jerusalem in A.D. 70.) The deity invoked is the "Lord," a term that conveniently covers Jesus as well as Yahweh.

It isn't just Jews who have changed their attitudes toward intermarriage. Growing up in the 1940s in a small town in Nebraska, the theologian Martin Marty recalls that "if a Catholic married a Lutheran, they had to move out of town, because the hassles were just too much. Before Vatican II [1962–65] Catholics weren't allowed to go into another person's church; I've heard couples say they weren't allowed to attend the baptism of their own children." Today, Marty says, mixed marriage "is not a big deal" among most American Christians. "Even if a staunch Catholic marries a Methodist, there's almost a sigh of relief by the families that at least their child isn't marrying a druggy or a cult member." "Methodists and Catholics [share] a belief in Jesus Christ," agrees the Rev. Eugene Winkler of Chicago Temple: First United Methodist Church, whose own daughter is married to a Catholic. In contrast to Catholicism and Judaism, "for a Protestant, religion is a necessary part of one's life, but it's not bound up so closely with who you are and who your friends are," Winkler says. But staunchly conservative sects such as Old Colony Mennonites and Missouri Synod Lutherans are less tolerant of intermarriage, and born-again Christians usually insist on born-again spouses. "To me," Winkler frets, "the worst-case scenario would be an evangelical Christian [wanting to marry] an Orthodox Jew." Experience suggests that he needn't

A Double Header

RALF-FINN HESTOFT—SABA

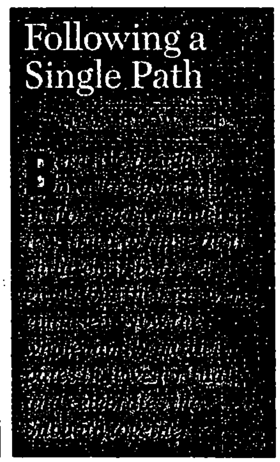
Islam: The holy month of Ramadan, a time of fasting and contemplation, begins this year on Dec. 30



MARNIE CRAWFORD SAMUELSON

worry too much about the possibility.

The amount of family strife and grief Americans have been spared by this trend toward tolerance is incalculable. But there is a price, at least for Jews. The traditional Jewish stricture against intermarriage grew out of the experience of the Diaspora, when Jews were a tiny and persecuted minority. They are still, for all their prominence in American life, less than 3 percent of the population. When half of them marry someone outside the faith, says Elliott Abrams, the president of the Ethics and Public Policy Center in Washington, D.C., and a former assistant secretary of state, "we're looking at a very dismal prospect" for long-term survival. Abrams argues that secularized, ethnic Judaism—the kind that finds its highest expression in writing pro-Israel letters to the editor of The New York Times—is a doomed experiment. Only religious observance counts, and only about a quarter of interfaith couples, by his figures, raise their children as Jews. But the writer Gabrielle Glaser, who studied intermarriage in her new book "Strangers to the Tribe," concluded more or less the opposite: that "a significant number of Jews who marry outside their faith are making serious efforts to pass on the religion and culture of their forefathers ... If the interfaith couples I met over the past three years are any measure, [Judaism] will surely survive modern intermarriage."



Jews, at least, share a history with Christianity, and most Americans have at least a passing familiarity with the faith. But the misunderstandings that can arise when an American marries into a polytheistic religion make the Christmas-tree dilemma seem simple by contrast. As a matter of fact, Ann and Rajesh, a couple from Maryland who didn't want to use their last names, don't have that problem because his family, which has lived in America for years, has always had a Christmas tree anyway. On the other hand, Ann finds some Hindu practices strange and the statues of temple gods positively frightening. "Whenever I go to their temple," she confesses, "I just close my eyes and pray to Jesus." Islam is much closer to the religions most Americans follow than Hinduism, but it places a high value on proselytizing—as Joe Miller, a nonpracticing Catholic by birth, discovered when he announced his engagement to Rashda Buttar, a Chicago lawyer. On a courtesy visit to her family's mosque, Miller recalls, an uncle led him to a back room, handed him a Koran and a sheaf of papers in English and Arabic to sign, testifying to his conversion. Miller declined, but it made for an uneasy few months leading up to their wedding.

But love is always hard, and people who have found it don't let go. Even if, like Julie Marcus of New York, marrying Alex Gomez, a Catholic, meant that the ceremony couldn't be performed by her father, a Conservative rabbi. Even if, for Siona Carpenter, a Baptist in New Orleans, marrying the Catholic Kenneth LaFrance on Easter weekend meant that her family couldn't have barbecue at the rehearsal dinner on Good Friday. Even if, like Christine Meredith, she worries that she will not have eternal life with her husband, Tony, if he doesn't get around to joining the Mormon Church.

Two days after Thanksgiving, Claudia Ricci went to her synagogue to think and pray, and when she came home her mind was made up. There would be no tree this year. She would undoubtedly agree with Dan Josephs, one of the founders of Chicago's interfaith support group. Josephs, a Catholic married to a Jew, once took his wife to a Good Friday service at his hometown and was mortified to hear the priest talk about how the Jews killed Jesus. Did marrying a Jew mean betraying his love of Christ? "How can falling in love and getting married be a betrayal of anything?" he asks.

With PAT WINGERT *in Washington,* KAREN SPRINGEN *in Chicago,* BRAD STONE, JENNIFER LACH *and* JENNIFER TANAKA *in New York,* NADINE JOSEPH *in San Francisco and* CLAUDIA KALB *in Boston*

Special Report

INVESTORS BEWARE CHOP STOCKS ARE ON THE RISE

An inside look at how scamsters are taking billions from small investors

By Gary Weiss

It has become almost routine. On Nov. 13, the U.S. Attorney in Brooklyn charged 13 people—brokers, Mob associates, and officials of two brokerage firms—with manipulating the prices of thinly traded micro-cap stocks. On the same day, in New Jersey, federal authorities announced a similar indictment. And then, on Nov. 25, came this bombshell: A federal grand jury in Manhattan handed up an indictment charging 19 people with multiple counts of racketeering and securities fraud. Among the accused were stock promoters, alleged mobsters, corporate officials, and six brokers at a firm that had managed to avoid the limelight, Meyers Pollock Robbins Inc. Not since the insider-trading scandals of the 1980s has Wall Street faced such a sustained legal juggernaut.

Throughout the multitude of charges in the assault on fraud in micro-cap stocks, there is one common theme. It's not just "pump and dump" stock-rigging schemes, or financial-statement fraud, or profiteering on hot initial public offerings. Nor is the problem confined to what the public experiences—the ubiquitous, forked-tongue cold-callers. Bribery is another element, but not the crucial one. Neither is the Mob the common factor, though it feasts on this corner of Wall Street.

Behind all the charges lies a simple fact that has received surprisingly little attention—even from regulators. Vast, interlocking networks of brokers are managing to obtain shares in hundreds of companies at dirt-cheap prices and are unloading them on the public. Among the people who make their living by pushing them on the public, the rogue brokers and stock promoters and mobsters, there's a name for these stocks. It is brutally simple: chop stocks.

"Chop" is slang for spread—the difference between the prices the brokerages pay for stocks and the prices at which they are sold to the public. In the world of the "chop houses" that sell these stocks, the real spreads often bear no relation to the numbers that appear on stock-quote machines. Often the stock is obtained by the brokers from corporate insiders or offshore accounts at a fraction of the price listed on the quote terminals. They then sell it to the public, illegally, at massive, undisclosed markups. It's fraud of the most fundamental kind. The public doesn't know that they are buying stocks that are worth nothing more than the pennies shelled out by their brokers.

To regulators, this is a small if troublesome fringe of the securities industry. Even Mob infiltration, they assert, is "relatively isolated, and does not threaten the overall stability of our markets," as U.S. Attorney Mary Jo White maintained in a press conference on Nov. 25. But this is a problem that goes well beyond the Mob on Wall Street.

LOW RISKS. In fact, BUSINESS WEEK has found that chop stocks constitute a vast underworld of the securities markets—a $10 billion-a-year business that regulators and law enforcement have barely dented in their recent prosecutions. Chop stocks are increasingly exploited by organized crime, and for a good reason: The profits are huge, the chances of incarceration low. Guaranteeing the "chop"—the immense profit margins—requires cooperating networks of brokerage firms employing uncounted thousands of cold-callers that are the public's main exposure to this world. Behind the cold-callers

ILLUSTRATIONS BY JOE SORREN

are an array of stock issuers, offshore accounts, and the barred brokers and stock promoters who are the middlemen between brokers and companies.

How serious is this problem? How is it being handled by regulators, in their well-publicized assault on small-stock fraud? Who are the players—the brokerages and stocks involved and the stock promoters who bring them together? BUSINESS WEEK sought answers to these questions in a six-month investigation involving interviews with present and former chop-stock brokers and customers, review of massive quantities of public documents and internal records and tape recordings, and interviews with traders, clearing-firm executives, and current and former securities regulators and law-enforcement officials.

BIG NAMES. One former chop-house exec, who requested anonymity, shared a graphic tale of illicit trading and payoffs—including a bribe that he said was paid to a National Association of Securities Dealers examiner (page 118). Another broker provided BUSINESS WEEK with a rare account of what he asserts was the purchase of a hidden stake in his firm by a leading behind-the-scenes power in the chop-house business—Jordan Belfort, former head of the now-defunct Stratton Oakmont Inc. penny-stock house. Sources also painted a disturbing picture of alleged customer overcharges and trading abuses at Paragon Capital Corp., one of the largest dealers in micro-cap stocks. And other sources maintain, in allegations being probed by regulators and state and federal law enforcement, that stock promoters dominated a Florida cold-calling operation run by the president of Meyers Pollock Robbins, the large micro-cap brokerage whose brokers were indicted on Nov. 25. Meyers Pollock declines comment on the indictments.

What emerges is a shocking picture of a problem that has spun out of control. Among BUSINESS WEEK's findings:

■ The bull market in chop stocks has spawned a new generation of stock promoters, some still in their early 30s, replacing the Meyer Blinders and Robert Brennans who dominated the heyday of penny stocks during the 1980s. The new promoters gain control over cheap stock, or dominate the markets for thinly traded stocks, and then push them on the public, using crews of brokers reporting to them.

Special Report

■ The NASD and Securities & Exchange Commission's highly visible campaign against small-stock abuses and the recent spate of criminal prosecutions have failed to have a significant impact on chop houses. Although regulators have shut down a handful of cold-calling powerhouses, the vast majority of questionable firms—totaling perhaps 200 nationwide, according to state securities regulators—remain untouched.

■ Although officials have downplayed Mob infiltration of Street firms, the Mob remains a troublesome presence on Wall Street (page 130).

■ Payoffs to brokers have emerged as a commonplace method of bringing chop-stock companies into the marketplace. Some of the stocks that BUSINESS WEEK has identified as recent subjects of broker payoffs are listed here (table). None have been named in the recent prosecutions.

■ Some of Wall Street's best-known firms—notably Bear, Stearns & Co. and Schroder Wertheim & Co.—clear trades for chop houses, processing trading records that sometimes show massive commissions and excessive price markups.

Are Brokers Being Paid Off To Sell These Stocks?

Here are some of the stocks that sources say have been the subject of payoffs to brokers within the past few months. Company officials who could be reached for comment denied knowledge of any payoffs.

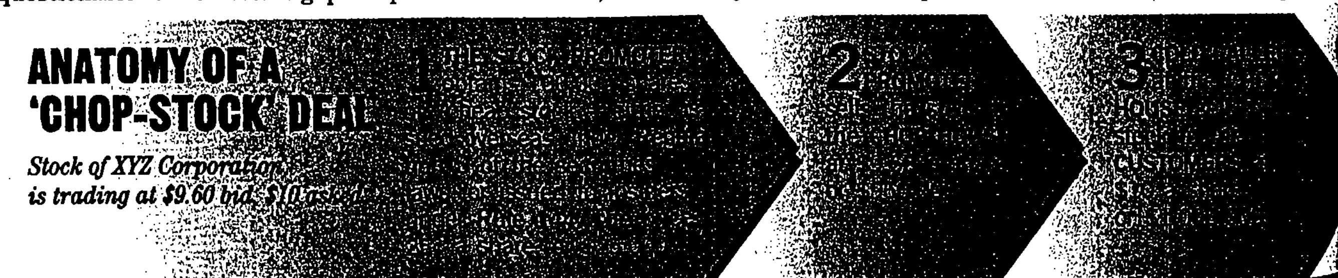
COMPANY	[illegible]	[illegible]
APPLETREE ART	[illegible]	[illegible]
AXXESS	[illegible]	[illegible]
HARVEST RESTAURANT GRP.	[illegible]	[illegible]
IMMEDIATE ENTERTAINMENT	[illegible]	[illegible]
JUNGLE STREET	[illegible]	[illegible]
LEGEND SPORTS	[illegible]	[illegible]
SCOTTSDALE CIGAR	[illegible]	[illegible]
TCP RELIABLE	[illegible]	[illegible]
TELLURIAN	[illegible]	[illegible]
TTR	[illegible]	[illegible]

*Not trading DATA: BLOOMBERG FINANCIAL MARKETS

At the NASD and SEC, officials say they are hard at work addressing the problem of small-cap fraud. And, they say, they have made great strides—particularly in eliminating the large firms that used to be a major source of small-stock abuses. Testifying before the Senate investigations subcommittee late in September, NASD Regulation's head of enforcement, Barry R. Goldsmith, said he would "readily acknowledge that there are some dishonest individuals and firms in the securities business today." But they also have systematically minimized the problem. In his Senate testimony, Goldsmith asserted that "the problem firms represent a tiny portion of the more than 5,500 securities firms."

By contrast, BUSINESS WEEK's investigation shows that chop stocks are a vast and growing industry. The NASD and SEC won't even hazard a guess on the scope of the problem. But according to people familiar with the business, chop stocks make up perhaps half the 85 million-share daily volume of the OTC Bulletin Board, plus dozens of stocks on the NASDAQ Small Cap Market. By that reckoning, there would be perhaps 700 actively traded chop stocks on the OTC Bulletin Board alone, and perhaps another 200 NASDAQ Small Cap stocks. With dollar volume of trading in domestic OTC Bulletin Board stocks—the shares not traded on NASDAQ or the exchanges—exceeding $20 billion a year, the portion consisting of chop stocks might well exceed $10 billion.

Cheap stock is fueling the chop-stock explosion. Restricted or "letter" stock, issued under Rule 144 of the securities laws, is commonplace at many perfectly legitimate companies as a way of rewarding key employees and giving them an equity interest—often in lieu of a high salary. Stock and warrants are also issued to compensate consultants in lieu of cash. And stock issued overseas, under Regulation S of the securities laws, is a widely recognized way of raising capital for emerging companies. Reg. S stock is cheap for a simple reason: Since it cannot be legally traded for two years, it is commonly issued at a steep discount. Rule 144 stock is cheap be-



cause it is usually issued at little or no cost and also must be held for one or two years.

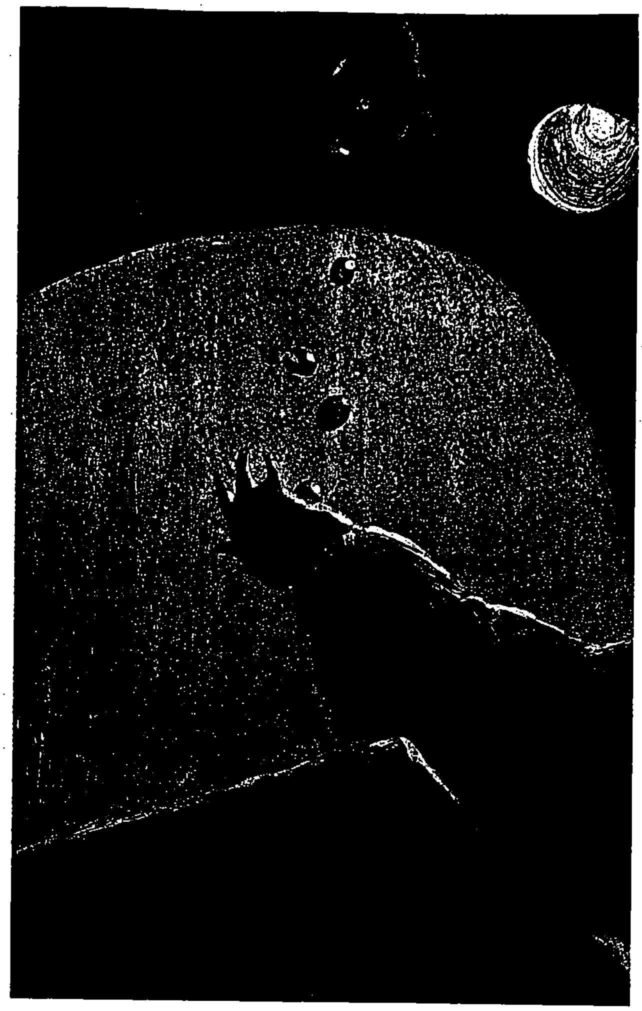
The chop houses make their profits by simply breaking the law and getting that stock on the market immediately. "People violate the restriction. [They] basically launder it and dump it," says the SEC's enforcement chief, William R. McLucas. Another form of abuse, he notes, involves misuse of the rule allowing companies to compensate consultants with stock instead of cash—a rule that was put in place to help cash-poor high-tech startups. The "consultants" are often stock promoters. The Meyers Pollock indictment, for example, alleges that stock-promoter "consultants" were issued shares and warrants in one chop stock, much of which was immediately dumped on the public.

How does cheap stock make its way to the cold-callers? As told by chop-house brokers, one common method is simple enough:

Rule 144 stock certificates carry a legend marking it restricted stock, and the legend can only be legally removed at the end of the holding period. Among the chop houses, however, the restrictions are often ignored and the "legend stock" is traded in an illicit black market. The stock is available at a cut rate because it cannot be legally sold to the public. If the stock is trading at $6 a share, the chop-stock house may buy it at $2.50—never reporting it in the daily runs to NASDAQ. They can swiftly trade it to another chop-stock house at $3, making a swift profit.

When the legend stock is sold to the public, chop houses go for big profits. The price to the customer might be, say, $7 a share. The official bid would be $6 bid and $7 asked. But the actual cost to the brokerage is $2.50. The real, humongous spread never appears on the stock-quote machines.

If customers were to see the stock, they might realize that it's not supposed to be sold to the public. So the chop houses have a simple solution: They don't show the customers the stock. The shares are only a book entry.



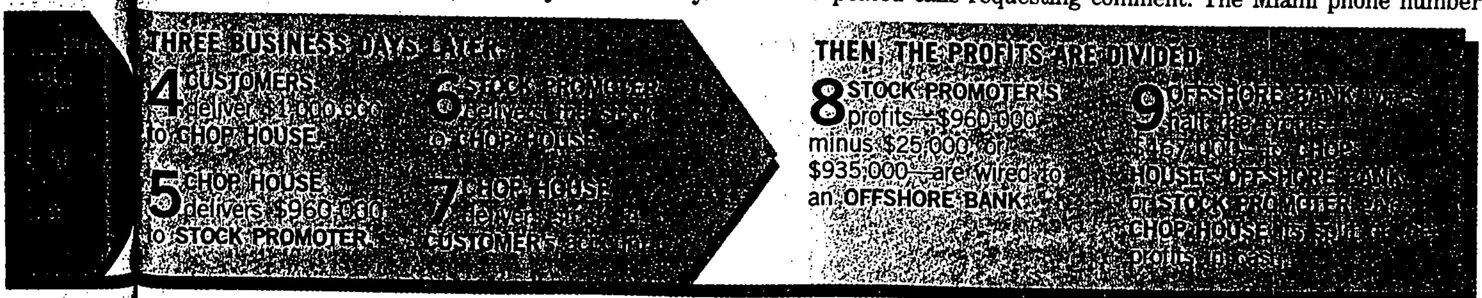
OFFSHORE BANKS ARE REPOSITORIES FOR PROFITS REAPED BY CHOP HOUSES

The illicit nature of the stock is one reason shady brokers are notoriously reluctant to execute sell orders. If the customers want to sell, or obtain the certificates, or transfer the shares to another firm, they are discouraged. If the customer insists on selling, the firm simply does another book entry and "washes" the stock into another account—the brokerage's own "house" account, or sells it to an allied firm.

Whether the cheap stock originated overseas or from insiders, the procedure for getting it to the public is the same (chart). According to brokers familiar with the process, the massive profits are often split—in cash—between the brokerages involved. And the payments are often made in strip bars and other nontraditional Wall Street locales.

BALM. Warrants are the other major chop-stock moneymaking machine. Because of the leverage they afford, they become gold mines when the underlying stock is manipulated upward. They are often issued for pennies or no cost at all, making warrants a cheap way of compensating brokers and stock promoters. Warrants are also provided to favored investors in chop-stock deals, and sometimes are used to mollify unhappy chop-house customers.

That is what allegedly happened a couple of months ago to a customer of a New York-based firm named PCM Securities Ltd. The customer, a California resident who asked that his name not be used, had been in another stock sold to him by PCM that was a disaster. To make up for some of his losses, he says, PCM offered him warrants in an outfit called Medley Credit Acceptance Corp., which has filed for an initial public offering of its stock but has not yet gone public. The broker, he says, offered him the opportunity to buy the warrants, when the company went public, for 15¢—and assured him that the warrants would then be sold at $3. The customer says he was offered 15,000 to 20,000 warrants—a guaranteed profit of $45,000 to $60,000. PCM officials did not return repeated calls requesting comment. The Miami phone number



STRIP BAR$ AND OTHER UNCONVENTIONAL LOCALES ARE OFTEN USED AS SITES FOR PAYOFFS

for Medley—whose president is a PCM officer—has been disconnected.

For chop houses, warrants are a form of cheap currency. But in order for them to have any future value, the underlying stock has to climb. In the case of the Medley deal, the stock would have to rise from its initial price of $5.50 to $8.65 a share. The ability to drive up share prices is crucial. That is where the stock promoter comes in.

Stock promoters are the middlemen and fixers of the chop-stock world. Investors rarely have contact with them. They put stock in the hands of brokers, and on occasion they perform old-fashioned investor relations—the "promote" in stock promoter. But when Carol Ann Kandell, a bookkeeper at a college in Colorado, bought a stock called Java Centrale in 1995, she didn't come into contact with a promoter. It was simply on the sell list of her broker in a Long Island (N.Y.) office of Meyers Pollock Robbins—the 160-broker national firm that had escaped attention until the Nov. 25 indictments.

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"GOOD STUFF." Java was not a penny stock—it went public at $6 a share, $1 above the official definition of a penny stock. The broker "was always pitching that it was really good stuff," says Kandell. And then—guess what? The stock price dropped into pennies in the months that followed.

Investors had no way of knowing that a stock promoter was pushing Java and a host of other stocks destined for the cellar. According to sources familiar with his activities, the promoter was James Peter Minsky. In his file in the NASD's Central Records Depository (CRD), the 30-year-old Minsky has a typical record for a low-level chop-house broker. Minsky worked at 16 brokerages over a four-year time span, ending with a one-month stint at Westfield Financial Corp. in early 1994. Among the firms where Minsky worked was Joseph Roberts & Co., a Chicago-based firm where, one former regulator notes, he worked closely with Claudio Iodice—one of the stock promoters indicted on Nov. 25. Efforts to reach Iodice and officials of Westfield and Joseph Roberts for comment were unsuccessful.

Meyers Pollock appears nowhere in Minsky's CRD record. But according to people familiar with his activities, by 1995, Minsky was working at Meyers Pollock, pushing marginal stocks through Meyers Pollock brokers reporting to him. In the chop-stock world, stock promoters are an intriguing amalgam—part investment banker, part stock retailer, and part investor-relations publicist. They often have "crews" of brokers working for them and often work closely with chop-house execs. In Minsky's case, the venue in 1995 allegedly was the Fort Lauderdale office of Meyers Pollock, which was run by the president of the firm, Michael Ploshnick. Also working there, sources have told investigators, were two allied stock promoters—W. Fred Ballou and Leonard Ruge.

Ploshnick denies that the three men pushed stocks at Meyers Pollock. Minsky and Ballou could not be reached for comment, and the NASD declined to release the name of the attorney representing Minsky in recent NASD disciplinary proceedings. Ruge's attorney, Michael Bachner, says that "Mr. Ruge denies any involvement in the promotion of any stocks at Meyers Pollock."

According to one account of the stock-pushing process at the Fort Lauderdale branch, which was furnished to federal and state investigators, a typical manipulation of a hot IPO would begin well before the stock began trading. Minsky and Ballou and the brokers reporting to them, would work with other Meyers Pollock brokers to line up as many other chop houses as possible to support the stock and increase the share price as much as they could. But IPO or not, the stocks pushed by the brokers in that office of Meyers Pollock all seemed to have one inevitable outcome. With one exception—a "vegetation management" firm called Aquagenix Inc.—the stocks pushed by the brokers all plummeted in the months to come.

LUCKY INSIDERS. One IPO allegedly handled by the Minsky-Ruge-Ballou crews at Meyers Pollock was Multi-Media Tutorial Services Inc. That offering consisted of "units," each made up of one share of stock and one warrant to buy one share for $5.60, with an initial offering price of $4 a unit. As a result of the enthusiastic selling by Minsky's brokers and others at other firms, the units ended the first day of trading on Apr. 13 at $5.75 a unit—a one-day profit of well over $500,000 for the handful of brokers and insiders lucky enough to trade the units on the opening day. The units are now worth 7¢.

The stocks allegedly promoted by the three men at Meyers Pollock were considerably more substantial than the shell companies that were foisted on investors in the penny-stock era. Aside from Multi-Media Tutorial and Aquagenix, there were NuMed Home Health Care Inc., an Ohio-based home-care company, and American Resources International of Delaware, an energy exploration company. Others included Protosource Corp. and Grace Development, which is headed by Ruge. (In November, 1996, Ruge was arrested in an FBI sting, accused of attempting to bribe an undercover agent who was posing as a stockbroker. Bachner says Ruge is vigorously contesting the charges.) Officials of Aquagenix, NuMed, and Protosource denied knowledge of the promotion of their stock at Meyers Pollock, while officials of the other companies could not be reached.

When Meyers Pollock's South Florida operations shifted from Fort Lauderdale to Boca Raton in May, 1995, sources say the Minsky crew did what stock promoters always do when offices close—they simply changed firms. The next stop was at the Miami offices of J. P. Milligan, and then the Boca Raton office of Euro-Atlantic Securities Inc. A branch office of a firm called Brauer & Associates opened up at the same location, with some of the same brokers, and, sources maintain, Minsky. At Brauer and Euro, his brokers allegedly continued to push stocks, just as they had at Meyers Pollock and other firms. An attorney for Brauer, John Kiefner, confirms that Minsky worked briefly for Brauer in South Florida, but in a legitimate "investment-banking capacity." He denied that Minsky had any role in retailing stocks. Efforts to reach officers of J. P. Milligan and Euro-Atlantic, which ceased operations in mid-1997, were unsuccessful. Minsky's odyssey

HOW BRIBES WORK—FROM ONE WHO'S BEEN THERE

Bribes grease the wheels of the chop-stock business. How do bribes work? How common are they? What follows are excerpts from an interview between BUSINESS WEEK Senior Writer Gary Weiss and a veteran of the chop-stock business who has worked for five chop houses since 1993.

Q: *When corporate officials are confronted with charges of market manipulation, they protest that they don't know anything about it. What's the real situation?*

A: In my experience, there has been an incestuous relationship between the small, unproven, speculative corporation and the broker backing his company.... Say Company A needs to get its stock up for many reasons: (1) to allow insiders to sell their own positions at a handsome profit; (2) to make an acquisition; or (3) to remove fear of a declining stock. It's not rare for a corporate officer to approach a broker and, in noncriminating language, ask: "What will it take to have you recommend my shares?"

Q: *What is that supposed to mean?*

A: Compensation. The corporate representative might suggest to the broker there might be additional compensation to the broker if he can [illegible] sell to customers so many shares of the company's stock. It could be 10,000, 100,000, 1 million shares. The payoff [illegible] is the broker can document the amount of shares he put away. Usually, the broker is asked to supply a copy of each transaction sheet—each customer confirmation showing the amount of shares that were purchased. And on that basis, a formula would be arranged in which the broker would be paid off in cash or in near-cash items. Near-cash items would be a trip to Hawaii, maybe a luxury car, and so on.

Q: *Would payoffs come direct from the company?*

A: It could be either way. A cautious company, of course, would always use intermediaries. It could be another broker at the same firm. It could be the brokerage firm itself.

> "THEY FIND A CORRUPT BROKER [AND PAY] $5,000 FOR EVERY HALF-POINT THE BROKER CAN SHOW HE LIFTED THE STOCK"

Q: *How much are the payoffs?*

A: That depends on the amount of shares put away and the price of the shares. Say the stock is 2 bid, 2¼ asked. The company wants the stock to go from 2¼ to [illegible]. They find a corrupt broker ... and pay maybe $5,000 cash payment up front and maybe $5,000 for every half-point the broker can show he lifted the stock.... The deal calls for the broker to buy, say, 100,000 shares of the stock, 200,000 shares of the stock. The broker shows copies of customer confirmations. That way, the intermediary is convinced the broker is doing what he said.

Q: *How knowledgeable were officials you encountered from the National Association of Securities Dealers (NASD)?*

A: I would say very weak in their knowledge—not in the rules and regs of the NASD but in the actual goings-on in the brokerage firms. They didn't have a clue as to what was going on. When I was there, my experience was that they were easily deceived by the broker-dealers—particularly chop shops. The chop shops would work overtime just to cover the books. They're not fools. They're notified by the NASD that they're going to be examined, so they know when to prepare. They know which trades to eliminate from the books. They know how to work the capital out.

Many brokerage firms were in a rush to get into the business. New brokerage firms, in many cases an offshoot of a firm that had gone out of business, would need a PMI—that is, a pre-membership interview—by the NASD. This can be a long process because each of the principals' backgrounds is thoroughly examined. They'd have to be in compliance with rules and regs, proper forms have to be filed, and so forth.

And in many cases, there were certain members of the regulatory authorities who were known to approve these items in a relatively short period of time. So in many cases, those officials might have been short of cash, and arrangements were made that the due process would be speeded up a certain [illegible]. These were done.

Q: *Such as?*

A: Some kind of cash gratuity, usually $10,000, $15,000, or as high as $25,000. Remember, what you're talking about here, you're talking about the entrance of a new broker-dealer into these markets. The quicker they can make it, the faster they make money.

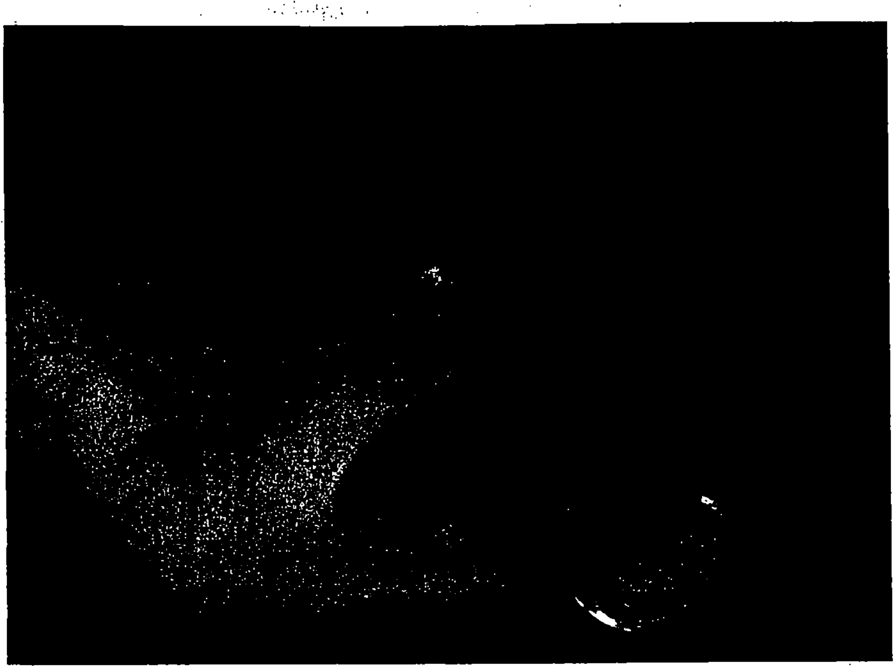
Q: *Did you know of specific instances where this has happened?*

A: Yes, I do.

Q: *Did you see it happen?*

A: I was there.

Special Report



COLD-CALLERS PERSUADE GULLIBLE CUSTOMERS TO BUY THE NEARLY WORTHLESS STOCK AT BLOATED PRICES

through a succession of firms is an example of a phenomenon that has vexed regulators since the demise of the huge cold-calling powerhouses. One ex-regulator notes that the NASD and SEC can lose track of the dozens of stock promoters who work behind the scenes. And even when regulators act promptly, it isn't always promptly enough. Take Euro-Atlantic, which was expelled from the securities industry last month. In this case, the NASD acted fairly quickly—filing a complaint in March, 1997, only a few months after the trades that were the subject of their investigation. But by the time the firm was expelled a few weeks ago, Euro had been out of business for four months.

Regulators do not always act so swiftly, or at all. For example, in 1992 and 1993 the NASD became aware of possible payoffs to a 150-broker California firm called LaJolla Capital. According to an internal NASD memorandum obtained by BUSINESS WEEK, NASD examinations found that the brokerage had accepted "due diligence fees" and "investment banking fees" from companies for which it was a market maker. But the NASD never acted on those findings—which officials suspected were illegal payoffs. A LaJolla spokesperson, Janet Frazier, denied LaJolla had ever accepted payments for making a market in companies, but said the company continued to accept due diligence fees—in return for carrying out due diligence on companies.

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The NASD's Goldsmith says that he does not know why the LaJolla case was not pursued. But he observed that a federal appellate court ruling in 1994—on alleged payoffs to another firm—required the NASD to issue a formal rule banning such conduct before prosecuting payoffs to brokerages. The rule was not issued until last July. In the interim, he noted, the NASD did not pursue such cases. Goldsmith pointed out that the NASD fined LaJolla in September for violating penny-stock sales rules, in a decision that LaJolla says it is vigorously contesting. However, the recent action makes no mention of payments from companies.

Payoffs to brokers and brokerages by corporate officials and stock promoters are some of the most invidious practices in the chop-stock business. How widespread are they? Regulators at the NASD minimize their prevalence. "When you're talking about payments or bribes—we take that very seriously. But to characterize that as widespread, as sort of the practice or the norm, or as endemic, even to the small, micro-cap stocks—we just don't see that," says the NASD's Goldsmith.

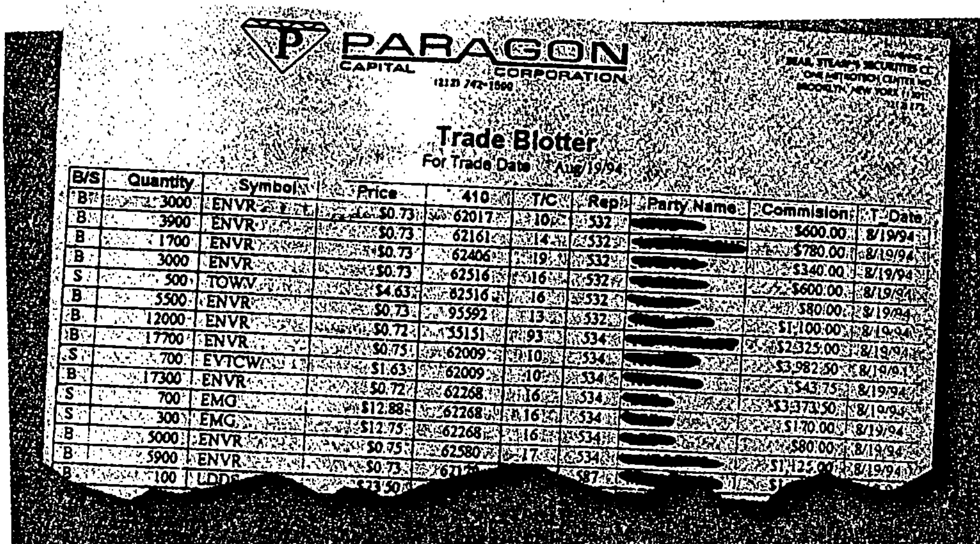
But former chop-house execs maintain that such payoffs are pervasive throughout the world of micro-cap stocks. Chop-house brokers say that corporate officials, directly or through intermediaries, frequently pay off brokers to drive share prices upward, or to obtain offerings of their shares for listing on the OTC Bulletin Board. At one brokerage, a former chop-house manager maintains, every OTC Bulletin Board stock offering involved a payoff. "It's a very thin market, usually there's very little on the buy side initially—that's why they have to enlist the help of a lot of brokers to get the buyers for these things," says one former chop-house broker. The brokers have the whip hand—and thus can demand payoffs. In one case, according to the former chop-house official interviewed by BUSINESS WEEK, even NASD examiners are not immune from accepting payoffs. However, NASD officials contend that they have heard no such allegations—which, they say, they would promptly refer to law enforcement.

One problem the NASD does pursue fairly vigorously is common at chop houses—excessive commissions and markups. But the cases they handle appear to be the tip of the iceberg—and point up the sensitive role served by the Wall Street firms that process trades for chop houses. The firms often process trades that appear to show excess markups and commissions—but insist that they are in no position to monitor the activities of the firms that trade for them. Regulators are studying ways of chipping away at this long-established, legally sanctioned "see no evil" policy—for often, there is a lot of evil that passes through their trading systems.

A LOT OF HEAT. In its recent prosecution of Euro-Atlantic, markups of as much as 63% were alleged. The NASD complaint does not specify when the trades took place, but they appear to have been in the latter half of 1996—at a time when the trades were processed by Schroder Wertheim. A Schroder spokeswoman declined comment on whether the firm was aware of the overcharges or even whether Schroder processed the trades—though the spokeswoman said the firm "apparently" did so.

One firm that has been subject to substantial heat for its chop-house clearing activities—particularly at the now-defunct A. R. Baron—is Bear Stearns. Bear has been the clearing agent for a host of chop houses, including PCM Securities, Meyers Pollock, and another major dealer in small-company stocks—Paragon Capital—where, regulators have been told by a former Paragon employee, massive overcharges have taken place. These charges are significant because Paragon is believed to be one of the largest dealers, possibly the biggest, in OTC Bulletin Board stocks.

Internal Paragon trading records from late 1994, which were recently submitted to the NASD and were obtained by BUSINESS WEEK, show apparently massive commissions. Some



PARAGON CAPITAL CORPORATION

Trade Blotter
For Trade Date Aug/19/94

B/S	Quantity	Symbol	Price	410	T/C	Rep	Party Name	Commision	T-Date
B	3000	ENVR	$0.73	62017	10	532	[redacted]	$600.00	8/19/94
B	3900	ENVR	$0.73	62161	14	532	[redacted]	$780.00	8/19/94
B	1700	ENVR	$0.73	62406	19	532	[redacted]	$340.00	8/19/94
B	3000	ENVR	$0.73	62516	16	532	[redacted]	$600.00	8/19/94
S	500	TOWV	$4.63	62516	16	532	[redacted]	$80.00	8/19/94
B	5500	ENVR	$0.73	95592	13	532	[redacted]	$1,100.00	8/19/94
B	12000	ENVR	$0.72	55151	93	534	[redacted]	$2,325.00	8/19/94
B	17700	ENVR	$0.75	62009	10	534	[redacted]	$3,982.50	8/19/94
S	700	EVTCW	$1.63	62009	10	534	[redacted]	$43.75	8/19/94
B	17300	ENVR	$0.72	62268	16	534	[redacted]	$3,373.50	8/19/94
S	700	EMG	$12.88	62268	16	534	[redacted]	$170.00	8/19/94
S	300	EMG	$12.75	62268	16	534	[redacted]	$80.00	8/19/94
B	5000	ENVR	$0.75	62580	17	534	[redacted]	$1,125.00	8/19/94
B	5900	ENVR	$0.73	671[illegible]	[illegible]	534	[redacted]	$1[illegible]	8/19/94
B	100	LDD[illegible]	$73.50	[illegible]	[illegible]	587	[redacted]	[illegible]	[illegible]

DID PARAGON OVERCHARGE ITS CUSTOMERS ON TRADES CLEARED BY BEAR STEARNS?

This is a trade blotter processed for Paragon Capital by Bear Stearns & Co. for Aug. 19, 1994. Highlighted is the purchase by a customer of 3,000 shares of Environmental Technologies USA at 73¢ a share, or $2,190. The commission, $600, would appear to indicate an unusually high rate—27%. Of the 17 trades on the blotter, 10 show high commissions. Paragon officials did not respond to requests for comment. Bear Stearns said it simply processed and didn't review the blotter.

were as high as 25% or more. One trade went as follows: On Aug. 19, 1994, one customer bought 17,700 shares of Environmental Technologies USA Inc. for $13,275. According to the trading records furnished to the NASD, as shown above, he paid a commission of $3,982.50—30%. Similar high commissions were charged for trades that took place on other days that month.

According to the trading records supplied to the SEC by a former Paragon employee, customers were similarly overcharged in a host of other stocks—Evro, Paramark Enterprises, Apogee Robotics, La-Man, Eco2, First Standard Ventures, and quite a few others. There was no indication that the firms had any knowledge of the overcharges. Repeated calls to Paragon President Danny Levine for comment on these allegations were not returned.

The trading records were routinely churned out by Bear Stearns, which could have noted the size of the commissions at Paragon by making a simple calculation. Two former Paragon officials, who were unacquainted with the former Paragon employee who submitted the records to the NASD, said that the trading records show the magnitude of the commissions clearly and that they would be obvious at a glance. However, an official of a rival clearing firm—no friend of Bear—notes that there is "no obligation of a clearing firm to look at anything like that." Bear Stearns's position is that it simply processed the Paragon trading records and did not review them. Asserts Bear Stearns's general counsel, Mark E. Lehman: "It is our view that the responsibility for determining markups and commissions is that of the introducing firm and not the clearing firm." According to Lehman, Bear Stearns is still clearing trades for Paragon.

Special Report

"GRAVY." One former Paragon manager observed a nefarious practice that, he maintains, has been common at the New York headquarters of Paragon in recent years. According to this ex-manager, who personally witnessed the practice, Paragon would postdate and predate time stamps of trading tickets, to make markups as large as possible. According to this ex-manager, the scheme worked like this: A customer would buy 10,000 shares of a Bulletin Board stock when the market was $5 bid and $6 asked. If portions of the order were filled at a lower price, the order was supposed to be time-stamped to reflect that, and at the end of the day the orders are submitted to NASDAQ. The former manager maintains that Paragon would accumulate the stock during the day—paying, say, $5 for the first thousand, $5.50 for the next, and so on—and show the entire order at the highest price. "Everything else is gravy for the broker," says the ex-Paragon manager.

No one seems to have sopped up the gravy that flows from chop stocks more than Jordan Belfort, who founded the Stratton Oakmont penny-stock brokerage in the 1980s. Just 35, he is believed to be a millionaire many times over. "Investment banker" was how *Yachting Magazine* characterized him in its May issue, in detailing the sinking of his 150-foot yacht, the Nadine. A publicity release from United Film Distributors, one of Belfort's many enterprises, calls him a "private investor." The Queens (N.Y.) native is the executive producer of several of United's movies, which have titles such as *Santa With Muscles*.

But there is another side to Belfort. According to numerous chop-house execs and traders interviewed by BUSINESS WEEK, Belfort has remained a hidden power whose influence in the chop-stock world has hardly waned since he sold his stake in Stratton and was barred for life from the securities industry by the SEC, nearly four years ago. (Belfort agreed to the ban without admitting or denying the SEC's allegations of securities fraud.) He has managed to retain his power and wealth while apparently remaining within the letter of his agreement with the SEC. Indeed, his name does not appear on a single scrap of paper associated with any brokerage—except Stratton.

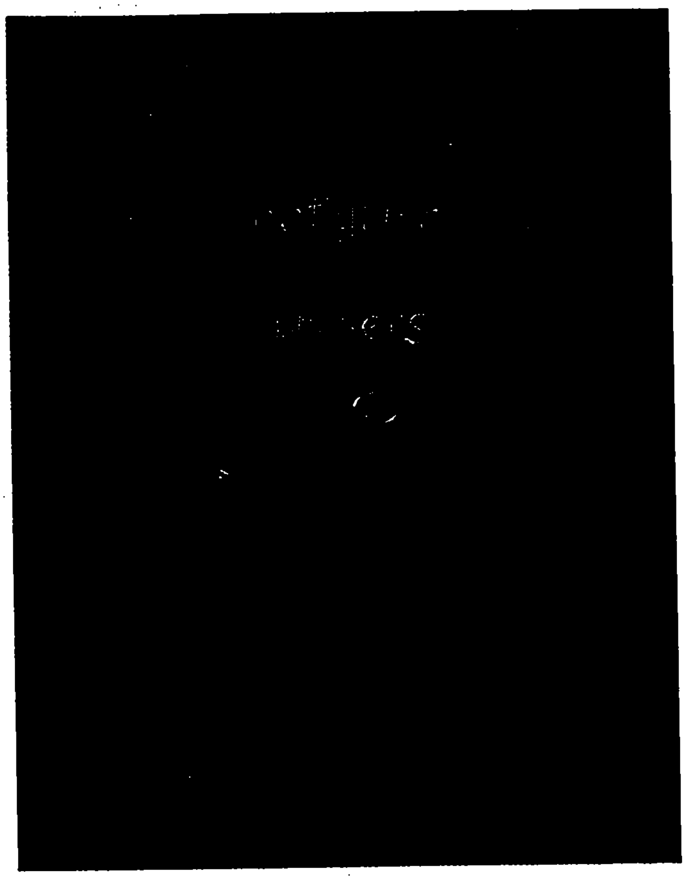
After he left Stratton, Belfort continued to draw vast sums from the firm—something that is currently being investigated by Stratton's bankruptcy trustee, Harvey Miller. Under a "noncompete" agreement that he signed with Stratton in March, 1994, Stratton agreed to pay Belfort a staggering $180 million, payable in monthly installments of $1 million. In return, Belfort could not open a competing brokerage. The timing of the deal was fortuitous, to say the least—it was signed one week before Belfort was banned from the securities business. The SEC ban, one state regulator observes, was no doubt pending at the time the noncompete was signed. Belfort and the former attorney for Stratton who negotiated the deal, Ira L. Sorkin, declined comment, with Sorkin citing attorney-client privilege.

Belfort kept up his side of the bargain by keeping out of the securities business—at least on paper. Sources on Wall Street assert that Belfort continues to exert control, through intermediaries, of some of the leading brokerages in the micro-cap stock business. Among them are D. L. Cromwell Investments, Monroe Parker Securities, and Biltmore Securities. Allegations of Belfort control are not new for Monroe Parker—they were raised in 1992 by the NASD when the firm applied for membership, notes Monroe Parker attorney Bil

Singer. But Singer says that the NASD was satisfied that Belfort had no hidden role at the firm. Attorneys for Biltmore and D. L. Cromwell deny that Belfort has any tie to the firms.

But Amr "Tony" Elgindy, head of a Fort Worth-based firm called Key West Securities Inc., has alleged in court papers that Belfort bought a silent partnership in his firm early in 1997. He maintains that the relationship fell apart after he resisted pressure by Belfort to open up an office in New York City to sell stock to the public in the time-proven way, by high-pressure cold-calling. According to Elgindy, Belfort bought into his firm using a trusted associate named Robert LoRusso as a "front man." LoRusso and Belfort vigorously deny Elgindy's allegations.

LoRusso and Belfort both maintain that Elgindy is no angel. Indeed, in September, Elgindy settled NASD charges of alleged trading abuses by consenting to a fine and a one-year ban as principal of a brokerage firm. He neither admitted nor denied the charges. The NASD complaint alleges that "Elgindy was suffering from severe mental illness" at the time of the trading abuses. Elgindy maintains that was a reference to severe depression. LoRusso also asserts that Elgindy misappropriated funds and failed to disclose regulatory problems, which resulted in a suit by LoRusso to rescind his deal to buy into the firm. LoRusso's allegations are denied by Elgindy, who settled the suit by agreeing to rescind the deal.



CHOP HOUSES MOVE FAST AND MAY BE GONE WHEN CUSTOMERS COMPLAIN

PASSIVE? Although Elgindy is anything but an unbiased observer, his allegations support the assertion of chop-house brokers and traders that Belfort remains a powerful presence in the chop-stock business. According to Elgindy, Belfort is a well-capitalized short-seller of chop stocks—an adventurous brand of trading that is Elgindy's specialty. But, say Elgindy and other sources familiar with Belfort's activities, Belfort also has had access to cheap stock in numerous companies and has pushed a host of stocks through retail firms—particularly Monroe Parker, D. L. Cromwell, and Biltmore. In a phone conversation with Elgindy in December, 1996, that Elgindy taped, Belfort seems to imply that he is more than just a passive observer of activities on the Street. Referring to one stock deal, Belfort told Elgindy: "I have access to a lot of small firms."

Special Report

Elgindy and others familiar with Belfort's activities maintain that Belfort has been a hidden power behind the retailing of a host of stocks. Among the stocks that Elgindy says were Belfort favorites were Big City Bagels, Luma Net, Grand Havana Enterprises, and the company that was the subject of the possible Paragon overcharge—Environmental Technologies. Elgindy says Belfort would sometimes supply brokers with cheap stock in the firms, which would be sold to customers at huge markups. Belfort says he legitimately owns shares in some of those companies but denies having access to "cheap stock" in any. The chief executive of Grand Havana, Harry Shuster, says that he knows of no Belfort involvement in the company for the past two years. Officials of the other companies did not return phone calls.

Elgindy maintains that Belfort sometimes would wax sentimental about the good old days at Stratton. And taped excerpts of those conversations, which Elgindy shared with BUSINESS WEEK, are revealing. In one conversation in December, 1996, Belfort speculated why one particular stock both men were shorting was doing so well. "They're paying people off," said Belfort. "They're definitely paying people off with stock. I know. I owned a very large OTC firm.... I made a zillion dollars off my deals."

In another taped conversation, Belfort made a startling disclosure. According to Belfort's taped account, a company called Builders Warehouse Association Inc.—which since has become a unit of Osicom Technologies Inc.—once offered him a huge bribe in return for Stratton selling the stock. Said Belfort: "This guy came to me, this...kid from Utah came to me.... He offered me three shares in Switzerland for every share I sold.... I had like 500 brokers," Belfort continued. "I could have sold a zillion shares." Belfort declined to discuss the alleged bribe offer. Osicom and Barry Witz, former chief executive of Builders Warehouse, did not respond to requests for comment.

Whether Elgindy is a whistle-blower or a sore loser, one thing is sure: The conduct that he describes is common in the world of chop stocks. In their efforts to clean up the world of micro-cap stocks, the regulators have always seemed to be a day late and a dollar short—or perhaps more accurately, years late and billions of dollars short. Their efforts to crush micro-cap fraud are well-intentioned, sometimes vigorous—but they have failed to put more than a dent in the problem. Driving brokers out of the industry does little good when they stay active behind the scenes. Shutting firms does little good when other firms open to take their place. The money is simply too good: The indictment on Nov. 25, which alleges the involvement of four ranking Mob figures in pushing a single chop stock, proves that. And it is coming from a seemingly bottomless pit—the pockets of small investors. □

Science & Technology

CARS

TOYOTA'S GREEN MACHINE

The jazzy new Prius will help cut pollution, but will consumers start flocking to the showrooms?

It was Toyota Motor Corp.'s most extravagant product launch in years. As chimes sounded, huge video screens showed views of sky and birds. A sporty compact car appeared on stage, and a broadcast voice summoned Toyota President Hiroshi Okuda to take a ride in the Prius, the world's first mass-produced car powered by a combination of gasoline and electricity. Six-foot-tall Okuda squeezed into the back of the Prius while Toyota chief engineer Takeshi Uchiyamada drove the car silently down a ramp to the ballroom floor of Tokyo's ANA Hotel.

It was quite a spectacle for just one new car among the score the giant auto maker has recently launched. But with the Prius, which goes on sale in Japan on Dec. 10, Toyota was making a declaration. This is to be the first of a new generation of Toyota cars whose engines will cut air pollution dramatically and boost fuel efficiency to spectacular levels. Toyota, in short, wants to launch and dominate a new "green" era for automobiles—and it will spend billions to do it. After conquering Japan, Toyota plans to sell the Prius and other green cars in the U.S.

It's a big gamble. No carmaker has ever succeeded in selling consumers en masse something they have never wanted to buy: cleaner air. And oil and gasoline prices are bumping along at record lows. Even in Japan, where a liter of regular gas can cost as much as $1, carmakers have trouble pushing higher fuel economy and lower carbon emissions.

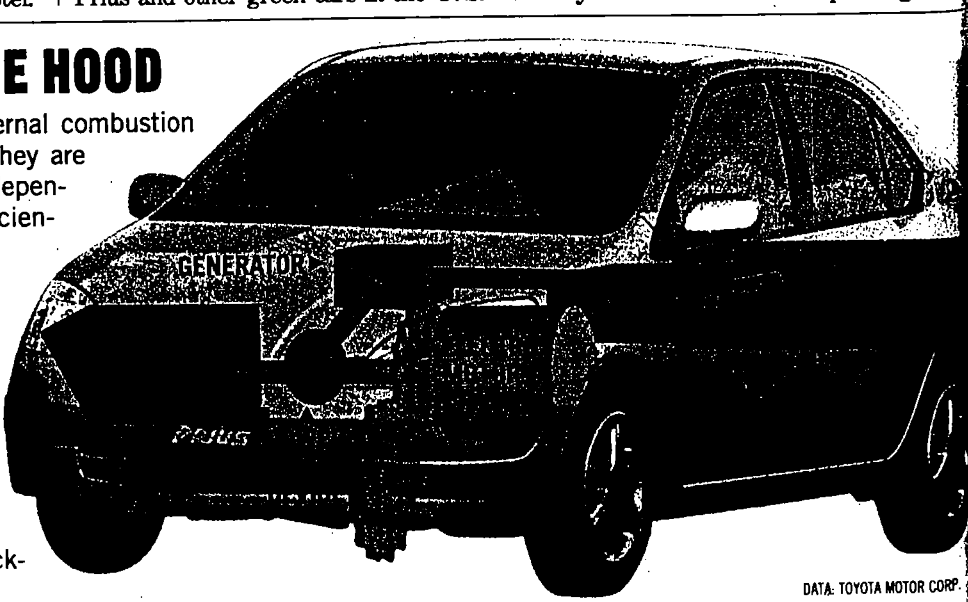
But Japan's major carmakers are ignoring the doomsayers. Toyota at the moment leads the pack by making a serious effort to mass-market the hybrid car, which uses a gasoline engine and electric motor to cut emissions dramatically and get as much as 28 kilometers per liter—equivalent to 66 miles a gallon. Honda Motor and Nissan Motor, too, are developing hybrid cars. Toyota, Nissan, and Mitsubishi Motors have launched cars and sport utility vehicles that increase fuel efficiency by as much as 30% in controlled tests, and cut pollution through direct-injection gasoline engines. "Green cars could be yet another issue that puts Japan in a leadership position," says Maryann N. Keller, an auto analyst for Furman Selz Inc. in New York.

The Japanese predict that gasoline prices will rise worldwide and that pollution and global warming will provoke governments to enact tough measures to clean the air. So Japan's auto industry is shelling out about $2 billion every year on green-car research. When representatives from some 150 countries touched down in Kyoto on Dec. 1 for an international summit on global warming, Toyota, Nissan, Honda, and Mitsubishi all had a readymade forum for promoting their cars.

The Big Three in Detroit and Germany's carmakers are also spending bil-

A PEEK UNDER THE HOOD

The Prius is powered by an internal combustion engine and an electric motor. They are designed to turn on and off independently in a way that boosts efficiency and cuts pollution. A power split device insures that power is delivered smoothly to the wheels and to the generator as the motor and engine turn on and off. The generator charges the batteries and serves as the car's starter. The inverter provides alternating current for the motor and direct current to charge the nickel-metal hydride battery.



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lions on electric and hybrid vehicles, direct-injection engines, methanol, ethanol, and hydrogen-powered fuel cells. The Germans have had much success with their direct-injection diesel technology. But General Motors has leased only 288 EV1 electric cars after a year.

Toyota expects to sell more than 12,000 Prius models to Japanese drivers in the next year. To do that, it is charging just $16,929 a car. Rivals and analysts say that's about $16,000 below the estimated cost of building the Prius, but Toyota insists it is not losing money on the cars. Analysts figure Toyota's low-price strategy will generate annual losses of more than $100 million on the new compact. Toyota must sell an unlikely 250,000 Priuses a year to make a profit, says Christopher Redl, automotive analyst at ING Baring in Tokyo. "It's going to sell very well," says Redl. "But that's only because they are going to sell it at a loss."

"POWER SPLIT." Toyota began developing the Prius four years ago. The automaker's chief engineer, Uchiyamada, proposed a car that would be 30% more fuel-efficient. But Toyota's head of research and development, Akihiro Wada, nixed that idea. Says Uchiyamada: "He said our goal was too low and that we would have to increase fuel efficiency by two times."

So Uchiyamada spent yet another year researching what types of engines could meet such high standards. He considered electric motors. Another option was fuel-cell cars that run on hydrogen. But he suspected mass production might not be possible for another 15 years. Uchiyamada finally settled on a hybrid system powered by an electric motor, nickel-metal hydride battery, and gasoline engine.

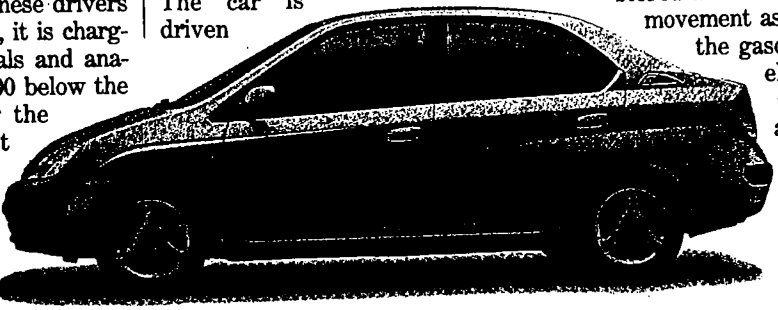
It took Toyota engineers two years to develop the power system in the Prius. The car is driven by both the gasoline engine and electric motor, with a newly developed 1.5-liter engine providing the primary power. When the engine is in use, a special "power split device" sends some of the power to the drive shaft to move the car's wheels. The device also sends a portion of the power to a generator, which in turn creates electricity. Some of that electricity drives the motor, and some of it is stored in the battery for future use.

The Prius can switch back and forth between motor and engine, or employ both, without creating a jerking motion in the way the car drives. The battery and motor are used to power the car at slow speeds. At normal speeds, the motor and engine work together to power the wheels, and at higher speeds the battery kicks in extra power. When the car decelerates and brakes, the motor converts the vehicle's kinetic energy into electricity and sends it through an inverter to be stored in the battery. So the car's own movement as well as the power from the gasoline engine provide the electricity needed.

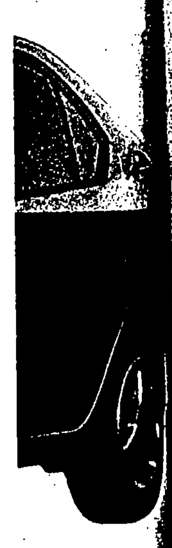
The energy created and stored by deceleration boosts the car's efficiency. So does the fact that the engine shuts down automatically when the car stops at a light. Toyota claims that in tests, its hybrid car has boosted fuel economy by 100% and engine efficiency by 80%. The Prius emits about half as much carbon dioxide, and about one-tenth as much carbon monoxide, hydrocarbons, and nitrous oxide as conventional cars. It also sports a futuristic look that Uchiyamada insisted on.

Toyota forecasts that hybrids will account for a third of the world's auto market as early as 2005. But Japan's Ministry of International Trade & Industry expects 2.4 million alternative fuel vehicles, including hybrids, to roam Japan's back streets by 2010.

Japanese carmakers believe that their government may soon tell them to slash carbon dioxide emissions by 20% by 2010. They also take American pollution standards seriously. It was Honda, not an American carmaker,



COST DILEMMA The Prius' retail price is $16,929, but building one of these cars may cost twice as much



STARTING OUT The gasoline engine turns on briefly, but at low speeds the electric motor alone powers the vehicle.

NORMAL DRIVING The gasoline engine now starts up while the electric motor, propelled by the generator, kicks in power.

FULL-THROTTLE The battery powers the electric motor, which drives the wheels with the engine when the car accelerates.

DOWNHILL/BRAKING The wheels power the generator, which produces electricity to store in the battery for future use.

STOPPING When the car stops in traffic, the gasoline engine shuts off to reduce energy loss and eliminate exhaust.

GRAPHIC BY ROB DOYLE/BW

TOYOTA MOTOR CORP.

that first sold low-emission vehicles across the U.S. this fall, with the new Accord.

Many of Japan's innovations run the risk of becoming impressive technologies meant for the masses but actually only bought by the elite. Why buy a $16,000 Prius when a $13,000 Corolla is more affordable? Toyota has convinced only 1,862 of 43,332 Corona Premio buyers to pay $866 more for its version of the direct-injection gasoline engine. It doesn't help Toyota that it is launching the Prius in the middle of a sagging domestic car market.

The unfamiliarity of green technology can also frighten consumers. The Japanese government sponsors festivals where people can test drive alternative-fuel vehicles. But some turned down that chance on a rainy weekend in May because they feared riding in an electric car might electrocute them.

The Japanese may face an even rougher ride in North America. Chrysler Corp.'s research shows that fuel economy ranks 19th among reasons to buy a car, right after "quality of the air-conditioning." Environmental concerns are further down the list. Yet the Japanese press on. From 2010 on, Mitsubishi says, it will only sell cars powered by direct-injection gasoline engines in Japan. Such vehicles now account for almost 40% of Mitsubishi's sales. Toyota will soon introduce two new recreational vehicles with gasoline direct-injection engines. Nissan is launching the Leopard sedan powered by a direct-injection gasoline engine.

The efforts of Toyota and its Japanese competitors may be folly. Then again, many skeptics thought the Japanese would never succeed in selling fuel-efficient automobiles 20 years ago. If the Japanese are right about the hidden potential of hybrid cars and other green technologies, their rivals in Detroit and Germany may have to play a costly game of catch-up.

By Emily Thornton in Tokyo, with Keith Naughton in Detroit and David Woodruff in Frankfurt

STEERING THE HYBRID THROUGH A TEEMING TOKYO

Even on a Saturday morning, navigating the traffic in downtown Tokyo can be a driver's worst nightmare. But Toyota Motor Corp.'s $16,929 Prius is designed for just such stop-and-start jams. In tests, the compact car's "hybrid" power plant—an electric motor and a gasoline engine—gets 66.5 miles per gallon of gas in heavy city traffic. That's twice the fuel efficiency of a conventional Toyota with a comparable engine, the 1.5-liter Carina sedan. And when the Prius comes to a halt, the gas engine doesn't idle. You can hardly feel it, but the engine shuts off—reducing exhaust to zero.

SEAMLESS. I tested a Prius one recent weekend in Shibuya, one of Tokyo's most congested shopping districts. The differences between the Prius and a conventional car were evident as soon as I started up. I couldn't tell whether the car was running: Turning the ignition key starts the electric motor and the gas engine, but the gas engine shuts off in seconds if the battery is charged. The first clue that the car was ready to go was a "Welcome to Prius" message flashing across a liquid-crystal display screen. The gas engine didn't come back on until I built up speed.

The dashboard is a big part of the Prius' next-generation feel. Its central feature is the LCD screen, which tells you everything from the outside temperature to your fuel efficiency, displayed with colored bar charts and star bursts. The brakes had a mushy feel, but they were highly sensitive. Toyota apparently intends to adjust them.

Green arrows on the LCD, showing that the electric motor was running, would quickly turn orange whenever the engine kicked in. These transfers of power were seamless. The Prius features Toyota's new 1.5-liter four-cylinder engine, which is designed to get 15% more fuel efficiency than the Carina's comparable engine. I was assured that even my stops and starts were more fuel-efficient than a gas-powered Carina's. But as the LCD told me, I seemed to achieve the maximum fuel efficiency when maintaining a constant speed on the gas engine—as in any conventional car.

Unlike Toyota's RAV4 electric vehicle, which must be recharged every 134 miles, the Prius doesn't need recharging. When the car decelerates, the electric motor kicks in and acts as a generator. That converts otherwise wasted energy from the engine into electricity that charges a nickel-metal-hydride battery.

Toyota believes the battery should last for the full 10-year lifespan of the car and offers its standard five-year, 60,000-mile warranty. This will be the first time the hybrid system and other new gadgets in this car, including the LCD monitor, will be tested in a mass market. Toyota is now training service technicians in all 50 of its dealers around Japan, who [illegible] some 200 outlets. Some analysts suspect buyers may have to shell out additional sums to satisfy government-mandated *shaken* inspectors, who check cars after their first three years on the road and every two years after that.

Although the Prius costs more than the $12,441 Carina, it's a lot of fun for the money. And a team in the company's California design studio has given the car a sporty, New Age look. Attention all gadget-hungry grease monkeys: Try one.

By Emily Thornton in Tokyo

NEXT-GENERATION FEEL *Prius' LCD offers readouts*

TOM WAGNER/SABA

The cat sat on the tam

As many as 15% of children may have dyslexia, and every year upwards of $1 billion in America alone is devoted to helping them improve their reading. Might it be better spent on improving their hearing instead?

NATURAL selection has equipped mankind with impressive spoken-language skills. But it never had a chance to prepare people for reading. The first known language in which written letters corresponded to particular sounds was developed by the Canaanites around 1700BC. By then the human brain had already been chiselled into its current form.

The brain of a child has evolved to process speech, not intricate written symbols that represent speech. So perhaps it is not surprising that nearly four times as many children have dyslexia, a difficulty with reading, as have specific language impairment (SLI), a difficulty with spoken language. And while children with SLI usually outgrow their speech handicap, the reading problems of most dyslexics linger on stubbornly throughout their lives.

Despite the differences between SLI and dyslexia, Paula Tallal, a psychologist at Rutgers University in New Jersey, proposed over 20 years ago that both syndromes may arise from a simple hearing defect. Dr Tallal's hypothesis, and the data it was originally based upon, have been widely disputed. But evidence is growing that she may have been right—and it suggests that dyslexia could be treated by training someone's ear rather than their eye.

Listen closely

That a reading problem could be related to a problem with hearing may seem paradoxical. But children must hear the basic sounds, or phonemes, of their language before they can become skilled readers. When they first read the word "cat", for instance, they must learn to associate the three letters in the word with three phonemes—"kuh", "ah" and "tuh". Children become masters of the written word only when letters can be easily decoded into their corresponding phonemic sounds. Young children who are poor at mentally dividing spoken words into phonemes almost always develop dyslexia later on.

Moreover, people who never hear at all—the congenitally deaf—rarely learn to read at advanced levels. The deaf, like dyslexics, rarely win spelling bees, as they tend to produce wildly inaccurate spellings. Reading and writing problems appear to develop in deaf people because sign languages are not phonemic in the sense that a spoken language is. Hence, the deaf never get a true sense of the phonemic structure of spoken language: they have no sounds in their heads that can represent the written letters.

All this suggests that a problem with hearing or processing speech could be the underlying cause of dyslexia. Now, Michael Merzenich, a neuroscientist at the University of California, San Francisco, and his colleagues have tested this idea by giving extensive hearing tests to grown-ups with a wide range of reading abilities. The researchers found that all the poor readers, while normal in nearly every other measure of hearing, had problems distinguishing closely-spaced tones. If two tones, one high and one low, were played about 40 milliseconds apart, the best readers had no trouble telling which tone came first. But the poorest readers, many of whom had been formally diagnosed as dyslexic, could rarely distinguish the order of the tones. Poor readers also could not reliably identify tones immediately followed by hissing noises; good readers had no trouble with this task. Moreover, mediocre readers had the same kind of hearing deficit as the poor readers, albeit to a lesser extent.

Dr Tallal reckons that children suffering from such a hearing problem—which the researchers have also found in children who have SLI—may have trouble telling certain phonemes apart. For instance, with sounds such as "bah" and "dah", the "b" and "d" sounds are succeeded by the "ah" after an interval of roughly 40 milliseconds. Children who cannot hear these rapid transitions may confuse the sounds.

In listening and speaking, Dr Tallal and Dr Merzenich argue, dyslexics learn to compensate for their hearing problem. But in reading and writing, the problem may be harder to solve. The two researchers are convinced that the brains of dyslexics store an improper and unreliable representation of phoneme sounds. As a result, dyslexics make lots of mistakes when mentally converting sounds to letters and letters to sounds.

This suggests that children might learn to read better if they could be taught to hear better. So Dr Tallal and Dr Merzenich have founded a company, Scientific Learning, to sell a computer game intended to improve the hearing of children with language problems. The game, called Fast ForWord, is meant to improve phoneme recognition by

Let's hear it for reading

stretching out and accentuating each sound, much as mothers do when they talk baby-talk, until the child's ear becomes more attuned to the different phonemes. Through a range of listening exercises, the researchers claim, the game replaces the brain's faulty phonemic representation with one that is more faithful to the sounds of speech.

Fast ForWord seems to be effective. It improves understanding of spoken language in about 90% of children with language problems; preliminary evidence suggests that the game may also have a big impact when it comes to improving reading. But despite the elegance of the Tallal-Merzenich argument, and the encouraging results from their game, their work is still extremely controversial.

Michael Studdert-Kennedy, a psychologist at the Haskins Laboratory, in New Haven, Connecticut, and one of the most vigorous critics of the approach, argues that other studies have shown that the brain processes speech sounds completely differently from non-speech sounds, and that the hearing problem identified by Dr Merzenich's group thus has nothing to do with dyslexia. Dr Studdert-Kennedy maintains that speech moves in a fluid stream of sound that has little resemblance to the discrete tones used in Dr Merzenich's hearing tests, and that dyslexia probably stems from a high-level problem in the brain's language system that is simply not yet understood.

These arguments are supported by the fact that dyslexia is associated with more problems than just a hearing deficit. Dyslexics also have a number of subtle vision problems that could interfere with reading. Moreover, the language areas in the brain of a dyslexic often contain nerve cells that are abnormally arranged and unusually small—although it is still unclear whether this is a cause or consequence of the disorder.

Dr Studdert-Kennedy and his allies reckon that although Fast ForWord does appear to improve language competence, it may not be for the reasons that Dr Tallal and Dr Merzenich have claimed. The researchers have not shown which aspects of the programme lead to the improvements: a child's language comprehension may improve simply because he or she is forced to listen to a barrage of phonemes, not something that an expensive and complicated computer game is necessary for.

Nonetheless, only one other treatment for dyslexia has come close to showing comparable improvements. This approach—known as the Lindamood programme after its developers, Patricia and Charles Lindamood—is an intensive reading course that tries to improve phoneme identification by focusing on how children articulate the sounds. This helps children become more aware of how their tongues, throats and mouths are positioned when they produce various speech sounds. Again, although the programme can lead to considerable improvements in both phoneme discrimination and reading ability, the way that this comes about is unknown.

The furore over Fast ForWord and whether it is truly treating the causes of dyslexia matters a great deal: more sophisticated treatments of dyslexia will only come with a thorough understanding of the cause of the disorder. But for sufferers, that should not obscure the basic promise of the Tallal-Merzenich approach. After all, it seems to put the cat back on the mat.

Musical computers

Miles Davis, version 2.1

JAZZ conjures up images of dark, smoke-filled rooms and the strains of a saxophone or trumpet breaking away into a flight of fancy that often surprises the musicians themselves, not to mention the audience. While computers have long been able to reproduce synthesised music to command, they have not been able to improvise along with jazz's finest. Now, however, jazzmen have a digital rival.

John Biles, a computer scientist at the Rochester Institute of Technology, in New York state, has created GenJam, a jazz-playing computer that can trade fours and eights with the best of them. Originally developed four years ago, GenJam rapidly learned to improvise jazz with enough proficiency to fool a casual listener. But it has recently become a far better musician: it is now interactive, able to respond with its own musical whims to the music of its creator. And on December 4th, at the meeting of the Acoustical Society of America in San Diego, California, Dr Biles and GenJam were due to blow their trumpets.

When Dr Biles puffs away on his instrument, the sound is captured by a microphone that feeds into GenJam's "ear". This is actually a box known as a "pitch-tracker", which converts musical notes into their digital equivalents so that GenJam can perceive them. GenJam then picks another series of notes that sounds interesting and toots right back at Dr Biles through a synthesizer, even though it has never heard that particular piece of music before.

The secret of GenJam's prowess is the same as for all musicians: practice. Like any novice, it started off with some basic knowledge of the music it was about to play. A computer program told it the tempo and rhythmic style of the tune to improvise on, as well as the chord progression and the number of solos to perform. At first, it was also told in advance the drum, piano and bass sequence that it was to accompany.

To learn to improvise, GenJam relied on a computing technique known as a genetic algorithm. The algorithm starts out by generating a random set of notes that GenJam plays in accordance with what it knows about the piece of music. Dr Biles, as GenJam's mentor, listens to what it plays and translates his cheers and winces into language that the computer can grasp by keying in a "g" (good) for combinations he approves of, and a "b" (bad) for less pleasing sounds. This way, GenJam can assign a value to each section of the tune. In the next round, GenJam boots out the worst snatches of cacophony and replaces them with snatches that received the thumbs-up. It arranges these randomly to create a new set of melodies to play to Dr Biles, who then

A CHILLING SCENE: *At Heath High, Michael Carneal, 14, calmly pulled a .22 semiautomatic pistol from his backpack and fired off 12 shots, killing three and wounding five just as they had said 'Amen'*

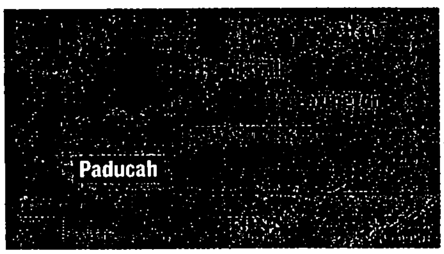
CRIME

Tragedy in a Small Place

It was just another Monday. Then a gawky kid with a mysterious grudge opened fire on his classmates at prayer, leaving a town wondering why.

BY DANIEL PEDERSEN AND SARAH VAN BOVEN

"THE BASKETBALL DIARIES" MAY not have been 14-year-old Michael Carneal's favorite movie. But one scene in particular stayed with the awkward Paducah, Ky., freshman: a young character's narcotic-tinged dream of striding into his school, pulling a shotgun from a black leather coat and opening fire. The real-life scene in the bloodied halls of Heath High School last Monday was a long way from Hollywood. Unlike handsome actor Leonardo DiCaprio's dramatic entrance in 1995's "Diaries," skinny, bespectacled Michael bummed a ride to school that day from his 17-year-old sister, Kelly. Instead of cinematically kicking down a classroom door, Michael quietly followed Kelly into the school through the band room, where he told a curious teacher that the four guns bound together with duct tape and wrapped in an old blanket were "a poster for my science project." Loitering in the hall, Michael waited for a prayer group of 35 students to

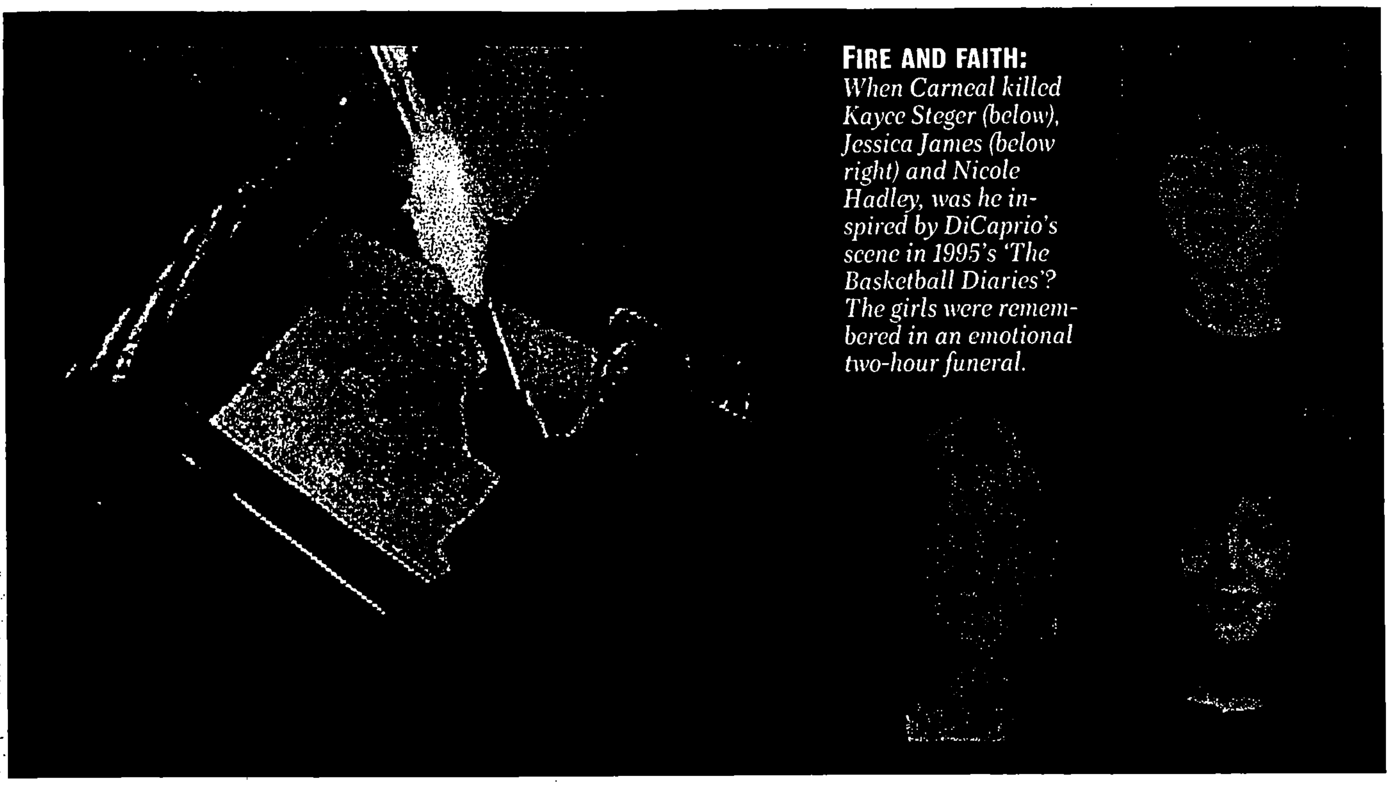


lift their bowed heads and say "Amen." He then took a fifth gun, a semiautomatic .22, from his backpack and fired off 12 shots, killing three students and wounding five. Before the police arrived, Carneal would tell a teacher, "it was like I was in a dream."

It was more like a nightmare, and Paducah is still trying to wake up. No one in the town seemed to have seen young Michael's outburst coming; the son of a successful lawyer, Carneal wasn't into drugs or crime or cults. He was a solid B student who played in the band and had gotten into trouble at school exactly twice: once for accessing the Playboy Web site on a library computer and once for picking paint off a hallway wall. "His father's a deacon and his sister's the valedictorian," said Bill Bond, the principal. "Michael never dressed in black or wore upside-down crosses. He does not fit the mold of what our society says an angry person should be like." For now, there is no easy explanation for last week's tragedy; when asked by police why he did it, Michael repeats, "I don't know, I don't know." But so far, Paducah has for the most part resisted pointing fingers at the usual social suspects, like the film industry or lax school security or Michael's parents. In a part of the South known for both vengeance and mercy, the residents of the largely fundamentalist Christian town of 27,000 seem more interested in forgiveness. On Tuesday students at Heath High gathered to pray not just for the victims but for Michael as well. Kelly Carneal was not only welcomed back to school but encouraged to sing with the school choir at the slain students' funeral.

By all accounts, the Carneals were a model family. In the hunting culture of McCracken County, family friends say, Michael was a rare 14-year-old who had never fired a gun

CLOCKWISE FROM TOP LEFT: STEVE NAGY-PADUCAH SUN—AP; PADUCAH SUN—AP, NO CREDIT



FIRE AND FAITH: *When Carneal killed Kayce Steger (below), Jessica James (below right) and Nicole Hadley, was he inspired by DiCaprio's scene in 1995's 'The Basketball Diaries'? The girls were remembered in an emotional two-hour funeral.*

(he preferred the sax and chess). The family celebrated Thanksgiving unaware that at some point in the day Michael had slipped out of their brick ranch house and taken two shotguns, two rifles and the .22 from a neighbor's garage. Michael spent the evening before the massacre doing his homework—assignments he must have known he would never turn in. After hearing about the shooting the next morning, Ann Carneal had already gathered together blankets, water and cups to bring to the school to help—and then she got the news that Michael was the gunman. John Carneal had headed straight to the school to make sure his two kids were OK. When a guidance counselor told him that Kelly was all right but added, "You need to come with me," Carneal thought he knew what the worst possible news could be—that Michael was dead. He was wrong. Tammie Pierce, the wife of John Carneal's law partner, told NEWSWEEK, "John said he'd give anything if he himself could have been a victim, rather than being on the other side."

Why did Michael do it? Though some students recalled hearing him insult the morning prayer circle, he doesn't appear to have been antireligious and may have just targeted the gathering because it was the first significant event of the school week. Classmates couldn't remember Michael's being particularly hazed or harassed, but when principal Bond reviewed the 5-foot-2 Carneal's school essays, he said he did find a theme of feeling "small and powerless, that the world had teased him and he was going to show the world how powerful he was." When police searched Michael's room, they discovered little out of the ordinary—except for the many empty ammo boxes he'd left behind after loading 800 rounds into his backpack. The strangest finds: a book called "The Lore of Arms" and a typewritten note entitled "The Secret" (described to the press only as "very bizarre writing").

The clearest warning came from Michael himself. Before Thanksgiving he told several friends, including goateed prayer-group leader Ben Strong, to stay away from Monday's session because "something big is going to happen." Strong thought Michael was probably talking about a prank like setting off a stink bomb, and he showed up at 7:30 for the weekly prayer meeting as usual. So did a deeply religious senior named Jessica James, softball player Kayce Steger and a newcomer from Nebraska, Nicole Hadley. Twelve rounds and a few moments later, the girls were dead or dying and five other students were wounded. Strong ran up to Michael, taking him by the shoulders and yelling, "What are you doing?" Michael dropped the gun, but even Strong, a minister's son who had resisted the impulse to run, felt terrible for ignoring Carneal's earlier warning. He told his father, "Dad, I feel guilty. I didn't move quickly enough."

But for the most part, the town of Paducah has resisted assigning blame. Citizens and churchgoers prefer to talk about the victims—the "good kids," as the principal says—rather than the shooter. On Friday, when more than 2,000 people attended an emotional funeral for Jessica, Kayce and Nicole, the town's pastors celebrated the slain girls and their deep faith. Friends had signed the girls' coffins, which sat banked by flowers and letter jackets. Nicole's minister spoke of her family's decision to donate her organs. Christian musician Steven Curtis Chapman sang for the assembly, then asked anyone who had found Jesus Christ because of the week's events to stand. When several did, Chapman said, "There are three little girls just going nuts in heaven right now."

Signs of the Christian spirit that has characterized the town's reaction are everywhere; placards at Heath High read WE FORGIVE YOU MIKE and WE FORGIVE BECAUSE GOD FORGAVE US. But prosecutors aren't intending to be quite so lenient: this week McCracken County Attorney Tim Kaltenbach will petition to try Carneal as an adult. If convicted, he will face a life sentence with 25 years before the possibility of parole. Sheriff Frank Augustus has mentioned a "gut theory" that other Heath High students may have been in on the plot, but officials say quick arrests are unlikely.

From schoolyard prayer to the wrenching, nationally televised funeral, Paducah seems to have a sophisticated understanding of the power of public gestures. On Saturday, the Heath High band honored a prior engagement by participating in the town's annual Christmas parade. But they marched in silence, and four musicians were missing: Kayce Steger on clarinet, Jessica James on baritone, Nicole Hadley on clarinet and Michael Carneal on saxophone. When the band passed by John Carneal's law office, the kids paused for a moment of silent prayer—and then marched on. ■

CLOCKWISE FROM TOP LEFT: NEW LINE CINEMA, PADUCAH SUN—AP (3)

Road Runner v. Coyote

As Microsoft case shows, markets move faster than Justice

BY RUSS MITCHELL AND
MARIANNE LAVELLE

Antitrust enforcement in the 1990s seems to be producing some odd effects. Consider the Department of Justice's latest legal action against Microsoft Corp., which went before a federal judge last Friday. If Microsoft wins this case, it wins big. And if Microsoft loses, well, it wins anyway.

How so? For over a year, the feds have been investigating the methods Microsoft employs to market its Web browser, Internet Explorer. On October 22, Justice filed a motion against Microsoft, charging the software maker with violating a 1995 consent decree by requiring computer makers to bundle Explorer along with the Windows 95 operating system used on most machines. Justice argues that this gives Microsoft an unfair advantage over the main competing browser maker, Netscape Communications Inc.

But as the investigation has dragged on, Microsoft has charged ahead with Explorer, moving from bit player to serious challenger against Netscape's Navigator browser. With the case still tied up in court, Microsoft's competitive momentum has reached the point at which some analysts say Microsoft could dethrone Netscape as browser king over the next several months—rendering moot theoretical legal considerations of the tactics it used to win the battle (chart, Page 59).

It's only money. In cases like this, says Steve Salop, an antitrust expert at Georgetown University, by the time the court acts, "the damage has already been done." In its legal pleadings, Justice is seeking a cease-and-desist order and a fine of $1 million a day if Microsoft doesn't comply. As Microsoft Chairman Bill Gates concedes, the monetary fine is not an issue: "What the judge says we'll do, we'll do. That's the way it works in this country." Meanwhile, the software maker has grabbed a big share of yet another market.

That's not to imply Microsoft is guilty of anything more than shrewd marketing. The court could well dismiss the complaint. Whatever the outcome, the case highlights the inadequacies of an antitrust system first created more than 100 years ago to protect consumers from collusive oil barons and greedy railroad magnates, a system ill-equipped to contend with nanospeed industries like software and networking, in which product cycles are measured not in years but in months. It raises the question of whether the feds should even bother to try.

JEFF CHRISTENSEN—REUTERS

"What the judge says we'll do, we'll do," Bill Gates says of the pending ruling on Microsoft.

The creaky wheels of government bureaucracy just can't keep up. "The [antitrust] laws are sufficiently flexible," says Dennis Yao, a former Federal Trade Commission member, now an economist at the University of Pennsylvania's Wharton School. "The quickness with which they are [enforced] is the problem."

Yao points to the FTC's own investigation into Microsoft's licensing practices starting in 1989, a probe that Justice took over and that ultimately resulted in the 1995 consent decree Microsoft is now accused of violating. Microsoft had in effect required computer makers to pay a licensing fee for each computer they shipped, whether those machines were loaded with Windows operating software or not. That meant if manufacturers chose to ship PCs with operating systems like Novell's DR-DOS or IBM's OS/2 rather than Windows, they still had to pay Microsoft.

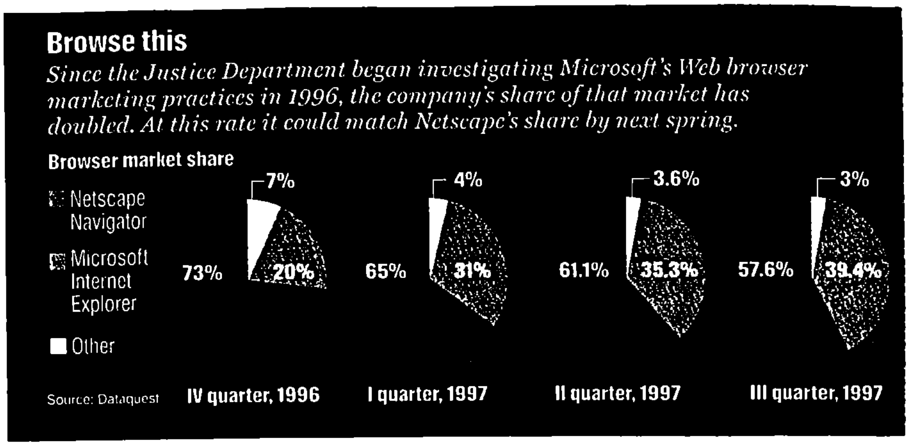
Under government pressure, Microsoft signed a consent decree agreeing to end the practice. But by that time, DR-DOS was practically kaput and OS/2 was foundering; Microsoft had decisively crushed all competitors in the Intel-compatible PC market. And, critics say, a similar pattern is emerging in browsers.

Justice attorneys are well aware of the time-to-trial problem and are doing their best to persuade Judge Thomas Penfield Jackson to make a quick ruling—even as Microsoft pleads for a full-scale evidentiary hearing that would stretch out the case for weeks, perhaps longer.

To speed up investigations in future cases, however, critics say Justice must develop deeper technological expertise. "Our whole culture is in the midst of changing how we do things," says Roberta Katz, Netscape's corporate counsel. "The fact that Justice and the courts have to deal with these new technologies is no different from the fact that our schools and our businesses have to deal with them."

Nader's notion. More radical ideas are being proposed to deal with antitrust in the tech era. Consumer activist Ralph Nader argues that the government should place restrictions on any company that dominates any market with, say, a 50 percent share or greater. On the other extreme, critics insist that the best way for the feds to assure competition is to just lay off companies like Microsoft—unless there is a clear case to be made, like when the FTC blocked Microsoft from buying personal-finance software maker Intuit in 1995. The merger would have allowed Microsoft to dominate a market by buying it, not competing for it.

"The problem [with the browser case] is that Microsoft really hasn't done anything wrong," insists William Baxter, a veteran antitrust lawyer who headed the trustbusters at Justice in the early 1980s when the department negotiated the breakup of AT&T. In the new economy, says Baxter, "companies will compete *for* markets, rather than *in* markets." In other words, a competitor could create great new software that makes Windows irrelevant—just as Sun Microsystems is trying to do with the Java computing language. "We'll have a series of companies leapfrogging one another," adds Baxter. "The worst thing we can do is weaken the incentives to be the successful frog."



For now, the biggest challenge Justice faces in the browser case may boil down to legal definitions. The court's decision likely will turn on the judge's interpretation of a single phrase in the consent decree. The decree bars Microsoft from forcing customers to tie the licensing of one product to that of another, "provided, however, that this provision in and of itself shall not be construed to prohibit Microsoft from developing integrated products." Microsoft, naturally, says Internet Explorer is an integrated product (part of a package of software programs), and that the decree gives Microsoft the right to combine anything it wants with Windows—whether, as a Microsoft executive told Justice, that product be Internet Explorer or "a ham sandwich." In its legal briefs, Justice emphatically and repeatedly states that Explorer is a separate product and is not "integral" to Windows.

ADAM NADEL—AP

Love it or hate it, Windows 95 is hot.

Problem is, Justice never defined the words "integrated" or "integral." This apparent oversight may weaken its case considerably. "The ambiguity jumps right out of that sentence, and Justice didn't clear it up," says Baxter. "This is the result of bad contract drafting."

Further confusing matters, Microsoft is arguing that Explorer is not only integrated with Windows but is in fact *integral* to Windows as well. The company says that removing pieces of the browser code would cause the operating system to "break."

The idea that a browser is an integral part of an operating system puts some software experts' teeth on edge. "You probably can't use the word 'bull----' in print, right?" says Albert Woodhull, a computer science professor at Hampshire College and coauthor of the textbook *Operating Systems: Design and Implementation.* Woodhull says an operating system runs the computer's basic operations and its parts are "so tightly integrated you can't conceive of stopping part of it without having the whole system stop." He views Windows as a package of various applications—Microsoft calls them "features"—that sit atop the operating system. Says Woodhull: "Anybody who works with operating systems knows a browser is definitely an application." Microsoft begs to differ, saying anything it includes with Windows is part of the operating system.

How are the courts to decide such dicey matters? And how is the Justice Department to guide them? Everybody in the legal system has a lot of learning to do about basic technology. Until then, the results of antitrust enforcement are going to leave a lot of technology companies and customers—as well as Justice itself—feeling discombobulated.

For more information, see U.S. News Online (http://www.usnews.com).

EW 11-17-98

Financial Literacy/Financial Empowerment

DRAFT--------------DRAFT------------------DRAFT

1. Background

An initiative to support the financial literacy of Americans would address many policy concerns, is relatively inexpensive, and is likely to have broad support.

- More Americans now enjoy a much broader range of financial services than at any time in the past. The share of the population with credit cards, home equity loans, personal retirement accounts, and market investments has increased substantially over the past decade to all-time highs.

- With these greater opportunities have come rising concerns about whether consumers have the information they need to use these often complex financial services effectively. Consumer debt levels relative to income have been rising sharply since the early 1990's and are now at a level well above the average over the past 25 years.

- High debt levels may make it more difficult for consumers to maintain financial security throughout their lives. Personal bankruptcy rates are at an all-time high. At the same time, the U.S. personal savings rate has declined substantially. Many consumers also appear to be ill-prepared for such adverse economic events as job losses or a major illness. Many households also do not have retirement savings adequate to sustain their standard of living in old age.

- Much empirical evidence suggests that financial education and information disclosures can have a significant and, often, lasting effect on consumer financial behavior.

Government, consumer, and industry groups all currently support financial literacy initiatives.

- Government initiatives include the Treasury Department's EFT99 program, with matching funds from the Social Security Administration. This national initiative has used local outreach campaigns and educational activities to introduce hundreds of thousands of "unbanked" low-income Americans to bank accounts and electronic commerce. It can readily be expanded to address other financial education goals for low-income Americans. The Department of Agriculture sponsors a broad range of financial education programs through the combination of the Department's Cooperative State Research, Education, and Extension Service, county government and community Extension educators and volunteers, and the expertise of the affiliated land-grant universities. The Department of Defense offers Personal Financial Management Programs to families in each service branch coordinated through the Office of Family Policy. The Department of Health and Human Services offers services to older Americans through the Administration on Aging, acting as an advocate for older Americans and working with its nationwide network to develop community-level services. The Department of Labor has launched a Retirement Savings Education Campaign that, in conjunction with a public-private partnership organization, offers support for developing materials and PSAs, sponsors public events and conferences, and participates in outreach activities.

- Many consumer groups support financial education initiatives. For example, the National Foundation for Consumer Credit offers curriculum development and material for their local agencies, which, in turn use them in counseling services and credit and financial education programs through schools and community groups. The National Institute for Consumer Education serves as a clearinghouse for consumer information of all types, including credit education information; the Institute maintains a credit education resource bibliography and provides lesson plans and teaching resources. Consumer Action develops consumer education materials in languages other than English and disseminates them through their network of community-based organizations. Consumer advocacy groups, such as the Consumer Federation of America, have publications related to consumer credit and support credit education.

- The credit industry supports a number of initiatives, both individually and through trade associations. The major general purpose credit card companies have all developed credit education materials, often targeted to high school and college youth, and parents. Most of these materials are multi-media. Some financial institutions and their trade associations provide credit education materials; the American Bankers Association, for example, provides *In Charge,* a credit education program, with materials and local banker-speakers for high schools and colleges. The American Financial Services Association Education Foundation, combining efforts of public partners, including the Department of Labor and the Securities and Exchange commission, with an extensive private and non-profit membership, has a variety of credit publications; it was also active in planning the June, 1998, Saver Summit.

- Some joint industry/consumer initiatives are also underway. For example, the Jump$tart Coalition, begun in 1995, combines resources from a range of consumer, governmental, and private sector partners to serve as a clearinghouse, collecting and disseminating information on research findings, new program offerings, and educational materials.

Leaders from all of these groups agree that the Administration "bully pulpit"and seed funding could substantially increase the visibility and effectiveness of financial literacy programs. Since the elimination of the White House Office of Consumer Affairs in 1995, there has been no coordinated Administration effort to address these issues.

2. Options for Financial Literacy Initiatives

The proposed activities include two one-time sets of events, and a set of educational programs. The two events include an Administration conference, to identifying needs, publicize successful interventions, and provide a forum for announcing further Administration activities to promote financial literacy; and Administration leadership in the upcoming Consumer Week activities sponsored by the FTC. The education policy initiatives include a range of outreach and education programs building on activities throughout the Administration.

A. An Administration conference on financial literacy/financial empowerment

The conference will discuss education needs, reviews educational programs that are effective in addressing these consumer finance concerns, and presenting opportunities for the Federal Government to meet these concerns. It will be accompanied by the release of a study that reviews previous research and develops new evidence on how Americans use credit and savings opportunities, what resources are currently available to assist Americans with financial concerns, and what key features are needed to ensure successful financial education initiatives. The conference would be held in February, in conjunction with Consumer Week, and will include participation by senior Administration officials as well as diverse public and private opinion leaders.

Pros: Many private and federal programs are under way now, and we do not know enough about all of these initiatives to certify definitively which will be effective. A conference can highlight successful existing initiatives and signal Administration concern, and would have minimal cost.

Cons: The financial literacy concerns listed above suggest that there is considerable need now for more visible Administration leadership and increased federal support for programs of education and evaluation reaching a wide range of consumers. Private and public experts report insufficient resources, and a need for public opinion leaders to highlight efforts to influence consumer behavior substantially. Using the conference to announce further activities would address these concerns.

B. Administration Participation in Consumer Week (February 1999): Credit Fraud

Education

The FTC sponsors Consumer Week, an annual set of activities and events around a single consumer theme. This year's topic is credit fraud, and it will feature public events sponsored by government, nonprofit, and private industry groups. These events can be coordinated with the Administration financial literacy initiative, as most of the participating groups are also involved in the Administration initiative. A Presidential proclamation about Consumer Week, coupled with the Administration conference on financial empowerment, would create substantial publicity for educational programs on credit fraud and other consumer finance issues. Education about credit fraud, and related issues such as financial identity theft and maintaining financial privacy, will be important components of the public opinion and education programs listed below.

Pros: Well-organized set of events with many participating groups; topic fits very well into the proposed set of Administration initiatives; minimal cost.

Cons: None?

C. Public Opinion Campaign

A public opinion campaign would begin with visibility from the Administration conference and Consumer Week. It might include public service announcements and appropriate media and regional events. Examples of messages for PSAs and other outreach activities include: guides to wise credit usage, covering what to look for in shopping for a credit card, how to manage credit and debt and increase saving, "warning signs" of credit trouble, and where to go for help. These messages can be coordinated by the Treasury's Office of Public Affairs and Community Development, which have recently conducted a range of publicity initiatives on such topics as outreach to the unbanked and informing the public about changes in printed money and risks of counterfeiting. The Department of Health and Human Services (which sponsors publicity campaigns on saving through its IDA program and on retirement savings through AOA), the Department of Labor (pension savings), the Department of Agriculture (financial education outreach through Agricultural Extension offices), and other Departments all have public outreach initiatives related to consumer finance that could be incorporated in this initiative. An ongoing campaign to influence public opinion would also include a high-profile advisory group, such as a new President's Council on Financial Fitness. The President's Council would help provide visibility through a cadre of outside speakers. Some of these publicity efforts could be undertaken in partnership with a broad range of consumer and industry groups. For example, Jump$tart and other programs have developed and tested effective PSAs, and Administration funding for the use of these announcements could be matched by nongovernmental sources.

D. Clearinghouse for Financial Empowerment

The Administration would support the development of data banks of information on existing public and private consumer education and counseling resources, and information on programs for educators and counselors, to be made available on an Internet site with appropriate links and an on-line search capability (expansion of FTC's www.consumer.gov website, with links and/or supplemental sites on other Departmental websites), or an 800 phone number. This initiative would be supported by web and network resources already developed by a range of public and private groups.

E. Educational Incentive Grant Program

The Department of Education would provide additional budget support for consumer credit and financial management education through existing grant programs in K-12 and post-secondary institutions. The support could take the form of an award and recognition for excellent existing programs, seed money for integrating financial management modules into high school curricula, or matching funds for local district efforts to include financial education in their curricula. The Department of Agriculture, through the auspices of the 4-H Cooperative Extension programs, may also provide some support for high school education.

F. Educational Programs for Adults

The Administration would expand current Federal programs to provide adult education through the Departments of Education and Agriculture (through curriculum development programs analogous to those described in Section E); education and counseling programs for military personnel in the Department of Defense; the Retirement Savings Campaign of the Department of Labor; through the community-based programs of the Administration on Aging; and public education programs in the Treasury Department's FMS program, which provides basic financial education (principles of savings accounts, consumer credit, and techniques for increasing savings) to lower-income households. All of these initiatives may include some direct funding of educational initiatives, as well as seed grants or matching funds to outstanding private initiatives. For example, principles of personal finance are now included in many "basic training" programs in the military, and some Agricultural Extension offices provide personal finance education to low-income residents of rural areas.

G. Assistance for Consumers with Credit Trouble

This initiative, to be conducted jointly by the FTC, Fed, and Treasury, would provide some guidance toward effective counseling and debt relief agencies for over-extended consumers. The options range from publicizing a list of questions about financial risk for consumers to ask themselves (already developed by credit counseling and other agencies), to development of an industry-wide "seal of approval"certification and accreditation program for counselors and agencies. (It is not clear whether the "seal of approval" approach will be feasible; alternatively, the initiative would develop information for consumers on what to look for in credit counseling.)

H. Retirement Savings Initiatives

[to be added]

I. Coordinating Office and Advisory Council on Financial Fitness

This office will help coordinate activities on financial education and outreach throughout the Administration. Previously, the White House Consumer Office provided this coordination; because the office was "downsized" in 1995, however, it may be politically difficult to implement a new White House office for these activities. An alternative "home" is within the Treasury Department's Domestic Finance program, which already provides some policy coordination functions on financial services issues in the Administration. This small office (2 staff members) would help implement policy decisions taken through the White House interagency process on financial services initiatives, through regular communications, updates, and conferences. The Administration could also create a high-profile Advisory Council on Financial Fitness, which could provide both advice and publicity for Administration financial literacy initiatives. The likely cost is around $1 million for the coordinating office, and $1 million for the Advisory Council (approximate budget of the President's Council on Physical Fitness).

Issues for All Educational Initiatives

Pros: Executive Departments and agencies and private interest groups, ranging from industry participants and trade groups to consumer advocacy groups, are largely unified in their support for such an initiative. As considerable synergies exist between this initiative and the broad range of existing public and private efforts, we expect that these funds can be used to generate matching support from other sources, including state and local governments, consumer and industry groups, and other Federal sources (for example, the Social Security Administration provides matching funds for Treasury's EFT initiatives to increase the financial literacy of low-income households). The initiatives are likely to increase education and information available to a broad range of consumers, with potentially beneficial and measurable effects on consumer awareness of wise financial practices and on achieving their financial goals. Initiatives will receive considerable support from consumer interest groups, and some support from industry groups. The initiatives will also complement a range of existing and potential Administration initiatives, thereby increasing their effectiveness -- including programs to encourage savings, additional TALA disclosures, and initiatives to provide more information to consumers on financial services fees.

Cons: Most of the proposed initiatives are enhancements of existing efforts, rather than truly new programs. It may be difficult to measure effectiveness of additional federal funding, and there is no guarantee the additional initiatives would all be effective.