

VOLUME	22
--------	----

1993

NUMBER 1

Changes in Usage, Practices and Policies in Pre-Employment Polygraph Testing in Law Enforcement Agencies in the United States: 1964-1991 Robert T. Meesig and Frank Horvath Alcohol Use and Abuse Richards J. Heuer, Jr. Financial Irresponsibility Richards J. Heuer, Jr. Compulsive Gambling Richards J. Heuer, Jr.	1 17 46
Changes in Usage, Practices and Policies in Pre-Employment Polygraph Testing in Law Enforcement Agencies in the United States: 1964-1991 Robert T. Meesig and Frank Horvath Alcohol Use and Abuse Richards J. Heuer, Jr. Financial Irresponsibility Richards J. Heuer, Jr. Compulsive Gambling Richards J. Heuer, Jr. Police Applicant Screening - A Bibliography	1 17 46
Changes in Usage, Practices and Policies in Pre-Employment Polygraph Testing in Law Enforcement Agencies in the United States: 1964-1991 Robert T. Meesig and Frank Horvath Alcohol Use and Abuse Richards J. Heuer, Jr. Financial Irresponsibility Richards J. Heuer, Jr. Compulsive Gambling Richards J. Heuer, Jr. Police Applicant Screening - A Bibliography	17 46
Robert T. Meesig and Frank Horvath Alcohol Use and Abuse Richards J. Heuer, Jr. Financial Irresponsibility Richards J. Heuer, Jr. Compulsive Gambling Richards J. Heuer, Jr. Police Applicant Screening - A Bibliography	17 46
Alcohol Use and Abuse Richards J. Heuer, Jr. Financial Irresponsibility Richards J. Heuer, Jr. Compulsive Gambling Richards J. Heuer, Jr. Police Applicant Screening - A Bibliography	17 46
Financial Irresponsibility Richards J. Heuer, Jr. Compulsive Gambling Richards J. Heuer, Jr. Police Applicant Screening - A Bibliography	46
Compulsive Gambling Richards J. Heuer, Jr. Police Applicant Screening - A Bibliography	
Police Applicant Screening - A Bibliography	80
Norman Ansley	120
Standard Chart Markings Steve Bartlett, Vickie Murphy & Dick Putnam	125

PUBLISHED QUARTERLY Polygraph 1993, 22(10, Box 1061, Severna Park, Maryland 21146

CHANGES IN USAGE, PRACTICES AND POLICIES IN PRE-EMPLOYMENT POLYGRAPH TESTING IN LAW ENFORCEMENT AGENCIES IN THE UNITED STATES: 1964 - 1991

by

Robert T. Meesig

and

Frank Horvath

School of Criminal Justice Michigan State University

Abstract

This paper reviews three unpublished national surveys conducted over the past 30 years on the use of pre-employment polygraph screening by law enforcement agencies in the United States. The review shows that the number of agencies using the technique increased from 19% in 1964 to 62% of the largest agencies in 1991. It also shows a surprising consistency among agencies regarding reasons for use and the benefits and circumstances of use. It concludes that agency experiences with polygraph screening over the years have been quite favorable and that the motivating reasons for its use are well-established.

During the past three decades polygraph testing has been used extensively to screen job applicants for both private and public sector employers in the United States. During this period, however, the use of such testing became increasingly controversial. In 1963, for example, only three states had passed legislation banning the use of pre-employment polygraph screening by private employers (Gooch, 1964). By 1988, over 30 states had such legislation and in that year the U.S. Congress passed the Employee Polygraph Protection Act (EPPA). Although EPPA was initiated

1

Robert T. Meesig is a Lt.Col. USAF (Ret.) and a graduate student in The School of Criminal Justice, Michigan State University. Professor Frank Horvath, Ph.D., is Chairman of the Board of the American Polygraph Association and an Associate Editor of Polygraph.

Pre-Employment Polygraph Testing in Law Enforcement Agencies

ostensibly because of Congressional concern about the increasing use of polygraph testing in federal employment, in its final form it ironically exempted federal, state and local government agencies from its restrictions but severely curtailed the use of polygraph private industry (Ansley screening in and Beaumont, 1992). Although exempted from EPPA, polygraph screening in police agencies continues to be controversial, perhaps because there is little reliable empirical data about many of the issues in this debate. One of these issues involves the actual extent of the use of polygraph screening in law enforcement agencies and the degree to which this usage has been affected by the increasing controversy and legislation.

In this paper we review three unpublished, national surveys of law enforcement agencies' use of polygraph screening. Each of these addressed somewhat different populations of agencies and questioned them on related but not necessarily identical issues. Yet, because these three surveys are the only national surveys available and because they also span approximately the last 30 year period, from 1964 to 1991, they provide the most comprehensive information about changes in usage patterns in polygraph screening in that time. For that reason, the findings from these surveys are well suited for the purpose of this paper.

Overview: The Three Surveys

The first survey, reported by Gooch (1964), focused on the extent of use of polygraph screening by law enforcement agencies in the United States. (Hereinafter referred to as the 1964 study.) In this study, Gooch selected 167 police agencies, including all state agencies (excluding Alaska and Hawaii) and municipal agencies serving populations of 50,000 and above. A total of 118 usable responses were received, a response rate of 71% (118/167). Only 23 agencies (19%) reported using polygraph screening, although 13 more agencies said they were considering its use. Gooch concluded that although polygraph screening was not generally accepted at that time, it could become a valuable asset to police agencies in screening applicants.

The second survey was reported by Horvath and Shelton (1982). (Hereinafter referred to as the 1982 study.) Its purpose was to extend the 1964 study and to determine changes in the use of polygraph screening during the 18 years following that study. Additionally, the 1982 survey solicited information regarding a number of important issues pertaining to polygraph screening that the 1964 study had not addressed.

In the 1982 study all federal and state police agencies and a random sample of 270 local agencies, stratified by size, were surveyed. From a total sample of 340 agencies, usable responses were received from 237, a response rate of 70%. A total of 105 agencies (44%) reported using polygraph screening.

2

Robert T. Meesig and Frank Horvath

The third survey, reported by Horvath (1991), sampled the largest law enforcement agencies in the United States, including all state agencies, all sheriff's agencies with 100 or more sworn employees and all municipal agencies serving populations of 50,000 or more. (Hereinafter referred to as the 1991 study.) It did not include any federal agencies. In addition to questions similar to those used in the earlier 1982 study, this survey sought information about policies and practices regarding the use of polygraph screening.

Of the 699 agencies included in the sampling frame for this study, 626 responded, a response rate of 90% (626/699). A total of 386 agencies, or 62% of the respondents, said they currently used polygraph screening.

Specific Findings in the Studies

In the review and comparison of findings from these studies, four points must be understood. First, it is to be emphasized that in some instances the questions asked in the three surveys were similar but not identical. Nevertheless, they have been grouped together in this report in order to facilitate presentation and discussion. Second, since the original survey instrument used in the 1964 study was not available, the specific questions and answer options in that survey were not known. In order to deal with this problem the question items were inferred on the basis of the information contained in the written report. Third, the three surveys provided for multiple responses to some questions; thus, the totals exceed 100% in some areas. Finally, in the 1982 study, respondents were asked to indicate as many answer options as applied to some issues. In the 1991 questionnaire, on the other hand, respondents indicated a "yes" or "no" to each answer choice on some of the same items included in the 1982 study. In other words, in the 1991 results there was an independent response to some issues which were not answered independently in the 1982 This difference may have produced a higher percentage of study. responses in the 1991 survey than in the 1982 study. For this reason, the tables in our review show the rank order of answer choices as well as percentages and means of responses to questions, where appropriate.

Use of Polygraph Screening

The first issue is whether or not the use of police polygraph screening increased or decreased during the past three decades. The results reported in the three studies reflect that the number of agencies that currently used polygraph screening ("User" agencies) increased from 19% in the 1964 study, to 44% in the 1982 study, and to 62% of the largest police agencies in the 1991 study, an increase of 43% over the period. Since none of the User respondents in the 1964 and 1982 studies were federal agencies, and Pre-Employment Polygraph Testing in Law Enforcement Agencies

since the 1991 study did not include federal agencies, the reported increase in the use of polygraph screening was among state and local agencies. This growth in usage is quite noteworthy since it occurred during the same period that controversy over polygraph testing in the United States increased. Clearly, the controversy did not diminish police agency interest in the use of polygraph screening.

Reasons for Use of Polygraph Screening

To shed some light on reasons why the use of polygraph screening increased, a comparison of the reasons offered by User agencies in the 1982 and 1991 studies was made. (This issue was not addressed in the 1964 study.) These data are displayed in Table 1. Common to both studies, the primary reason for usage was that polygraph screening reveals information about applicants not available through other screening methods. In the 1982 study 94% of the Users gave this response as their primary reason for usage, and in the 1991 study, 90% either agreed or strongly agreed with this response. These results are consistent with observations made in the 1964 study that other applicant selection techniques were not sufficiently effective in uncovering undetected or unreported crimes, and that polygraph screening could be used to supplement other techniques in this regard.

The second and third most often cited reasons for polygraph screening reported in the 1982 survey were that it "Deters Undesirable Applicants" (54%) and that it was "Faster" than other methods (42%). These items were ranked third (Faster - 84%) and fourth (Deters Undesirable Applicants - 83%) in the 1991 survey, reflecting similar results even after a decade of police agency experience with polygraph screening. The second-ranked reason (89% of the respondents) in the 1991 survey, as shown in Table 1, was that polygraph screening made "Background Information Easier to Establish"; this option was not available to the respondents in the 1982 survey.

TABLE 1

RANK ORDER AND PERCENTAGES OF USER'S REASONS FOR USE OF PRE-EMPLOYMENT POLYGRAPH SCREENING REPORTED IN THE 1982 AND 1991 STUDIES

STUDY							
REASONS FOR USE*	HORVATH & SHELTON (1982) <u>(N=105)</u>			HORVATH (1991) <u>(N=386)</u>			
	<u>n**</u>	RANH	<u>८ </u>	n	RANK	<u> </u>	
REVEALS INFO. NOT OTHERWISE AVAILABLE	105	1	94	38	4 1	90	
DETERS UNDESIRABLES	105	2	54	38	2 4	83	
FASTER	105	3	42	38	43	84	
LESS EXPENSIVE	105	4	37	38	07	59	
BACKGROUND INFO. EASIER TO ESTABLISH		N/A*	* *	38	42	89	
MORE USEFUL INFO.		N/A		38	35	65	
IDENTIFIES PROBLEM PERSONNEL		N/A		38	36	61	
EASIER TO ADMINISTER		N/A		38	38	56	
BETTER THAN BACKGROUND INVESTIGATION		N/A		38	19	55	
LESS FAULTY INFO.		N/A		37	9 10	51	

*This issue was not addressed in the Gooch (1964) study. **n=Number of agencies that responded to the answer choice. ***N/A=Question or option not asked or not available in this study.

Pre-Employment Polygraph Testing in Law Enforcement Agencies

Purposes of Polygraph Screening

The purposes for which agencies reported using polygraph screening were available in the 1982 and 1991 studies; these are displayed in Table 2. The results of these two studies are quite consistent. The two primary purposes of polygraph screening in the 1982 study were to verify information given by an applicant (82%) and to develop new information (67%) not available by other screening methods. These purposes were also the top two revealed in the 1991 study (97% and 91%, respectively). With the exception of the "Verification of Questionable or Incomplete Information", offered as a purpose by 82% of the respondents in the 1991 study, other purposes, such as using polygraph testing as a substitute for a background investigation, were infrequently reported (2%, 1991 study).

TABLE 2

RANK ORDER AND PERCENTAGES OF PURPOSES FOR WHICH USERS EMPLOY PRE-EMPLOYMENT POLYGRAPH SCREENING IN THE 1982 AND 1991 STUDIES

	STUDY							
PURPOSES*	HORVATH & SHELTON (1982) <u>(N=105)</u>	HORVATH (1991) <u>(N=386)</u>						
	n** RANK %	n RANK %						
VERIFY INFO	104 1 82	378 1 97						
DEVELOP INFO	104 2 67	370 2 91						
<u>ONLY</u> WHEN QUESTIONABLE OR INCOMPLETE INFO	104 3 3	N/A***						
TO VERIFY QUESTIONABLE OR INCOMPLETE INFO	N/A	365 3 82						
SUBSTITUTE FOR BACKGROUND INVESTIGATION	N/A	354 4 2						

*This issue was not addressed in the Gooch (1964) study. **n=Number of agencies that responded to the answer choice. ***N/A=Question or option not asked or not available in this study.

Robert T. Meesig and Frank Horvath

Benefits of Polygraph Screening

Given the increase in the use of polygraph screening, it would be presumed that police agencies generally found some benefits in using the procedure. All three studies provide insight into the perceptions of User agencies on this issue.

Table 3 displays the benefits reported by User agencies in each of the three studies. Inspection of those data shows strong agreement between all three sets of survey responses. In the 1964 study, higher quality employees (74%), fewer problems (57%) and lower turnover (48%) were the three main reasons given. Eighteen years later, the same three reasons were reported in the same order in the 1982 study (88%, 43% and 36%). In the 1991 study, the same three reasons appeared as the second (83%), fourth (60%) and sixth (45%) ranked items. In that study, the benefits that were first and third, in order, were "More Honest Applications" (86%) and "Fewer Undesirable Applicants" (77%); these items had not been included in either the 1964 or 1982 studies.

Circumstances of Use of Polygraph Screening

The 1982 and 1991 studies asked questions regarding the circumstances in which agencies employed polygraph screening. Responses to these questions are summarized in Tables 4 and 5.

As shown in Table 4, in both studies the majority of agencies reported they employed their own examiners to conduct polygraph screening exams (1982, 82%; 1991, 70%), as opposed to using examiners outside their agency. In 1982, 74% of the agencies reported testing applicants for sworn positions and only 14% tested applicants for civilian positions. In 1991, these percentages rose to 99% for sworn positions and 54% for civilian positions. In both 1982 and 1991, the great majority of agencies stated that an applicant's refusal to take a polygraph screening examination led to automatic rejection (82% in 1982 and 90% in 1991).

The 1982 and 1991 studies requested information from agencies about their view of the relative importance of a variety of issues that may be explored during polygraph screening examinations. In each case it was possible to calculate the mean score assigned by respondent agencies to each of a number of issues and then to rank order the importance of issues based on these mean values; these data are displayed in Table 5. Inspection of that table shows that in the 1982 study the three issues of greatest importance to the respondents were, in order: commission of (undetected) felonies (\underline{M} =3.9), drug and alcohol abuse (\underline{M} =3.7) and employment related $d\bar{i}$ shonesty (\underline{M} =3.6). With the exception of alcohol abuse, these were also the top three areas reported in 1991 (drug abuse, $\underline{M}=3.9$; employment related dishonesty, M=3.6; commission of felonies, Alcohol abuse, reported separately from drug abuse in M=3.6). 1991, ranked sixth (M=3.4) after "Taking and/or Receiving Bribes" (M=3.5) and the use of "Excessive Force" (M=3.4).

7

TABLE 3

RANK ORDER AND PERCENTAGES OF USER'S PERCEIVED BENEFITS OF PRE-EMPLOYMENT POLYGRAPH SCREENING

	<u></u>				STUD	<u>Y</u>			
BENEFITS	(GOOCH 1964 N=23	I) <u>)</u>	HORVATI (H & S (1982) N=105	HELTON	H ((ORVAT (1991) <u>N=386</u>	H L
	<u>n*</u>	RANK	<u>8</u>	<u>n</u>	RANK	8	n	RANK	<u>_</u> &
HIGHER QUALITY EMPLOYEES	23	1	74	104	1	88	352	2	83
FEWER PROBLEMS	23	2	57	104	2	43	320	4	60
LOWER TURNOVER	23	3	48	104	3	36	321	6	45
INCREASED EMPLOYEE EFFICIENCY	23	4	43		N/A*	*		N/A	
REDUCED TRAINING COSTS	23	5	35		N/A			N/A	
INCREASED PUBLIC CONFIDENCE	23	6	35		N/A			N/A	
REDUCED NUMBER OF APPLICANTS	23	7	22		N/A			N/A	
FEWER CITIZEN COMPLAINTS		N/A		104	4	32	307	5	51
MORE HONEST APPLICATIONS		N/A			N/A		365	1	86
FEWER UNDESIRABLE APPLICANTS		N/A			N/A		353	3	77

*n=Number of agencies that responded to the answer choice. **N/A=Question or option not asked or not available in this study.

Robert T. Meesig and Frank Horvath

TABLE 4

RANK ORDER AND PERCENTAGES OF USER'S RATINGS OF CIRCUMSTANCES OF USE OF POLYGRAPH SCREENING IN THE 1982 AND 1991 STUDIES

	STU	DY					
CIRCUMSTANCES*	HORVATH (1 <u>(N</u>	& S 1982) =105	HELTON	H((ORVAT 1991) N=386	H))	
	<u>n**</u>	RANI	<u>8</u>	<u>n</u>	RANK	8	
USE OWN EXAMINERS	104		82	384		70	
WHO IS TESTED? SWORN POSITIONS	105	1	74	382	1	99	
APPLICANTS FROM OTHER POLICE DEPTS	105	2	47		N/A*	* *	
ENTRY LEVEL POSITIONS	105	3	42		N/A		
CADETS	105	4	32		N/A		
JAIL POSITIONS	105	5	28		N/A		
DISPATCH POSITIONS	105	6	18		N/A		
ALL POSITIONS	105	7	17		N/A		
CIVILIAN POSITIONS	105	8	14	382	2	54	
SECRETARIAL/ADMIN SUPPORT POSITIONS	105	9	10		N/A		
CRITICAL/SPECIAL POSITIONS		N/A		383	3	54	
REFUSAL TO TAKE EXAM LEADS TO AUTOMATIC REJECTION	72		82	383		90	

*This issue was not addressed in the Gooch (1964) study. **n=Number of agencies that responded to the answer choice. ***N/A=Question or option not asked or not available in this study. Pre-Employment Polygraph Testing in Law Enforcement Agencies

TABLE 5

RANK ORDER AND MEAN RANK OF USER'S RATINGS OF ISSUES OF GREATEST IMPORTANCE IN POLYGRAPH SCREENING IN THE 1982 AND 1991 STUDIES

	STUDY					
ISSUES*	HORVATH & SHELTON (1982) <u>(N=105)</u>			HORVAI (1991 <u>(N=386</u>	Ч))	
	<u>n**</u>	RANK	MEAN	<u>n</u>	RANK	MEAN
FELONIES COMMITTED	103	1	3.9	381	3	3.6
DRUG/ALCOHOL ABUSE	103	2	3.7	383	1	3.9
				380 ((DRUG 6 ALCOHC) 3.4 DL)
DISHONESTY ON JOBS	103	3	3.6	381	2	3.6
MISDEMEANORS	103	4	3.3	382	9	3.3
HOMOSEXUAL ACTIVITIES	102	5	3.2	360	16	2.5
FINANCE/CREDIT	102	6	2.9	380	14	2.9
BRIBES		N/A*	* *	381	4	3.5
EXCESSIVE FORCE		N/A		381	5	3.4
JOB HISTORY		N/A		381	7	3.3
ILLEGAL SEXUAL ACTIVITIES		N/A		375	8	3.3
SUBVERSIVE ACTIVITIES		N/A		375	10	3.2
MENTAL PROBLEMS		N/A		379	11	3.1
MEDICAL PROBLEMS		N/A		380	12	3.0
PHYSICAL DISABILITIES		N/A		381	13	2.9
TRAFFIC VIOLATIONS		N/A		381	15	2.7

*This issue was not addressed in the Gooch (1964) study.

**n=Number of agencies that responded to the answer choice.

***N/A=Question or option not asked or not available in this study.

Robert T. Meesig and Frank Horvath

Nonuser Agencies

The three surveys were also somewhat revealing about agencies that chose not to use pre-employment polygraph screening, referred to as Nonusers. These respondents, as discussed here, include those agencies that had never used polygraph screening and those that had used it at some time in the past but discontinued its use. Also, whereas all of the identifiable Users in the three surveys were either state or local agencies, the mixture of Nonusers in the 1964 study is unknown; in the 1982 study the Nonusers included 12 federal agencies as well as state and local agencies.

In Table 6 the reasons given by the Nonusers for not using polygraph screening are listed for each study. It can be seen that in both the 1964 and 1982 studies, the primary reason given was that the agencies were satisfied with the current (other) methods of screening; in 1964, 39% and in 1982, 54% of the agencies cited In 1964, the second-ranked reason was that the this reason. agencies had never been approached about initiating a program or were generally unaware of polygraph screening programs, cited by 17% of the agencies. The third reason was that such a program was viewed as being too costly (14%). In the 1982 study, the cost of polygraph screening was the second-ranked (34%) factor and the lack of trained examiners was third (22%). It is of some interest to note that in the 1982 study the lack of awareness of polygraph screening was the seventh-ranked factor (11%), showing, perhaps, a growing awareness of the use of such screening over the 18 year period of time between that and the 1964 study.

Consideration of usage. Table 7 displays a listing of the circumstances in which the Nonuser agencies indicated that they would consider implementation of polygraph screening. In 1982, 76 Nonuser agencies (76/135=56% of the Nonusers) said they would consider using polygraph screening, and in 1991, 54 Nonuser agencies (54/240=23% of the Nonusers) gave a similar response. As can be seen in Table 7, when asked under what circumstance they would do so, 37% of the Nonusers in the 1982 study said they would implement polygraph screening based on research evidence showing the effectiveness of the testing and 36% said they would, based on In 1991, these same responses a favorable major court decision. were also in the top two positions, with 76% of the Nonusers indicating they would implement polygraph screening based on research showing effectiveness and 71% based on a favorable major court decision. Although the percentages in the two studies were probably affected by the manner in which the responses were indicated (i.e., all that apply in the 1982 study and independent response to each item in the 1991 study), it is noteworthy that the rank ordering of these two items is the same in both studies.

11

TABLE 6

RANK ORDER AND PERCENTAGES OF NONUSER'S REASONS FOR NOT USING PRE-EMPLOYMENT POLYGRAPH SCREENING IN THE 1964 AND 1982 STUDIES

		*		STUDY	•		·····
REASONS*) (1	GOOCH 1964 <u>N=95</u>	H))	HORVATH & SHELTON (1982) <u>(N=125)</u>			ielton L
	<u>n**</u>	RANI	<u> </u>		n	RANK	<u></u>
SATISFIED WITH OTHER METHODS	95	1	39		125	1	54
NEVER BEEN APPROACHED/UNAWARE OF PROGRAM	95	2	17		125	7	11
COST INVOLVED	95	3	14		125	2	34
CONSIDERING USE	95	4	14		N/A***		
AGENCY SIZE	95	5	9		125	5	15
LACK CONFIDENCE IN POLYGRAPH EXAMINERS	95	6	6		125	8	6
RESENTMENT THAT WOULD RESULT	95	7	6		125	9	6
LACK CONFIDENCE IN POLYGRAPH TECHNIQUE/ EQUIPMENT	95	8	5		125	6	14
SHORTAGE OF APPLICANTS	95	9	4		125	10	5
LACK TRAINED EXAMINERS		N/A			125	3	22
LEGISLATIVE PROBLEMS		N/A			125	4	16

*This issue was not addressed in the Horvath (1991) study. **n=Number of agencies that responded to the answer choice. ***N/A=Question or option not asked or not available in this study.

TABLE 7

RANK ORDER AND PERCENT OF CIRCUMSTANCES IN WHICH NONUSERS WOULD CONSIDER IMPLEMENTING POLYGRAPH SCREENING IN THE 1982 AND 1991 STUDIES

	STUDY							
CIRCUMSTANCES*	HORVATH & SHELTON (1982) <u>(N=76)</u>		ſ	H	'H) <u>)</u>			
	<u>n**</u>	RANI	<u>K 8</u>		<u>n</u>	RANK	<u>9</u>	
EVIDENCE/RESEARCH SHOWING EFFECTIVE	76	1	37		46	1	76	
COURT ACCEPTANCE/ FAVORABLE DECISION	76	2	36		48	2	71	
IF LAW/POLICIES PERMIT	35	3	17			N/A*	**	
IF FUNDS AVAILABLE	35	4	11		45	4	47	
INCREASE IN APPLICANTS	76	5	11		43	8	14	
SYSTEMS FAILURE	35	6	9			N/A		
IMPROVED TRAINING/ REQUIREMENTS	76	7	8		46	5	46	
CONSIDERING USE	35	8	5			N/A		
IF COST EFFECTIVE	35	9	4			N/A		
RESTRICTIONS ON BACKGROUND INVESTIGATION		N/A			48	3	69	
LICENSURE LEGISLATION		N/A			45	6	42	
INCREASED CITIZEN COMPLAINTS		N/A			44	7	39	

*This issue was not addressed in the Gooch (1964) study. **n=Number of agencies that responded to the answer choice. ***N/A=Question or option not asked or not available in this study. Pre-Employment Polygraph Testing in Law Enforcement Agencies

In the 1982 study the third ranked item was "If Law/Policies Permit" (17%). In the 1991 study this item was not included as an available option. However, in this study the third-ranked item that would lead the Nonusers to initiate polygraph screening was if there were "Further Restrictions on Background Investigations", an option selected by 69% of these respondents. (This item was not an available answer choice in the 1982 study.)

Discussion

These findings make it clear that there has been strong growth in the use of pre-employment polygraph testing in law enforcement agencies in the past 30 years. This growth, of course, occurred during the same time that the controversy about polygraph screening led to its virtual elimination in the private sector. Such strong growth in law enforcement in the face of such increasing opposition shows that the motivating reasons for the use of the procedure are well-established and that the benefits are repeatedly validated in the experiences of these agencies. In fact, the consistency in the perceived benefits over the past three decades strongly suggests that the practical utility of the procedure, based on the actual experience of an increasingly large number of police agencies, far outweighs the apparent shortcomings often cited in opposition to such screening (See: Congressional Record, 1987).

These three studies, though conducted over a thirty year time span, produced surprisingly similar findings regarding many aspects of the use of polygraph screening. These consistent findings over such an extended period indicate that agency experience is quite favorable. The strong growth in use coupled with the finding that as Nonuser agencies implemented polygraph testing and, over time, reported almost the same benefits as those previously reported by others, is evidence of value in polygraph screening that is difficult to overlook. It is of interest to note that the benefits reported by these law enforcement agencies are similar to those that were reported by many private employers who used polygraph screening prior to the passage of EPPA (Congressional Record, The significant controversy about the procedure and the 1987). restrictive legislative actions (in private sector situations) that occurred during this period of growth would seem to indicate that there are likely a number of features in law enforcement that either make polygraph screening more necessary in that environment or that raise issues that have not been well defined in the debate. Both of these appear to be the case since almost all of the legislative restrictions on polygraph screening have specifically exempted law enforcement agencies and other "sensitive" employment situations, perhaps in recognition of the views offered during the debate about EPPA that public employment (as well as certain other employment contexts) requires higher standards than other situations. National surveys, in fact, indicate that not only do

Robert T. Meesig and Frank Horvath

legislatures seem to agree with this sentiment but that the public also is almost overwhelmingly in agreement (Horvath, 1987).

Even though the User agencies remained in agreement on a number of important issues about polygraph screening over time, Nonusers, diminishing in number, appear also to have remained consistent in the rationale for their reluctance to implement such screening. The Nonusers clearly identify the need for more thorough and sound research and greater acceptance in the courts as necessary areas of improvement. As Horvath (1991) pointed out, these two factors are not independent. There has been no major, scientifically sound research regarding the validity of polygraph screening and there has been only limited research regarding its utility. It is likely that scientifically sound, favorable research findings would increase the probability of positive judicial decisions. Further, such research will serve as the basis for more informed debate over legislative actions to regulate the nature and extent of polygraph screening programs.

Law enforcement agencies and polygraph examiners' organizations can, and probably should, act as catalysts for promoting not only the use of polygraph screening but, more important, research to determine its effectiveness and utility in personnel selection. Moreover, there is a need for operational models and procedural quidelines that law enforcement agencies can use to ensure that polygraph screening is professionally, ethically and legally carried out. There is also a need to promote positive legislative efforts to deal with issues in the management and control of polygraph testing programs based on research, model programs, and agency experiences. In the absence of such efforts, and, as seems likely, even with such efforts, it is possible that there will be continual attempts to restrict further the use of polygraph screening by law enforcement agencies. Given the positive experiences of those agencies that have used such screening, it would indeed by unfortunate if attempts at prohibition were to succeed before adequate empirical data, favorable or not, have been accumulated.

* * * * * *

ALCOHOL USE AND ABUSE

By

Richards J. Heuer, Jr.

Executive Summary

Alcohol abuse is one of the behaviors considered when deciding whether to grant a security clearance. Personnel involved in the security clearance process will be aided by knowledge of the prevalence of alcohol use and abuse in the overall U.S. population, indicators for recognizing alcohol abuse, the relationship between alcohol abuse and other behaviors of security interest, and the effectiveness of treatment for alcohol problems.

About 10% of adult Americans have a serious alcohol problem. Excessive alcohol consumption may impair judgment and increase the risk of accidental, careless or even deliberate disclosure of classified information. The nationwide economic and social cost of lost productivity, accidents and health problems caused by alcohol abuse is estimated at \$136.3 billion per year. These costs are paid, in large measure, by employers.

Motivation for using alcohol or any other drug is one of the most potent predictors of future use or problems with that drug. If the motivation is experimentation, peer pressure, or adolescent rebelliousness, this does not necessarily lead to future abuse. To the extent that alcohol is used as a means of coping with life's problems, such as stress or low self-esteem, then one can expect that the alcohol consumption itself may eventually become a source of future problems. Solitary drinking is far more predictive of future problems than social drinking. So is drinking prior to social events (to relax), as compared with alcohol use at social events.

A four-question test known as the CAGE questionnaire has been used successfully to identify persons who need a more comprehensive assessment for alcohol problems. The test is so simple that it can be administered inconspicuously during a routine interview.

Arrest for driving while intoxicated (DWI) is one of the most significant indicators of alcohol abuse available to adjudicators. Two studies have shown that 90% of those arrested for DWI have an alcohol problem serious enough to merit treatment. The evidence indicates that most DWI offenders are not average citizens who just

Richards J. Heuer, Jr. is a retired CIA employee. This report was written for the U.S. Government at the Defense Personnel Security Research Center in Monterey, CA.

happen to be caught during an unusual lapse of judgment or through an unfortunate piece of bad luck. People who are so drunk that their driving attracts attention and gets them arrested are often problem drinkers. And since problem drinkers drive under the influence repeatedly, they are the ones most likely to be caught.

The child of an alcoholic is several times more likely to become an alcoholic than an individual with no family history of alcoholism. The risk is far greater for children of alcoholic mothers than alcoholic fathers. The child of an alcoholic father is at greater risk if the mother instilled in the child high esteem for the father.

One characteristic of alcohol dependence is increasing tolerance for alcohol--it takes more and more to have the same effect on the body. A claim of high tolerance for alcohol should be interpreted as a warning indicator.

Problems in handling alcohol are often observed in combination with other security and suitability issues, and they take on greater significance in these cases. If alcohol is the only problem, a motivated employee can generally kick the habit or bring it under control so that it does not affect job performance. When combined with other issues, alcohol may be part of a broader pattern of high-risk, irresponsible, or aggressive antisocial behavior that is much harder to change and may justify denial of clearance.

In an Alcoholics Anonymous (AA) membership survey, 42% of those attending AA meetings reported they were also addicted to drugs. Another study found that nearly half of the persons in the general population diagnosed as alcohol abusers or alcohol dependent also had some form of mental or emotional disorder. Soldiers with one DWI offense were found to be several times more likely to be arrested for a criminal offense than those with no prior DWI record. The correlation between alcohol consumption and spouse abuse is so close that researchers have suggested spouse abuse should be regarded as an indicator of alcohol problems.

Successful treatment of alcohol problems depends on the strength of the patient's motivation and compliance with the aftercare program. For those who successfully complete the treatment and aftercare program, the probability of successful work performance is very high. If one gets through the first three months after treatment without relapse, the chances for long-term abstinence improve dramatically, and the chance of relapse that affects work performance is very small. Even without treatment, people often experience remission of alcohol problems as they grow older and the circumstances that prompted the drinking change; this is especially common among women.

Richards J. Heuer, Jr.

Introduction

Alcohol abuse is one of the criteria that may justify denial of a security clearance. A recent study analyzed the issues that arose in 7,232 Special Background Investigation cases adjudicated by 14 different federal agencies. The study found that alcohol was the issue in 5% of the cases in which only a single issue was identified. In cases that had three issues, however, alcohol was one of the issues almost 40% of the time.[1] When things go wrong in a person's life, alcohol is often part of the problem.

This study of alcohol use and abuse presents relevant background information for persons engaged in the security clearance process. Most of the information is statistical data that falls into four general categories:

> * Statistics on the prevalence of alcohol use and abuse among the U.S. population. The data are broken down according to demographic variables such as age, sex, race/ethnic groups, and region when this information is available.

> * Potential indicators of alcohol problems. These indicators will help identify those at highest risk for alcohol problems.

> * The relationship between alcohol abuse and other problem behaviors. Alcohol abuse is often found in combination with other security and suitability issues. To the extent that alcohol abuse helps identify a pattern of high risk or aggressive, antisocial behavior, it may assume greater importance in these cases.

> * Information on treatment effectiveness and relapse rates. This provides background for assessment of mitigating circumstances.

The report pulls together in one place a wide variety of information that may be useful to security policy-makers, practitioners, and researchers. Policy-makers and managers may wish to draw on this information when reviewing standards and procedures. The indicators of alcohol problems may help investigators determine when to expand an investigation. Information on treatment effectiveness and relapse rates may help decision makers evaluate mitigating factors.

Some caution is in order when using statistical data about the prevalence of any type of behavior, as such information may be misleading and can be misused.

Statistics that apply to the overall population will generally be different from the frequency rates found in a select and prescreening pool of persons undergoing security processing. Further, statistical frequency should not be used as the basis for judging the acceptability of behavior. Rather, behavior should be judged on the basis of its relevance to security and work performance, not on the grounds that "lots of people are doing it." Nor should the statistics be used to create stereotypes that bias the investigation against higher risk categories of applicants.

ALCOHOL ABUSE AND PERSONNEL SECURITY

Automobile drivers with a blood alcohol content of .08% are four times more likely to be responsible for a fatal accident than drivers who have not been drinking. With a blood alcohol content of .15%, the risk of being responsible for a fatal crash is approximately 25 times greater.[2] Although comparable statistical evidence is not available for the impact of alcohol abuse on national security, it seems reasonable to assume that high blood alcohol levels also increase the risk of accidental, careless or even deliberate disclosure of classified information.

Alcohol abuse is also closely associated with other behaviors of security concern--crimes against persons and property, financial irresponsibility, personality disorders, drug abuse, and nonconforming sexual behavior. Although alcoholism alone is treatable and not necessarily cause for rejection of a security clearance, it is often part of a broad pattern of high-risk or aggressive antisocial behavior that does mark the undesirable employee.

For example, 42% of members of Alcoholics Anonymous reported they were also addicted to drugs.[3] Of drivers who have accidents while driving with suspended, revoked, or no licenses, about 83% have been drinking. Drivers not using seat belts are three times more likely to have been drinking than drivers using seat belts. Intoxicated motorcyclists have been found to wear helmets one-third as often as motorcyclists who are not intoxicated.[4] The relationship between alcohol abuse and aggressive, antisocial behavior such as crime and spouse abuse is discussed below. When alcohol problems appear together with other undesirable behavior, the combination may add up to more than the sum of its parts.

The economic and social cost of lost productivity, accidents and health problems caused by alcohol abuse raises issues of employee suitability as well as security. The economic cost of alcohol abuse in the United States was estimated at \$116.9 billion

Richards J. Heuer, Jr.

in 1983 and was projected to increase to \$136.3 billion in 1990. Of this cost, 61% was attributed to reduced productivity and lost employment and 13% to health care costs and treatment.[5] It has been estimated that 20% to 40% of all U.S. hospital beds are occupied by persons whose health conditions are complications of alcohol abuse and alcoholism.[6] These costs are paid, in large measure, by employers.

Alcoholism may also affect mental functioning. Although most alcoholics entering treatment facilities do not have decreased overall intelligence scores, approximately 45% to 70% do have specific deficits in problem solving, abstract thinking, concept shifting, psychomotor performance, and difficult memory tasks. These problems are usually not apparent without neuropsychological testing. The brains of alcoholics have been shown to have structural changes, reduced blood flow, and altered electrical activity. Liver disease and nutritional problems associated with alcoholism may also affect mental functioning.[7]

PREVALENCE OF ALCOHOL USE AND ABUSE

A 1990 survey of U.S. households found that 133 million people age 12 and older (66% of the population) drank alcohol during the previous year. Nearly one-third of these, or 42 million, drank at least once a week during the year.[8] About 10% of adult Americans have a serious problem with alcohol. An estimated 10.5 million adults exhibit some symptoms of alcoholism or alcohol dependence while an additional 7.2 million abuse alcohol.[9] The terms alcohol dependence and alcohol abuse are used throughout this report. These terms have specific technical meanings.

Alcohol dependence, or alcoholism, is a disease that has four main features:

(1) tolerance, or a state of adaptation in which more and more alcohol is needed to produce desired effects; (2) physical dependence, which means that upon interruption of drinking, a characteristic withdrawal syndrome appears that is relieved by more alcohol (e.g., morning drinking) or other drugs in the sedative group; (3) impaired control over regulating alcohol intake at any drinking occasion once drinking has begun; and finally, (4) the discomfort of abstinence, or 'craving,' which can lead to relapse.[10]

Alcohol abusers are not dependent on alcohol, but they develop difficulties as a result of alcohol consumption and due to poor judgment, failure to understand the risks, or lack of concern about damage to themselves and others. One is diagnosed as an alcohol abuser if one persists in drinking habits that are known to be

causing or exacerbating a persistent or recurrent social, occupational, psychological, or health problem; or if one uses alcohol repeatedly under circumstances which are physically dangerous, such as driving while intoxicated. Alcohol abusers are not addicted; they remain in control of their behavior and can change their drinking patterns in response to explanations and warnings.[11]

The amount of alcohol consumed in the United States is estimated annually by the National Institute on Alcohol Abuse and Alcoholism on the basis of sales in each state as determined by tax receipts, sales in state-controlled stores, and reports from beverage industry sources. Estimates of average per capita consumption are derived by dividing total sales by the total population age 14 or older.

Following two decades of steady increases, there was a gradual decline in per capita alcohol consumption during the 1980s. Figure 1 shows a significant drop in consumption of hard liquor during the period from 1977 to 1987, a small reduction in beer consumption after 1981, and a consistent increase in the use of wine.[12]



Figure 1. Per Capita Consumption

Estimated per capita consumption in 1987 was 2.54 gallons of pure alcohol per person. When abstainers are excluded from the calculation, the estimated consumption per drinker increases to approximately 4 gallons of pure alcohol per person per year. This

is equivalent to approximately 89 gallons of beer, 31 gallons of wine, or almost 10 gallons of distilled spirits.[13]

These averages are deceptive, however, as consumption of alcohol is very unevenly distributed. The 10% of drinkers who drink heavily (6.5% of the total population) account for one-half of all the alcohol consumed. The remaining half is consumed by the 90% who are infrequent, light, or moderate drinkers.

National surveys of drinking patterns show that about onethird of the U.S. population age 18 and over are abstainers, onethird are light drinkers, and one-third are moderate to heavy drinkers. In every age group, there are more men than women drinkers, and of those who do drink, a larger percentage of the men than women are heavy drinkers.[14]

One of the best sources of data on Americans' drinking habits, broken down by various demographic variables, is the National Household Survey on Drug Abuse sponsored by the National Institute on Drug Abuse of the U.S. Department of Health and Human Services. This survey has been taken every two or three years since 1971. The tenth survey in the series was completed in 1990. This 1990 survey, which is a source for much data in this report, was based on interviews with 9,259 persons age 12 and over selected randomly from the U.S. household population. It is noteworthy that this survey covers only persons living in households; it excludes college students living in dormitories, persons living in military barracks, transients, and those in jail.

Another principal source of data for this report is the <u>Seventh Special Report to the U.S. Congress on Alcohol and Health</u> prepared by the National Institute on Alcohol Abuse and Alcoholism, January 1990. These special reports, prepared every three years, describe what has been learned from recent research on alcohol abuse and alcoholism, including many studies that explain or elaborate on the findings of the National Household Survey.

The 1990 survey results document a decline in recent years in the percentage of the population using alcohol. At the time of the 1985 survey, for example, 59% of the survey population had consumed alcohol during the previous month. This dropped to 53% in 1988 and 51% in 1990. Drinking by youth age 12 to 17 has declined steadily since 1979. Drinking by young adults age 18 to 25 has also declined, going from 71% during the previous month in 1985 to 63% in 1990.

This decline may be part of a broader trend toward increased health consciousness. Use rates are declining for tobacco and hard drugs as well as alcohol. Although this broad trend is favorable, there is evidence of an increasing proportion of heavy drinkers

among young people in their twenties and a small increase in the prevalence of problems with alcohol dependence.[15]

Table 1 examines the percentage of the household population age 12 and over that has consumed alcohol during the past year and breaks this down by age, sex, and frequency of use--at least once, 12 or more times, and once a week or more. It shows that 37% to 38% of males in both the 18-25 and 26-34 age groups, and 15% of the females in these age categories, consumed alcohol at least once a week during the previous year.

Subsequent sections discuss how patterns of alcohol use are affected by demographic variables such as age, sex, race/ethnicity, and region of the country. Alcohol consumption may also be affected by educational level and socioeconomic status, but current data are not available for these variables. Data from the 1985 Household Survey, which did measure educational level, suggests that this may be an important omission. Alcohol consumption does increase as educational level increases, so the base rate will be higher in any pool of highly educated applicants than it is in the population at large.

In using these data, the reader needs to exercise caution in drawing conclusions from statistics on frequency of alcohol consumption. Frequency is not the best indicator that an individual has a current drinking problem nor the best predictor of a future drinking problem. Frequency of intoxication is much more significant, but that is difficult to measure accurately in a broad survey, and data directly addressing this variable are not available.

Age	At Least Once	12 or More Times	Once a Week or More
12-17	41.0%	14.4%	5.1%
Male	40.8	15.1	5.6
Female	41.1	13.6	4.5
18-26	80.2	51.1	26.6
Male	86.0	64.6	38.6
Female	74.6	38.3	15.0
26-34	78.8	50.8	26.2
Male	83.1	63.1	37.2
Female	74.7	38.9	15.5
35+	62.5	37.0	20.1
Male	68.5	47.3	29.2
Female	57.2	28.0	12.3
Total	66.0	39.5	20.7
Male	71.0	49.6	29.7
Female	61.5	30.1	12.6

Table 1

Alcohol: Frequency of Use Within Past Year (1990) by Sex and Age Groups for Total Population

Differences in Age and Sex

Figure 2 shows selected data from Table 1 in a graphical format that highlights the differences between age groups and sex. It shows only the percentage of the household population over 12 that drank alcohol once a week or more during the previous year. Clearly, ages 18 to 34 are the highest usage years, and about two-and-a-half times as many men as women drink this frequently.



Figure 2. Alcohol Consumption by Age and Sex Drink at Least Once a Week

The National Household Survey provides an overview, but a number of other studies help fill out the picture. Every year since 1975, the Institute for Social Research at the University of Michigan has conducted a nationwide survey of about 17,000 high school seniors on drug and alcohol use and related questions. This survey confirms significant reductions in frequency and amount of alcohol consumption by high school students since the mid 1980s, but the level remains very high.

In 1987, two-thirds of high school seniors were current drinkers; more than one-third (and nearly half of males) indulged in occasional heavy drinking; nearly one-third did not perceive a great risk in having four or five drinks nearly every day; nearly one-third reported that most or all of their friends got drunk at least once a week; and nearly 10% had first used alcohol by the sixth grade.[16]

Figure 3 shows how these high school drinking practices have changed over the years. Current drinkers are those who consumed alcohol during the previous 30 days while occasional heavy drinkers

took five or more drinks at one sitting during the previous two weeks.[17]



Figure 3. Drinking by High School Seniors

Of particular significance for the security clearance process is that an individual's pattern of drinking in high school does not necessarily remain constant as individuals become older. One study tracked a group of young men over a 15-year period from age 16 to 31. It found that

half of the heavier drinkers at age 18 remained at that level at age 31, and 7% had become abstainers. Half of the 18-year-old abstainers became moderate drinkers, onethird became heavier drinkers, and only 15% remained abstinent. Nearly half of the moderate drinkers became heavier drinkers; most of the other half remained at the same level, except for 4% who became abstainers.[18]

Drinking is a problem only if it leads to dependence on alcohol or other adverse consequences. A 1984 national survey found

that 7% of all drinkers had experienced moderate levels of dependence symptoms during the preceding year (i.e., they reported 3 or more of 13 indicators of dependence,

such as impairment of control, morning drinking, and increased tolerance). Ten percent had experienced moderate levels of drinking-related consequences (i.e., they reported 4 or more of 32 consequences related to problems with spouse, job, police, or health). As would be expected, many drinkers reported both types of problem, and thus the categories are not mutually exclusive.

Problem levels were higher among men than among women. Among male drinkers, the proportion reporting at least a moderate level of problems was highest in the 18to-29 age category for both dependence symptoms (14%) and drinking-related consequences (20%). The proportions dropped with increasing age, reaching respective lows of 5% and 7% among men aged 60 and older. Among female drinkers, the proportion reporting at least a moderate level of dependence symptoms remained stable at 5 to 6% from age 18 to age 49 and then dropped to 1%. For drinking-related consequences, however, the proportion reporting at least a moderate level of problems was relatively high in the 18-to-29 age group (12%) but dropped to 6% for women in their thirties and forties and was negligible for women aged 60 and older.[19]

The survey respondents most likely to report frequent heavy drinking and problems caused by alcohol were male, young, and single. Frequent heavy drinkers with lower incomes and less education were more likely to report both dependence symptoms and alcohol-related consequences than those at higher income and education levels.

Another study showed some age-related differences between alcohol problems in men and women. The prevalence of drinking problems for men peaks for individuals who are in their 20s. The prevalence declines with age but drinking problems may persist into the 40s and 50s. For women, the problems are more likely to start among those in their 30s but then have a high probability of going away. Women have a much higher rate of remission of alcohol problems than do men at all ages.[20]

It has been speculated that prevalence of drinking among women has been increasing, leading toward a convergence of drinking patterns between men and women. There is no evidence of this in the surveys, however. There are indications that those women who do drink may be drinking more heavily.[21] By most measures, women do not drink as heavily as men. In one study, however, the consumption level that defines heavy drinking for females was 25% lower than for males, in order to account for difference in body weight and thus in blood alcohol level. With this adjustment, the

27

study found very little difference in patterns of heavy drinking between men and women.[22]

Although prevalence of drinking among women is much lower than among men, and women have a lower rate of drinking problems, surveys of women's drinking have identified several demographic subgroups where problems are more prevalent.

High-risk groups related to employment included women who were unemployed and looking for work and those who were employed part time outside the home. With respect to marital status, those who were divorced or separated, or who had never married or were unmarried but living with a partner, were at greater risk. Women in the last category had the highest rates of heavy drinking, drinking problems, and alcohol dependence symptoms of all the employment and marital status groups. Other highrisk groups were women in their twenties and early thirties and women with heavy-drinking husbands or partners.[23]

Another study that examined the relationship between alcohol problems and women's changing roles over their life span found that women who were married, had full-time jobs and children at home were the least likely to report drinking problems. Thus it appears that the stresses caused by women's multiple roles do not increase the risk. For women of all ages, the variables of marriage, children, and working full time for pay outside the home or working full time in the home without seeking outside work were associated with less risk of alcohol-related problems. The opposite of these conditions was associated with increased risk of alcohol problems.[24]

Differences for Race/Ethnicity

Systematic study of drinking by racial and ethnic groups in the United States is relatively recent, so data are not available to draw conclusions about long-term trends. Information is available only on current practices.

<u>Blacks</u>: The 1990 National Household Survey of Drug Abuse reports that, on the whole, blacks drink a little less than whites. There is a significant difference in the distribution of this drinking among age groups. The highest prevalence of drinking among blacks is in the 26-34 age group, as compared with the 18-26 age group for whites. This is illustrated in Figure 4. A 1984 study found a high rate of abstention among blacks in the 18-29 age category, but that rates of heavy drinking rise sharply among those in their thirties.[25] This same study determined that black men have somewhat higher abstention rates overall than whites--29% for blacks versus 23% for white men. The differences were more pronounced among women; 46% of black women abstained compared with 34% of white women.

Although blacks in general drink a little less than whites and have lower rates of heavy drinking, black men report more drinkingrelated problems than whites. This is principally due to health problems starting with black men in their thirties and continuing throughout middle and old age. Black males who drink heavily for a prolonged period are at extremely high risk for alcohol-related diseases such as cirrhosis, alcoholic fatty liver, hepatitis, heart disease, and cancers of the mouth, larynx, tongue, esophagus and lung.[26]



<u>Hispanics</u>: The most striking aspect of alcohol consumption by Hispanics is the exceptionally low rate of drinking by Hispanic women. The 1990 U.S. Household Survey found that only 7.5% of Hispanic women drank alcohol at least weekly during the previous year, as shown in Figure 5.

The household survey supports the conclusions of a 1984 study that found 70% of Hispanic women drank either less than once a month or not at all. By contrast, almost the same percentage of Hispanic men were drinkers.

There is considerable cultural diversity among Hispanic groups. Mexican-American men and women had much higher rates of both abstention and heavier drinking than men and women of Puerto Rican or Cuban origin. Mexican-Americans also reported more alcohol-

related problems than Puerto Ricans or Cubans.[27] Cuban Americans are far less likely to be heavy drinkers than either Mexican Americans or Puerto Ricans.[28] To the extent that Hispanics become assimilated into American society, their drinking patterns become more similar to the U.S. population at large.





<u>Asian-Americans</u>: Americans of Asian descent have the lowest level of alcohol consumption and alcohol-related problems of all the major racial and ethnic groups in the United States, but there are substantial differences between the various Asian cultures. A study of Californians of Chinese, Japanese, Korean and Filipino origin found that

Rates of abstention were very high among Korean men, nearly half of whom were abstainers. Approximately onethird of Chinese, Japanese, and Filipino men were abstainers. Four-fifths of Korean and Filipino women were abstainers, as were two-thirds of Chinese women but only one-third of Japanese women ... Japanese, Korean and Filipino men all had approximately the same percentage of heavy drinkers (28%), but only half as many Chinese men drank heavily. Twelve percent of Japanese women drank heavily, but only 4% of Filipino women and virtually none of the Chinese or Korean women were heavy drinkers.[29]

Richards J. Heuer, Jr.

Although heavy drinking is prevalent among males in some Asian-American groups, there appear to be very few alcohol-related problems among Asian-Americans. This may be because the circumstances of drinking and the social controls are different for Asian-American cultures.

<u>Native Americans</u>: Drinking practices among American Indian tribal groups are so diverse that it is not possible to make generalizations about them. Some tribes are mostly abstinent while others have high levels of alcohol abuse.[30]

Regional Differences

There are also regional differences in drinking practices, with the most alcohol per person consumed in the Northeast and the least in the South.



Male Figure 6. Regional Differences By Sex -- Drink at Least Weekly

Figure 6 is based on the 1990 National Household Survey on Drug Abuse. It shows that in the Northeast over 34% of men and 17% of women drank alcohol at least once a week during the year before the survey. Comparable figures for the South were only about 25% for men and are markably low 9% for women.

Other studies indicate that the entire southern tier of states, all the way across the country, has a much higher rate of abstinence than the northern states. These same southern states, however, also report significantly more alcohol-related problems than the northern states, particularly fighting, accidents, problems with police, and problems with friends or spouse. This could result from less tolerant attitudes prevalent in a relatively more abstinent social milieu.[31]

INDICATORS OF ALCOHOL ABUSE AND DEPENDENCE

The most basic task of investigators and security decision makers is to determine whether information about an individual's past behavior meets specified standards for security clearance. Beyond that, however, it may also be necessary to make inferences about things that are not clear from the file and to predict a person's future behavior pattern.

Making inferences about future behavior is always a risky business, but that is, after all, the purpose of the security clearance process. Our real interest is future behavior, how a person will behave if given a security clearance, not past behavior. Some elements of past behavior can serve as particularly useful guides to what one might expect in the future. This section identifies several indicators or predictors of future alcohol problems. The presence of these indicators in a specific case suggests that an individual may already have an alcohol problem or be at high risk for developing one. These indicators are certainly not conclusive evidence, but when present they do suggest a need for more careful investigation and analysis.

CAGE Test

A number of screening tests have been developed to identify persons who need further and more comprehensive assessment. One of these, the CAGE questionnaire, is so simple it can be administered inconspicuously during a routine interview. One first asks a neutral, lead-in question, such as "Do you drink now and then?" If the answer is affirmative, one then asks the following four questions: "Have you ever felt you should cut down on your drinking?" "Have people annoyed you by criticizing your drinking?" "Have you ever felt bad or guilty about your drinking?" "Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?"

A positive response to any one of these questions raises suspicions of a problem with alcohol use. More than one "yes" response is a strong indication that a problem exists and that an alcohol evaluation may be appropriate. On the other hand, all negative responses is not necessarily conclusive if the interview is held under conditions that may motivate the subject to deny excessive alcohol use.[32]

A recent study of 915 randomly selected patients admitted to the University of Michigan Hospital found that asking the four CAGE questions was a better predictor of alcohol dependence than lab tests. The CAGE questions correctly identified 87% of the patients, while a combination of lab tests had a predictive accuracy no greater than 50%.[33]

Arrest for DWI

There are a large number of responsible citizens who occasionally drive with a blood alcohol level above the legal limit. In a recent U.S. national survey, 6.1% of adults responded positive when asked if they had driven during the past month "when you've had perhaps too much to drink."[34] In a 1983 Gallup Poll, 80% of midlevel executives of large companies answered yes when asked if they had ever driven while drunk; this compared with only 33% of the general public who reported they had ever driven while drunk.[35]

Despite the reported prevalence of drinking and driving, actual arrest for driving while intoxicated (DWI) is an important indicator of alcohol abuse. Most of those arrested for driving while intoxicated belong to that segment of the population that does have a serious drinking problem. They are not average citizens who just happen to have been caught during an unusual lapse in judgment or through an unfortunate piece of bad luck.

The approximately 2 million persons per year arrested for DWI represent a special category. People who are so drunk that their driving attracts attention and gets them arrested are usually problem drinkers. And since problem drinkers tend to drive under the influence repeatedly, they are the ones who push the odds to the point of getting caught.

Evidence of this comes from a systematic study of 1,600 military personnel arrested for DWI and who subsequently completed a five-day alcohol evaluation and education program at Beaumont Army Medical Center, Ft. Bliss, Texas.[36] This study showed that fully 90% of DWI offenders had a serious alcohol problem. Of this group, which represents all military personnel arrested for DWI either on or off post in the Ft. Bliss area from January 1985 to September 1989, 45% were diagnosed as alcohol dependent (alcoholic), 45% as alcohol abusers, and only 10% revealed no pattern of alcohol abuse, as shown in Figure 7. According to this study, a single DWI arrest indicates a 90% likelihood that the subject has an alcohol problem in need of treatment.

A civilian study of 1,208 persons convicted of driving under the influence in Indiana in 1985 reported almost identical findings--91.2% were diagnosed as alcohol abusers or alcohol dependent.[37] This percentage is higher than most previous

¹ Driving under the influence (DUI) is a more general term that refers to driving a motor vehicle under the influence of either alcohol or drugs. DWI applies only to intoxication by alcohol. Some state penal codes make this distinction while others do not, so the two terms are sometimes used interchangeably.

studies of DWI offenders conducted in the 1960s and 1970s which generally found that 60% to 70% were alcohol dependent or alcohol abusers. The date of the studies may be a factor, as there has been a change in public attitudes concerning drinking and driving. Persons willing to drink and drive in the face of the greater social consciousness of its risks and punishments in the mid-80s are more likely to have a serious drinking problem than was the case in earlier years. The percentage will also depend upon the thoroughness of the post-arrest evaluation program. The depth of evaluation provided by the Ft. Bliss program was substantially greater than most other programs.



Figure 7. DWI Offenders -- Ft. Bliss Study

These findings have significant implications for investigators and adjudicators. Finding a record of a single DWI arrest should prompt investigators to intensify their search for other indications of alcohol-related problems. It may be advisable to order an alcohol evaluation before placing a person in a position of trust. Some researchers have suggested that driving while impaired is often part of a more general behavioral syndrome typified by highrisk behaviors and irresponsible attitudes,[38] and this could be checked through professional medical evaluation.

Richards J. Heuer, Jr.

Information is available from the Department of Justice on the amount and type of alcohol consumed by DWI offenders who were in jail during 1983. This may be of interest for comparison purposes.

The median blood alcohol level at time of arrest was .20, which means half of those arrested had levels above that figure and The median prisoner had been drinking for four hours half below. prior to arrest and had consumed 6 ounces of pure alcohol, which is the equivalent of 12 beers or 8 mixed drinks. Some (9%) had consumed as little as two ounces of pure alcohol. Those who had consumed the least pure alcohol prior to their arrest reported that they generally drank daily or several times per week. Those who consumed the most--10 ounces or more--reported that this was their normal consumption when drinking, but nearly half said their frequency of drinking was less than weekly. This type of binge drinking is thought to be most common among younger age groups and among those not living with spouses.

Only beer had been consumed by 54%, while 21% had been drinking only liquor, 2% only wine, and 21% more than one type of alcoholic beverage. The beer drinkers consumed the smallest amount of pure alcohol. Those who combined different beverages were estimated to have consumed more than three times as much pure alcohol as those who drank beer only, and nearly 40% more than those who drank liquor only.

These figures are not necessarily representative of all DWI offenders. They are for offenders sentenced to jail, while most DWI offenders are sentenced to probation or receive other sanctions. Considerable additional detail is available in the full report.[39]

Circumstances of Alcohol Use

Motivation for using alcohol or any other drug is one of the most potent predictors of future use or problems with that drug. If the motivation is experimentation, peer pressure, or adolescent rebelliousness, this is not indicative of future abuse. To the extent that alcohol is used as a means of coping with life's problems, such as stress or low self-esteem, then one can expect that the drinking itself will eventually become a source of future problems. Similarly, if heavy alcohol consumption is incorporated into one's lifestyle, this also indicates a high likelihood of future problems.[40]

In this context, solitary drinking until intoxicated is far more predictive of future problems than social drinking. So is drinking prior to social events (to relax), as compared with alcohol use at social events. If drinking becomes a compulsive daily ritual, followed the same time each day, this indicates future problems as it suggests that one's life has become centered

around the drug. Regular morning drinking as an "eye-opener" or to overcome a hangover is a strong indicator of alcohol dependence.[41]

Peak alcohol use normally occurs in white youths during the late high school or college years. If peak use continues after college, or after about age 23, this is atypical and suggests future problems. Blacks and Hispanics commonly reach peak use in their late 20s or early 30s.

Alcoholic Parent

There is a wealth of evidence that one of the greatest risk factors for becoming an alcoholic is to be the son, daughter, brother, or sister of one. Although the evidence is clear, the reasons for it are not; so far, scientists have been unable to determine whether the family nature of alcoholism is best explained by inherited or environmental factors.

The evidence suggests that the child of an alcoholic is about two to five times more likely to become an alcoholic than a child with no family history of alcoholism. The chances the child will follow in the parent's footsteps depend, in part, upon which parent is the alcoholic and the nature of the relationship with that parent. Children of alcoholic mothers are at far greater risk than children of alcoholic fathers. Sons of alcoholic fathers are almost twice as likely to become alcoholics if the mother expressed high esteem for her alcoholic husband than if she did not convey to her children a high regard for their father.[42]

Tolerance for Alcohol

One characteristic of alcohol dependence is increasing tolerance for alcohol--it takes more and more to have the same affect on the body. Heavy drinkers who may not otherwise admit to an alcohol problem may nonetheless boast of their high tolerance level. "I can drink a lot without its having any affect on me, so I don't have to worry." Such tolerance is by no means conclusive evidence of alcohol dependence, but it should be interpreted as a warning indicator. Increasing severity of dependence is marked by the individual functioning at a blood alcohol level that would incapacitate the less tolerant drinker.

RELATIONSHIP OF ALCOHOL TO OTHER PROBLEM BEHAVIOR

Problems in handling alcohol are often observed in combination with other security and suitability issues, and they take on greater significance in these cases. If alcohol is the only problem, a motivated employee can generally kick the habit or bring it under control. When combined with other issues, alcohol may be
part of a broader behavior pattern that is much harder to change and may justify denial of clearance.

Patterns of high-risk and irresponsible behavior, and aggressive antisocial behavior, are the most common. In addition to alcohol problems, actions consistent with these behavior patterns include drug abuse, borrowing money without the ability to repay, spouse abuse, theft, shoplifting, fighting, multiple sex partners in the age of AIDS, as well as espionage.

The association between alcohol and some other behaviors discussed in this section is so close that existence of an alcohol problem should be viewed as an indicator that other problems may be present as well. This should guide security personnel toward heightened awareness and more thorough investigation in cases where alcohol problems are apparent.

Alcohol and Mental/Emotional Disorders

One study found that within the general population, nearly half of all those diagnosed as alcohol abusers or alcohol dependent also had some form of psychiatric disorder. The percentage was greater for females than males. "Although the diagnosis of alcohol dependence was five times more prevalent among men than among women, the association of alcoholism with other [psychiatric] diagnoses was stronger in women; 65% of female alcoholics had a second diagnosis, compared with 44% of male alcoholics."[43]

A different study that examined only those in treatment for both alcohol and other drug problems found that 65% had a current mental disorder and 78% had a history of some mental disorder during their lifetime. The patients in treatment for alcoholism had lifetime prevalence rates of 42% for antisocial personality disorder, 31% for phobias, 30% for psychosexual dysfunction, 23% for major depression, 13% for dysthymia (a depressive disorder), 9% for panic disorder, and 8% for schizophrenia. Obviously, many patients had more than one disorder. The diagnostic methods used may have led to overestimation in some categories, but the findings are nonetheless significant.[44]

Characteristics of antisocial personality disorder include inability to sustain consistent employment, impulsiveness, recklessness, irritability, aggressiveness, failure to honor financial obligations, and inability to maintain enduring relationships or function as responsible parents.[45]

Alcohol and Crime

The relationship between alcohol and crime in the general population is unclear. What appears on the surface to be a close relationship may be inflated by several factors, including the fact

Alcohol Use and Abuse

that alcohol abuse and crime are both prevalent among the same demographic group--young men. A direct causal relationship between alcohol and crime has not been established. One study found that by age 31 there was no significant relationship between alcohol consumption and crime.[46]

The previously discussed studies at Ft. Bliss, on the other showed a strong relationship between DWI offenses and hand, Figure 8 illustrates the relationship between criminal activity. DWI offenses and several types of illegal behavior. It shows the percentage of military personnel with no arrest for DWI, with one offense, and multiple offenses who then engaged in three different forms of illegal activity. On the graph, persons refers to crimes against persons, such as assault, child or spouse abuse, or attempted murder. Property refers to property crimes such as larceny and damage to government property, while public order refers to disorderly conduct, domestic disturbance, or AWOL. As seen in this graph, those with one DWI offense were several times more likely to engage in other illegal activity than those with no prior DWI record, while those with multiple DWI offenses were about twice as likely to engage in objectionable behaviors as those with only one DWI offense.



Figure 8. DWI and Crime -- Ft. Bliss Study

38

This strong relationship between alcohol and crime in the Ft. Bliss population may not be as strong in an applicant that is probably a little older, better educated, and lacking some of the personality characteristics that lead one to volunteer for military service.

Alcohol and Spouse Abuse

The Ft. Bliss study supports studies of civilian populations that show alcoholism and alcohol abuse is related to 50% to 75% of spouse abuse incidents. Surprisingly, the spousal violence generally does not occur during or immediately after the drinking; as a result, the drunkenness is often not reported in police reports on the spouse abuse. However, so many spouse abusers have alcohol problems that spouse abuse may be regarded as a possible indicator of alcohol problems. The Ft. Bliss study recommends that, within a military community, all spouse abusers be referred for alcohol evaluation.

MITIGATING FACTORS

Treatment Effectiveness

If an individual has obtained or is seeking help for an alcohol problem, this may be considered as a mitigating factor for past alcohol abuse. During the 12 months ending October 31, 1987, 1.43 million persons were treated in 5,586 treatment centers in the United States. Of these, 76.3% were male; 71.55% were white, 15.4% black, and 9.9% Hispanic; and 55% were between the ages of 25 and 44 years old.[47]

A number of questions arise when evaluating individual cases. What are the chances that a recently completed treatment for alcoholism will be successful? How long must an individual be abstinent before security adjudicators may have reasonable confidence that the problem will not recur? What is the significance of one or two relapses? Fortunately, some hard evidence is available to answer these questions.

A very interesting study of treatment outcomes was conducted by the Tri-Service Alcoholism Recovery Department (TRISARD) at the Bethesda Naval Hospital.[48] The TRISARD study followed 722 patients for two years after they completed a six-week inpatient alcoholism treatment problem. The outcome of the treatment was measured by clinical reports from aftercare personnel as well as by supervisors' reports on job performance. Such objective measurement of treatment "success" distinguishes this study from many others that judge success only by the patients' own reports of treatment effectiveness.

Alcohol Use and Abuse

The study found that 77% of the patients who completed the inpatient program succeeded in continuous abstinence from alcohol during the two-year study period. Supervisors reported satisfactory job performance during the study period for 90% of those who completed the program. Percentage of success was greater for those patients who were higher in rank, older, had been in the service longer, and--most important--those who adhered to the one-year-long aftercare program.

Of those who completed the inpatient program and complied with the aftercare program, 97% were successful by all measures at the end of the two-year study period. Of those who failed for any reason to complete the six-week inpatient program, 63% nevertheless met all the criteria for long-term treatment success.

Most civilian programs would probably not be as successful as the TRISARD program. Patients in this program were strongly motivated, as they all had a large investment in their jobs and participation in the program was a condition of continued employment. Those conditions do not apply to most civilian programs. The authors conclude that the results may apply

to large occupational programs that serve stable, hierarchical work forces such as large manufacturing concerns, civilian uniformed employees, and local, state, and federal workers. They apply to any setting where the participation of the worker in treatment is a condition of continued employment, the worker is strongly vested, and the social and occupational status of the worker may be clearly defined.

There is a great variety in the length and types of treatments used in civilian alcoholism treatment programs, and the length of aftercare programs varies from one to three months up to two years. The scientific evidence of the effectiveness of many treatments is questionable, but all programs have many graduates who report successful outcomes. The evidence indicates that expensive, inpatient treatment programs offer no advantages in overall effectiveness as compared with outpatient treatment.[49] It may be that the effectiveness of treatment is determined more by the motivation of the participant to break the habit than by the specifics of the treatment program.

For many persons, formal treatment may be unnecessary. Spontaneous remission of drinking problems is common as drinkers move into older age categories and the lifestyle, stress or other circumstances that prompted the drinking change. One survey rechecked the same respondents nine years later. It found that of those reporting drinking problems during the first questioning, fewer than half reported still having problems at the time of the follow-up questioning.[50] The likelihood of spontaneous remission

without treatment is relatively high among young men in their 20s, but relatively low among older men in their 40s.[51] Controlling one's own drinking problem without treatment is far more common in women than among men.[52]

When evaluating the significance of alcoholism treatment as a mitigating factor, the most significant indicators that an individual will remain abstinent are successful completion of the treatment program, strict adherence to the aftercare program, and any other evidence that the individual recognizes his or her problem and is highly motivated to overcome it.

Relapse Rates

Relapse is a common occurrence after all addiction treatment programs, but the risk of relapse diminishes as time passes. In alcohol as well as drug and smoking addiction programs, the first relapse occurs most commonly during the first three months after completion of treatment.[53] If one gets through the first three months without relapse, the chances for long-term abstinence improve dramatically, and the chances of a relapse that affects work performance are very small, according to the TRISARD study.

Figures 9 and 10 illustrate the relapse rate for graduates of the TRISARD program. Figure 9 represents all graduates of the program, while Figure 10 deals only with those who failed to complete the aftercare program and who, therefore, in most cases failed to maintain abstinence. The most interesting part of Figure 10 is that it shows how soon that failure occurred and what its consequences were for behavior and job performance.



Figure 9. Relapse Rate Over Time All TRISARD Graduates



Figure 10. Relapse Rate Over Time Graduates Who Failed Complete Aftercare

Alcohol Use and Abuse

The charts show three different measures of success: abstinence refers to total abstinence after completion of the treatment; behavior refers to success in avoiding alcohol-related behavioral incidents; successful work performance was judged by a periodic questionnaire filled out by the patient's job supervisor.

It is noteworthy that failure to achieve complete abstinence did not, in most cases, lead to objectionable behavior or affect work performance. In fact, this study showed that when a patient who completed the program got through three months without a relapse, the chance that any subsequent relapse from abstinence would affect job performance was almost negligible for at least 24 months. This is illustrated by the nearly straight dotted line on both charts. It must be remembered, however, that this favorable outcome was achieved with a group of patients with a large investment in their job and who risked separation from the service if the treatment was unsuccessful. Only under similar circumstances must one be confident that three months of abstinence after treatment would be adequate for a finding of mitigating circumstances.

CONCLUSIONS

Alcohol abuse and alcoholism have been the subject of extensive study. Much good information is available that is relevant to personnel security decisions and the process for making these decisions. Some of this information helps policy-makers set standards. Other information helps investigators decide when to expand an investigation or decision makers to understand the significance of information in a case file.

Among the more interesting and useful points are the differences between alcohol abuse and alcohol dependence (alcoholism); the utility of the simple, four-question CAGE test for identifying individuals who may have an alcohol problem; the potential significance of a single DWI offense or of growing up with an alcoholic parent; the high frequency with which alcohol problems are associated with other problem behaviors; and that the risk of relapse after treatment is perhaps less of a concern than is sometimes believed.

REFERENCES

[1] Carney, R.M. (1991, April). Evaluation of DCID 1/14 investigative requirements. Washington, D.C.: CIA, IC Staff, Personnel Security Working Group.

[2] Waller, F.P. (1986). Alcohol and unintentional injury. In B. Kissin and H. Begleiter (Eds.), Encyclopedic Handbook of Alcoholism (pp. 395-405). New York: Gardner Press.

[3] Alcoholics Anonymous. Alcoholics Anonymous 1989 Membership Survey.

[4] National Institute on Alcohol Abuse and Alcoholism (NIAAA). (1990, January). Seventh Special Report to the U.S. Congress on Alcohol and Health (pp. 165 and 171). Washington, D.C.: Author.

[5] Harwood, H.J., Kristiansen, P., & Rachal, J.V. (1985). Social and economic costs of alcohol abuse and alcoholism (Issue Report No. 2). Research Triangle Park, NC: Research Triangle Institute. (From NIAAA, op. cit., p. 174).

[6] NIAAA, op. cit., p. vii.

[7] National Institute of Alcohol Abuse and Alcoholism. (1989, May). Alcohol and cognition. Alcohol Alert, 4.

[8] National Institute on Drug Abuse. (1990). National Household Survey on Drug Abuse: Population Estimates. Washington, D.C.: Author.

[9] NIAAA, op. cit., p. ix.

[10] NIAAA, op. cit. p. xviii.

[11] NIAAA, op. cit., pp. xviii and 184.

[12] NIAAA, op. cit., pp. 13-15.

[13] NIAAA, op. cit., pp. 13-15.

[14] Malin, H., Wilson, R., Williams, G., & Aitken, S. (1986). 1983 health practices supplement. Epidemiologic bulletin no. 10. Alcohol Health and Research World, 10(2), 48-50.

[15] NIAAA, op. cit., p. 13.

[16] Johnson, L.D., O'Malley, P.M., & Backman, J.G. (1988). Illicit drug use, smoking and drinking by America's high school students' college students, and young adults, 1975-1987. (Dept. of Health and Human Services Pub. No. (ADM)89-1602). Rockville, MD: ADAMHA. (From NIAAA, op. cit., p. 28).

[17] Johnson, L.C., O'Malley, P.M., & Backman, J.G. (1989). Drug use, drinking, and smoking: National survey results from high school, college and young adult populations, 1975-1988. (Dept. of Health and Human Services Pub. No. (ADM)89-1638). Rockville, MD: ADAMHA. (From NIAAA, op. cit., p. 28).

[18] Temple, M.T., & Fillmore, K.M. (1985-86). The variability of drinking patterns and problems among young men, age 16-31: A longitudinal study. International Journal of Addiction, 20, 1595-1620. (From NIAAA, op. cit., p. 27).

[19] Hilton, M.E. (1987). Drinking patterns and drinking problems in 1984: Results from a general population survey. Alcoholism, 11, 167-175. (From NIAAA, op. cit., p. 23).

[20] Fillmore, K.M. (1987). Women's drinking across the adult life course as compared to men's. British Journal of Addiction, 82, 801-811. (From NIAAA, op. cit., p. 24).

[21] Wilsnack, R.W., Wilsnack, S.C., & Klassen, A. (1984). Women's drinking and drinking problems: Patterns from a 1981 national survey. American Journal of Public Health, 74, 1231-1238. (From NIAAA, op. cit., p. 20).

[22] Whitehead, P.C., & Layne, N. (1987). Young female Canadian drinkers: Employment, marital status and heavy drinking. British Journal of Addiction, 82, 169-174. (From NIAAA, op. cit., p. 29).

[23] Wilsnack, R.W., et. al., op. cit., and related studies. (From NIAAA, op. cit., p. 25).

[24] Wilsnack, R.W., & Cheloha, R. (1987). Women's roles and problem drinking across the lifespan. Social Problems, 34, 231-248. (From NIAAA, op. cit., p. 25).

[25] Herd, D. (1989). The epidemiology of drinking patterns and alcohol-related problems among U.S. blacks. In National Institute for Alcohol and Alcohol Abuse, The epidemiology of alcohol use and abuse among U.S. minorities. (NIAAA Monograph No. 18, Dept. of Health and Human Services Pub. No. (ADM)89-1435.) Washington, D.C.: U.S. Government Printing Office. (From NIAAA, op. cit., p. 33).

[26] Ibid.

[27] Caetano, R. (1988). Alcohol use among Hispanic groups in the United States. American Journal of Drug and Alcohol Abuse, 14, 293-308. (From NIAAA, op. cit., p. 34).

[28] National Clearinghouse for Alcohol and Drug Information. (January 1989). Alcohol and other drug use in three Hispanic populations: Mexican-Americans, Puerto Ricans, and Cuban-Americans. NCADI Update.

[29] Kitano, H.H.L. & Chi, I. (1986-87). Asian-Americans and alcohol use. Alcohol Health and Research World, 11(2), 42-47. (From NIAAA, op. cit., p. 35).

[30] NIAAA, op. cit., p. 36.

[31] Hilton, M.E. (1988). Regional diversity in United States drinking practices. British Journal of Addiction, 83, 519-532. (From NIAAA, op. cit., pp. 15 and 19).

[32] Ewing, J.A. (1984). Detecting alcoholism, the CAGE questionnaire. Journal of the American Medical Association, 252, 1905-1907. (From NIAAA, op. cit., p. 187).

[33] Beresford, T.P., Blow, C.F., Singer, K., Hill, E., & Lucey, M.R. (1990, August 25). Using the CAGE questionnaire to screen for alcoholism. Lancet. Reported in Business Research Publications (1990, November 1), Substance Abuse Report, 21(21).

[34] Bradstock, M.K., Marks, J.S., Forman, M.R., Gentry, E.M., Hogelin, G.C., Binkin, N.J., & Trowbridge, F.L. (1987). Drinking-driving and health lifestyle in the United States: Behavioral risk factors survey. Journal of Studies on Alcohol, 48, 147-152. (From NIAAA, op. cit., p. 164).

[35] Examining ethics. (December 1983/January 1984). Public Opinion, p. 40.

[36] Kruzich, D.J., Silsby, H.D., Gold, J.D., & Hawkins, M.R. (1986). An evaluation and education program for driving while intoxicated offenders. Journal of Substance Abuse Treatment, 3, 263-270. Initial data in this study were updated in personal communication from Jack Gold to Kent Crawford, PERSEREC, November 1990.

[37] Crancer, A. (1986). The myth of the social drinker-DUI driver. Paper presented at the Joint Meeting of the American Medical Society on Alcoholism and Other Drug Dependencies and the Research Society on Alcoholism, San Francisco, CA.

[38] Wilson, R.J. & Jonah, B.A. (1985). Identifying impaired drivers among the general driving population. Journal of Studies on Alcohol, 46(6), 531-537.

[39] Greenfield, L.A. (1988). Drunk driving. (Bureau of Justice Statistics Special Report RP0722) Washington, D.C.: U.S. Department of Justice.

[40] Glanz, M. Prevention Branch, Division of Clinical Research, National Institute on Drug Abuse. (Personal communication, April 1991.)

[41] Ibid.

[42] El-Guebaly, N., & Offord, D.R. (1979). On being the offspring of an alcoholic: An update. Alcoholism (NY), 3, 148-157; Werner, E.E. (1986). Resilient offspring of alcoholics: A longitudinal study from birth to age 18. Journal of Studies of Alcohol, 47(1),34-40; McCord, J. (1988). Identifying developmental paradigms leading to alcoholism. Journal of Studies of Alcohol, 49, 357-362. (All from NIAAA, op. cit., p. 56.)

[43] Helzer, J. & Pryzbeck, T.R. (1988). The co-occurrence of alcoholism with other psychiatric disorders in the general population and its impact on treatment. Journal of Studies of Alcohol, 49(3), 219-224. (From NIAAA, op. cit., pp. 21-22; NIAAA, op. cit., p. 56.)

[44] Ross, H.E., Glaser, F.B., & Germanson, T. (1988). The prevalence of psychiatric disorders in patients with alcohol and other drug problems. Archives of General Psychiatry, 45, 1023-1031.

[45] NIAAA, op. cit., p. 196.

[46] Temple, M., & Ladouceur, P. (1986). The alcohol-crime relationship as an age-specific phenomenon: A longitudinal study. Contemporary Drug Problems, 13(1), 89-116. (From NIAAA, op. cit., pp. 171-172).

[47] National Institute for Drug Abuse. (1989). Highlights from the 1987 national drug and alcoholism treatment unit survey (NDATUS). Rockville, MD: NIDA/NIAAA. (From NIAAA, op. cit., p. 261).

[48] Wright, C., Grodin, D.M., & Harig, P.T. (1990). Occupational outcome after military treatment for alcoholism. Journal of Occupational Medicine, 32(1), 24-32.

44

[49] Miller, W.R., & Hester, R.K. (1986). The effectiveness of alcoholism treatment: What research reveals. In W.R. Miller and N. Heather (Eds.), Treating addictive behaviors: Processes of change (pp. 121-174). New York: Plenum Press.

[50] Hermos, J.A., LoCastro, J.S., Glynn, R.J., Bouchard, G.R., & DeLabry, L.O. (1988). Predictors of reduction and cessation of drinking in community-dwelling men: Results from the normative aging study. Journal of Studies on Alcohol, 49, 363-368. (From NIAAA, op. cit., p. 24).

[51] Fillmore, K., & Midanik, L. (1984). Chronicity of drinking problems among men: A longitudinal study. Journal of Studies on Alcohol, 45(3).

[52] Fillmore, K. (1987). Women's drinking across the adult life course as compared to men's. British Journal of Addiction, 82, 801-811. (From NIAAA, op. cit., p. 24).

[53] Hunt, W.A., Barnett, L.W., & Branch, L.G. Relapse rates in addiction programs. Additional identifying data not available.

* * * * * *

FINANCIAL IRRESPONSIBILITY

By

Richards J. Heuer, Jr.

Executive Summary

Financial irresponsibility is one of the criteria that justifies denial or revocation of security clearance. This study discusses the relationship between financial problems and personnel security, provides information on the prevalence of various types of financial problems in the United States population as a whole, describes ways to identify and judge the severity of financial problems, and points out the relationship between financial problems and other types of behavior of security interest.

A study of 115 Americans arrested for espionage between 1945 and 1990 showed that at least 67.8% were motivated by money, and money was the primary motive in at least 52.2% of the cases.

The figures in this study on numbers of people who default on financial obligations paint a general picture of the frequency of financial problems encountered by Americans. This enables one to evaluate the financial behavior of individuals against a backdrop of what is happening in society as a whole.

The frequency of bankruptcy has increased dramatically since a new bankruptcy law went into effect in 1979. There were 782,960 bankruptcy filings during 1990, which is one bankruptcy filing for every 120 households. This varied greatly from state to state. In Tennessee, one out of every 51 households sought bankruptcy protection. Nationwide, the bankruptcy rate jumped by 28% during the first quarter of 1991 as compared with the previous year.

Delinquency rates are reported for many types of loans. For bank credit cards, 2.56% of the revolving accounts represent 4.46% of all bankcard debt were overdue by 90 days or more in late 1990. Visa and MasterCard wrote off \$5.9 billion in bad debt during 1990, which was 3.37% of outstanding credit balances.

For loans by car dealers, the delinquency rate in March 1990 was 2.3%, while the rate of repossession was 2% per year. In the third quarter of 1990, 5% of all home mortgages were at least 30 days overdue. These figures vary substantially from state to state and for different kinds of mortgages and car loans.

The IRS estimates that about 6 to 7 million Americans who owe tax fail to file federal income tax returns each year. This is a

Richards J. Heuer, Jr. is a retired CIA employee. This report was written for the U.S. Government at the Defense Personnel Security Research Center in Monterey, CA.

failure-to-file rate of about 5.5%. This is an important indicator, as failure to file income tax returns has been found to be a common practice among persons arrested for espionage. Of 44 persons arrested for espionage since 1980, 17 (or 38.6%) failed to file an income tax return during at least one year prior to their arrest. At least 13 and possibly all 17 of them did have a tax obligation during the tax year in question.

About 17% of borrowers in the federal guaranteed student loan program were in default during 1990, and these defaults cost the federal government \$2.4 billion during that year. The default rate for students who had attended four-year colleges was 10%, for those from two-year schools it was 20% to 25%, while students from trade schools defaulted at a 39% rate.

Of fathers with a legal obligation to pay child support, only 48% were paying the full amount. Twenty-six percent, or 1,395,680 fathers, paid nothing at all, while another 26% paid less than the full amount. As a result of collection programs sponsored by the federal government, both student loan obligations and child support obligations are being recorded with increasing frequency on credit reports.

The Consumer Credit Counseling Service (CCCS) provided free or low cost counseling services to approximately 390,000 persons during 1990. Almost half of those receiving services from CCCS report that their financial problems were caused by reasons somewhat beyond their control-unemployment, accident or disability, divorce or separation, or unexpected medical expenses. The average CCCS client had gross monthly income of \$1,840 and total consumer debt (not counting mortgage or rent) of \$16,548 owed to 11 creditors. About 30% of CCCS clients were able to help themselves after receiving budget counseling services, while 37% required a debt repayment program.

The rule of thumb used by credit counselors is that a person's monthly payments for consumer credit (excluding mortgage by including car payments) are more than 20% of monthly take-home pay, that individual is in serious financial difficulty. A 1981 study of persons filing for bankruptcy found that 91% failed this 20% test. Within the general population, only 5% are this burdened with consumer debt.

Various patterns of compulsive behavior center around the theme of money--either spending it, saving it, or taking risks with it. Compulsive gambling and compulsive shopping are of security concerns as potential sources of financial problems. Such a large percentage of compulsive gamblers engage in illegal activities to finance their gambling that compulsive gambling is the subject of a separate report.

Financial problems sometimes lead to crime in a desperate effort to meet financial needs. The white-collar crimes of

47

embezzlement, forgery/counterfeiting, and fraud are often crimes of opportunity committed by persons in a position of trust who find themselves in a financial bind or who fall to the temptations of an extravagant lifestyle. Espionage is a similar crime where a person misappropriates information rather than money.

During 1989, there were 6.5 arrests for embezzlement per 100,000 inhabitants of the United States, 40.5 arrests per 100,000 inhabitants for forgery and counterfeiting, and 145 per 100,000 for fraud. For some reason, arrests for these crimes are about twice as common in the South as in other parts of the country. Reports of arrest for embezzlement increased by 80.6% from 1980 to 1989 as compared with an increase of 27.7% for other crimes. The number of women committing financial crimes increased sharply during this same period, presumably reflecting the changing role of women in the work force. During 1989, more than one-third of the financial crimes of embezzlement, forgery/counterfeiting and fraud were committed by women.

These disturbing figures confirm the need for careful investigation of financial issues. Common sense and experience suggest that financial difficulties may increase temptation to commit illegal or unethical actions. One must remember, however, that many such acts are committed out of simple greed, not need, and that the great majority of those with financial difficulties are not included to commit illegal acts at all.

Introduction

Financial irresponsibility is one of the criteria that may justify denial or revocation of security clearance. A recent study analyzed the issues that arose in a sample of 7,232 Special Background Investigation cases adjudicated by 14 different federal agencies. In those cases when a single issue was identified by the investigation, it was a financial issue 16.6% of the time. Of all the single issue cases, finances were the basis for 30% of the denials. In cases where three or more issues were identified, finances were one of the issues 48.2% of the time and were one of the reasons for almost 59% of the denials.[1]

The present study provides background information on financial issues. Most of the data fall into four general categories.

* Statistics on the prevalence of bankruptcy and delinquency on various types of debt among the U.S. population are cited.

* Potential indicators of financial problems are identified and assessed. For example, the rule of thumb used by credit counselors is that an individual's monthly payments for consumer credit not exceed 20% of take-home pay.

* The relationship between financial problems and other problem behavior is discussed, particularly the relationship with white collar crime and various compulsive behaviors.

* Potential mitigating factors are noted.

FINANCIAL PROBLEMS AND PERSONNEL SECURITY

Money has been a major incentive in most recent cases of espionage and in many other cases of illegal behavior by government employees. The John Walker and Jerry Whitworth espionage cases which resulted in extensive compromise of U.S. military communications secrets are prime examples. Financial difficulties were the initial impetus for Walker to volunteer his services to the Soviets and for Whitworth's agreeing to help him, and financial gain was a continuing motivation for their cooperation.[2]

According to a study now underway of 115 Americans arrested for espionage between 1945 and 1990, at least 67.8% were motivated by money. In at least 52.2% of the cases, money was the primary motivation. Of those with financial motivation, at least 30% are known to have had significant debts, while the others may have been motivated mainly by greed. This study is based only on unclassified information, so the data are incomplete.[3]

A different study of 44 Americans arrested for espionage since 1980 showed that a check of Internal Revenue Service master file records alone (not the individual Form 1040 records) would have raised significant financial issues concerning nearly half of them. Out of the 44 cases, 13 to 17 individuals who had a tax obligation failed to file a tax return during at least one year prior to their arrest. (The number is uncertain, as in four cases it has not been determined whether the individual actually had a tax obligation during the tax year in question.) Such failure to file is surprisingly common, as discussed below. In four cases in which returns had been filed, tax payments were delinquent and the individual had significant difficulties with the IRS prior to arrest for espionage.[4]

Whether motivated by need or greed, recent Defense procurement scandals have also heightened awareness of financial issues in security clearance. Most white-collar crime is committed by longterm, trusted employees who develop financial difficulties, or by persons seeking to live a lifestyle well beyond their financial means. According to one estimate, white-collar crime bleeds American business of \$40 billion per year.[5] In retail stores, losses from theft by one's own employees have increased greatly in recent years and are now believed to be three times as great as losses to theft by outsiders.[6] Personnel security specialists report that 30% to 40% of employees from retail, restaurant, manufacturing and health care industries admit to costly employee

49

theft, and that as many as 30% of all business failures are due to employee theft and related forms of dishonesty.[7] No estimate is available of the cost to the U.S. Government from fraud or theft by its own employees.

After 1988 when the polygraph was outlawed for most employers as an employee screening tool, many American businesses turned to using credit reports as an alternative means of judging whether a prospective employee is likely to steal, sell company secrets or otherwise act irresponsibly on the job. They contend that knowing how a person handles bills, loans and other financial obligations is a useful predictor of how the person might act on the job. The three largest credit report vendors started marketing what they call employee screening reports in 1988 or 1989, and sales have grown dramatically.[8]

Critics in some personnel assessment firms, however, point out that there is no statistical evidence of a link between financial problems and dishonesty. Credit records contain many inaccuracies, honest people can accrue bad credit records, and people with clean credit records are not immune to temptation.[9]

Common sense and experience suggest that financial difficulties may increase temptation to commit illegal or unethical acts as a way of meeting financial obligations. One must always remember, however, that many such acts are committed out of simple greed, not need, and that the great majority of those with financial difficulties are not inclined to commit illegal acts at all. Existence of personal financial difficulties should not always bar an otherwise qualified applicant for security clearance. Income from the new job may be all that is needed to solve the financial problem.

Financial problems ought to be viewed in the context of what has caused them and what is being done to resolve them. One survey of persons seeking financial counseling suggests that in about half the cases, the financial problems arose through little or no fault of the individual. They were caused by loss of job, divorce or separation, accident or disability, or unexpected medical bills.[10] If there is no clear personal fault, an individual's financial difficulties should not be compounded by denial of security clearance, especially if the individual has demonstrated intention and ability to gain control over his or her financial situation.

At the other extreme are those whose financial problems stem from personality flaws with broader security ramifications-compulsive gambling, compulsive shopping, drug or alcohol abuse. Compulsive behavior is a form of emotional disorder in which one loses control over one's own actions. It impairs judgment and can easily lead to illegal or unethical acts in a desperate attempt to recover from self-inflicted financial adversity. For example, one study found that 21% of a sample of Gamblers Anonymous members and 46% of a sample of pathological gamblers treated by the Veterans

Administration had been arrested specifically for one or more of a small group of crimes all resulting from attempts to obtain money for gambling.[11]

A third grouping consists of those whose problems result from immaturity or irresponsible attitudes. Again, one should not make judgments solely on the basis of the credit record. One has to understand the whole person and the reasons for this record, and only then judge the extent to which an individual's financial problems might constitute a security risk. If an individual with financial problems has shown a general propensity toward high-risk behavior and a contempt for authority, one might judge that this individual is more likely than others to turn to illegal or unethical means of solving financial difficulties.

PREVALENCE OF FINANCIAL PROBLEMS

This section presents statistics on the amount of consumer credit outstanding in the United States and on delinquency rates for many kinds of financial obligations. It shows how common or uncommon various types of financial problems are. The problem of unexplained affluence is also discussed, although no statistical data is available on its frequency.

Overall Consumer Credit

The overall amount of consumer installment credit outstanding has increased from \$356.5 billion in 1977 to \$739 billion in 1990 (as of December, seasonally adjusted). With a little over 94 million households in the United States, this is an average consumer installment debt of about \$7,850 per household. Consumer installment credit refers to credit extended to individuals that is scheduled to be repaid (or has the option of repayment) in two or more installments, excluding loans secured by real estate. It includes automobile loans, credit card accounts, and personal loans by banks, credit unions, savings and loans, and finance companies.

Figure 1 depicts this increase in consumer credit since 1977.[12] Inflation accounts for much of the increase. Even after adjusting for inflation, however, consumer installment credit increased by 43% from 1980 to 1988 and has continued to increase. By comparison, real disposable income grew by only 32% during this same period, indicating that debt grew faster than income. Almost all of the increase in debt came since 1983 during a period of economic growth and expansion.

There are several possible explanations for this apparent deterioration of family finances. The average length of a new car loan increased from 36 to 48 months, which made if possible for car buyers to carry a larger loan balance with no increase in monthly payments. There was further proliferation of credit cards, partially as a result of heavy marketing to lower income and therefore higher risk groups.

On the other hand, the way these statistics are calculated masks what was actually an even larger increase in consumer debt. The Tax Reform Act of 1986 first reduced and eventually eliminated the tax deductibility of interest paid on consumer debt. This prompted many homeowners to take out home equity lines of credit, for which interest payments are tax deductible. Since these lines of credit are secured by real estate, they fall outside the generally accepted definition of consumer credit. Surveys have shown that a substantial portion of the approximately \$75 billion in home equity credit line balances outstanding at the end of 1988 was being used for things that would normally be considered consumer credit rather than home improvements.[13]



Consumer Credit Counseling Service (CCCS) is a non-profit organization that provided free or very low cost services to an estimated 390,000 families in 1990. As of January 1991, it had 578 offices in the United States and Canada and was growing at a rate of two new offices per week. Table 1 gives the results of a 1989 survey of CCCS clients concerning the reasons for their financial problems. This was not a carefully planned and conducted scientific survey, but it does give a rough indication of the portion of those having financial problems who may not themselves be greatly at fault. Half of those receiving credit counseling reported that their problems were the result of unemployment, accident or disability, divorce or separation, unexpected medical expenses, or

reduced income. The other half attributed their problems simply to "Overobligation" (47%) or "Other" (4%). The "Other" category included those who admitted drug abuse or gambling as the source of their problem.

Table 1

Reasons for Financial Problems

Overobligation	47%	Unexpected Medical	10%
Unemployment	13%	Reduced Income	1%
Accident/Disability Divorce/Separation	13% 12%	Other (e.g., Drugs, Gambling)	4%

Responses by Consumer Credit Counseling Service clients to 1989 survey.¹⁴

The "Overobligation" and "Other" categories cover problems that were caused by immaturity, irresponsibility, compulsive spending, gambling, drugs and alcohol. They amounted to about half of those receiving counseling services. Of course, the listing of unemployment, divorce, accident and medical problems may mask some compulsive behavior that contributed to or caused that problem. Therefore, the actual percentage of those whose financial problems are predominantly of their own making may be greater than 50%.

Bankruptcy

In 1990, eight-tenths of one percent of all households, or one of every 120 American households, filed for bankruptcy.[15] In the first quarter of 1991, personal bankruptcies jumped by 28% over the year-earlier level. The number of bankruptcy filings during the first quarter of 1991 was 213,093, up from 166,694 in the first quarter of 1990.[16]

The frequency of bankruptcy in the United States has been increasing dramatically since a new bankruptcy law went into effect in 1979. The new law lowered the cost to the individual filing for bankruptcy by increasing the number of assets that are exempt from liquidation in the bankruptcy process. During the decade of the 1970s, before the new law, there were a total of 2,086,189 bankruptcy filings. During the 1980s, this increased by almost two-and-a-half times to a total of 4,583,391 bankruptcy filings. This and other bankruptcy statistics in this section are from a March 1991 draft of the 1990 annual report on "Bankruptcy Statistical Information" prepared by the Administrative Office of the United States Courts, Division of Bankruptcy.[17]

Bankruptcy is not always bad. Many people experience financial problems through no fault of their own, and bankruptcy rules were loosened in 1979 for the express purpose of making it easier for people to get a fresh start. To evaluate the significance of bankruptcy, it is necessary to understand the reasons for it and what efforts were made to solve the financial problems short of bankruptcy.

There are two basic ways an individual can file for personal bankruptcy. Under Chapter 7 of the 1978 Bankruptcy Code, the procedure is based upon the value of the debtors' assets, less certain essential assets, such as a home, that are exempt. The non-exempt assets are sold by a court-appointed trustee to pay off unsecured creditors as much as possible. The remaining debts are A Chapter 7 filing usually remains on a credit then canceled. report for ten years and cannot be repeated for six years. About 70% of bankruptcy filings are made under Chapter 7. Of these, about 90% are "no asset" cases where all property of the debtor is exempt from sale by the court-appointed trustee.[18] In such a "no asset" case, all debts are wiped clean and the debtor loses no tangible assets.

Proceedings under Chapter 13 are based on the debtor's future earnings potential. This is designed for individuals with regular income who desire to pay their debts but are currently unable to do so. The primary benefit of Chapter 13 relief is the ability to consolidate debts and repay creditors, in full or in part, in installments over a three to five year period. During this time creditors are prohibited from collection efforts. The payments are supervised by a court-appointed trustee. Again, any remaining debts are canceled at the time the individual emerges from the bankruptcy proceeding. The record of the Chapter 13 filing remains in one's credit report for seven years.

Most business bankruptcies are actually counted as personal bankruptcies under Chapter 7 or Chapter 13. This is because most businesses are either sole proprietorships or partnerships where the individual is personally liable for the business debts. Corporations file for bankruptcy under Chapter 11 of the bankruptcy code, which allows a business to reorganize as a going concern rather than be liquidated. It provides the business with breathing room to scale down its operations and work out a plan of repayment acceptable to its creditors. Although Chapter 11 is well known because of the publicity surrounding the bankruptcy of large corporations, it is actually not very common. There were only 20,783 Chapter 11 cases during 1990. About 97% of all bankruptcies are personal bankruptcies.

The steady increase in bankruptcy filings during the 1980s is shown graphically in Figure 2. Almost all of this increase has been in personal bankruptcies, as business bankruptcies peaked in 1984 and have dropped significantly since then.

The fall in the number of bankruptcies during 1983 and 1984, as shown in Figure 2, is attributed to economic growth following back-to-back recessions between 1980 and 1982. The rapid growth in bankruptcies starting in 1985 has been called "the boom in going This has puzzled economists because of the growth in bust." consumers' disposable income during the same period. One factor may be that despite economic growth from 1985 to 1990, the proportion of households carrying heavy debt loads increased, thus increasing the pool of potential bankruptcies. Other factors may be changes in consumer attitudes toward bankruptcy (reduction in the social stigma of filing), the trend toward extending consumer credit to higher risk categories of borrowers, attorney advertising, and a wider awareness of the improvement in household finances that may be gained through filing for bankruptcy.[19]



There are great differences between the states in frequency of bankruptcy cases. These are caused mainly by differences in state laws on the amount and type of property exempt from bankruptcy

Financial Irresponsibility

proceedings. These determine how much an individual gets to keep after going through bankruptcy. At one extreme, Tennessee during 1990 had one bankruptcy filing for every 51 households, while at the other extreme, Hawaii had only one filing for every 409 households. Fourteen states had at least one bankruptcy for each 100 households, while ten states and the District of Columbia had less than one bankruptcy per 200 households. As previously noted, the national average in 1990 was one bankruptcy for every 120 households. Table 2 shows the number of households per bankruptcy filed during 1990 for each state plus the District of Columbia and Puerto Rico.[20]

Other differences between states are caused by regional changes in economic conditions. During 1990, for example, bankruptcy filings increased by about 15% nationwide, but they increased by at least 55% in each of the New England states which felt the brunt of an economic recession. During 1990, bankruptcy filings increased by 63.2% in Connecticut, 88% in Massachusetts, and 94% in New Hampshire. Massachusetts led the nation with a 403% increase in bankruptcy filings during the past five years. Even after this increase, however, Massachusetts still ranked only 44th among the states in the frequency of bankruptcies per 100 households.

To help lenders and businesses cope with the increasing frequency of bankruptcy loses, VISA recently initiated a Bankruptcy Alert Service. Subscription to this service provides information updated weekly on computer disk or tape of all bankruptcy filings anywhere in the United States.[21] This information could then be matched by computer against personnel records to gain prompt notification of cleared personnel who are having serious financial problems, and this computer matching could be done in-house with very little effort. The same information will eventually be available thorough a credit check when a periodic re-investigation is done, but it would only be received several years after the financial problem had come to a head.

Credit Cards

In 1988, more than \$390 billion worth of goods and services were purchased with credit cards issued by banks, department stores, gas stations, and other retailers. This part of the credit industry has been growing at the rate of about 16% per year, and Americans now hold more than 880 million credit cards.[22]

The American Bankers Association reports that the delinquency rate on individual bankcard accounts grew from 2.56% of all revolving accounts in the third quarter of 1990 to 2.85% in the fourth quarter. This compared with 2.24% of revolving accounts in the fourth quarter of 1989. The percentage was higher when

Table 2

Number of Households per Bankruptcy

State	# of House- holds in 1000's	Total Cases Filed 1990	House- holds per case filed	Nat'l Rank	State	# of House- holds in 1,000's	Total Cases Filed 1990	House- holds per Case Filed	Nat'l Rank
TENN	1,882	36,718	51	1	TEXAS	6,134	43,279	142	27
GA	2,362	42,407	56	2	NEB	622	4,048	153	28
ALA	1,519	25,853	59	3	AK	180	1,153	156	29
UTAH	534	7,894	68	4	MONT	307	1,951	157	30
NEV	442	6,468	68	5	RI	376	2,345	160	31
ARIZ	1,303	18,385	71	6	NHAMP	413	2,568	161	32
COL	1,281	16,671	77	7	місн	3,424	20,524	167	33
OKLA	1,250	15,233	82	8	MD	1,729	10,311	168	34
MISS	929	11,228	83	9	PR	1,210	7,082	171	35
IND	2,102	24,109	87	10	wisc	1,842	10,766	171	36
IDAHO	370	4,100	90	11	SDAK	271	1,492	182	37
ORE	1,127	12,091	93	12	NJER	2,858	15,405	186	38
KY	1,396	14,718	95	13	WVA	708	3,670	193	39
CALIF	10,581	108,607	97	14	IOWA	1,097	5,661	194	40
OHIO	4,148	39,689	105	15	NCAR	2,498	12,659	197	41
VA	2,274	21,590	105	16	NY	6,843	33,248	206	42
MINN	1,643	15,100	109	17	CONN	1,211	5,608	216	43
KS	965	8,811	110	18	MASS	2,235	10,154	220	44
WASH	1,867	16,425	114	19	DC	241	1,087	222	45
ILL	4,370	37,832	116	20	SCAR	1,245	5,527	225	46
LA	1,562	12,918	121	21	NDAK	247	1,082	228	47
WYO	177	1,424	124	22	DEL	250	1,088	230	48
ARK	912	7,062	129	23	PENN	4,538	17,871	254	49
NMEX	548	4,200	131	24	MAINE	469	1,809	259	50
мо	1 ,988	14,847	134	25	VT	216	701	308	51
FLA	5,072	36,552	139	26	ні	361	882	409	52
Nat'l	94,129	782.960	120						

CALENDAR YEAR 1990

calculating the percentage of all outstanding balances, rather than the percentage of individual accounts. In the fourth quarter of 1990, 4.46% of outstanding bankcard debt was overdue by 90 days or more. That was up from 4.01% in the third quarter and 3.22% in the fourth quarter a year ago. This is the highest delinquency rate since the fourth quarter of 1986, when the rate was 4.8%.[23] When families start having financial problems, their unsecured credit card debt is among the first debts to go unpaid.

These delinquencies led Visa and MasterCard to write off a total of \$5.19 billion as bad debts in 1990. This was 3.37% of their outstanding credit card balances, up from 2.99% in 1989.[24]

Two different types of sources provide information on patterns of credit card use. One is a series of five surveys of consumer finances sponsored by the Federal Reserve Board between 1970 and 1986.[25] These figures are based on consumer responses to survey questions. The other source is collation of statistical data provided by companies that issue credit cards.

The Federal Reserve board studies reported that just over half of all American families held one or more types of credit card in 1970. This increased to 71% of families surveyed in 1986. The greater growth came from bank credit cards, which were held by only 16% in 1970 but 55% in 1986. Figure 3 shows the increase in percentage of families at various income levels that hold bank cards. The income levels for all years are expressed in constant One notes that 21% of all families with incomes 1985 dollars. under \$10,000 had bank credit cards in 1986, and 37% of all families with incomes between \$10,000 and \$19,999. The greater the income, the greater the percentage of people having at least one bankcard.



Figure 3. Growth in Bank Credit Cards, by Income Income in constant 1985 dollars

58

Use of bank credit cards has continued to increase rapidly since 1986, as bankcard marketing programs have increasingly targeted the lower income and higher risk market segments of the population that did not previously use them. For example, the number of MasterCard holders in the United States increased from 17 million in 1986 to 90 million in 1990.[26] Current information on the percentage of bankcard holders by income level is not available.

Credit card holders may be divided into "convenience uses" who pay the full bill each month so that no interest is accrued, and "revolvers" who use the cards as a source of credit and often pay only the minimum balance due. The Federal Reserve surveys asked families about their payment pattern. In 1977, 1983 and 1986, almost half of families using bank or retail credit cards said they "nearly always pay in full." The greatest increases in the "hardly ever pay in full" category were families with incomes less than \$10,000, up from 19% to 41%, those aged 65 and over, up from 8% to 22%; and those with no more than an eighth grade education, up from 24% to 60%.

The percentage of convenience users who pay their full balance each month has been declining since the last consumer finance survey in 1986. Data provided by credit card issuers is not directly comparable to the Federal Reserve's survey data, but it offers a similar picture. According to a national association of bankcard holders, Bankcard Holders of America, in 1986 about 50% of card holders paid their full balance every month and paid no By 1990, this figure had dropped to 33%, with the interest. remaining accounts carrying a balance for more than 30 days and therefore accruing interest.[27] The decrease in percentage of convenience users and corresponding increase in revolvers since 1986 is explained, at least in part, by the strategy of many card issuers to market their cards to lower income and higher risk segments of the market.

The figures vary for different types of bankcards. MasterCard reports that during the average month in 1990, 26% of its cardholders paid their account in full and were charged no interest; conversely, 74% carried over a balance for more than 30 days and were charged interest. This had changed from an average of 29% and 71% in 1986.

At MasterCard, the average monthly balance for those accounts that did revolve and accrue interest was \$1,340 during 1990. The average payment per month on those balances was \$179.98. This is the average for all types of cards; the figures would be higher for premium or "gold" cards issued to wealthier customers with a higher credit line and lower for regular cards.[28] This is comparable to a figure provided by Bankcard Holders of America that the outstanding revolving balance on all bankcards averages \$1,600.[29]

In the fourth quarter of 1990, the average interest rate on bankcard debt was 18.23%, the highest since 1986.[30] At this interest rate, a debt will almost double in four years. Many issuers were charging as much as 19.8% interest.[31] However common it may be, continued maintenance of credit card debt at these interest rates is not good financial planning. At a time when other rates were moving down, credit card rates inched up as banks became concerned about increasing default rates. Cardholders seem insensitive to the high rates as most intend to pay off their monthly balance to avoid the interest, even though many fail to do so.[32] Cardholder balances continued to grow even after 1986 when changes in tax law first reduced and then eliminated the taxdeductibility of consumer interest. In spring 1991, a few credit card issuers finally started to compete on the basis of lower interest rates.[33]

Other Consumer Credit

The American Bankers Association collects monthly data from a sample of commercial banks concerning the number of loan contracts of various types delinquent by 30 days or more. It then puts out a quarterly report called <u>Consumer Credit Delinquency Bulletin</u>. Unless otherwise noted, the information below is from the report for the first quarter of 1990.[34]

The ABA quarterly report includes a composite figure that is a weighted average of delinquency rates for seven types of closedend consumer credit. These are unsecured personal loans, direct and indirect auto loans, mobile home and recreational vehicle loans, property improvement loans, and home equity loans that have a fixed payment schedule. Credit card debt is not included. Since 1977, this composite delinquency rate has ranged from a low of 1.78% in February 1984 to a high 2.86% in September 1989.

In March 1990, the composite delinquency rate was 2.46%. As usual, there was significant variation between states. Nebraska, Wisconsin and Arizona had the lowest delinquency rates, with 1.15%, 1.23%, and 1.26% respectively. North Dakota, Connecticut and Massachusetts were the highest at 5.59%, 5.36%, and 5.13%.

As might be expected, unsecured personal loans have the highest delinquency rate, with an average of 3.37% of such loans delinquent at least 30 days in March 1990. This figure varied from a low of 1.22% in Colorado to a high of 7.85% in Connecticut.

After home mortgages, automobile loans are the largest single source of consumer installment indebtedness. They account for roughly 40% of total non-mortgage installment debt. There are two types of automobile credit contracts, direct and indirect. Direct loans are made to customers who apply directly at the bank. Indirect loans are made through retail auto dealers to borrowers that the bank typically never sees. Delinquency rates on indirect loans are consistently higher than on direct loans, as the auto dealers do not screen borrowers as effectively as the banks.

Since 1977, the percentage of auto loans more than 30 days past due has ranged from a low of 1.32% to a high of 2.68%. In March 1990, the figure was 1.83% of direct loans and 2.30% for The highest delinquency rates for direct loans indirect loans. were in Puerto Rico (9.15%), North Dakota (5.58%), and New Hampshire (5.45%). For indirect loans, the highest rates were in Massachusetts (5.18%), North Dakota (4.14%), and Alabama (3.92%). Notice that the average delinguency rate was lower for direct loans than for indirect loans, but the peak delinquency rates for individual states are for direct loans rather than indirect. One possible explanation is that auto dealers in those high risk states are more aggressive than banks in repossessing cars once the delinguency reaches 60 to 90 days.

Repossession of cars on indirect loans made by auto dealers is almost twice the rate for direct loans by banks. In March 1990, there were 1.81 repossession for every 1,000 indirect loans outstanding, and only .94 per 1,000 direct loans. Those are monthly figures, so the annual rate of repossession would be about 22 per 1,000 or 2% for loans through an auto dealer and about 12 per 1,000 or 1.2% for bank loans.[35]

Repossession rates for leased automobiles are similar. Leased vehicles repossessed during 1990 represented 1.52% of the value of all auto leases outstanding. This was roughly double the yearearlier figure. The Consumer Bankers Association suggests that repossessions increased dramatically because consumers struggling to afford higher priced new cars increasingly turned to leasing when they found they could not afford to buy.[36]

<u>Mortgages</u>

Mortgage loans are the largest source of household indebtedness. Mortgage payments past due reached a peak in the third quarter of 1990 when 5% of all mortgage payments on one to fourunit residences were past due. Of these, 3.47% were 30 days past due, .78% were 60 days and .75% were 90 days or more past due. Foreclosures were started on .33% of all loans.[37] From 1977 through 1988, the delinquency rate had ranged from 3.12% to 4.15%.[38] During 1989 through the third quarter of 1990, however, the rate ranged from 4.41% to 5%.

According to the quarterly <u>National Delinquency Survey</u> prepared by the Mortgage Bankers Association, delinquency rates vary substantially depending upon type of mortgage loan. Although the average during the third quarter of 1990 was 5%, the rate for conventional loans was 3.23%, for VA loans it was 6.81%, and for FHA loans it was 7.06%. Figure 4 shows the rate for these various types of loans broken down by the length of time past due.

Financial Irresponsibility

Delinquency rates also vary by state, with some states having twice as many delinquencies as others. Regional economic conditions and differences in foreclosure laws and practices affect which states have the highest rate. States with particularly high rates during 1990 were Mississippi, Tennessee, Louisiana, Texas, and New Mexico. States with the lowest rates were Hawaii, South Dakota, Oregon, and Washington.

Second mortgages and open-ended home equity loans have lower delinquency rates. According to the American Bankers Association <u>Consumer Credit Delinquency Bulletin</u>, 1.47% of second trust loans with a fixed payment schedule were past due 30 days or more as of March 1990. For the open-ended home equity loans, the rate was .79%. Demand for home equity loans has grown rapidly since the 1986 tax law changes. In early 1991, home equity lending was running 18% above the year-earlier level. About 20% of all homeowners now have home-equity lines of credit.[39]



Figure 4. Residential Mortgage Delinquencies, 1990 3rd Qtr.

Income Taxes

The Internal Revenue Service estimates that about 6 to 7 million Americans who owe tax fail to file federal income tax returns. About 110 million individual tax returns are filed each year, so this represents a startling failure-to-file rate of roughly 5.5%. The estimate of 6 to 7 million non-filers is not a hard figure, as this is obviously a difficult subject to research. The current estimate is based on an old, 1977 IRS study that has been updated only to reflect the increased number of persons filing returns.[40]

As noted previously, a check of IRS master file records (not the individual Form 1040 files) on 44 Americans arrested for espionage since 1980 found that 13 to 17 (29.5% to 38.6%) of them failed to file an income tax return during at least one year prior to their arrest. The exact figure is uncertain, as in four cases it was not clear whether the individual actually owed tax during the year in question.

Failure to file an income tax return is a potential disqualifying factor for a security clearance, as an individual who does not respect the U.S. Government's tax laws cannot be counted on to have much respect for security regulations. Failure to file a tax return is easier for a self-employed person to get away with than for a government or other employee whose salary is subject to tax withholding. However, failure to file occurs even among government employees, especially those whose financial situation is in considerable disarray. It is noteworthy that failure to file is only a misdemeanor, while intentionally giving false information on a return is a felony. If one cannot pay the tax or does not want to disclose certain income, the penalty is less severe for not filing at all than for filing a deliberately false return.

Of the roughly 110 million tax returns that were filed in 1989, about 14%, or 15.5 million, were assessed a penalty. There were 9,524 penalties for fraud, 226,708 for paying with a check that bounced, 1.6 million penalized for delinquency (late payment or failure to file), 1.8 million penalized for negligence; 4 million penalized for failure to pay estimated tax, and 7.7 million penalized for failure to pay (underreporting of income such as failure to report an interest payment). There were also 94,307 penalties for other offenses such as using an incorrect tax payment identification number, failure to report tips, and incorrect reports of amount withheld.[41]

Student Loans

About 17% of borrowers in the federal guaranteed student loan program were in default during 1990, and these defaults cost the federal government \$2.4 Billion during that year.[42] The default rate for students who had attended four-year colleges was 10%, for those from two-year schools it was 20% to 25%, while students from trade schools defaulted at a 39% rate.[43]

In 1990, the Department of Defense obtained a computer tape of all student loan defaulters and matched this tape against its computer records of 10 million current and retired military and federal civilian employees. This kind of computer matching can be done very quickly, in-house, and with relatively little effort. The computer match determined that 65,598 defaulters who owe the U.S. Government \$184.5 million were then receiving a U.S. Government paycheck. This means that out of every 1,000 current and retired federal civilian and military employees, about 6.6 are in default on student loans.[44]

Default of federal guaranteed student loans may indicate either financial problems or lack of respect for financial obligations or for government regulations.

Child Support Payments



Figure 5. Child Support Payments, 1985

In 1975, there were 8.8 million women with children under 21 where the father was not present in the household. Of these 8.8 million women, 61% had been awarded child support and 39% had not. Of those awarded child support, only 48% were receiving the full amount. Less than the full amount was received by 26%, and another 26% received nothing.

In other words, more than half of the fathers ordered to make child support payments were either delinquent in these payments or completely ignored the order. The problem of child support payments has been increasing due to the steady increase in number of single-parent families.

Failure to pay child support costs federal and state governments large amounts of money, as many single mothers must then depend upon Aid to Families with Dependent Children (AFDC) and other welfare programs. In order to place the burden for child support on the parents, where it belongs, Congress in 1975 established the Child Support Enforcement Program, which is implemented by the states under federal policy guidelines and standards and with largely federal funding.

During FY 1988, the Child Support Enforcement Program collected \$4.6 billion. Of this amount, \$1.5 billion was collected on behalf of families receiving AFDC payments, and much of this was used to offset the AFDC payments. Elements of the federal enforcement program include intercepting federal income tax refunds, helping establish paternity and getting support orders issued, operating the Federal Parent Locator Service, encouraging states to report child support information to credit bureaus, and changing the law to allow states to withhold wages and impose liens on property for overdue child support.

The enforcement program also includes ability to match a computer tape of nonpayers against an agency's computer records of its own employees. A 1989 computer match identified 53,670 active, retired or reserve military or civilian Defense Department employees who are not meeting their child support obligations.[45]

In addition to the costs it imposes on government and society at large, failure to pay child support is a relevant factor in security clearance because it indicates either an inability or refusal to accept responsibility for the consequences of one's actions.

<u>Pawnbrokers</u>

Pawnbrokers provide credit to the approximately 10% of the population that is excluded from the mainstream credit markets. The Federal Reserve Board's 1983 Survey of Consumer Finances found that 12% of all families who did not have a checking or savings account, almost guaranteeing that they would not pass the typical screening requirements of a bank or finance company. These tend to be persons with low incomes and little education, and their only access to credit may be the pawnbroker. Some pawnshop customers have access to traditional forms of credit but select the pawnshop for its privacy and discretion.

Default rates on pawnbroker loans are high. Depending on the state, they range from 14% to 22% of all loans made. Given the exceptionally high rate of patronizing pawnbrokers in most states, seeking out this source of credit often indicates some measure of desperation. Either the individual's financial condition is so weak that there is no other alternative, or, for some reason, the individual is willing to pay dearly for the increased privacy associated with pawnbroker transactions.

There are roughly 6,900 pawnshops in the United States, one for about every 35,700 inhabitants. They are most common in the Southern and Central Mountain states, with the greatest density of pawnshops found in Oklahoma and Texas. Pawnbrokers made about 35 million loans in 1988. They serve several million Americans each

Financial Irresponsibility

year and perhaps as much as 10% of the adult population. The average loan is only \$50, but repeat customers are common. Effective interest rate ceilings vary across states from 1.5% per month to 25% per month. In more than half the states, pawnshops levy interest rates and fees that on an annual basis amount to 120% APR or more for an average-size loan. If a customer defaults, the collateral becomes the property of the pawnshop after a specified period, commonly one to three months. The amount loaned is typically 50% to 60% of the resale value of the collateral.[46]

Unexplained Affluence

Unexplained affluence refers either to known income from unidentified sources or to a pattern of expenditure and standard of living that cannot be explained by known sources of income. No statistical data is available on unexplained affluence.

Unexplained affluence is a difficult concept to work with, as there are so many legal as well as illegal sources of income beyond one's own salary. Unusual affluence might come from inheritance, gifts from parents, astute investments, a profitable hobby, or a second job. On the other hand, it may also be attributable to drug dealing, espionage, or other criminal activity. In many cases, the indications of affluence are the same regardless of its source.

Indicators that investigation of unexplained affluence may be appropriate include large cash transfers, paying in cash (especially large denomination bills) for purchases that are more normally paid for by check or credit card, foreign bank accounts, any apparent attempt to hide income, or sudden changes in financial status. Title 31 of the Bank Secrecy Act provides for maintenance by Customs and/or the Internal Revenue Service of five data bases that are relevant to detection of unexplained affluence. These data bases are records of bank, merchant, and casino currency transactions of \$10,000 and over; and foreign bank accounts. All are retrievable from one consolidated data base.

INDICATORS OF FINANCIAL PROBLEMS

This section provides background information for those whose job involves identifying the presence of financial problems and judging how bad they are. It addresses questions such as: How much debt is too much? How accurate are credit reports, and what is often missing from them? What is credit scoring, and how is it used? This section also notes that compulsive gambling and compulsive shopping are common causes of financial problems that are often overlooked.

The Debt Test

A principal rule of thumb used by credit counselors is that if an individual's monthly payments for consumer credit (excluding mortgage but including car payments) are more than 20% of monthly

take-home pay, that individual is in serious trouble. A 1981 study of persons filing for bankruptcy found that 91% of bankruptcy filers failed this 20% test. Within the general population, only 5% are this burdened with consumer debt. The bankruptcy study found that this debt/income ratio is the single most useful predictor of who will file for bankruptcy.[47]

The National Foundation for Consumer Credit, which is the umbrella organization for 578 Consumer Credit Counseling Service offices in the United States and Canada, has developed a simple test to help consumers know when they should become concerned about their debt levels. If a person answers yes to two or more of the following questions, the NFCC says that person should seek professional assistance. The questions are:

- 1. Are you borrowing to pay for items you used to buy with cash?
- 2. Is an increasing percentage of your income going to pay debts?
- 3. Is your savings cushion inadequate or nonexistent?
- 4. Can you only make minimum payments on your revolving credit accounts?
- 5. Are you near or at the limit on your lines of credit?
- 6. Do you take out a new loan before the old one is paid off, or make a new loan to pay off the old loan?
- 7. Are you unsure about how much you owe?
- 8. Are your monthly credit bills more than 20% of your net income (excluding rent or mortgage)?
- 9. If you lost your job, would you be in immediate financial difficulty?

Credit Reports

A credit report is available on virtually all persons processed for security approval and is the most basic document for judging a person's financial status. Given its pervasive use, it is unfortunate that the credit report is so often incomplete or inaccurate. A 1989 study of 1,500 credit reports found that 10% of the reports contained some information that applied to the wrong person, and that 43% contained errors of a nature that delayed processing of mortgage loan approvals.[48]

In early 1991, the Federal Trade Commission reported that credit reports are the No. 1 subject of consumer complaints, ahead of auto defects and debt collectors. In July 1991, the attorneys general in six states filed lawsuits against TRW, Inc. charging that it uses sloppy procedures that create errors in consumer credit files, inadequately investigates consumer complaints about inaccuracies, and allows errors to recur in consumer files. The attorneys stated that the same failings are apparent in the work of the two other major credit report vendors. In summer 1991, Congress as considering five bills to overhaul the industry.[49]

The credit report contains information on credit card debt, car loans, bank and finance company loans, most mortgages, and

Financial Irresponsibility

debts owed to many mail order firms and large department stores. Federal government programs are increasingly causing student loan information and child support obligations to be included. The credit report also has information from credit agencies on collection actions, repossessions and garnishment of wages. From public records it has information on most bankruptcies, liens, and civil judgments. The reports do not always have all relevant information, and the degree of completeness varies for the different categories.

Many items of interest do not generally appear on the credit report. Debts owed to local stores do not appear unless they have been turned over to a collection agency. Federal and state tax delinquencies are usually not reported. Doctors, dentists and utility companies do not normally report their bad debts. Alimony obligations are not reported unless there has been a court order to pay. Automobile or other equipment leases are not included.

Credit Scoring

Credit scoring is a computerized, mathematical procedure that most financial institutions now use to make decisions to accept or reject credit or loan applicants. There are many different versions of credit scoring, but what they all have in common is that they assign numerical weights or values to applicant characteristics such as age, income, occupation, length of credit history, level of indebtedness, home ownership, residential ZIP code, etc. One company that developed a bankruptcy forecasting model studied more than 300 potential characteristics before identifying what is considered 25 key indicators.[50] Other credit scoring systems are based on seven to ten key indicators. Several generic types of credit scoring models are discussed in the literature, [51] but the specifics of which variables are considered most important and how heavily they are weighted is carefully guarded proprietary information.

The weights assigned to each characteristic are based on the financial institution's past credit experience, for example experience that persons under ago 30 are more likely to default on a loan than persons over 30. Weights assigned to all the relevant characteristics of each applicant are then summed to arrive at a score for that individual. The score is compared to an established standard to determine whether the applicant is approved, rejected, or subjected to further investigation or analysis.

Credit scoring aims to speed up the credit decision process and to increase its reliability and validity. It replaces or augments the judgment of loan officers with a pre-formulated decision process. It is done by computer and saves the human effort required to evaluate and make decisions on individual cases.

All three national credit report vendors are able to process all their credit records thorough credit scoring models. For

example, TRW has a Bankruptcy Model and a National Risk Model. The Bankruptcy Model uses 13 variables that were identified as the most predictive characteristics in distinguishing between bankrupt and non-bankrupt consumers. These variables include debt burden, delinquencies, and number of inquiries about that account. For each consumer, the model calculates the risk that the individual will go bankrupt, have debts charged off for nonpayment, or have debts that become 60 or 90 days delinquent. The National Risk Model uses 43 behavioral characteristics to predict the risk of serious delinquencies in an account.

The output of each model is a number for each individual that reflects the degree of credit risk associated with that individual's credit history. The credit reporting vendors charge a small extra fee for including these credit scores on a credit report, so they are not included on all reports. Two of the vendors (TRW and Trans Union) also have an account monitoring service that alerts a lender whenever one of its clients reaches a given risk threshold specified by that lender.[52]

Payment of Old Debts

Individual's sometimes claim that they fully intend to pay their overdue debts. If they do pay them, this is certainly to



Financial Irresponsibility

their credit, but the evidence suggests that they often will not. The general rule is that the longer the bill is overdue, the less chance that it will ever be paid. The Commercial Collection Agency Section of the Commercial Law League of America did a survey to determine exactly how much the likelihood of payment diminishes as the debt become older. For a bill six months old, they found a 57.8% chance of successful collection. For a 12 month old debt, this dropped to 26.6% and for 24 months to 13.6%.[53] This is shown graphically in Figure 6. These figures apply to debts that are being actively pursued by collection agencies. If the debt is not being actively pursued, the changes of payment are far less.

Lack of Health Insurance

Health insurance is fundamental to sound financial planning, as extended hospitalization or disability that is not compensated by insurance can destroy one's financial well-being. Lack of health insurance could be the inevitable consequence of very inadequate income, or it may indicate immature, high-risk financial behavior. It is very common, however. If clearance is granted and an individual is employed by the government or a government contractor, health insurance will normally become available.

According to the 1990 census, 34 million Americans, or 16% of the non-elderly population, have no health insurance. Census figures show that 36% of Hispanics, 22% of blacks and 12% of whites lack health insurance.[54] Based on 1986 figures, about 75% of those without health insurance were employed or were family members of someone who was employed. About 90% of those who were employed but uninsured worked for employers not offering health insurance, mostly in the service sector. At least one-third of the uninsured group were families with incomes greater than twice the poverty line.[55]

As noted earlier in this section, 10% of Consumer Credit Counseling Service clients cited unexpected medical bills as the cause of their financial problems. A study of bankruptcy petitioners, however, found that less than 2% of bankruptcy filings by individuals are caused by overwhelming medical debts.[56]

Compulsive Gambling

Various patterns of compulsive behavior center around the theme of money--either spending it, saving it, or taking risks with it. These include compulsive gambling, shopping, hoarding, and "revenge spending" by an angry retaliatory spouse.[57] Compulsive gambling is so important, and so much information is available that it is discussed in detail in a following article.

Compulsive Shopping

Compulsive shopping is a potential cause of financial troubles. Statistics on its frequency are not available, although

it is not uncommon. All compulsive shoppers don't have financial problems, however, as this emotional disorder affects the wealthy as well as those with limited means.

Like alcoholism, compulsive shopping is taking an otherwise common behavior to the extreme. This emotional disorder has been described as

... an overpowering urge to buy items, especially clothing, usually in a pattern of 'shopping binges.' The articles are not bought because they are needed or a bargain, or even out of an intrinsic desire for the thing itself. The urge, at its most intense, is a compelling desire to obtain items and is experienced as frantic and irresistible ... The distinction between compulsive shopping and the occasionally shopping 'spree' is that compulsive shopping represents an attempt ... to remedy depression and emptiness and is a chronic pattern. The compulsive shopper often experiences an inner tension that is released only when something is bought.[61]

RELATIONSHIP OF FINANCIAL ISSUES TO OTHER PROBLEM BEHAVIORS

Financial issues may be related to other behaviors of security concern in either of two ways. Problems such as compulsive gambling, compulsive shopping, drug use or alcohol abuse may help cause financial problems by draining financial resources or contributing to poor health, divorce, or unemployment. Causation may also work in the opposite direction; the stress of financial problems may exacerbate drug or alcohol abuse or emotional problems or lead to criminal actions in a desperate effort to meet financial needs.

<u>Crime</u>

When financial need is a stimulus to crime, the nature of that crime may take many different forms depending on the opportunities available. Robbery, drug dealing and shoplifting are among the possibilities. The FBI's Uniform Crime Reports identify 29 different categories of crimes. Three of these are commonly regarded as financial crimes. The white-collar crimes of embezzlement, forgery/counterfeiting, and fraud are often committed by persons in a position of trust who find themselves in a financial bind or who fall to the temptations of an extravagant lifestyle well beyond their means. Espionage is a similar white-collar crime where a person misappropriates information rather than money.

Financial crimes are often motivated by financial difficulties or the temptations to which those in positions of financial trust are exposed. These crimes are defined as follows:

Financial Irresponsibility

<u>Embezzlement</u>: Misappropriation or misapplication of money or property entrusted to one's care, custody, or control.

<u>Forgery/Counterfeiting</u>: Making, altering, uttering, or possessing, with intent to defraud, anything which is made to appear true.

<u>Fraud</u>: Fraudulent conversion and obtaining money or property by false pretenses. This includes confidence games, writing bad checks, giving or taking bribes, making a false insurance claim, or deliberately giving false information on a tax form or travel voucher.

The FBI's Uniform Crime Reporting Program collects statistical information from approximately 16,000 city, county and state law enforcement agencies. It uses this information to compile an annual report entitled <u>Crime in the United States</u>. The information below is from the report for the year 1989.[62]

It is estimated that 18,200 persons were arrested for embezzlement, 105,400 for forgery or counterfeiting, and 376,600 for fraud in the United States during calendar year 1989. To facilitate comparison of arrest rates by region, age group, sex or race, arrests rates are commonly presented as number of arrests per 100,000 persons. There were 6.5 arrests for embezzlement per 100,000 inhabitants, 40.5 arrests per 100,000 for forgery and counterfeiting, and 145 per 100,000 for fraud.



Figure 7. Financial Crimes by Region
Breaking arrests down according to the region of the country in which they occur shows some interesting patterns. Robbery, for example, is about twice as common in the Northeastern states as in other parts of the country, while motor vehicle theft is far more common in the Western states than elsewhere. The financial crimes of embezzlement, forgery and counterfeiting, and fraud are reported far more often in the South (which includes Washington,D.C.) than in other parts of the country. This is not because of a generally higher crime rate in the South; rather, there seems to be some special affinity for these crimes, as distinct from other types of crimes, in the South. Figure 7 shows the regional distribution of these crimes per 100,000 population.

For some reason, these financial crimes are reported more often in cities with a population between 100,000 and 250,000 than in either larger cities or smaller cities. Again, this is uniquely characteristic of these financial crimes; other crimes do not follow this same pattern. Figure 8 compares the rate per 100,000 inhabitants for cities ranging in population from 50,000 up.



Figure 8. Financial Crimes by Size of City

Reports of arrests for financial crimes have increased at a faster rate than reports of arrests for other crimes. Reports of all arrests increased by 27.7% from 1980 to 1989. Arrests for embezzlement increased by 80.6% during this period, while forgery and counterfeiting increased by 21% and fraud by 20.8%. There was a dramatic increase in the number of women committing these crimes, presumably reflecting the changing role of women in the work force. Embezzlement increased by 52.8% among men and 151.7% among women. Forgery/counterfeiting and fraud increased by 16.2% and 12.2%, respectively, among men, but 31.8% and 31.5% among women.

Polygraph 1993, 22(1)

Financial Irresponsibility

Although 81.9% of all arrested persons were male, and only 18.1% female, females played a much larger role in financial crimes. In fact, more than one-third of reported financial crimes were committed by women, which is a greater percentage than for any of the 29 crime categories except prostitution and juvenile runaways taken into protective custody. The exact percentages are shown in Figure 9.



Figure 9. Financial Crimes by Gender

As with most other crimes, reports of financial crimes were most common among those age 25 to 34, with a pattern of gradually decreasing frequency in the older age groups. The breakdown by race was not much different than the distribution of all arrests, which was 67.3% white and 30.8% black.

Compulsive Behaviors

Compulsive gambling and compulsive shopping, either of which may cause financial difficulties, are often found together with other compulsive behaviors. One psychiatrist has noted, for example, that most compulsive shoppers he has treated have also suffered from some eating disorder, usually bulimia.[63] A study of Gamblers Anonymous members found that 52% also evidenced problems with alcohol or substance abuse.[64] A study of female compulsive gamblers found that 54% had been dependent upon something else (alcohol, drugs, overeating, overspending, sexual addiction) at some point in their lives.[65]

Compulsives of all types are engaged in an unceasing pursuit of ways to fill some inner emptiness or to relieve tension or

anxiety. They may turn to alcohol, drugs, sex, food, gambling, or impressive possessions as means of satisfying some deep-seated psychological need. Compulsive behavior that affects one's financial condition, work performance or relationships with others often prompts denial of security clearance because of the intractable nature of the underlying problem. Behavior that is out of control can compromise an employee's dependability.

MITIGATING FACTORS

If an individual has obtained or is obtaining help for a financial problem, this may be considered as a mitigating factor. Bankruptcy proceedings are one common way of resolving financial problems. The bankruptcy law is intended as a means of allowing people to make a fresh start. The question to be asked is whether an individual has indeed made a fresh start, or if the person has simply been relieved of past debt while retaining bad habits that caused that bad debt in the first place.

If the original problem was caused by compulsive spending, compulsive gambling, drug addiction, or alcoholism that caused unemployment, the fresh start accorded by bankruptcy may do little to alleviate the root cause of the problem, and future problems might be anticipated. On the other hand, if the original problem was caused by inexperience and immaturity, health problems, or loss of employment through no fault of the individual, past bankruptcy may be irrelevant to a current security evaluation.

Other mitigating factors may include credit counseling, participation in a debt repayment program, or participation in programs such as Debtors Anonymous or Gamblers Anonymous. Unfortunately, no hard data are available on effectiveness of these programs, on drop-out rates, or how much time must elapse before one can be confident the problem is under control.

The Consumer Credit Counseling Service reports that about 30% of its clients were able to help themselves after receiving budget counseling services, 37% required a debt repayment program, and the remainder were referred to other resources (lawyers or programs for treating compulsive behavior) or decided not to participate at that time. In the debt repayment program, CCCS makes arrangements with creditors to reschedule payments; the consumer then makes a single monthly payment to CCCS, which in turn pays creditors according to the arranged plan. In the CCCS experience, most individuals who start the debt repayment plan complete it successfully, and the recidivism rate is low. The average CCCS client has eleven creditors, total consumer credit debt of \$16,548, and gross monthly income of \$1,840.[66] Many other organizations or individuals offer similar credit counseling services.

Polygraph 1993, 22(1)

CONCLUSIONS

The financial motivation evidence in recent cases of Americans arrested for espionage has heightened awareness of the importance of financial issues when approving security clearances. This comes at a time when more Americans are assuming larger amounts of debt which puts them at risk in the event of unanticipated financial obligations or loss of income. It also comes at a time when some observers of American values perceive an erosion of the personal values of honesty and loyalty to employer.

The frequency of personal bankruptcy has been increasing sharply for the past 12 years. During 1990, one in every 120 American families filed for bankruptcy, and the rate of bankruptcy filings jumped by an additional 28% in the first quarter of 1991. The Internal Revenue Service estimates that 6 to 7 million Americans who owed income tax failed to file a federal tax return in 1990. This is a failure-to-file rate of roughly 5.5%. In the latter part of 1990, 5% of all home mortgage payments were overdue, and the delinquency rate was about 7% for government-sponsored VA and FHA loans. About 17% of borrowers in the federal guaranteed student loan program defaulted on their loans in 1990.

These are very disturbing figures which confirm the need for careful investigation of financial issues. Experience suggests that financial difficulties may increase temptation to commit illegal or unethical actions. One must remember, however, that many such acts are committed out of simple greed, not need, and that the great majority of those with financial difficulties are not included to commit illegal acts at all. When investigating financial issues, it is important to look beyond the obvious facts of an individual's financial obligations. Investigators need to examine the causes of financial problems and how the individual has reacted to these problems.

<u>References</u>

[1] Carney, R.M. (1991). Evaluation of DCID 1/14 investigative requirements. Washington, D.C.: CIA, IC Staff, Personnel Security Working Group.

[2] Barron, J. (1987). Breaking the ring. Boston, MA: Houghton Mifflin Co.

[3] Wood, S., & Wiskoff, M. (1991). Americans who spied against their country since World War II. Research in progress. Monterey, CA: Defense Personnel Security Research and Education Center.

[4] Timm, H.W. (1989). Unpublished interim report. Monterey, CA: Defense Personnel Security Research and Education Center.

[5] Kent, D. (1987). Crime in the suites. CFO: The Magazine for Chief Financial Officers, 3, pp. 66-76.

[6] Gall, S. Gall & Gall, Inc., a nationwide personnel security and tenant tracking service headquartered in Dayton, Ohio. (Personal communication, May 1991).

[7] Jones, J., Arnold, D., & Harris, W. (1991, January). Integrity testing: The debate continues. Security Management, pp. 71-74. [8] Fuchsberg, G. (1990, May 30). More employers check credit histories of job seekers to judge their character. The Wall Street Journal, p. B1.

[9] Ibid.

[10] Scott, K., National Foundation for Consumer Credit. The National Foundation is the parent organization for the Consumer Credit Counseling Service. (Personal communication, April 1991).

[11] Custer, R., & Custer, L. (1978, December). Characteristics of the recovering compulsive gambler: A survey of 150 members of Gamblers Anonymous. Paper presented at the Fourth Annual Conference on Gambling and Risk Taking, Atlantic City, NJ.

[12] Data through 1988 is from Credit Research Center (1989). Household Credit Data Book, 1989. West Lafayette, IN: Krannert Graduate School of Management, Purdue University. Data for 1989 and 1990 is from Federal Reserve Board of Governors (1991, March 7). Consumer Installment Credit. (Statistical Release G.19.) Washington, D.C.: Author.

[13] Household Credit Data Book, op.cit., p. 2.

[14] Scott, K., National Foundation for Consumer Credit. (Personal communication, April 1991).

[15] Flynn, E., Administrative Office of the U.S. Courts, Bankruptcy Division. (Personal communication, April 1991).

[16] Personal bankruptcies rose 28% in first quarter. (1991, June 26). The Wall Street Journal.

- [17] Flynn, E., op.cit.
- [18] Ibid.
- [19] Household Credit Data Book, 1989, op.cit., p. 61.
- [20] Flynn, E., op.cit.

[21] The Bankruptcy Alert Service costs \$995 for a one-year subscription. Information on the disk is organized by social security number, so computer matching with personnel files would have to be by social security number. For further information, contact Pat Long, Risk Management & Security Division, Visa USA Inc., P.O. Box 8999, San Francisco, CA 94128, or telephone (415) 358-2958.

[22] Samuels, A.L. (1990, January). Debt, be not proud. Black Enterprise, p. 63.

[23] Credit-card delinquencies growing, bank group says. (1991, March 15). The Wall Street Journal.

[24] Bank charge-offs up 30%. (1991, April). The Nilson Report, a news and advisory service for credit card executives, Issue 498.

[25] All figures cited from the Federal Reserve Board studies are taken from Household Credit Data Book, 1989, op.cit., pp. 21-34.

[26] Apesos, S., a manager of the statistical department at MasterCard headquarters in New York. (Personal communication, April 17, 1991).

[27] Marybeth, an employee of Bankcardholders of America. (Personal communication, April 2, 1991). Similar information was obtained from Peter Martin, of RAM Research, which collates and publishes data provided by bankcard issuers. (Personal communication, April 17, 1991). Martin stated that 1990 data show 32% paid every month.

[28] Apesos, S., op.cit.

[29] Card issuers' push for more customers doesn't lower rates. (1991, March 7). The Wall Street Journal.

[30] Why credit-card rates are defying gravity. (1991, March 4). Business Week, p. 12.

[31] The Fed may need a crowbar for this credit crunch. (1991, March 11). Business Week, p. 82.

[32] The charge-it wars. (1991, April 15). newsweek, p. 50.

[33] Rumblings of a plastic rate war. (1991, July 1). Business Week, p. 58.

[34] American Bankers Association (1990, first quarter). Consumer Credit Delinquency Bulletin (Bulletin NO. 451). Washington, D.C.: Author.

[35] Data for March 1990 are from American Bankers Association (1990, first quarter), op.cit. Earlier data is from Household Credit Data Book, op.cit., pp. 11, 51, and 55.

[36] Auto repossessions surged last year, bankers group says. (1991, March 19). The Wall Street Journal.

[37] Mortgage Bankers Association of America. (1990, December 17). National Delinquency Survey. Washington, D.C.: Author.

[38] Household Credit Data Book, op.cit., p. 81.

[39] Why lenders love home sweet home equity. (1991, May 6). Business Week, p. 22.

[40] Cox, D., Chief of Compliance Analysis Group in the IRS Research Division. (Personal communication, April 1991).

[41] Internal Revenue Service. (1990). Internal Revenue Service annual report 1989, Table 14 -- Civil Penalties Assessed and Abated, p. 53. Washington, D.C.: Author.

[42] Stout, H. (1991, May 3). Education agency set to crack down on loan defaults. The Wall Street Journal, p. B5C.

[43] Government Accounting Office (1989, July). Guaranteed student loans: Analysis of student default rates at 7,800 postsecondary schools. (GAO/HRD-89-63BR) Washington, D.C.: Author.

[44] Reiman, S., program manager at Defense Manpower Data Center, Monterey, CA. (Personal communication, May 1991).

[45] Ibid.

[46] Caskey, J.P. & Zikmund, B.J. (1990, March/April). Pawnshops: The consumer's lender of last resort. Federal Reserve Bank of Kansas City Economic Review, pp. 5-18.

[47] As we forgive our debtors, op.cit., pp. 76 and 313.

[48] Mierzwinski, E. (1990, June 12). Nightmare on credit street. Washington, D.C.: U.S. Public Interest Research Group. Citing Williams, J. (1989, August 7) Credit file errors: A report. New York, NY: Consolidated Information Services.

[49] Miller, M.W. (1991, July 10). Six states sue TRW over credit-reporting practices. The Wall Street Journal, p. B1.

[50] Wolff, M.R. (1988, January). Is that customer a potential bankrupt? Bottomline. The company was Trans Union Credit Information Co.

[51] Bodzin, M.B. (1988, September). A literature survey of private sector methods of determining personal financial responsibility. (Masters Thesis, Naval Postgraduate School, Monterey, CA).

[52] TRW Credit Data Services (1989). TRW good series; New dimensions in modeling. Promotional brochure.

[53] Bill connection, the odds (1988, October). INC. magazine, p. 112.

[54] News briefs. (1991, April 16). The Wall Street Journal, p. 1.

[55] Credit Research Center (1988). Research Agenda for 1988-89. West Lafayette, IN: Krannert Graduate School of Management, Purdue University.

[56] As we forgive our debtors, op.cit., p. 168.

[57] Bergler, E. (1984). Money and emotional conflicts. New York, NY: International Universities Press.

[58] Volberg, R.A. (1990, August). Estimating the prevalence of pathological gambling in the United States. Paper presented at the Eighth International Conference on Risk and Gambling, London, England.

[59] Lesieur, H., & Rosenthal, R. (1991). Pathological gambling: A review of the literature. Journal of Gambling Studies, 7, 5-40.

[60] Lesieur, H., & Puig, K. (1985). Insurance problems and pathological gambling. Journal of Gambling Behavior, 3, 123-136.

[61] Krueger, D.W. (1988). On compulsive shopping and spending: A psychodynamic inquiry. American Journal of Psychotherapy, 42, 574-584.

[62] U.S. Department of Justice (1990). Crime in the United States -- 1989. Washington, D.C.: Federal Bureau of Investigation.

[63] Krueger, D.W., op. cit., p. 581.

[64] Linden, R., et al. (1986). Pathological gambling and major affective disorder: Preliminary findings. Journal of Clinical Psychiatry, 47, 201-203.

[65] Lesieur, H. The female pathological gambler. In W.R. Eadington (Ed.), Gambling research: Proceedings of the Seventh International Conference on Gambling and Risk Taking. Reno, NV: University of Nevada-Reno.

[66] Scott, K., National Foundation for Consumer Credit. (Personal communication, April 1991).

* * * * * *

COMPULSIVE GAMBLING

By

Richards J. Heuer, Jr.

Moderate gambling, like moderate alcohol use, is an accepted part of our culture and causes no problems. As with alcohol use, however, gambling to excess is a relatively common failing that may lead to serious security problems. According to available unclassified data on Americans arrested for espionage, financial pressures from gambling debts played a significant role in motivating at least seven Americans to sell classified U.S. government information to the Soviet Union.

Nevertheless, security personnel report that they rarely identity compulsive gambling as an issue. If true, the present study suggests that this is only because investigators have not been looking for it. Questions about gambling practices have not been a routine part of investigative interviews or polygraph examinations. The magnitude of security problems associated with compulsive gambling will not be apparent until clearance procedures are changed to increase the focus on this issue.

The United States has experienced dramatic change during the past two decades in the prevalence of legal gambling and public attitudes toward it. Legal gambling has been one of the fastest growing industries in the country. The amount of money gambled legally each year increased by 1,400% (not adjusted for inflation) from 1974 to 1989. Rapid expansion of gambling opportunities is expected to continue during the 1990s. The growth of state lotteries represents only a small part of the increase. Many forms of gambling that were once condemned as a sin, and later a vice, are now actively promoted by governments, charities, and even churches as a "painless" way to raise funds for worthy causes.

Unfortunately, there has been no comparable increase in public awareness of the social costs that result when millions of Americans are unable to gamble in a responsible manner. Gambling is so fashionable today that the scope of problems it causes is largely unrecognized. Compulsive gambling has been called the "hidden disease," as there are few overt signs of it in the workplace until the problem is in its most advanced stage.

About two thirds of Gamblers Anonymous members and of patients being treated for compulsive gambling admit to engaging in criminal behavior or civil fraud to finance their gambling or to pay gambling-related debts. The average gambling debt of persons admitted to treatment was \$54,662 in one study and \$92,000 in

Richards J. Heuer, Jr. is a retired CIA employee. The report was written for the U.S. Government at the Defense Personnel Security Research Center, Monterey, CA.

Polygraph 1993, 22(1)

another. Of male members of a Gamblers Anonymous group, 47% admitted to engaging in insurance-related fraud or theft. The average dollar amount per person of the fraud or theft was \$65,468.

Social changes of the magnitude now under way with respect to gambling in the United States typically require adjustments to personnel security policies and procedures. The compelling evidence that compulsive gambling often leads directly to crime, especially white-collar crimes comparable to espionage, makes compulsive gambling a significant security issue. Security policies and procedures should be reviewed to ensure that they focus appropriate attention on this subject.

Compulsive gambling is a popular term, not a scientific designation. It refers to an uncontrollable preoccupation with gambling, and an inability to stop gambling even when one recognizes that gambling is causing serious financial, family, work, or other problems. The technical term now recognized by the American Psychiatric Association is pathological gambling. However, this term implies that compulsive gambling is a mental illness, and this is a controversial conclusion with legal and other implications. The term problem gambling is sometimes used to refer to all gambling that causes problems for the gambler, or to lesser problems that do not qualify as compulsive.

Surveys of person living in states where gambling opportunities are readily available found that the number of probable compulsive gamblers ranged from 1.2% of the adult population in California to 2.3% in Massachusetts. Another 2% to 3% were classified as problem gamblers; although not compulsive, their gambling did affect their family, work, or financial condition. In Maryland, 1.5% of the population over age 18 was identified as probable compulsive gamblers, while another 2.4% had some form of gambling problem. In a state such as Iowa, where gambling has not been readily available until recently, the figure was much lower--0.1% compulsive gamblers and 1.6% problem gamblers.

One section of this report is devoted to indicators for recognizing compulsive gamblers. Compulsive gamblers are far more likely than social gamblers to be preoccupied with thoughts of gambling, gamble more than intended, "chase" losses, become restless if unable to gamble, and continue gambling despite financial, family, or work problems it has caused. They are also more likely to bet larger sums, more frequently, and to spend far more time preparing for gambling than social gamblers. Gambling may explain why an individual who appears to have sufficient income is nevertheless building up significant debts. Compulsive gamblers are two to three times as likely as social gamblers to bet on horses and sports. The time required to gain information required to gamble intelligently, place bets, follow the action, borrow money and make payments may prompt characteristic behavior patterns that are recognizable in the workplace. The report lists 12 such indicators.

Like other addictive behaviors, compulsive gambling is treatable, so successful treatment may be considered a mitigating factor when adjudicating security clearance decisions.

Addiction treatment centers find a close relationship among alcohol abuse, drug abuse, and gambling abuse. Many persons have multiple addictions, with one exacerbating the consequences of the other, or with the combination adding to the difficulty of treatment. The relationship among these problems is so close that the National Council on Alcoholism recommends that:

It is important to consider the possibility of compulsive gambling in the assessment of any persons with alcoholism, or other drug dependency, or a chief complaint of financial, legal or marital problems. Denial and rationalization are as common in compulsive gamblers and their families as in alcoholism. Thus the patient or family may not interpret their problems as caused by gambling.

Pathological (compulsive) gambling is now recognized as a mental illness in the American Psychiatric Association's <u>Diagnostic</u> <u>and Statistical Manual of Mental Disorders</u>. This "medicalization" of compulsive gambling has made it much easier for those who suffer from it to obtain treatment, but it has had broad legal ramifications. The concept of compulsive gambling as a disease suggests that individuals who suffer from this affliction are unable to exercise control over their own actions and, therefore, should not be held legally responsible for actions caused by their illness.

The legal precedents are now unclear on whether a government employee who commits a crime as a consequence of compulsive gambling should be fired and punished, or treated and rehabilitated. Should compulsive gambling be viewed as the motive for the crime, or as a form of mental illness that explains the action and relieves the individual of guilt? The law is in a period of transition on this issue.

INTRODUCTION

The amount of money gambled legally each year in the United States increased by 1,400% (not adjusted for inflation) from 1974 to 1989. Gambling that was once condemned as a sin, and later a vice, is now actively promoted by governments, charities, and even churches as a painless way to raise funds for worthy causes. If increased gambling opportunities are leading more people to become compulsive gamblers, as most researchers expect,[1] then the prevalence of compulsive gambling among applicants and cleared personnel should be increasing. Unfortunately, data are not available at this time to document the existence or magnitude of any increase, as current reporting mechanisms do not single out gambling problems as a separate issue. Two thirds of compulsive gamblers undergoing treatment or who join Gamblers Anonymous admit to committing illegal acts to finance their gambling or pay their gambling debts. Nevertheless, security personnel report seeing little evidence of compulsive gambling as a security issue.

This study suggests that if security officers are not seeing much evidence of compulsive gambling, this is probably only because investigators have not been directed to look for it. The study pulls together in one place information useful to personnel security policy-makers, practitioners, and researchers when reviewing standards and procedures relating to compulsive gambling. It focuses on the potential impact of compulsive gambling on U.S. Government security, the growth of gambling in the United States, the prevalence of a small percentage of problem gamblers among the general gambling population, indicators for identifying these problem gamblers, and the relationship between compulsive gambling and other addictions. It also discusses legal considerations and treatment results that may be relevant to adjudication decisions.

The American Psychiatric Association's 1980 decision to recognize pathological gambling as a mental disorder gave added impetus to the scientific study of problem gambling, but this inquiry is still at an early stage. Research has been handicapped by inconsistent definitions of terms (compulsive or pathological or problem gambling) and by difficulties in measuring key variables. The number of test subjects in most studies is small, and the sample of test subjects is often taken from members of Gamblers Anonymous or persons in treatment for compulsive gambling. Those who have taken the initiative or been directed by the courts to join Gamblers Anonymous or to undergo treatment may differ in important ways from other compulsive gamblers who have not. These limitations need to be kept in mind when considering the research reported here.

Given the rapid growth of gambling in the United States, there is urgent need for further study of those who are unable to gamble responsibly. The National Council on Problem Gambling and the Institute for the Study of Gambling and Commercial Gaming are helpful in providing interested persons with bibliographies, addresses for contacting researchers in this field, lists of treatment centers, and other information.[2] This report has been reviewed for technical accuracy by Prof. Henry R. Lesieur, editor of the Journal of Gambling Studies.

COMPULSIVE GAMBLING AND PERSONNEL SECURITY

Moderate gambling, like moderate alcohol use, is an accepted part of our culture and causes no problems. As with alcohol use, however, gambling to excess is a relatively common failing that may lead to serious security problems. Imprudent or uncontrolled gambling often results in significant financial losses. Individuals who entered one treatment clinic for gambling had a mean gambling-related debt of \$54,662,[3] while the same figure at another treatment program was \$92,000.[4] For a sample of female Gamblers Anonymous members, the average level of gambling-related debt was almost \$15,000. In each study, this was only the current accumulated debt, not the amount of gambling debt that had already been paid off.[5]

Debt of this magnitude may compromise one's financial stability, cause problems with family and work, and prompt some individuals to engage in illegal activities--including espionage-- as a means of covering those losses.

Motivation for espionage is usually complex and difficult to assess, but gambling debts have clearly played a significant role in a number of cases. Perhaps the clearest case of gambling debts as a direct stimulus to espionage was Air Force Capt. George French, who was caught volunteering his services to the Soviets in 1957. He was a devotee of high stakes poker games who played two or three times a week, but was not a good player and his losses piled up. When he saw no other way out, French tossed a letter over the fence of the Soviet Embassy offering to sell information on nuclear bombs.[6]

Navy Yeoman Nelson Drummond was another chronic gambler who was always in debt, suffering repossession of his belongings and cancellation of his household utilities. In 1957, Soviet Military Intelligence learned of his financial difficulties and approached him with an offer of money. He had access to classified information as a clerk in the U.S. Navy Headquarters in London at the time, and he worked as a Soviet agent for five years before being caught.[7]

Gambling debts were also part of Army Sgt. Daniel Richardson's motivation for contacting the Soviet Embassy in Washington in 1986. He had made regular trips to the casinos in Atlantic City, New Jersey, in hopes of clearing up his mounting debts, but found himself buried deeper with every visit.[8] In yet another case, an Air Force Staff Sergeant admitted volunteering his services to Soviet Military Intelligence in London in 1978 because of his financial problems. Although the exact source of those problems is not confirmed, he was known as a gambler (blackjack, horses and dogs) with a chronic history of indebtedness. Before being caught, he passed the Soviets two Secret codeword documents dealing with Electronic Security Command capabilities to monitor communications activities. His name has not been revealed publicly, as he was separated from the service but not arrested.[9]

The story of Air Force Tech. Sgt. James Wood is a similar tale of a gambler who volunteered his services to the Soviets as a means of extricating himself from financial difficulties; he was arrested for espionage in 1973.[10] Electronics engineer John Butenko, arrested in 1964 and later convicted of espionage for the Soviet Union, was another high stakes card player.[11] In most of these

cases, gambling was combined with heavy drinking and was part of a generally dissolute lifestyle.

Lary Wu-Tai Chin, a former CIA employee arrested in 1985 after spying for China for 30 years, was an inveterate gambler. In his case, however, gambling was not a motivation for espionage but a means of using and covering his espionage earnings. He talked constantly about his system for winning at blackjack and had a reputation among his colleagues as a successful gambler. He may have claimed gambling winnings as a cover story to partially explain his high standard of living, which was actually based on somewhere between \$500,000 and over \$1 million in payments for espionage.[12]

This discussion of Americans who spied against their country is limited to cases for which unclassified reports indicate that the gambling probably played a significant role in the case. There are other cases where the agent was reported to be a gambler, but the significance of the gambling for his espionage activity is not apparent from the unclassified information. Still other known espionage cases in which gambling is believed to have played a significant role are not discussed as no unclassified citation is available.

Compulsive gamblers generally use legal sources of funding for as long as possible. As gambling losses intensify, legal sources of money are gradually used up or closed off. Depending on personal value systems, opportunities for illegal activity, perceptions of risk and the existence of threats (from loan sharks or bookies, for example), compulsive gamblers may then become involved in progressively more serious illegal activity. In some cases, the amount of money runs into millions of dollars.[13]

Three different studies in the mid-1980s administered questionnaires to members of Gamblers Anonymous and persons in treatment for compulsive gambling to determine the extent to which gambling had led them to commit illegal activities to obtain money for gambling or to pay gambling debts. Specific offenses and percentages committing each offense are shown in Table 1.

About two thirds of gamblers in treatment or Gamblers Anonymous admitted engaging in illegal behavior to finance their gambling or to pay gambling-related debts. The white-collar crimes of fraud, embezzlement, forgery and tax evasion predominate among those whose employment and economic status present the opportunity for such crimes.[15]

In the top line of Table 1, the notations that n=40, n=190 and n=50 refer to the number of persons questioned for each study. Note that these are small samples, and that the nature of the samples is not necessarily representative of all compulsive gamblers. For example, compulsive gamblers in treatment tend to be

middle-aged, white males while surveys indicate that the population suffering from this affliction is considerably more diverse.

Table 1

Illegal Activities and Civil Fraud Engaged in by Compulsive Gamblers in Order to Gamble or Pay Gambling Debts Three Samples, 1984-1986¹⁴

	Hospital	VA Hosp.	
TYPE OF ACTIVITY	Inpatients	<u>& GA</u>	Female GA
	n = 40	n=190	n = 50
Civil Loan Fraud:	38%	41%	44%
White-Collar Crime:			
Check Forgery	30	33	40
Forgery	18	18	18
Embezzlement & Employee Theft	28	38	24
Tax Evasion	10	28	12
Tax Fraud	13	18	4
Commonplace Crime:			
Larceny	13	21	14
Burglary	13	15	2
Armed Robbery	-	4	2
Pimping	-	2	0
Prostitution	5	-	10
Selling Drugs	28	9	0
Fencing Stolen Goods	23	14	4
Gambling System Connected Crimes:			
Bookmaking or Working in an			
Illegal Game	18	23	26
Hustling at Pool, Golf,			
Bowling or Other Sport	23	19	10
Hustling at Cards or Dice	30	21	6
Running a "Con Game" or			
Swindling Suckers	18	9	12
Engaging in Any of the Illegal			
Activities Above	65%	n/a	68%

The columns do not sum to 100% as many individuals had multiple offenses.

Another study that questioned 241 members of Gamblers Anonymous focused specifically on how problem gambling affects the insurance industry. It found that 47% of the Gamblers Anonymous members had engaged in some form of insurance fraud, embezzlement or arson. Table 2 shows the exact nature of the illegal activity and the percentages of persons engaging in each. For example, 32% admitted making false claims after an auto accident, 8% created or staged an accident, 15% faked a business or home burglary or property theft, 11% took part in or profited from arson, and 21% stole something which they knew an insurance company had to pay for.

The average dollar value per person of those who committed one or more of these illegal activities was \$65,468. The strength of the obsession with gambling is indicated by the fact that 30% of those questioned reported having gotten into auto accidents because they were thinking about gambling rather than driving.[16]

Table 2

Insurance Fraud and Theft by Compulsive Gamblers

Made a false claim after auto accident	32%
Created or staged an accident	8%
Took part in or profited from arson	11%
Faked business or home burglary or	
property theft	15%
Made false claim other than fire or theft	16%
Staged claim other than fire or theft	15%
Caused loss to insurance company in which	
you were bonded and insurance company	
had to pay	8%
Stole something which you knew insurance	
company had to pay for	21%
Engaged in any of the above	47%
Engaged in two or more of the above	31%
Engaged in four or more of the above	13%
Average dollar value involved	\$65,468

WHAT IS COMPULSIVE GAMBLING?

There is much confusion about terminology in both the scientific and the popular literature on gambling. As used in this report, compulsive gambling is a popular or layman's term, not a scientific description or medical diagnosis. It refers to an uncontrolled preoccupation with gambling, and an inability to stop gambling even when one recognizes that gambling is causing serious financial, family, work, or other problems. The currently accepted technical term is pathological gambling, which is the term used in the <u>Diagnostic and Statistical Manual of Mental Disorders</u>, a reference work published by the American Psychiatric Association. However, this term implies acceptance of the view that pathological gambling is an addiction and a disease, and this is a controversial finding with many legal and other implications.

To sidestep the controversies, this report uses the term compulsive gambling. For consistency, compulsive gambling is used even when describing scientific reports which employ the term pathological gambling.

Another term sometimes used is problem gambling. The National Council on Compulsive Gambling recently changed its name to the National Council on Problem Gambling in order to draw attention to the wider range of problems implied by that name.[17] Problem gambling is easier to define than compulsive or pathological gambling and more neutral in its implications, but the term is used in two different ways.

In its broad sense, problem gambling includes all gambling which causes problems for the gambler. That is, it includes compulsive or pathological gambling as well as less serious gambling practices that cause problems but may not qualify as compulsive or pathological.

In its narrow sense, problem gambling includes only those less serious forms that do not qualify as compulsive or pathological. In this sense, the distinction between problem gambling and compulsive (or pathological) gambling is comparable to the difference between alcohol abuse and alcohol dependency (alcoholism). The problem gambler is able to respond to counseling and make a rational decision to limit or stop his or her gambling. The compulsive (Pathological) gambler has lost control and requires treatment. When the term problem gambling is used in this report, the meaning is clear from the context.

The American Psychiatric Association first recognized pathological gambling as a form of mental illness in 1980. Pathological gambling was classified as an impulse control disorder and described as follows in the 1987 revision of the <u>Diagnostic and</u> <u>Statistical Manual of Mental Disorders</u>:

The essential features of this disorder are a chronic and progressive failure to resist impulses to gamble, and gambling behavior that compromises, disrupts, or damages personal, family, or vocational pursuits. The gambling preoccupation, urge, and activity increase during periods of stress. Problems that arise as a result of the gambling lead to an intensification of the gambling behavior. Characteristic problems include extensive indebtedness and consequent default on debts and other financial responsibilities, disrupted family relationships, inattention to work, and financially motivated illegal activities to pay for gambling.[18]

The criteria for clinical diagnosis of pathological gambling were revised in 1987 and are in the process of being revised again. The criteria proposed for inclusion in Revision IV of the manual are:

Maladaptive behavior as indicated by at least four of the following:

1. Preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble.)

2. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.

3. Exhibits restlessness or irritability when attempting to cut down or stop gambling.

4. Gambles as a way of escaping from problems or relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression).

5. After losing money gambling, often returns another day in order to get even ("chasing" one's money).

6. Lies to family members or others to conceal the extent of involvement with gambling.

7. Commits illegal acts such as forgery, fraud, theft, or embezzlement in order to finance gambling.

8. Has jeopardized or lost a significant relationship, job, educational or other career opportunity because of gambling.

9. Relies on others to provide money to relieve a desperate financial situation caused by gambling (a "bailout").

10. Makes repeated unsuccessful efforts to control, cut back, or stop gambling.[19]

These criteria parallel the diagnostic criteria for alcohol and drug addiction in many ways. While compulsive gambling does not involve use of a psychoactive substance, it does have a number of similarities to other addictions. Compulsive gamblers lose control over their behavior and commonly lie and cheat in order to continue their gambling. They frequently try, unsuccessfully, to cut down or quit. The "action" which compulsive gamblers crave is an aroused, euphoric state comparable to the "high" sought by drug This aroused state is accompanied by changes in brain users. chemistry similar to those caused by psychoactive substances. There is also a "rush" usually characterized by sweaty palms, rapid heart beat, and nausea which is experienced during the period of anticipation. Alcoholics and drug abusers develop "tolerance" for their drug of choice and then must increase their consumption in order to feel the same effects. Similarly, compulsive gamblers develop "tolerance" for the "action" and must increase the size of their bets or the odds against them to create the same amount of excitement. Withdrawal symptoms have also been noted in compulsive gamblers.[20]

GETTING HOOKED

Diverse theories have been advanced to explain why people become compulsive gamblers. Freudian psychiatrists believe people become compulsive gamblers as a form of self-punishment to explate guilt feelings. Some psychologists see underlying personality traits as the root of the problem. Others argue that people learn to become compulsive gamblers when gambling is rewarded with feelings of excitement and arousal. Sociologists describe it as caused by faulty reasoning and inept money management. Some recent work traces all the addictions, including compulsive gambling, to underlying feelings of emptiness, loneliness, or guilt usually associated with traumatic childhood experiences. Other addiction researchers have demonstrated physiological differences in brain chemistry between compulsive gamblers and others.[21]

There is lively debate among opposing views. Alternative theories about the causes of compulsive gambling have important and controversial implications for how the law should deal with people whose crimes are prompted by compulsive gambling, for treatment programs for problem gamblers, and for social policy concerning the legalization and promotion of gambling.

Whatever the underlying cause, observation of many compulsive gamblers has shown that they pass through identifiable stages on their way to developing serious problems. Henry Lesieur, a prominent scholar in the field of problem gambling, has described this process by which many people become "hooked" on gambling, making the transition from social gambler to compulsive gambler, and often to criminal. This process is believed to apply to most male compulsive gamblers, especially those who play games of skill, and to about half of female compulsive gamblers. The rest of this section is a mixture of quotation and paraphrase from Lesieur's account, [22] together with several points added from other sources.

During the early phase of gambling, there are usually no serious losses. Those who will eventually have a problem fall in love with the excitement and "action." They have fantasies of success, and of gambling becoming their personal path to wealth and power. Such fantasies are often fed by a big win early in the gambler's career. Gamblers who are headed for problems think they are smarter than the average bettor and are bound to win in the long run. "They know that gambling is going to work for them because they, unlike less clever people, really understand how to beat the system."[23] As they become more involved in gambling, they derive an increasing portion of their self-esteem from seeing themselves as smart or lucky. Because of this, two things happen when they do incur the inevitable losses: first, they suffer monetary loss; second, and often more important, they suffer a deflated eqo.

In order to salvage their self-esteem, they rationalize losses by blaming other people, such as the jockey or the pitcher, or by blaming "bad luck" in cards, craps or lotteries. If these excuses fail, the gamblers reflect on their handicapping abilities and tell themselves they will not make the same "mistake" the next time. The monetary loss is another matter, however, and this is dealt with differently. In order to recoup the loss, many gamblers "chase." That is, they continue their betting and increase the amount of their bets in order to get even.

This can be illustrated using sports betting with a bookmaker. Starting on Friday night, the gambler bets \$50 on one team but loses. On Saturday, \$50 is bet on each of two teams in order to have a new bet and to get even from the night before. In the event of loses on Saturday, the gambler will bet \$50 on each of four teams on Sunday. Monday night football is called "get even time" when the gambler will try to get even for the entire weekend.

This chasing of losses is the defining characteristic of the compulsive gambler. Instead of saying, "It's lost," compulsive gamblers say, "I'll get even tomorrow." Chasing losses leads the gambler to gamble with more than he or she can afford to lose, and, eventually, to borrow money in an effort to get even. The amount of chasing clearly distinguishes the compulsive gambler from the social gambler.

By sheer mathematics, of course, sports gamblers will in the long run bet on the winning team half the time if they flip a coin. They eventually lose, however, because of the vigorish (handling fee) the bookmaker charges for taking the bet. On a \$50 bet, the bookmaker pays \$50 if the gambler wins, but the gambler pays \$55 or \$60 to the bookmaker after a loss, depending upon the amount bet and the bookmaker. A similar thing occurs at the race track where the house takes from 13% to 20%, in casino games where the house

retains an average of 4.3% of the amount bet, and in state lotteries where the government may keep as much as 54% of the money put into the lottery system.[24] Only those with an edge win in the long run, such as those who have access to inside knowledge and only bet when they are privy to such knowledge.

To many gamblers, however, chasing is logical as it means giving oneself a chance to get even, and because it has worked occasionally in the past. It is also logical because friends are doing it, and periodically they, too, get out of jams in this fashion. Gambling is a roller-coaster ride of wins, losses and breaking even. There are usually enough wins to feed the wishful dreams, while the losses are dismissed as just bad luck. The compulsive gambler becomes an expert at denying reality.

Chasing losses interacts with the options gamblers use to finance their gambling. This happens in a way that creates an escalating spiral of involvement. If gamblers quit, both money and self-regard are lost; if they continue to gamble and win, both can be regained. There is, therefore, the impetus to borrow in order to recoup losses; when continued gambling leads to still more losses, the compulsive gambler continues to borrow. The more money borrowed, the greater the commitment to more gambling as the only possible means of gaining enough money to pay off the debt.

The family acts as an unwitting catalyst in this spiral of commitment to increased gambling. In the process of gambling, many gamblers cash in joint savings bonds, empty checking accounts, use furniture money, pawn joint property, and take out loans without the spouse's knowledge. In order to preserve or regain respectability in the eyes of parents, spouse and others--and because their paychecks are insufficient--desperate gamblers see more gambling as the only alternative. Fearing loss of respectability, the gambler hides loans. When gamblers default on the loans, fear that the bank or loan company will tell their spouse may drive them to more gambling as a possible quick way out. Commitment to gambling is greater as a result. The behavior that caused the problem is increasingly seen by the gambler as the only solution, as there is no other way to get the needed money quickly.

As loans come due and pressures to pay become more insistent, sometimes involving threats of exposure or of physical harm from loan sharks or bookies, desperate gamblers weigh the risks of "borrowing" (embezzling) money from their employer, making fraudulent loan applications or insurance claims, or stealing the money. Once they succumb to this temptation, the threshold to an even greater commitment to gambling has been crossed. This is especially true if they obtain money by loan fraud or embezzlement. These kinds of crimes enable gamblers to rationalize that they are not really criminals; the money is only "borrowed" so no one is being hurt. But there is constant pressure to repay the money, and counting on a big gambling win is seen as the only hope for doing so. This extends the spiral of involvement from more gambling to more and more illegal activities until the gambler is caught, seeks professional help, or really does hit the big win.

The nature of the criminal activity often depends upon the opportunities available to the gambler. For lower income gamblers, burglary, larceny and drug sales have been common. For those in positions of responsibility, white-collar crimes such as fraud, embezzlement, and forgery predominate. As previously noted, espionage has sometimes been the crime of opportunity for compulsive gamblers with a security clearance.

Falling in love with the "action" and then chasing losses is the starting point for most men who become compulsive gamblers. However, Lesieur found that over half the women he interviewed in Gamblers Anonymous groups had taken a different route. While they also enjoyed the "action" and chased losses, their dominant theme when describing their gambling career was escape--escape from memories of unhappy childhoods or parental abuse, escape from troubled husbands, and escape from loneliness. These women often came to gambling later in life than most men, and many never experienced the winning phase that starts many men thinking they can outsmart the odds. Many were closet gamblers who seldom bragged about their wins. Once they became hooked on gambling, however, they followed the same spiral of increasing involvement leading, among 68% of the women, to criminal activity.[25]

GAMBLING IS A GROWTH INDUSTRY

In 1974, 61% of the American population gambled, but the amount wagered legally during that year was only \$17.4 billion.[26] This was before the approval of casino gambling in Atlantic City and the general surge in gambling nationwide. By 1989, the percentage of the population that gambled increased to 71%, while the total amount wagered legally soared to \$246.9 billion[27]--an increase of over 1,400% (not adjusted for inflation) in 15 years.

Table 3 shows the gross wagering "handle" for 20 different forms of commercial gambling in 1989. This enables one to compare the dollar amounts wagered in the different forms of gambling. It shows, for example, that the Nevada and New Jersey casinos account for two thirds of the gambling in the United States, and that the amount wagered in lotteries is still only about one tenth of the "handle" in casinos.

In 1989, Americans wagered \$290 billion on all the different forms of legal and illegal commercial gambling. Illegal gambling, which is less than 15% of the total, is based on an informed guess rather than hard data. To put the magnitude of this \$290 billion figure in perspective, all the goods and services charged to all the credit cards issued by all the banks, department stores, gas stations and other retailers in the United States amounted to about \$390 billion in 1988.[28]

In the parlance of gambling revenue accounting, the term "handle" includes the recycling of winnings. This partially explains why the numbers are so high. When slot machine winnings are reinvested in continuous play, the same coin will be counted about 15 times when calculating the "handle" for that machine. For slot machines, the amount lost by the gambler amounts to an average 6.6% of the total "handle." For casino table games where the same chip may be wagered many times, the amount lost by the gambler averages 2.4% of the "handle." [29]

Table 3

1989 Gross Gaming Handle and Percentage Increase from 1982 to 1989

	<u>Amount</u>	% Change
PARIMUTUELS		
Horses		
Track	\$ 11,155,011,075	11.65
Off-Track Betting	2,775,058,960	62.54
Total	13,930,070,035	19.08
Greyhounds		
Track	3,183,112,602	44.13
Off-Track Betting		*
Total	3,211,684,166	45.42
Jai-alai	552,746,477	-11.25
Total Parimutuels	17,694,500,678	21.79
LOTTERIES	19,468,330,000	376.20
CASINOS	, , , ,	
Nev/NJ Slot Machines	65,790,588,454	356.88
Nev/NJ Table Games	. 127,774,754,003	46.87
Cruise Ships	2,073,500,000	*
Other Casinos	22,300,000	*
Noncasino Devices	301,600,000	*
Total Casino	. 195.962.742.457	93.36
LEGAL BOOKMAKING	,	
Sportsbooks	1.434.952.978	245.64
Horsebooks	403,178,763	228.30
Total Bookmaking	1,838,131,741	241.68
CARD ROOMS	3,798,437,500	279.84
BINGO 3,772,029,542		
CHARITABLE GAMES	3,990,444,149	232.54
INDIAN RESERVATIONS	400,000,000	*
Total Legal	. 246,924,616,067	96.35
ILLEGAL GAMBLING	, , ,	
Numbers	5,550,305,120	27.01
Horsebooks	8.128.905.535	47.85
Sportsbooks	27,387,198,884	88.88
Sportscards	2.119,702,209	87.92
Total Illegal	43,186,111,748	69.38
CRAND TOTAL	\$290 110 727 816	01.81
	<i>427</i> 0,110,121,010	21.01

* Percentage increase is not available as this form of gambling was not permitted in 1982.

Table 3 also shows the percentage growth in gambling, by category, from 1982 to 1989.[30] Total legal and estimated illegal gambling increased by only 91.8% during this 7-year period, while U.S. personal income grew by 65.7%. When measured by percentage, growth during the 1980s was slower than during the 1970s, but this is only because growth during the 1970s started from such a low base. In absolute terms, the \$15.3 billion increase in legal gambling in just one year, from 1988 to 1989, almost equals the entire \$17.3 billion wagered on all forms of legal gambling in 1974.

The change from 1982 to 1989 is cited here because there was a fundamental shift in American gambling behavior during this period. State lotteries, slot machines, card rooms, legal bookmaking and charitable games saw dramatic growth, while other forms of gambling grew at modest rates or not at all.

Gambling on state lotteries grew by 376% from 1982 to 1989, while gambling with slot machines grew by 357%, card rooms by 280%, legal bookmaking in Nevada by 242%, and non-bingo charitable games by 233%.

Buying and selling stock options and commodity futures is not discussed in this report. Although commonly described as investment rather than gambling, these are recognized as high risk activities. The process of "chasing" losses and becoming hooked on the excitement of the market is the same as for gambling and can have the same adverse consequences.

The rapid growth of gambling has been fueled by state governments' appetite for tax revenues, the 1988 Indian Gaming Regulatory Act, which authorized Indian tribes to establish casinos on their sovereign territory, and a public thirst for gambling opportunities that was not previously being satisfied.

The first state lottery was introduced in New Hampshire in 1964. By 1984, 17 states had lotteries. Now, the number is up to 33 states plus the District of Columbia. Lotteries were set up as state-run monopolies primarily to generate revenues and limit the need to increase taxes. They serve as a form of "voluntary" taxation. Lottery tickets are the only consumer products actively promoted and sold by the state, and they are sold with the same amount of advertising hype as soap, beer, and other consumer commodities. State governments do not tell their residents that they should save money or have health insurance, but they do tell them they should gamble. The main concern of state lottery directors is how to attract new players who otherwise would not gamble.

With the lottery market maturing in many states, lottery directors are now seeking new products to fuel continued growth in revenues from state-sponsored gambling. In late 1989, the South Dakota lottery started to install on-line video poker and video

blackjack machines but called them Video Lottery Terminals (VLTs). In one year, 5,000 VLTs were installed in liquor-licensed facilities in South Dakota. On the basis of this South Dakota experience to date, these VLTs are considered "the most successful lottery product since the lotto game.[31] Lottery revenues doubled, and every other state lottery is now looking at the possibility of introducing these machines.[32]

The video poker machine has been described as "the closest thing we have to the perfect gambling device. It is fast, fun, easy to learn, has the potential for large jackpots, allows even novice players to gamble without being intimidated, and has at least the illusion that skillful participation will change the results."[33]

Oregon and Kentucky already have state-sponsored gambling on professional sports, and the legislatures in Illinois, New York and Pennsylvania are considering bills to legalize wagering on professional sports.[34]

Nevada as the sole outlet for casino gambling in the United States from 1931 until 1978, when Atlantic City, New Jersey, was authorized to become the second casino gambling mecca. Today, a dozen other states--and the number is growing rapidly--have authorized casinos on licensed riverboats, on cruise ships, on Indian reservations, or in small mining towns. Charities are now permitted to run full-scale casinos in 14 states.[35] The amount wagered in non-bingo charitable games doubled from 1987 to 1989.[36] Gaming experts predict that casinos will soon be operating within an easy day's drive of everyone in the nation.[37]

In 1989 and 1990, the states of Iowa, Illinois and Mississippi all approved legislation authorizing riverboat or dockside casinos. Shipboard casinos began operating in 1989 on cruise ships making "day trips to nowhere" from ports in California, Florida, and the gulf states.[38] In 1989, South Dakota introduced casino gambling as a means of rejuvenating the small, remote mining town of Deadwood. The Deadwood casino developers had projected betting of \$4 million per year. They were off by 5,000%, as \$400 million was wagered there during the first two years.[39] Colorado voters followed in 1990 by approving casino gambling in three old mining towns in that state.

The 1988 Indian Gaming Regulatory Act grandfathered-in high stakes commercial casinos already operating on Indian reservations in North and South Dakota, Washington and Michigan and opened the door to casinos on Indian reservations in most other states. As a result, 11 casinos are now operating on Indian reservations in Minnesota, and tribes in at least 10 other states are planning to open casinos.[40] Indian tribes in southern California are preparing to compete with the casinos in Las Vegas. Mirage Resorts, Inc., one of the most successful Las Vegas casino operators, recently agreed to design and operate Indian-owned casinos in Kansas City and the Seattle-Tacoma area.[41]

In gambling on the races, the greatest growth--62.54% from 1982 to 1989--was in off-track betting. Off-track betting is now permitted in 27 states.[42] Participants can watch the races on closed circuit television at county fair grounds and in luxurious teletheaters with restaurants and wide screens.

The wave of the future may be gambling on the races from the comfort of home. In Japan, 16 million owners of Nintendo game systems will soon be able to bet on nationally televised horse races and bicycle races using software that turns their home video screens into tote boards, complete with the latest odds.[43]

A new federal law which went into effect in May 1990 eliminated many restrictions on advertising of gambling. The Charity Games Advertising Clarification Act lifted all limitations on advertising of charity gambling and many limits on state lottery commercials. Gaming on Indian reservations was exempted from restrictions on gambling advertising in 1988. "By 1993 the country will be blanketed in newspaper and magazine ads and radio and TV commercials for state-run sports cards, charity games and Indian offtrack betting, high-stakes bingo and casinos."[44]

Fueled by state and local jurisdictions' need for "painless" sources of new revenue, a wide variety of gambling opportunities has been brought much closer to home for the average American. This rapid increase in gambling opportunities is expected to continue during the 1990s.

CHARACTERISTICS OF GAMBLERS IN GENERAL

A 1989 Gallup poll of 1,208 Americans age 18 and older explored a number of questions relating to type and frequency of gambling, characteristics of gamblers, and attitudes toward gambling. Information on the frequency of various types of gambling is presented in Table 4 below.

The poll found that 71% of American adults gambled during the previous year, and 31% played something at least weekly. This poll concluded that "lottery-playing may have replaced baseball as the national pastime." With the rapid increase in the number of stateoperated lotteries, the number of adults who sometimes buy lottery tickets increased from 18% in 1982 to 54% in 1989. In states that have lotteries, 66% of adults buy lottery tickets at least occasionally, and 31% are weekly players. As gamblers go, most lottery players are small-time bettors; half of them limit their gambling to games of luck such as the lottery.[45]

Card games, the racetrack and sports betting are games that offer better odds and put a premium on specialized skills of knowledge. This same Gallup poll showed that the 40% of Americans

who play these games gamble mainly for the love of the game and for the excitement winning can bring. This is the "action" to which some gamblers become addicted. Many bet on a weekly basis and bet larger sums of money, and these gamblers tend to be male, young, and more affluent than average. Enjoyment of financial risk is an important motive for this type of gambler. Nationwide, 21% of adults visited a casino in Atlantic City or Nevada during the previous year, but in the Western states the figure was 40%, according to the Gallup poll. Westerners generally set the pace for gambling in America; the poll shows that Westerners tend to get more enjoyment out of placing bets and to wager larger amounts than people who live in the East. Casinos attract an above average proportion of heavy gamblers, but the typical casino gambler differs from the typical card player, racetrack enthusiast or sports bettor. Casino visitors are about as likely to be female as male and tend to be middle-aged rather than youthful.

Table 4

Frequency of Gambling, by Type 1989 Gallup Poll

Weekly	Monthly	Less Often	Not Sure	Total
MCCRIT	Monthly		0010	10101
23%	16%	14%	1%	54%
4	7	12	*	23
6	5	11	*	22
2	3	16	1	22
1	2	18	*	22
1	1	18	*	20
*	1	18	*	19
5	5	7	1	18
3	4	6	1	14
2	3	8	1	14
1	3	10	*	14
3	2	8	*	13
*	1	6	1	8
*	1	5	*	6
*	1	2	*	3
	Weekly 23% 4 6 2 1 1 * 5 3 2 1 3 * *	Weekly Monthly 23% 16% 4 7 6 5 2 3 1 2 1 1 * 1 5 5 3 4 2 3 1 3 3 2 * 1 * 1	WeeklyMonthlyOften23%16%14%47126511231612181118*118*1185573462381310328*16*15*12	LessNotWeeklyMonthlyOftenSure23%16%14%1%4712 $*$ 6511 $*$ 231611218 $*$ 1118 $*$ 1118 $*$ 5571346123811310 $*$ 328 $*$ *161*15 $*$

* Less than 1%

** For professional and college sports, totals reflect all who bet on any sport in that category. For example, all pro sports bettors are counted in the total for major league baseball although some may limit their betting to pro football.

Summary of Activities

Play anything weekly	31%
Play anything monthly	18%
Play less than once a month	22%
No activity in past 12 months	29%
5 1	100%

Long a mainstay of church basements, bingo attracted 13% of American adults during the year prior to the Gallup poll. Three percent of all adults played weekly, and 5% of persons over age 50 played weekly. Bingo players tend to be female, less well educated, less affluent, disproportionately Catholic, and residents of states east of the Rocky Mountains. Regular players tend to be older.

Surprisingly, the typical bingo player is not someone who plays just to pass the time or support his or her church or favorite charity. Bingo players have the gambling bug--they enjoy placing bets about as much as those who play games more often associated with serious gambling. In fact, 7 in 10 bingo players also play cards, bet on the races or wager on sports. Bingo players are as likely as other gamblers to be heavy bettors and to report gambling-related problems.[46]

According to the 1989 Gallup poll, 24% of those who gambled claimed to have won more than they lost during the previous year. More than twice as many, 58% admitted they had lost more than they had won, while 15% claimed to have broken even and 3% didn't know. The number of self-claimed winners may be inflated and the amount of losses minimized in this poll, as gamblers who play games of skill are notoriously reluctant to admit losses. Asked about their reaction to losing, 60% said they did not get upset, while 30% reported getting only somewhat upset. A small number reported getting very upset or extremely upset (3% and 4%, respectively).

In responding to a poll question designed to explore why people gamble, the largest number, 39%, said they gambled for recreation, because it's enjoyable or fun. Another 27%, perhaps including many of the lottery players, reported gambling to make money or to get rich. Twelve percent reported gambling for the excitement, 11% for the challenge or competition, and 6% because it is part of their social life. The poll permitted more than one response to the question.

Although not demonstrated by systematic studies, one might hypothesize that those who gamble for the excitement and competition or make it a part of their social lives, and who then get very upset when they lose, may be the gamblers who are most likely to "chase" their losses and eventually become compulsive gamblers.

PREVALENCE OF COMPULSIVE GAMBLING

In the past, estimates of the prevalence of serious gambling problems in the United States have ranged from 0.77% to 6% of the adult population. Estimates very widely depending upon the method of inquiry used, the definition of compulsive or problem gambling, and the population that was sampled.[47] Systematic empirical research to develop more accurate estimates is very recent.

Anonymous self-report questionnaires were completed by 16,395 randomly selected U.S. military personnel for the Defense Department's 1992 Worldwide Survey of Substance Abuse and Health Behaviors. This study found that 2% reported three or more out of eight listed symptoms of compulsive gambling. Individuals with three or more of the symptoms are urged to seek help.[48]

The test now used to screen large samples of people to estimate the presence or absence of a gambling problem is known as the South Oaks Gambling Screen. This is a questionnaire based on the diagnostic criteria for pathological gambling identified in the <u>Diagnostic and Statistical Manual for Mental Disorders</u>. Respondents scoring 3 or 4 points out of a possible 20 are classified as "problem gamblers," while those scoring 5 or more points are classified as "probably pathological gamblers," or what this report calls probable compulsive gamblers. Clinical evaluation by a psychiatrist or psychologist would be required to confirm a diagnosis for any single individual.

Questions asked as part of this test include the following:

- When you gamble, how often do you go back another day to win back money you lost?
- Have you ever claimed to be winning money gambling when you really weren't?
- Did you ever gamble more than you intended to?
- Have people criticized your gambling?
- Have you ever felt guilty about the way you gamble or what happens when you gamble?
- Have your ever hidden betting slips, lottery tickets, gambling money, or other signs of gambling from your spouse, children, or other important people in your life?
- Have you ever borrowed from someone and not paid them back as a result of your gambling?
- Have you ever lost time from work (or school) due to gambling?
- If you borrowed money to gamble or to pay gambling debts who or where did you borrow from? (Followed by list of eight alternative sources of funds.)

The first statewide survey using the South Oaks Gambling Screen was in New York state in 1986. Subsequent statewide surveys were conducted in New Jersey, Maryland, Massachusetts, Iowa and California between 1988 and 1990. Substantial efforts were made to ensure that the demographic mix and geographic dispersion of the persons questioned in each state corresponded with the state In the six states combined, a total of population as a whole. 5,500 interviews were conducted, with the number in each state proportional to the population of that state. Interviews were conducted by telephone with random digit dialing and random selection of respondents within households. The response rate ranged from 65% in New Jersey to 76% in Iowa. These response rates are similar to response rates for telephone surveys on other

sensitive topics. In other words, this is a much larger and more carefully selected sample than one finds in other research on compulsive gambling.[49]

The findings for problem and compulsive gamblers in the six states are shown in Table 5. In the Eastern seaboard states and California, about 4% of the population over age 18 has some form of gambling problem. About one third of these are in the more serious compulsive gambler category.

The prevalence of problem and compulsive gambling in the coastal states where a broad range of legal gambling opportunities has been available for many years is far greater than in Iowa, where opportunities are more limited and legal wagering is comparatively recent. The difference is especially marked in the prevalence of probable pathological gamblers. This is the first statistical evidence to support the "general consensus among researchers that ... increasing the availability of gambling opportunities will ... eventually lead to an increase in compulsive gambling."[5]

Table 5

Prevalence Rates of Problem and Compulsive Gambling

State	Problem <u>Gamblers</u>	Compulsive Gamblers
New York	2.8%	1.4%
California	2.9%	1.2%
New Jersey	2.8%	1.4%
Maryland	2.4%	1.5%
Massachusetts	2.1%	2.3%
Iowa	1.6%	0.1%

Health professionals and many members of the public have tended to assume that problem gamblers are primarily middle-class, white men in their 40s and 50s. Those who join Gamblers Anonymous or seek treatment for compulsive gambling do fit this profile. However, the six state studies show that the demographic category most susceptible to problem gambling is the unmarried, non-white male under age 30 who has not completed high school. This suggests that existing treatment facilities are not directed toward serving the segment of the population that most needs these services.

Specifically, 70% of the problem or compulsive gamblers were men and 30% women, but women represent a very small percentage of those being treated for gambling problems. In inpatient gambling treatment programs in New York, New Jersey, and Maryland, the

percentage of women varies from 8% to 13%. Twenty-six percent of the survey sample was under 30 years old, but this group accounted for 37% of the problem gamblers. Non-whites made up 18% of the survey sample but accounted for 36% of the problem gamblers. Only 11% of those questioned had not completed high school, but this group included 21% of the problem gamblers. And 55% of the persons sampled were married, but only 43% of the problem gamblers were married.[51]

Compulsive gambling has been found among college and university students at higher rates than in the general population. The distribution of gambling problems among men and women is also different at this younger age level--much higher among male students and lower among female students than in the general population. This parallels reported differences in the origin of compulsive gambling among men and women. The vast majority of males who become compulsive gamblers as adults started gambling in their teens. Women who become compulsive gamblers generally start gambling much later in life, as a form of escape, and have a shorter gambling career.[52]

The most comprehensive study to date of gambling among university students was a 1987-1988 survey of 1,771 students at six different schools in five states--New York, New Jersey, Oklahoma, Texas, and Nevada. The study used the South Oaks Gambling Screen, described above, to identify problem gamblers and probable compulsive gamblers.[53] Some results of this study are shown in Table 6.

Table 6

Percentage of University Students with Gambling Problems, by State and Gender

	N <u>n =</u>	FY 446	ז <u>n=</u>	NJ <u>=227</u>	N <u>n=</u>	IV <u>=219</u>	(<u>n=</u>	DK = <u>583</u>	ך <u>n =</u>	X 299	5-St <u>Ave</u> i	ate age
Declar	<u>M</u>	F	<u>M</u>	F	<u>M</u>	F	<u>M</u>	F	<u>M</u>	F	<u>M</u>	F
Gamblers	30	9	26	8	20	12	19	4	18	8	25	8
Compulsive Gamblers	12	4	12	1	6	1.5	8.5	2	9	3	9.5	2.3

Over 90% of the males and 82% of the females had gambled, with 34% of the males and 15% of the females reporting that they currently gambled at least once a week. The test identified 5.5% of the students (9.5% of the males and 2.3% of the females) as probable compulsive gamblers, with an additional 15% (25% of males and 8% of females) categorized as problem gamblers.

Some of the gambling problems identified by the students, and the percentages for each, are:

Seven percent of the students said that someone had criticized their gambling; 3% argued with someone they lived with over gambling; 3% hid betting slips, lottery tickets or other evidence of gambling from family members; 4% cut classes in order to gamble, and 2% said they had lost time from work or school due to gambling. These students also experienced financial difficulties as 10% borrowed from household money, 3% from banks, 3% from credit cards, 3% from checking accounts, 1% from loan sharks and 2% sold personal property [in order to gamble].

There were significant differences among states, with many more gambling problems among New York and New Jersey students than in Texas and Oklahoma or even Nevada. Table 6 shows the results by state for males and females. Particularly noteworthy is the small percentage of compulsive gamblers found among students at the University of Nevada-Reno. More students had gambled weekly than students in the other states, and more of them had gambled with more than \$100 in one day, but fewer became compulsive gamblers. Perhaps the daily exposure to a gambler's mecca induced increased participation but also increased awareness of the potential pitfalls of allowing their gambling to get out of control.

These rates of compulsive and problem gambling among university students are four to eight times higher than reported for the adult population. The causes and potential significance of this are unclear. The high rate of gambling problems could be a portent of problems to come as this student population moves on into the work force. On the other hand, experimentation with alcohol and drugs may be viewed as relatively normal behavior among our youth, and gambling may take a similar form. Young gamblers may learn from their mistakes and become less involved with gambling as they mature.[54]

INDICATORS OF COMPULSIVE GAMBLING

Compulsive gamblers tend to be bright, energetic, competitive, adventuresome individuals. In short, they may have the characteristics of an otherwise ideal employee. The affliction is difficult to detect, unlike some drug or alcohol abusers, there is no evidence of needle marks on the arm, odors, slurred speech or staggering gait.

In personal interviews, it is appropriate to ask some of the questions about gambling listed in the previous section as part of the South Oaks test that screens for compulsive gamblers. One should recognize, however, that the compulsive gambler whose job may be at stake will generally minimize or deny any troubles caused by the gambling. Therefore, information may need to be developed through independent sources such as interviews with friends, work colleagues, or neighbors.

A question which may be particularly useful in a polygraph setting is: "Have you ever borrowed money to pay off a gambling debt?" This hits at the heart of the security issue, which is a person's desperate need for money.

Extensive gambling is not itself a security problem. It becomes a security problem if it leads to significant financial difficulties, as this presents a high risk of criminal activity to make up for gambling losses. If investigation reveals extensive gambling, one must then look more closely at financial condition. Similarly, if an individual's financial condition looks shaky, investigators should be alert to the possibility that this may be caused by gambling. Especially when an individual appears to have sufficient income but is nevertheless operating at a loss, gambling may account for the unexplained drain on income.

The combination of frequent gambling and poor financial condition may justify denial of security clearance. Even though the financial problems alone may not be sufficient to cause denial of clearance, disapproval is warranted if the financial problems are caused by gambling. If debt is caused by gambling, there is a high probability of the financial problems getting worse.

If the investigation reveals heavy involvement in gambling but the credit check shows no financial problems, there are at least six possible explanations: 1) Debts may be in a form that does not show up on a credit check, i.e., borrowing on life insurance, stockbroker loans, unpaid hospital bills, or credit provided by casinos, bookies or loan sharks; 2) The individual may be financing his or her gambling through embezzlement or other illegal activity; 3) The individual may be too young to have a meaningful credit history; 4) If the gambler is playing games of skill, he or she may be more skillful than most and be a long-term winner; 5) The gambler's financial condition may be so strong that losses are affordable and considered as "entertainment" costs; or, 6) The gambler may for a while be luckier than most, as some people actually hit jackpots. An investigator should seek to determine which of these possible explanations applies.

One specialist in this field advises that consistent winning should not necessarily be interpreted as meaning there is no security risk. He notes that "I'd be at least as concerned about those who are winning." This is because doctors who work with compulsive gamblers undergoing treatment find that many of the

embezzlers come from the ranks of those who had been big winners.[55] A severely compulsive gambler must periodically increase the amount bet or the riskiness of the bet in order to continue achieving the same level of excitement and psychic satisfaction. When the bad break inevitably does come, those who had been consistent winners fall farther and harder and may be more prone to desperate actions. On the other hand, until there are adverse consequences, there is no basis for concluding that an individual has a severe gambling problem.

Although financial problems are the main indicator that involvement in gambling has become a security concern, other indicators may also be considered. This section describes those indicators: extent of involvement in gambling, behavioral consequences of gambling, type of gambling, workplace behavior, and influence of family background. While not direct indicators of security concern, they do help identify individuals who are at risk for already having or eventually developing serious gambling problems.

To assess the strength and validity of indicators of compulsive gambling, it is necessary to compare compulsive gamblers with other gamblers who are able to gamble without experiencing problems. Most studies of compulsive gamblers do not do this; they describe only the characteristics of compulsive gamblers without comparing them to other groups.

One study by the National Council on Compulsive Gambling does specifically set out to compare problem gamblers with recreational or other gamblers. Answers to questionnaires administered to 59 persons diagnosed as compulsive gamblers and being treated in outpatient treatment centers in New York were compared with answers to the same questionnaire by 273 persons who represented a crosssection of other residents in the New York City area who had reported they gambled at least once during the previous six months.[56]

In comparing the two groups, this report refers to them as compulsive gamblers and social gamblers. The following paragraphs and Tables 7, 8 and 9, below, compare compulsive and social The comparison enables one to identify risk factors gamblers. based on what gamblers say about their degree of involvement in gambling, certain aspects of the gambling behavior, and the type of gambling they do. Caution is needed when using this data, however, because of differences in the makeup of the two groups. The compulsive gamblers undergoing treatment were largely white males, while the social gamblers represented a broader cross-section of the population. If black and Hispanic compulsive gamblers prefer lotteries and women prefer cards and poker machines, while white males prefer horses and sports, this will skew the results, especially in Table 9.

105

Extent of Involvement in Gambling

As a general rule, the more one gambles the more likely one is to eventually lose; and as losses occur problems become more likely. One series of questions in the National Council on Compulsive Gambling study concerned degree of involvement in gambling. Five varieties were found that best discriminate the compulsive gamblers from the social gamblers. These were number of different types of gambling engaged in, frequency of betting, among bet, amount of time spent in preparation for gambling, and percentage of leisure time spent in gambling.

The single most striking difference between compulsive gamblers and social gamblers was the amount of leisure time devoted to gambling. Of the compulsive gamblers, 91.5% reported devoting at least one quarter of their leisure time to gambling, while 17% of social gamblers reported spending that much time. Time spent to gain information or skill in preparation for gambling was another distinguishing characteristic. The figures for those devoting more than two hours per week to preparation for gambling were 74.6% for the compulsive gamblers versus 25.5% for the social gamblers. (Note: Since the social gamblers were a broad cross-section of the population, this group included previously undiagnosed problem and compulsive gamblers in the proportion one would expect to find them in the population as a whole.)

There was no significant difference in frequency of betting on the lottery. There was, however, a very great difference in frequency of visits to off-track betting (O.T.B.) establishments. Of the compulsive gamblers, 47.8% made 11 or more visits to O.T.B. establishments during the previous six months, as compared with only 4.6% of the social gamblers. If one looks at the very high end of the range--70 or more O.T.B. visits during the previous 6 months--one finds 26.1% of the compulsive gamblers but none of the social gamblers.

Compulsive gamblers were also more likely to engage in more different types of gambling activity; they were almost twice as likely (53.4% versus 29.6%) to engage in three or more different types of gambling. They were also three times as likely (76.3% versus 21.9%) to gamble weekly, and they were much more likely to gamble for higher stakes. These and other comparisons are shown in Table 7.

106

Table 7

Comparison of Social vs. Compulsive Gamblers Degree of Involvement in Gambling

	Social	Compulsive
Nature of Involvement	Gamblers	Gamblers
Frequency of betting		
Less than monthly	55 80%	10.2%
Monthly	22.070	12.6%
Weekh	22.370	76.20%
Usual Bet at One Time	21.970	10.5%
Less than \$5	11 9%	3 70%
\$5 to \$49	30.8%	16.7%
\$50 plus	18 30%	79.6%
Time Per Week Spent Preparing	10.570	19.070
None	51 00%	11.0%
	J1.070	11.5 /0
2 Hours of More	25.5%	13.0%
2 Hours of More	23.3%	74.0%
Vor Little	92 0 <i>0</i> 7	9 5 07
At Losst 1/4 of Leisure Time	83.0% 17.0%	0. <i>3%</i>
At Least 1/4 of Leisure Time	17.0%	91.5%
Amount Prepared to Lose in One week	04.00	0
Under 35	26.0%	0
\$5 to \$19	30.5%	5.9%
\$20 to \$99	24.4%	23.5%
\$100 Plus	19.1%	70.6%
Number of Types of Gambling Activities		
1	40.2%	17.2%
2	30.3%	29.3%
3	14.7%	24.1%
4	14.7%	29.3%
Number O.T.B. Visits During 6 Months		
None	83.9%	34.8%
1 to 10	11.5%	17.4%
11 Plus	4.6%	47.8%

Consequences of Gambling

Another series of questions in this same study dealt with the behavioral consequences of gambling. The compulsive and social gamblers were each asked if they had experienced various types of problems as a result of their involvement in gambling. This is, of course, the crux of the difference between the two groups; compulsive gamblers have many problems and social gamblers generally do not.[57]

Table 8 clearly shows the differences between the two groups. It is noteworthy that even 13.2% of the social gamblers reported one or more of the cited problems. Many of these were presumably the undiagnosed problem and compulsive gamblers one would expect to find in any cross-section of the population.

Table 8

Comparison of Social vs. Compulsive Gamblers Types of Problems

Social	Compulsive
Gamblers	Gamblers
5.8%	66.7%
11.6%	83.3%
11.0%	66.7%
8.1%	83.3%
10.5%	79.2%
7.0%	83.3%
7.0%	45.8%
5.8%	58.3%
4.1%	66.7%
	Social <u>Gamblers</u> 5.8% 11.6% 11.0% 8.1% 10.5% 7.0% 7.0% 5.8% 4.1%

Type of Gambling

As may be seen from Table 9, the types of gambling that best distinguish the compulsive gambler from the social gambler are horse races and sports betting. Compulsive gamblers were three times as likely to play the horses and twice as likely to bet on sports as social gamblers.
Table 9

Comparison of Social vs. Compulsive Gamblers, Types of Gambling

	Social	Compulsive
Type	Gamblers	Gamblers
Lottery (Numbers)	73.1%	62.7%
Casino	30.0%	28.8%
Sports	28.6%	52.5%
Cards	27.1%	32.2%
Horses	24.9%	76.3%
Jai-alai	4.4%	2.5%
Bingo	5.9%	8.5%
Mahjongg	3.3%	4.2%
Dogs	3.3%	1.7%
Dominoes	2.6%	3.4%
Cock/Pit Bulls	1.8%	1.7%
Other	5.9%	6.8%

Workplace Behavior

Compulsive gambling has been called the "hidden disease," as no tell-tale signs are apparent to co-workers. Astute observers may, however, pick up clues.

Extensive gambling can be time-consuming. Doing everything required to gain the information required to gamble intelligently, to place bets, follow the action, borrow money and make payments often has an impact that can be observed in the workplace. One educational pamphlet on compulsive gambling lists these indicators that may be observed at work:

- Late to work (due to late night card game, casino venture, or bad night's sleep worrying about gambling-related problems).

- Long lunch (off-track betting, meeting bookmaker or loan shark or creditors).

- Mysterious disappearance in the afternoon (typically at the track, off-track betting, afternoon card or dice game, or listening to sporting events).

- Sick days taken right when they become available rather than allowed to accumulate (uses sick days to gamble).

- Vacation used in isolated days rather than blocks.

- Excessive use of rest room (reads sports pages or listens to radio in the rest room).

- Excessive use of the telephone (calls to off-track betting, bookie, creditor, or to find money; calls from bookie or creditors).

- Reads newspaper and sports literature at work (scratch sheet from race track, racing form, sporting news, etc.).

- Operates office sports pool or paycheck pool (the person running these may have a gambling problem).

- Collects money from other employees for off-track betting or lottery (ostensibly does this as convenience for co-workers but actually so he or she can place bets).

- Organizes trips to Atlantic City, Las Vegas, or other gambling junkets.

- Operates as bookmaker or runner for bookmaker (many bookmakers and runners are themselves compulsive gamblers and do this in order to gamble more).[58]

A 1989 survey of organizations that provide employee assistance counseling in New York state determined that 45% of the organizations had no one who had attended training or education sessions about compulsive gambling. Those organizations in which at least one person had received such training or education were much more likely to have identified compulsive gambling employees than organizations where no one had received this training.[59]

Influence of Family Background

As with alcoholism, there is considerable evidence that children of problem gamblers are at greater risk than others for developing a gambling problem themselves. One study found that 50% of the children of pathological gamblers were also pathological gamblers.[60] Another study that questioned 24 persons in a treatment problem for compulsive gambling found that almost 42% thought that one or more of their parents had a gambling problem.[61]

Of 50 female members of Gamblers Anonymous, 40% reported growing up in households where one or both parents were addicted to alcohol or gambling--28% had alcoholic fathers, 10% alcoholic mothers, 14% had compulsive gambling fathers, and 4% compulsive gambling mothers.[62]

In the previous noted study of university students in five states, 3% of all students identified their father as a compulsive gambler and 1% described their mother in this manner. Students who identified either parent as a compulsive gambler were more likely to show signs of compulsive gambling themselves (19.9%) than students who did not have compulsive gambling parents (4.7%).[63]

GAMBLING AND THE LAW

The American Psychiatric Association's formal recognition of pathological gambling as a disease has prompted dramatic changes in how the legal system deals with gambling. Although the mental health professionals explicitly stated that their intention was only to aid diagnosis and treatment of gambling problems, their action has had extensive legal consequences. American gambling law has been based upon the assumption that anyone who gambles is doing so of his or her own free will, and that those who gamble to excess

Richards J. Heuer, Jr.

are morally weak and deserving of punishment.[64] "Today, however, we are in the middle of a revolution in the law created by a growing acceptance that some individuals cannot control their gambling and that the crimes they commit are a direct consequence of their gambling addiction."[65] This raises serious legal and moral issues on the extent to which individuals should be held responsible for their actions when these actions are prompted by compulsive gambling.

I. Nelson Rose, a leading authority on gambling and the law, writes that

There is no middle ground, no way to compromise, between the opposing views; in a criminal case the particular defendant is either acting out of free will and is therefore liable for his actions, or is ill and cannot be held responsible. Guilty or innocent. The standards of punishment follow: punish or rehabilitate.[66]

These conflicting viewpoints are causing rather dramatic conflicts in interpretation of the law. For example:

...some courts are ordering gamblers who embezzle to serve prison sentences of up to ten years, other courts are ordering defendants in virtually identical cases to be put on probation and attend Gamblers Anonymous. In one divorce case the trial judge ordered the compulsive gambling husband to pay alimony to his ex-wife for destroying their marriage; the appellate court reversed because it believed the compulsive gambler was suffering from a disease and therefore was more in need of financial support than his wife.[67]

The same legal principles, and the same legal turmoil, apply to cases of employees who embezzle or commit other illegal acts as a consequence of compulsive gambling. Letter carrier Edward Hyde had been convicted on a criminal charge of delaying the mail after over 3,500 pieces of mail, many containing checks, were found in his car. He sued to get his job back on the grounds that he was a rehabilitated compulsive gambler.

He was sentenced to 18 months probation with the condition that he complete a rehabilitation program for compulsive gamblers. The United States Postal Service wanted to discharge him; a labor arbitrator reversed, deciding the only hope for rehabilitation lay in returning Hyde to work. The federal district court reversed the arbitrator, holding it would offend public policy to allow the delivery of the U.S. mails to depend 'upon the vicissitudes of rehabilitation of a single letter carrier.' The court of appeals reversed the district court, stating "the Postal Service would have this court impose its own brand of justice.' Chief Justice Rehnquist issued a stay, indicating he believed the Supreme Court would reverse the court of appeals. The Supreme Court first agreed to hear the case, then changed its mind. Thus, five different levels of the legal system have looked at this case and each disagreed with the prior decision on the effect of compulsive gambling.[68]

In a similar case, an FBI Special Agent was fired after he misappropriated \$5,000 to use the money for gambling at the casino in Atlantic City. After a series of appeals, the termination was reversed and the FBI was ordered to demote him and suspend him for 90 days.[69]

The legal precedents are, therefore, unclear on whether a government employee who commits an illegal action as a consequence of compulsive gambling should be punished or rehabilitated. Should compulsive gambling be viewed as the motive for the crime, or as an explanation that relieves the individual of much of the guilt? Even if compulsive gambling is not recognized as a legal excuse for criminal behavior, it may be considered an extenuating or mitigating circumstance that affects the legality of a proposed disciplin-The law is in a period of transition in how it deals arv action. Whether or not one agrees with the with compulsive gambling. current trend toward treating compulsive gambling as a disease, this trend is a reality that persons making personnel security decisions must recognize. Legal counsel will be required to compare the circumstances of each individual case against the most recent judicial precedents.

RELATIONSHIP OF COMPULSIVE GAMBLING TO OTHER PROBLEM BEHAVIORS

Compulsive gamblers frequently also suffer from mental illness as well as other addictions such as alcoholism and drug abuse. There is considerable appeal to the idea that mental problems cause compulsive gambling. "Very simply, only a disturbed individual could get so compulsively involved in an activity which causes such pain and destruction."[70] On the other hand, causation may go in the opposite direction as the many financial, family and legal difficulties caused by compulsive gambling can lead to depression and other mental disorders. It can also lead to alcohol and drug abuse and suicide as an escape from concerns about gambling debts. While the strong relationship between compulsive gambling and other problems is clearly documented, as noted below, the nature of the complex relationships between these problems is not yet understood.

The following paragraphs discuss the frequency with which gambling problems are associated with other addiction or mental problems of security interest.

Of 50 male patients in a VA Hospital gambling treatment program, 36% were current alcohol or drug abusers while 47% had abused alcohol or drugs at some point in their lives. Fully 76% were diagnosed as currently suffering from major depressive disorder and 38% had hypomanic disorder. Twelve percent had made a lethal attempt at suicide with definite intent to die, while another 12% had made preparations for but had not implemented a serious suicide attempt; only 20% had no apparent suicide tendency at all.[71] Three other studies have shown rates of attempted suicide among pathological gamblers ranging from 15% to 24%.[72]

An intensive study of 25 male members of Gamblers Anonymous found that 52% were alcohol abusers, 72% had experienced at least one major episode of depression, 52% had recurrent depressive episodes, and 20% suffered from panic attacks.[73]

A study of 50 female members of Gamblers Anonymous found that 54% had previously been addicted to something else other than cigarettes (i.e., alcohol, drugs, overeating, overspending, sexual addiction) at some point in their lives. Compulsive shopping (24%), compulsive overeating (20%) and alcohol abuse (14%) were most common. Twenty percent reported attempting suicide. Seventy percent had seen mental health professionals about their problems, but many were not well served. One therapist, for example, told a woman who had asked for help that she should get a job as a blackjack dealer in Atlantic City since she loved to gamble so much. Only four women had been referred to Gamblers Anonymous by a health professional. The study concluded that many mental health professionals are not alert to symptoms of problem gambling among women.[74]

As compared with a sample of psychiatric outpatients, a group of 68 compulsive gamblers attending a hospital inpatient behaviortherapy program scored significantly higher on Depression, about the same on Hostility, Paranoid Ideation, and Psychoticism, and significantly lower on Obsessive-compulsive, Interpersonal Sensitivity, Anxiety, and Phobic Anxiety scales. The test used was the SCL-90. Other studies consistently support the view that compulsive gamblers score high on indicators of depression, such as feelings of hopelessness, lack of motivation, suicidal thoughts, and loneliness.[75]

Most studies have looked at compulsive gamblers to determine how many had other problems as well. Several studies have taken the opposite approach, looking at persons in treatment for alcohol or drug dependency to determine the extent to which those people also have problems with compulsive gambling. "These studies have uncovered rates of 9 to 14% of patients diagnosed as pathological gamblers and 19 to 28% as being [either] problem or pathological gamblers. These rates are 6 to 10 times higher than for the general population."[76]

Multiple addiction may complicate treatment problems. For example, doctors at some treatment centers have observed a "switching of addictions," where recovering alcoholics begin to gamble compulsively after several years of abstinence from alcohol. Similarly, women recovering from compulsive gambling have encountered problems with compulsive shopping.[77] There is some evidence that individuals with multiple addictions encounter more serious problems than those who suffer from compulsive gambling or substance abuse alone.[78]

Various forms of addiction appear to be related to each other in ways not yet clearly understood. Some researchers have advanced the theory that compulsive gambling, alcoholism, and drug abuse are functionally equivalent forms of behavior that satisfy similar psychological needs.[79] Other focus on what all the addictions have in common and write of a general theory of addiction.[80] Still others question the whole concept of addiction as it is currently being used, emphasizing the role of the individual in controlling his or her own behavior.[81] Current genetics research suggests the possibility that susceptibility to various behavioral disorders might soon be traced to inheritance of one or more specific genes.[82]

A pamphlet on compulsive gambling distributed by the National Council on Alcoholism recommends that:

It is important to consider the possibility of compulsive gambling in the assessment of any person with alcoholism, other drug dependency, or a chief complaint of financial, legal or marital problems. Denial and rationalization are as common in compulsive gamblers and their families as in alcoholism. Thus the patient or family may not interpret their problems as caused by gambling.[83]

MITIGATING FACTORS

Compulsive gambling, like other addictive behaviors, is treatable, so successful treatment may be considered a mitigating factor when making security decision. Gamblers Anonymous was formed in 1957 and now has many chapters nationwide. It follows the same pattern as Alcoholics Anonymous, including the same 12step treatment program. The first inpatient hospital treatment program for compulsive gamblers started in a Veterans Administration hospital in 1972. There are now about 42 treatment programs in the United States.[84]

Several studies have aimed at measuring the effectiveness of treatment programs, but the number of recovering gamblers in each sample was small and the criteria for measuring success differed.[85] In general, one may conclude that the success rate is comparable to that for other addictions. Relapse is a problem, but one or two relapses do not necessarily indicate failure. The more severe the gambling problem prior to treatment, the greater the chances of relapse and eventual failure of treatment.[86]

Gamblers Anonymous insists that recovered gamblers, like recovered alcoholics, must remain totally abstinent. On the other hand, some research indicates that total abstinence may not be

Richards J. Heuer, Jr.

required, that controlled or social gambling that does not cause problems may also be a favorable, long-term outcome of treatment.[87] The need for total abstinence among recovered gamblers is a subject of controversy.

CONCLUSIONS

There has been a dramatic increase in the number and diversity of gambling opportunities available to Americans. This rapid growth in gambling opportunities and change in attitudes toward gambling is expected to continue during the decade of the 1990s. Unfortunately, there has been no comparable increase in public awareness of the social costs that result when as many as 7.5 million Americans may be unable to gamble in a fully responsible manner.

Social changes of the magnitude now under way typically require adjustments to personnel security policies and procedures. While there is no irrefutable evidence that greatly increased availability of legal gambling leads to more persons becoming compulsive gamblers, circumstantial evidence suggests this is the case. It is certainly a logical assumption, and persons with security clearance are no less susceptible to this problem than other elements of the population.

The compelling evidence that compulsive gambling more often than not leads directly to crime, especially white-collar crimes comparable to espionage, makes compulsive gambling a significant security issue. Security policies and procedures should be reviewed to ensure that they focus appropriate attention on this phenomenon.

References

1. Rosecrance, J. (1988). Gambling without guilt: The legitimation of an American pastime. Belmont, CA: Wadsworth.

2. Relevant addresses and phone and fax numbers are: National Council on Problem Gambling, 445 West 59th Street, New York, NY 10019, telephone (212) 765-3833 or (800) 522-4700, fax (212) 541-9752. Institute for the Study of Gambling and Commercial Gaming, University of Nevada-Reno, Reno, NV 89507, telephone (702) 784-1477, fax (702) 784-4337. Gamblers Anonymous, P.O. Box 17173, Los Angeles, CA 90017, telephone (2130 386-8789, fax (213) 386-0030.

3. Blackman, S., Simone, R., & Thoms, D. (1986). Letter to the editor: Treatment of gamblers. Hospital and Community Psychiatry, 37, 404.

4. Politzer, R., Morrow, J., & Leavey, S. (1985). Report on the cost-benefit effectiveness of treatment at the Johns Hopkins Center for Pathological Gambling. Journal of Gambling Behavior, 1, 119-130.

5. Lesieur, H. (1991). Compulsive gambling: Documenting the social and economic costs. Paper presented at Gambling in Minnesota: An Issue for Policy Makers, Humphrey Institute of Public Affairs, University of Minnesota, Minneapolis, MN, December 1990. Revised April 1991. Paper cites the following studies: Division of Alcoholism (1987). Admissions on compulsive gamblers--JKF Hospital. Trenton, NJ: MIS Unit. Politizer, R.M., Morrow, J.S., & Leavey, S.B. (1985). Report on the cost-benefit/effectiveness of treatment at the Johns Hopkins Center for Pathological Gambling. Journal of Gambling Behavior, 1, 199-130. Lesieur, H. (1988). The female pathological gambler. In W.R. Eadington (Ed.), Gambling research: Proceedings of the Seventh International Conference on Gambling and Risk Taking. Reno, NV: Bureau of Business and Economic Research, University of Nevada-Reno.

6. DeGramont, S. (1962). The secret way: The story of international espionage since World War II (pp. 439-443). New York: Putnam.

7. Allen, T., & Polmar, N. (1988). Merchants of treason (p. 55). New York: Dell.

8. Miles, D. (1989, January). Espionage--threat from within. Soldiers Magazine, pp. 29-30.

9. Crawford, D.J. (1988). Volunteers: The betrayal of national defense secrets by Air Force traitors. Washington, D.C.: HQ, Air Force Office of Special Investigations.

10. Ibid., pp. 164-168.

11. Jepson, L.P. (1988). The espionage threat. Washington, D.C.: Defense Intelligence Agency.

12. Allen & Polmar (1988). Merchants of treason, op.cit.

13. Lesieur, H., & Rosenthal, R. (1991). Pathological gambling: A review of the literature. Journal of Gambling Studies, 7, 5-40.

14. Table is from Lesieur & Rosenthal (1991), ibid. Hospital sample is from Lesieur, H., Blume, S., & Zoppa, R. (1986). Alcoholism, drug abuse, and gambling. Alcoholism: Clinical and Experimental Research, 10, 33-38. Veterans Administration and Gamblers Anonymous sample is from Nora, R. (1984, December). Profile survey on pathological gamblers. Paper presented at the Sixth Annual Conference on Gambling and Risk Taking, Atlantic City, NJ. Sample of female Gamblers Anonymous members is from Lesieur, H. (1988). Report on pathological gambling in New Jersey. In Report and recommendations of the Governor's Advisory Commission on Gambling. The original table has been modified by deleting reference to a study of male and female prisoners.

15. Jacobs, D.F. (1987). Problem gamblers and white collar crime. Paper presented at Seventh International Conference on Gambling and Risk Taking, Reno, Nevada.

16. Lesieur, H., & Puig, K. (1987). Insurance problems and pathological gambling. Journal of Gambling Behavior, 3, 123-136.

17. Lesieur & Rosenthal (1991). Pathological gambling: A review of the literature, op.cit.

18. American Psychiatric Association (1987). Diagnostic and Statistical Manual of Mental Disorders, third edition, revised. Washington, D.C.: Author.

19. Lesieur (1991). Compulsive gambling: Documenting the social and economic costs, op.cit.

20. Lesieur & Rosenthal (1991). Pathological gambling: A review of the literature, op.cit.

21. Ibid. Other interesting studies include: Abt, V., & McGurrin, M. (1989). Toward a social science model of addiction: A critical analysis of the disease model of addictive gambling. Sociological Viewpoints, 5, 75-86. Blaszczynski, A., & McConaghy, N. (1989). The medical model of pathological gambling: Current shortcomings. Journal of Gambling Behavior, 5, 42-52. Bybee, S. (1988). Problem gambling: One view from the gaming industry side. Journal of Gambling Behavior, 4, 301-308.

22. Lesieur, H. (1979). The compulsive gambler's spiral of options and involvement. Psychiatry: Journal for the Study of Interpersonal Processes, 42, 79-87. Lesieur, H. (1984). The chase: Career of the compulsive gambler. Cambridge, MA: Schenkman.

23. Taber, J.I. (1980). The early detection of pathological gambling. Talk to the G.A./Gam-Anon Eastern Regional Conference, New York.

24. Abt, V., Smith, J., & Christiansen, E. (1985). The business of risk. Lawrence, KS: University of Kansas Press.

25. Lesieur, H. (1988). The female pathological gambler. In W.R. Eadington (Ed.), Gambling studies: Proceedings of the Seventh International Conference on Gambling and Risk Taking. Reno, NV: Bureau of Business and Economic Research, University of Nevada.

26. Commission on the Review of the National Policy Toward Gambling (1976). Gambling in America. Washington, D.C.: U.S. Government Printing Office.

27. Christiansen, E., & McQueen, P. (1990, July 15-August 14). U.S. gaming handle up only 6% in 1989. Gaming and Wagering Business, 3, pp. 1, 7, 8, 22-30.

28. Samuels, A.L. (1990). Debt, be not proud. Black Enterprise, p. 63.

29. Christiansen & McQueen (1990), op.cit.

30. Ibid.

31. Christiansen, E. (1991, April). The New Jersey experience and the financial condition of Atlantic City casinos. The Newsletter of the Institute for the Study of Gambling and Commercial Gaming, p. 5.

32. Rose, I.N. (1991). Gambling and the law--update 1991. (Collation of syndicated newspaper columns). Los Angeles: Whittier College School of Law.

33. Ibid.

34. Hong, P. (1991, July 22). Not with our games you don't. Business Week, p. 24. Also Rose, I.N. (1989, August 17). Gambling's fall: You can bet on it. Los Angeles Times, p. 11/7.

35. Rose, I.N. (1989, August 17). Gambling's fall: You can bet on it. Los Angeles Times, p. 11/7.

36. Christiansen & McQueen (1990), op.cit.

37. Johnson, D. (1991, October 6). Gambling's spread: God rush or fool's gold? New York Times, p. 1.

38. Even, M., & LeFleur, T. (1990). 1989 gaming at a glance. Gambling and Wagering Business, 11 (7), 52-55.

39. Johnson, D., op.cit.

30. Ibid.

41. Yoshihashi, P. (1992, February 14). Mirage joins with Indians in Casino plan. The Wall Street Journal, p. Bl.

42. Rose (1989, August 17), op.cit.

43. Hardy, Q. (1991, October 3). Japanese couch potatoes, wake up: Here come racing bets via Nintendo. The Wall Street Journal, p. A14.

44. Rose, I.N. (1991). The rise and fall of the third wave: Gambling will be outlawed in forty years. In W.R. Eadington (Ed.), Proceedings of the Eighth International Conference on Gambling and Risk Taking. Reno, NV: Institute for the Study of Gambling and Commercial Gaming.

45. Hugick, L. (1989, June). Gambling on the rise; lotteries lead the way. Gallup Report, p. 32.

46. Ibid., p. 33.

47. Sommers, I. (1988). Pathological gambling: Estimating prevalence and group characteristics. The International Journal of the Addictions, 23, 477-490.

48. Lesieur, H., & Blume, S. (1987). The South Oaks Gambling Screen (SOGS): A new instrument for the identification of pathological gamblers. American Journal of Psychiatry, 144, 1184-1188.

49. Volberg, R. (1990, August). Estimating the prevalence of pathological gambling in the United States. Remarks presented at the Eighth International Conference on Risk and Gambling, London, England. Also see Volberg, R., & Steadman, H. (1988). Refining prevalence estimates of pathological gambling. American Journal of Psychiatry, 145, 502-505. Volberg, R., & Steadman, H. (1989). Prevalence estimates of pathological gambling in New Jersey and Maryland. American Journal of Psychiatry, 146, 1618-1619. Volberg, R., & Steadman, H. (1989). Problem gambling in Iowa. (Research funded by the National Institute of Mental Health NH-44295 and the Iowa Department of Human Services). Delmar, NY: Policy Research Associates, Inc.

50. Rosecrance (1988), op.cit.

51. Volberg (1990), op.cit.

52. Lesieur, H., Cross, J., Frank, M., Welch, M., White, C., Rubenstein, G., Moseley, K., & Mark, M. (1991). Gambling and pathological gambling among university students. Addictive Behaviors: An International Journal, forthcoming.

53. Ibid.

54. Ibid.

55. Lieberman, Dr. Louis, Director of Research, National Council on Problem Gambling. (Personal communication, August 11, 1991).

56. Lieberman, L. (1988). A social typology of gambling behavior. (New York State Office of Mental Health contract #C-001361). New York: National Council on Compulsive Gambling, pp. 44-49.

57. Similar findings comparing the problems and attitudes of compulsive gamblers versus social gamblers have been reported by Sommers, I. (1988), op.cit.

58. Lesieur, H. (1986). Understanding compulsive gambling. Center City, MN: Hazelden Educational Materials.

59. Lesieur, H. (1989). Experience of employee assistance programs with pathological gamblers. Journal of Drug Issues, 19, 425-436.

60. Lesieur, H., & Heineman, M. (1988). Pathological gambling among youthful multiple substance abusers in a therapeutic community. British Journal of Addictions, 83, 765-771.

61. Lieberman, op.cit., p. 43.

62. Lesieur (1988). The female pathological gambler, op.cit.

63. Lesieur, Cross, Frank, Welch, White, Rubenstin, Moseley, & Mark (1991), op.cit.

64. Rose, I.N. (1988). Compulsive gambling and the law: From sin to vice to disease. Journal of Gambling Behavior, 4, 240-260.

65. Rose, I.N., & Lorenz, V.C. (1988). Editorial comment. (Introduction to special issue on Gambling and the Law). Journal of Gambling Behavior, 4, 238.

66. Rose (1988), op.cit., p. 257.

67. Rose & Lorenz (1988), op.cit., p. 238.

68. Rose (1988), op.cit., p. 250.

69. Rudyk, A. (1988). Gambling and federal Civil Service employment law. Journal of Gambling Behavior, 4, 261-276.

70. Levy, M., & Feinberg, M. (1991). Psychopathology and pathological gambling among males: Theoretical and clinical concerns. Journal of Gambling Behavior, 7, 41-53.

71. McCormick, R., Russo, A., Ramirez, L., & Taber, J. (1984). Affective disorders among pathological gamblers seeking treatment. American Journal of Psychiatry, 141, 215-218.

72. Cited in Levy, M., & Feinberg, M. (1991), op.cit., p. 42.

73. Linden, R., Pope, H., & Jonas, J. (1986). Pathological gambling and major affective disorder: Preliminary findings. Journal of Clinical Psychiatry, 47, 201-203.

74. Lesieur (1988), The female pathological gambler, op.cit.

75. Blaszczynski, A., & McConaghy, N. (1988). SCL-90 assessed psychopathology in pathological gamblers. Psychological Reports, 62, 547-552.

76. Lesieur, H. (1991). Compulsive gambling: Documenting the social and economic cost. Paper presented at conference on Gambling in Minnesota: An Issue for Policy Makers at the Humphrey Institute of Public Affairs, University of Minnesota, December 1990, revised April 1991. Studies cited are: Haberman, P.W. (1969). Drinking and other self-indulgences: Complements or counter-attractions? The International Journal of Addictions, 4, 157-167. Lesieur, H., Blume, S., & Zoppa, R. (1985). Alcoholism, drug abuse, and gambling. Alcoholism: Clinical and Experimental Research, 10, 33-38. Lesieur, H., & Heineman, M. (1988). Pathological gambling among youthful multiple substance abusers in a therapeutic community. British Journal of Addiction, 83, 765-771.

77. Lesieur (1988), The female pathological gambler, op.cit.

78. Ciarrocchi, J. (1987). Severity of impairment in dually addicted gamblers. Journal of Gambling Behavior, 3, 16-26. Also Lesieur, H. (1989). Female pathological gamblers and crime. Paper presented at meetings of the American Society of Criminology, Reno, Nevada.

79. Adler, J. (1981). The treatment of pathological gambling as an addictive behavior. In W.R. Eadington (Ed.). The Gambling Papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking Behavior. Reno, NV: University of Nevada, Bureau of Business and Economic Research.

80. Jacobs, D. (1986). A general theory of addictions: A new theoretical model. Journal of Gambling Behavior, 4, 15-31.

81. Peele, S. (1989). Diseasing of America: Addiction treatment out of control. Lexington, MA: Lexington Books.

82. Waldholz, M. (1991, July 15). New studies lend support to 'alcoholism gene' finding. The Wall Street Journal, p. B1, 4.

83. Blume, S., & Lesieur, H. (1987). Compulsive gambling: A concern for families with alcoholism and other drug problems. New York: National Council on Alcoholism.

84. A list of treatment centers is available from the National Council on Problem Gambling. Among the most prominent at this time are: Gambling Treatment Program, V.A. Medical Center, 10000 Brecksville Rd., Brecksville, OH 44141, contact Dr. Lori Rugle (216-526-3030 ext. 6847; and V.A. Medical Center, Lyons, NJ 07939, contact Dr. Rena Nora, (201) 647-0180 ext. 6940.

85. Franklin, J., & Richardson, R. (1988). A treatment outcome study with pathological gamblers: Preliminary findings and strategies. IN W.R. Eadington (Ed.), Gambling Research: Proceedings of the Seventh International Conference on Gambling and Risk Taking. Reno, NV: Institute for the Study of Gambling and Commercial Gaming. Also, Walker, M. (1991, in press). Treatment strategies for problem gambling: A review of effectiveness. In W.R. Eadington, (Ed.), Gambling Behavior and Problem Gambling. Reno, NV: Institute for the Study of Gambling and Commercial Gaming and Commercial Gaming.

86. McCormick, R., & Taber, J. (1991). Follow-up of male pathological gamblers after treatment: The relationship of intellectual variables to relapse. Journal of Gambling Behavior, 7, 99-108.

87. Blaszcznski, A., McConaghy, N., & Frankova, A. (1991). Control versus abstinence in the treatment of pathological gambling: A two to nine year follow-up. British Journal of Addiction, 86, 299-306.

* * * * * *

POLICE APPLICANT SCREENING - A BIBLIOGRAPHY

By

Norman Ansley

<u>Analysis of Pre-Employment Interview by St. Louis Metropolitan</u> <u>Police Department, August 1961 to December 1964</u>. Personnel Division, St. Louis Metropolitan Police Department, January 1965.

Ansley, Norman (1975). Police Screening - the Results of 413 Examinations. <u>Polygraph Review 2</u>, 2-7.

Ansley, Norman (1973). Vermont State Police Polygraph Service. <u>Polygraph</u> 2(3), 239-244.

Arther, Richard O. (1972). How Many Robbers, Burglars, Sex Criminals is Your Department Hiring This Year? <u>Journal of</u> <u>Polygraph Studies</u> <u>6</u>(6), 1-4. Reprinted in <u>Pennsylvania Law</u> <u>Enforcement Journal</u> (June 1976), 50-55.

Arther, Richard O. (1967). Polygraph Picks Potential Policemen. <u>Journal of Polygraph Studies</u> 2(2), 1-4.

Arther, Richard O. (1968). Subversives in the Police Department. Journal of Polygraph Studies 2(6), 1-3.

Arther, Richard O. (1974). Why Does Police Work Attract So Many Failures? <u>Law & Order</u> 12(9), 62-69.

Barber, William E. (July 1967). <u>Kalamazoo Applicant Polygraph</u> <u>Program</u>. Unpublished manuscript.

Barber, William E. (July 1964). Police Applicant Screening. <u>Keeler Polygraph Institute Alumni Association Seminar</u>. Chicago, Illinois.

Barber, William E. (May 1973). Polygraphic Screening of Police Applicants. Paper presented at the <u>Third National Workshop</u> <u>on Practical Polygraph Procedures</u>. Delta College, Michigan.

Barnes, Philip G. (May 22, 1961). Should the Polygraph be Used to Periodically Screen All Members of a Police Department? Manuscript prepared for the 67th Session of the <u>FBI National</u> <u>Academy</u>.

Bartlett, Steven K. (1991). <u>Standardization of Law Enforce-</u> <u>ment Polygraph Screening</u>. Unpublished manuscript. ALA Archives.

Barton, Michael F. (1974). Polygraph as a Police Pre-Employment Selection Tool. <u>Polygraph</u> <u>3</u>(4), 401-411. Blum, Richard H. (1967). The Polygraph Examination in Law Enforcement Personnel Selection. <u>Police</u> <u>12</u>(2), 60-75.

Bohart, Paul H. (Sep. 1959). Tucson Uses New Police Personnel Selection Methods. <u>FBI Law Enforcement Bulletin</u> 28, 8-12.

Burkett, Bobby R. (1973). The Polygraph and Police Pre-Employment Testing. Manuscript prepared for the 95th Session of the <u>FBI National Academy</u>.

Confidential Police Study Supports Use of Lie Tests for Job Seekers. (June 11, 1965). <u>St. Louis Post Dispatch</u>, 3A.

Cormack, Robert W. (Sep. 1963). The Police Candidate Polygraph Examination Program of John E. Reid and Associates. Paper presented at the 10th Annual meeting of the <u>American Academy</u> of Polygraph Examiners.

Davis, Glenn (May 2, 1973). Police Applicant Testing and the Vermont State Police. Paper presented at the <u>3rd Annual Workshop</u> <u>on Practical Police Procedures</u>, Delta College, Michigan.

Dickson, Billy (April 1986). Pre-Employment Polygraph Screening of Police Applicants. <u>FBI Law Enforcement Bulletin</u> <u>55(4)</u>, 7-9.

Dishlacoff, Leon and Shaugnessy, R.B. (June 10, 1964). <u>Police</u> <u>Applicant Polygraph Program</u>. Denver Civil Service Commission.

Eisenberg, Terry; Kent, Deborah Ann; Wall, Charles R. (1973). <u>Police Personnel Practices in State and Local Governments</u>. Washington: Police Foundation, 15, 17, 20-21.

Elam, Gerald (July 1960). Polygraph: An Aid in Recruiting. Law & Order, 24-27.

Fifteen Cities, Seven States and FBI Now Use Lie Detector Tests, Eliminating Innocent from Suspicious One of Important Results. <u>Washington Star</u> (June 12, 1940).

Fox, Dean (1972). Screening Police Applicants. <u>Polygraph</u> 1(2), 80-83.

Godrey, E.D. and Harris, D.R. (1971). <u>Basic Elements of</u> <u>Intelligence: A Manual of Theory, Structure and Procedures for Use</u> <u>by Law Enforcement Agencies Against Organized Crime</u>. Washington: Department of Justice.

Gooch, Charles D. (1964). <u>An Inquiry into the Use of the</u> <u>Polygraph in Applicant Evaluation and Personnel Screening</u>. Unpublished M.S. Thesis, School of Police Administration, Michigan State University. Horvath, Frank S. (1972). The Police Candidate Polygraph Examination: Considerations for the Police Administrator. <u>Police</u> 16(10), 34.

Horvath, Frank S. (Oct. 16, 1990). <u>Preliminary Results of a</u> <u>Survey of Large Law Enforcement Agencies in the United States</u> <u>Regarding the Use of Pre-Employment Polygraph Screening</u>. American Polygraph Association Research Center, Michigan State University.

Inglin, Raymond D. (1974). Applicant Screening in the Los Angeles Police department. <u>Polygraph</u> <u>3</u>(2), 177-188.

Ivany, Loretta (Sep. 22, 1977). Lie Detector Valuable in Hiring of Police. <u>Sun Herald</u> (Cleveland, Ohio).

Kelso, Jack (April 8, 1964). Expert Claims Lie Tests Kept Jobs From Thieves. <u>The Evening Star</u> (Washington, D.C.), A4.

Lawrence G. H. (March 1966). The Psychiatrist, The Polygraph, and Police Selection. <u>Security World</u>, 23, 25.

Leistler, Ken (October 1989). On the Path to Wearing the Blue. <u>The Professional Polygraphists</u>, 5.

Lie Detectors Screen Law Upholders (January 1960). <u>Public</u> <u>Administration Bulletin</u> 4(1), 8.

Lindberg, George W. (n.d.). <u>The Reid Police Candidate</u> <u>Selection Program</u>. Unpublished inter-office report of John E. Reid & Associates.

Lopez, Peggie L. (1987). Results of Law Enforcement Pre-Employment Drug Survey. <u>National Academy of Women Polygraphists</u> Journal <u>2</u>, 24-26.

Los Angeles Police Department Scientific Investigation Division Polygraph Section Annual Report (1971), 6pp.

McCarthy, Dennis (October 2, 1991). Murder Charge Dismissed. The Oregonian, 1, All.

McKee, Roger (1971). The Polygraph and the Police. <u>The</u> <u>Police Chief</u> <u>37</u>(2), 52-53.

Maryland State Police (1975). <u>Maryland State Police Applicant</u> <u>Polygraph Screening Technique</u>. 14pp.

Meesig, Robert T. and Horvath, Frank (1993). Changes in Usage, Practices and Policies in Pre-Employment Polygraph Testing in Law Enforcement Agencies in the United States. <u>Polygraph 22(1)</u>, 1-16.

Morris, Jim (1987). Pre-Employment Polygraph Screening of Police Recruits. <u>APA Newsletter</u> 20(4), 16-17.

O'Connor, George W. (1962). Survey of Selection Methods. <u>The</u> <u>Police Chief</u> <u>29</u>(10), 8-43; <u>29</u>(11), 54-65; <u>29</u>(11), 12-24.

O'Keefe, Jack A. (August 1960). Background Check by Polygraph Interview a Use Tool. <u>Police Chief</u>, 5-6.

O'Leary, John (1977). Polygraphs and Police. <u>Police Chief</u> <u>44</u>(5), 18.

O'Shields, Joseph B. March 1967). The Polygraph and Recruiting. <u>Auditgram</u> <u>43</u>, 19-20.

Paull, Forrest S. (1964). A \$\$\$ Evaluation of the Polygraph. Police Chief 31(8), 45-46.

Philly FOP Says No to Polygraph Tests. (November 24, 1980). Law Enforcement News 6(20), 3, 16.

Philly PC Says Polygraph Exams are Needed to Restore Integrity. (October 3, 1986). Law Enforcement News 11(5), 3.

Police Cadet Who Didn't Tell It All. (November 23, 1974). <u>San</u> <u>Francisco Chronicle</u>.

The Polygraph as an Administrative Tool. (1980). Legal Points, 4pp.

Pre-Employment Inquiry Guidelines. (Summer 1981). <u>C.A.P.E.</u> <u>Newsletter</u> 1(3), 14-19.

Price, Carroll S. (1961). An Instrumental Approach to Applicant Evaluation. <u>Police 5(5)</u>, 39-42.

Prior, Leroy E. (1985). Polygraph Testing of Vermont State Police Applicants. <u>Polygraph 14(3)</u>, 256-257.

Putnam, Richard L. (1978). Polygraph Screening of Police Applicants. <u>Polygraph</u> 7(4), 257-262.

Ray, C.L. (Fall 1979). The Police Pre-Employment Test. <u>Newsletter, Alabama Association of Polygraph Examiners</u>, pp. 1-2.

Riley, Paul T. (1961). The Use of the Polygraph for Pre-Employment Testing of Police Recruits. <u>Police</u> 5(6), 42-43.

Robber Kept Off Police Force by Polygraph Examination. (May-June 1981). <u>American Polygraph Association Newsletter</u> 14(3), 6.

Roberts, Michael and Johnson, Michael (1989). <u>Pre-Employment</u> <u>Background Characteristics That are Different Between Officers</u> <u>Fired for Cause and Those Still in Good Standing</u>. Cited in <u>Woodland v. City of Houston</u>. Robles, G.K. and Dupnik, C.W. (March 16, 1966). <u>Polygraph in</u> <u>Screening of Police Applicants</u>. Police Department, City of Tucson, Arizona.

Romig, Clarence H.A. (1972). Improving Police Selection With the Polygraph. Polygraph 1(4), 207-220.

Skowsen, W. Cleon (1961). What About Examinations for Police Personnel? <u>Law & Order</u> 9(7), 44-47, 77.

Swank, Calvin J. and Haley, Keith N. (1972). The Objections to Polygraph Screening of Police Applicants. <u>Police Chief</u>, <u>39(6)</u>, 73-76.

Territo, Leonard (1974). The Use of Polygraph in the Pre-Employment Screening Process. <u>Police Chief</u> <u>41</u>(7), 51-53.

U.S. District Court Supports Police Polygraph Screening (174). Polygraph 3(4), 412-416.

Van Veghel, William (May 1963). Analyzing the Use of the Polygraph in Selection of Police Applicants. Manuscript Prepared for the 71st Session of the <u>National FBI Academy</u>.

Washnis, G.J. (July 1962). Polygraphic Tests for City Employees. <u>Public Personnel Review</u> 23, 192-198.

Wheeler, Dee (August 1963). Pre-employment Polygraph Examination of Police Applicants. Law & Order, <u>11</u>(8), 61-62.

Yeschke, C.L. (August 1962). The Advantages and Limitations of Police Applicant Testing with Polygraph. Paper presented at the 9th Annual Seminar of the <u>American Academy of Polygraph Examiners</u>, Chicago, Illinois.

Zon, Calvin (February 26, 1979). Polygraph Being Used to Screen Police Prospects. <u>The Prince George's Star</u>, p. PG-3.

* * * * * *

Steve Bartlett, Vickie Murphy and Dick Putnam

In order for an examiner to accurately interpret polygraph charts, it is extremely important to recreate the examination conditions as closely as possible. Certain conditions may cause distortions and without the knowledge of these incidents, those responses may be improperly or unjustly considered as a physiological response as opposed to some other distortion. As a minimum, the examiner should record specific data with chart markings that are consistent, such as subject identification, question identification, behavior of the subject, examiner comments, special instructions, external factors and instrument adjustments.

In the event that the subject makes an admission on a particular question between charts and it becomes necessary for the examiner to reword a question, a change in the question number (such as 6a, 6b, or 6c, etc.) should reflect that change. Chart markings should be made at the point and time of the occurrences during the instrumentation phase of the examination. Question spacing should remain constant throughout the charts and are recommended to be at least twenty seconds apart from time of answer to the beginning of the next question.

When going in and out of operation, begin with the pneumograph component and word downward. Reverse the process when going out of operation. A chart begins when the examiner announces the beginning of the examination and an X is placed on the bottom of the chart. All charts should be saved from beginning to end, which is marked with XX at the bottom of the chart. Notations should be included to designate disruptions in the examination phase. Whenever the examiner speaks or gives instructions to the subject during the examination phase, the chart(s) should be marked to indicate the given stimulus. The charts should also be marked in the event of noises occurring which may affect the subject.

Chart markings are a vital part of every successful examination. For an examiner's analysis or the reconstruction analysis by another examiner, chart markings must be complete and accurate. As with any related document, the examiner should consider permanency, neatness, consistency and abbreviations for minimal marking or

The authors appreciate the responses from the following schools & courses: Academy for Scientific Investigative Training, American Institute of Polygraph Technology & Applied Psychology, Argenbright International Polygraph Institute, Arizona School of Polygraph Science, Backster School of Lie Detection, Canadian Police College, Central Intelligence Agency Polygraph Course, Department of Defense Polygraph Institute, International Academy of Polygraph, Maryland Institute of Criminal Justice, and the Western Oregon State College School of Polygraph.

Standard Chart Markings

writing on the chart since the markings are made on moving graph paper. The markings are made at the location of the component or area most likely affected. All chart markings should be permanent to avoid criticism that the marks or notations could have been changed or that they were added at a later time. All markings should be made at the point of occurrent. They should be aligned with the pen tips. An examiner should not delay marking an event or adjustment.

SUBJECT IDENTIFICATION:

Subject's Name
Date of the Examination
Type of Examination (ZCT, MGQT, etc.)
Chart Number Run (C-1, C-2, etc.)
Examiner Identification (Name, license number, etc.)
Examination location
Stimulus (question) Mark (_____ or | |)
Subject Answer (+ for "yes") (- for "no") (? if not heard)
Question number, letter, or combination of letter and number
Beginning / Ending Time (Overall of each chart)
Instrument Serial Number (Optional but recommended if using
more than one instrument)

Subject's signature at Chart Conclusion

PNEUMOGRAPH:

SU	Sensitivity Units
1	Baseline Adjustment Up
Ţ	Baseline Adjustment Down
СВ	Chest (thoracic) Breathing (single pneumo)
SB	Stomach (abdominal) Breathing (single pneumo)
DB	Deep Breath

126

Steve Bartlett, Vickie Murphy and Dick Putnam

ELECTRODERMAL:

5	SU	Sensitivity Units
ľ	И	Manual Centering Mode (d.c.)
1	A	Automatic Centering Mode (a.c.)
5	50+	Sensitivity Units Increased with number of new setting
5	5U-	Sensitivity Units Decreased with number of new setting
	\wedge	Baseline Adjustment Up
	\checkmark	Baseline Adjustment Down
١	~~	Disregard
1	lK	PIP Switch Test (l kil/ohm)
Ę	5K	PIP Switch Test (5 kil/ohm)
CARDIC	DGRAPH:	
n	nm or mmHg	Milimeters of Mercury
	Ť	Baseline Adjustment Up

1	
↓ ↓	Baseline Adjustment Down
LA or LUA	Cuff Location - Left Upper Arm
RA or RUA	Cuff Location - Right Upper Arm
LFA	Cuff Location - Left Forearm
RFA	Cuff Location - Right Forearm
TM	Cuff Location - Left Wrist
RW	Cuff Location - Right Wrist
LL	Cuff Location - Left Leg (thigh)
RL	Cuff Location - Right Leg (thigh)
LC	Cuff Location - Left Leg (calf)
RC	Cuff Location - Right Leg (calf)
LA	Cuff Location - Left Ankle

127

Standard Chart Markings

RA	Cuff Location - Right Ankle
LT	Transducer Location - Left Thumb
RT	Transducer Location - Right Thumb
®	Notch Setting
®	Response Setting of Notch Control
SU	Sensitivity Units
SU+	Sensitivity Units Increased with number of new setting
SU-	Sensitivity Units Decreased with number of new setting

SUBJECT:

Т	Talking
тт	Extended Talking
M	Movement (Unspecified)
M(arm)	Movement (Specified)
MM	Prolonged Movement
SZ	Sneeze
SN	Sniff
SI	Sigh
С	Cough
СС	Extended Coughing
В	Belch or Burp
R	"Repeat the question"
СТ	Clear Throat
L	Laugh
LL	Extended Laughing
Y	Yawn
SW	Swallow

	Steve Bartlet	, Vickie Murphy and Dick Putnam
	<u>+</u> "sir" or 'Mam"	Answer Plus
	SP	Asleep
	SPSP	Extended Sleep
	WU	Wake Up
	SM	Smile
	CP or CD	Cuff Pain or Cuff Discomfort
	CE	Close Eyes
	OE	Open Eyes
EXAM]	INER:	
	х	Begin Chart Run
	XX	End Chart Run
	ADJ	Adjustment (specify clearly)
	от	Other Than
	ТВК	To (the) Best (of)(your) Knowledge
	TBM	To (the) Best (of)(your) Memory
	BI	Breathing Instruction
	TI	Talking Instruction
	MI	Movement Instruction
	AI	Answer Instruction
	TDB	Take Deep Breath Instruction
	ISN	Inside Noise
	OSN	Outside Noise
	N	Noise (unspecified)
	NN	Extended Noise (specify)
	PJ	Paper Jam
	EE	Examiner Error (Verbal)
	WR	Will Repeat the Question

Standard Chart Markings

Ε	Examiner
S	Subject
v	Victim
II	Other Instruction (specify)
PW or PWQ	Poorly Worded Question
PS	Pen Skip
IS	Ink Stop

MISCELLANEOUS:

BPmm=	Beginning Cuff Pressure
EPmm=	Ending Cuff Pressure
К	Knowledge or Know
DY	Did You or Do You
DYK	Did You Know or Do You Know
DYKW	Do You Know Who
LQ	Last Question
NQ	Next Question
ZCT	Zone Comparison Test
MGQT	Modified General Question Test
GS	General Series Test
R/I	Relevant/Irrelevant Test
POT	Peak of Tension Test
SPOT	Searching Peak of Tension Test
GKT	Guilty Knowledge Test
РК	Prior Knowledge
EF	Except For
BS	Besides
М	Modified (MZCT, etc.)

130