Polygraph

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POLYGRAPH PASSES THE TEST

Ву

Richard J. Phannenstill*

Crime against business costs business and the consumer dearly. According to the American Management Association, business loses between \$30 and \$40 billion annually to crime, excluding indirect insurance and prevention costs.

Interestingly, the largest percentage of these crimes against business can be attributed to theft by employees. In fact, more than twenty percent of all business failures each year are a direct result of employee theft, and such internal theft far exceeds business losses due to burglary, shoplifting, arson, and check fraud.[1]

The increasing threat of employee theft has prompted many businesses to use preemployment polygraph examinations to assist in screening applicants for positions of trust. But as the use of the polygraph has increased, so has the controversy surrounding it.

Proponents maintain that preemployment polygraph examinations do a better job of determining an applicant's honesty than other available selection methods.

Critics of the polygraph contend the preemployment polygraph examination is intrusive, an invasion of privacy, and a dehumanizing experience. According to Trudy Hayden, consultant to the American Civil Liberties Union, "Many people who are required to take a lie detector test as a condition of employment find it humiliating, frightening, sickening, and disgusting."[2]

However, in spite of these contentions, little empirical data supports the charges that properly conducted preemployment examinations are an invasion of privacy or constitute an offensive screening procedure. Recent studies consistently demonstrate that the overwhelming majority of persons who actually undergo preemployment polygraph tests do not find them objectionable. Researchers Philip Ash, Joseph Buckley, and Ben Silverberg surveyed different cross sections of persons who had taken preemployment polygraph examinations and reported essentially similar findings

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the majority of the respondents, whether hired or not, felt the polygraph examination was fair, inoffensive, and did not invade their privacy. In fact, most expressed a willingness to undergo polygraph testing in the future.[3]

Differences in the nature of the work force, occupational availabilities, and polygraph procedures may exist in different geographic locations. A study was carried out, therefore, to determine the attitudes of persons who had undergone preemployment polygraph testing in Milwaukee and to compare the results with previous research reported by Ash (Chicago), Buckley (Chicago and Denver), and Silverberg (Buffalo and Western New York and Toronto, Canada).

In the Milwaukee study 220 consecutive job applicants were given preemployment polygraph examinations by John E. Reid & Associates, Inc. during 1981. Of the 220 applicants, 107(48.6 percent) were male; 113(51.4 percent) were female. The ages of these applicants ranged from 17 to 63 years, with a mean age of 23.2 years. Categorized by race, 178(80.8 percent) of the subjects were white; 42(19.2 percent) were black. The subjects were applying for positions of trust as security officers, warehouse workers, cashiers, clerks, managers, route people, gas station attendants, pharmacists, and jewelers.

All subjects took standard preemployment polygraph examinations concerning theft of money and merchandise from former employers during the past five years; shoplifting during the past two years; convictions for crimes and commission of undetected crimes during the past seven years; sale and use of marijuana, illegal narcotics, and dangerous drugs during the past twelve months; buying and selling stolen merchandise during the past two years; the falsification of the job application.

Standards of acceptable and unacceptable behavior were established beforehand by the business clients. Using those standards as criteria for judging the subjects' suitability for employment (in the position applied for), 133(60.4 percent) met the standardization for employment; 87(39.6 percent) exceeded the standards for employment. The number of subjects actually hired is insignificant because that decision only partially depended on the outcome of the polygraph examination.

Following the polygraph examination, subjects were advised the testing was completed and were told their test results. Subjects the examiner believed were withholding information were asked for further explanation. Subjects then completed a six-item questionnaire to determine their opinions of various aspects of the polygraph examination. (See Exhibit 1).

Other than indicating their age and gender, subjects were instructed neither to identify themselves nor to include any personal data on the survey. The subjects were also informed the survey results would not influence the hiring decision.

All the questions could be answered "yes" or "no" except question 6, which asked, "What you do think about this [polygraph] test now that you have completed it?"

Responses to question 6 were categorized as favorable, not favorable,

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Exhibit 1
Attitudes of Job Applicants
Toward Their Preemployment Polygraph Examinations

QUESTION	No N(%)	RESPONSES Yes N(%)	Unclear N(%)
1. Do you think the test was un- fair in any way?	195(89%)	22(10%)	3(1%)
2. Did the test or any part of it offend you?	191(87%)	27(12%)	2(1%)
3. Do you think the test was an invasion of your privacy?	173(79%)	46(21%)	1(-)
4. If the occasion arose would you take a test like this as an applicant for a job?	11(5%)	207 (94%)	2(1%)
5. If a loss occurred at your company and you were asked to cooperate by taking a polygraph test to help find			
the person who caused the loss, would you?	9(4%)	210(96%)	1(-)

or unclear. The majority of answers were clearly favorable or unfavorable. For example, one response, "It wasn't worth worrying about; it was very fair and thorough." was categoried as favorable. Another response, "It's different and I really wouldn't want to make a habit of taking them," was categoried as not favorable. Responses such as "surprised," "average," "don't know," and "It really makes your mind work," could not be evaluated easily and were classified as unclear.

In answering question 6, 176(80 percent) of the respondents made a favorable comment about taking the polygraph exmaination; 31(14 percent) made an unfavorable comment; and 13(6 percent) made an unclear comment.

Of the total 220 persons, 156 answered questions 1 through 5 with a yes or no; 35 of these persons offered additional comments consistent with their responses. The remaining 64 subjects, however, made comments to one or more of the questions without answering specifically with a yes or a no; thus, it was necessary to categorize these comments as meaning yes or no. For instance, in response to the question "Do you think [the polygraph examination] was an invasion of your privacy?" one person wrote, "Maybe one question, but there is no way it can hurt me." This response was categorized as a yes, indicating this person did feel the test was an invasion of privacy. Other responses interpreted as indication of "invasion of privacy" included: "a little," "in a way," "somewhat," and "very little."

Richard J. Phannenstill

EXHIBIT 2
Number and Percentage of Favorable Respondent
Attitudes in Previous Research

				Study	And Lo	cation			
(Ash 1973	, ;	De (Bu	nver ckley,	West (Silv	ern, NY erberg,	Ca (Silve	nada erberg,	Ca (Silve	onto, nada erberg, N = 115)
N (%	s) .	N	(%)	Ν	(%)	N	(%)	Ν	(%)
208 (86	5%)	244	(90%)	102	(100%)	216	(99%)	114	(99%)
220 (9	1%)	235	(87%)	99	(97%)	212	(98%)	113	(98%)
200 (83	3%)	209	(77%)	100	(98%)	213	(98%)	113	(98%)
232 (96	5%)	253	(94%)	95	(93%)	207	(95%)	108	(93%)
)	70/1	000	(070/)	0.0	(000/)	202	(000)	444	(070/)
	(Ash 1973 N = 24 N (% 208 (86 220 (99 200 (83 232 (96	200 (83%)	(Ash, De 1973; (Bu N = 241) 1980; N (%) N 208 (86%) 244 220 (91%) 235 200 (83%) 209 232 (96%) 253	(Ash, Denver 1973; (Buckley, N=241) 1980; N=270) N (%) N (%) 208 (86%) 244 (90%) 220 (91%) 235 (87%) 200 (83%) 209 (77%) 232 (96%) 253 (94%)	Chicago Chicago- But (Ash, Denver West 1973; (Buckley, (Silv N=241) 1980; N=270) 1980; N (%) N (%) N (%) N (%) N (%) N (%) 208 (86%) 244 (90%) 102 220 (91%) 235 (87%) 99 200 (83%) 209 (77%) 100 232 (96%) 253 (94%) 95	Chicago (Ash, 1973; (Buckley, 1973; (Buckley, 1980; N = 270) Buffalo & Western, NY (Silverberg, N = 241) N = 241) 1980; N = 270) 1980; N = 102) N (%) N (%) N (%) 208 (86%) 244 (90%) 102 (100%) 220 (91%) 235 (87%) 99 (97%) 200 (83%) 209 (77%) 100 (98%) 232 (96%) 253 (94%) 95 (93%)	Chicago (Ash, 1973; (Buckley, 1973; (Buckley, 1980; N = 241) Cancer (Silverberg, 1980; N = 102) Cancer (Silverberg, 1	Chicago (Ash, (Ash, 1973; (Buckley, 1980; N=241) Denver (Buckley, 1980; N=270) Buffalo & Toronto, Canada (Silverberg, 1980; N=241) N=241) 1980; N=270) 1980; N=102) 1980a; N=217) N (%) N (%) N (%) N (%) 208 (86%) 244 (90%) 102 (100%) 216 (99%) 220 (91%) 235 (87%) 99 (97%) 212 (98%) 200 (83%) 209 (77%) 100 (98%) 213 (98%) 232 (96%) 253 (94%) 95 (93%) 207 (95%)	Chicago (Ash, (Ash, 1973; (Buckley, 1980; N = 241) Buffalo & Toronto, Canada (Silverberg, 1980; N = 270) Toronto, Canada (Silverberg, 1980; N = 217) Toronto, Canada (Silverberg, 1980) Canada (Silverberg, 1980) N = 217) 1980b; N = 217) N (%) N (%) N (%) N (%) N (%) N (%) N (%) N (%) N (%) N (%) N (%) N (%

All seven persons who thought the polygraph examination was an invasion of privacy mentioned questions about their financial status. Those questions, however, were not asked during the polygraph examination but rather in a written application form.

Exhibit 1 shows the number and percentage of the 220 respondents' answers to questions 1 through 5. One hundred ninety-five (85 percent) of the respondents did not feel the polygraph was unfair; 191 (79 percent) said the polygraph was not an invasion of privacy. Furthermore, 94 percent of the subjects said they would be willing to take a polygraph examination again to get a job, and 95 percent said they would be willing to take an examination to investigate a loss at their place of employment.

Exhibit 2 shows the number and percentage of subjects who responded favorably to questionnaire items about polygraph testing in the five previous studies, all of which were similar in methodology to the Milwaukee study. The findings in each of those studies were very similar to the results obtained here. For example, averaging across those five studies shows that 95 percent of the respondents found the polygraph examination fair; 94 percent did not find it offensive; and 91 percent did not consider it an invasion of privacy.

One difference between the Milwaukee study and prior research is that the time span investigated in this study was shorter. For example, in Ash's study, thefts of money and merchandise stolen from former employers were investigated from the past ten years rather than the past five years as in the Milwaukee study. Similarly, questions regarding stolen

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merchandise, shoplifting, and the sale and use of illegal drugs were investigated during the past ten years in the Ash study as opposed to seven years, two years, and twelve months respectively in the Milwaukee study.

Perhaps such time restrictions and limitations on the nature of questions asked during the polygraph testing, and public awareness of those limitations, will ensure that the rights of both businesses and prospective employees are protected. If polygraph examinations are carefully and properly carried out, and businesses prepare prospective employees for the test fairly and impartially, the preemployment polygraph examination is neither an unjustifiable nor unreasonable tool to help select persons for positions of trust.

Footnotes:

- [1] Chamber of Commerce of the United States, White Collar Crime (Washington, DC: Chamber of Commerce of the United States, 1974).
- [2] Andrews, L.B., "How Lie-Detectors Lie," <u>Parents Magazine</u> (March, 1983), pp. 26-31.
- [3] Ash, Philip "Survey of Attitudes of the Polygraph," Polygraph (1973, Vol. 2, #3), pp. 200-223; Buckley, Joseph, "Public Relations Committee Report," American Polygraph Association Newsletter (January-February 1980, Vol. 13, #1), p. 18; Silverberg, Ben, "Attitudes of Job Applicants and Employees Toward the Polygraph," Polygraph (September 1980, Vol. 9 #3), pp. 162-169.

ILLINOIS POLYGRAPH SOCIETY SURVEY OF STATES ATTORNEYS AND PUBLIC DEFENDERS

The survey was mailed out in early January 1983. Responses were received through late February 1983. Letters were sent to States Attorneys and Public Defenders in 102 Illinois counties. 47 States Attorneys responded, 30 Public Defenders responses, and 4 responses were received unidentified, totalling 81 responses.

Highlights of the survey are as follows:

- 1. 94% of all respondents have utilized polygraphs.
- 2. 70% of the States Attorneys feel that Illinois should stipulate results.
- 3. 60% of all respondents feel that Illinois should stipulate polygraph results.
- 4. Over 70% of the respondents felt the results were both consistent with other evidence and subsequent trial decisions.
- 5. 73% of all Public Defenders have had charges dismissed as either partial or total result of polygraph tests.
- 6. 88% have used the results for pre-trial agreements or plea bargaining.
- 7. Generally speaking, the States Attorneys are more in favor of polygraph than the Public Defenders.

The following is a synopsis of each question and the survey results:

1) Have you used polygraph testing in any cases in which you were involved?

	Yes	No
Total	94%	6%
States Attorney	96%	4%
Public Defenders	90%	10%

2) Have the results been consistent with other evidence?

Total States Attorney Public Defenders	Yes 54% 68% 30%	No 16% 9% 30%	0ther 30% 23% 40%
Of those directly answering the question	77%	23%	

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Illinois Polygraph Society Survey

3) Have the results been consistent with subsequent trial decisions?

Total States Attorney Public Defenders	Yes 42% 55% 23%	No 17% 6% 33%	0ther 41% 38% 43%
Of those directly answering the question	71%	29%	

4) What is the percentage of time that the results have been accurate?

Total	Under 50% 50% - 59% 60% - 69% 70% - 79% 80% - 89% 90% - 100%	8% 4% 6% 20% 16% 47%
States Attorney	60% - 69% 70% - 79% 80% - 89% 90% - 100% Unknown	4% 15% 11% 34% 36%
Public Defenders	Under 50% 50% - 59% 60% - 69% 70% - 79% 80% - 89% 90% - 100% Unknown	10% 7% 3% 7% 7% 23% 43%

83% of all respondents felt the results were accurate 70 - 100% of the time.

5) Have you used the results in any pre-trial agreements or plea bargaining?

	Yes	No	No Answer
Total	88%	6 %	6%
States Attorney	89%	6%	4%
Public Defenders	83%	7%	10%

6) As a defense attorney, have you ever had charges dismissed or S.O.L. as either a partial or total result of a polygraph examination?

T. 4 . 1	Yes	No 11%	No Answer
Total	43%	1 176	46%
States Attorney	26%	9%	66%
Public Defenders	73%	17%	10%

Illinois Polygraph Society Survey

7) How accurate do you think scientific evidence should be before it is admissible in court?

Total	60%+	1%
	70%+	12%
	80%+	4%
	90%+	38%
	100%	14%
	Unknown	31%
States Attorney	60%+	2%
v	70%+	13%
	80%+	4%
	90%+	36%
	100%	9%
	Unknown	36%
Public Defenders	70%+	7%
	80%+	3%
	90%+	43%
	100%	23%
	Unknown	23%

8) Polygraph results should be admissible as evidence in criminal cases where there is a prior stipulation agreed upon by both sides.

	Agree 62%	Disagree 30%	Undecided
Total	62%	30%	-8%
States Attorney	72%	17%	11%
Public Defenders	43%	50%	7%

9) Polygraph evidence presented in court can be sufficiently understood by a layperson in order for them to give it appropriate weight as evidence.

	Agree	Disagree 33%	Undecided
Total	56%	33%	11%
States Attorney	70%	19%	11%
Public Defenders	33%	53%	13%

10) Polygraph evidence, subject to proper cross-examination would overwhelm a jury contrary to other evidence.

	Agree	Disagree	Undecided
Total	Agree 32%	42%	26%
States Attorney	19%	51%	30%
Public Defenders	53%	27%	20%

Illinois Polygraph Society Survey

11) Legislation should be introduced in Illinois to allow people involved in criminal cases to stipulate to the results of a polygraph examination provided the defendant, his attorneys and prosecution agree beforehand.

	Agree	Disagree	Undecided
Total	60%	32%	8%
States Attorney	72%	19%	9%
Public Defenders	40%	53%	7%

Ву

Norman Ansley

Fred E. Inbau, Marvin E. Aspen and James E. Spiotto. <u>Protective Security Law.</u> Boston: Butterworths, 1983, 301 pp., indexed. <u>Appendix with state laws</u>. \$22.95. Butterworths, 10 Tower Office Park, Wobun, Massachusetts 01801, 617/933-8260.

Those who know the high quality of the books on law by Professor Inbau won't be disappointed by this new book. It is absolutely superb. No professional security or loss prevention officer should be without this reference and text.

The book covers the entire range of the law on protective security. Its first four chapters are devoted to Arrest, Search and Seizure, Temporary Detention and Inquiries of Detained persons, and The Interrogation of Suspected Persons. Then follows a chapter on Scientific Investigations and one on Security Surveillance of Customers and Employees. Chapters 7 and 8 are about The Right to Eject Persons Who Abuse Their Privilege as Invitees and the Right to Unionize, Picket, and Protest at or Upon Business Establishments. Chapters 9, 10 and 11 discuss Crimes and Crimial Law Principles of Particular Concern to Security Officers. Chapter 12 describes Criminal Procedure from Arrest through Trial and Chapter 13 is about the Courts and their Organization. In Chapters 14 and 15 the authors offer suggestions on a Security Officer's Preparation of a Case for Criminal Prosecution and the Security Office as a Witness.

There is a significant treatise on the legal aspects of the use of the polygraph in the employment context in the chapter on Scientific Investigation. Here is excellent coverage of court case law on personnel testing with the polygraph, arbitration case law, and statutory law on licensing and limitations.

Although written for security officers, the text is so thoroughly annotated that a corporate lawyer will find it a very useful reference. Those who teach commercial security courses should review this book as a possible primary or supplemental text.

Arthur S. Aubry, Jr. and Rudolph R. Caputo. <u>Criminal Interrogation</u>, Third Edition. Springfield, Illinois: Charles C. Thomas, 1980. \$18.75. Thomas, 2600 S. First St., Springfield, Illinois 62717.

Those readers who have the earlier editions of this work will be pleased to have the new edition, with five new chapters. The book is well designed for use as a textbook, but it also has value as a reference work, particularly in the sections dealing with court decisions.

The book discusses the need to confess, the interrogator, credibility, qualifications, personality, the art and science of persuasion, and the organization of persuasive arguments. There are chapters on

interrogation approaches, interrogation techniques, symptoms of deception, meeting the subject, the psychology of offenders and the psychology of confessions, and special considerations in interrogating tough subjects and emotional subjects. This is an excellent book for those who interrogate. the only disappointment is the two chapters on the polygraph which unlike the remainder of the text are superficial.

Lee Lapin. How to Get Anything on Anybody. San Francisco: Auburn Wolfe Publishing, 1983. 263 pp. \$34.00 postpaid from Auburn Wolfe Publishing, Inc., 584 Castro Street, #351, San Francisco, California 94114, tel. (415) 665-2025.

This is one of the strangest books you will ever see. It is poorly organized, badly written, occasionally ridiculous. Nonetheless it has some useful information which is not readily available elsewhere. is a lot of information on technical equipment used for investigations, some legal and some illegal. In fact, over half of the book is about bugging equipment, information on technical equipment for surveillance, not to mention information on how to cheat a telephone company, and how to get restricted information from the telephone companies. The writer brags that the book is useful to foreign intelligence agencies, but it would be more accurate to say that it is only of interest to criminals who do not have technical knowledge. The illustrations of the equipment are excel-There is some useful information and tips on locating persons in hiding, and those who are just plain hard to find but aren't hiding. There is birth, death and marriage records, with the price for each copy. There is a little chapter on the polygraph and two chapters on voice stress, and none of the information is worth the price of the book or the time to read it. The book has very large type and pictures, and is not as thorough as the 265 pages suggest. This book doesn't fit the description of one that every professional should have, but it is not without some value. If you collect everything on physical security or investigations, buy one.

A. Nicholas Groth with H. Jean Birnbaum. Men Who Rape: The Psychology of the Offender. New York: Plenum, 1979. 227 pp., indexed. \$15.00. Plenum, 227 W. 17th St., New York, New York 10011.

Based on over 15 years of extensive clinical experience with more than 500 sexual offenders, this work examines the psychological and emotional factors which predispose a person to react to situational and life events with sexual violence. It describes the developmental histories, the life styles, and the motivations of men who rape. The authors suggest guidelines for the identification, diagnostic assessment, and treatment of such offenders.

The study argues that rape is the sexual expression of power and anger, described as a pseudosexual act, complex and multi-determined, involving hostility and control more than sexual passion. There are discussions of selection of the victim, determination of the sexual act, the offender's reaction during the assault, the role of alcohol and sexual dysfunction.

Abstracts

There are also discussions of sadistic rape, gang rape, child rape, male rape, and marital rape, as well as discussions of offenders including adolescents and females. The book is not entirely technical or theoretical as it includes a significant number of case histories and quotations from offenders.

ABSTRACTS

Effect of Alcohol

M.T. Bradley and D. Ainsworth, "Alcohol and the Psychophysiological Detection of Deception." Psychophysiology 21(1)(1984): 63-71.

Psychophysiological detection of deception examinations were conducted on 40 subjects. Of these, 32 were "quilty" of a mock crime and 8 Sixteen quilty subjects committed the crime while intoxicated and the remaining 16 committed the crime sober. These two groups of guilty subjects were subdivided such that half of each group was examined with the polygraph while intoxicated and the other half was examined while sober. Two questioning techniques were used in the examination, a Control Question Test and the Guilty Knowledge Test. Measures of skin resistance, heart rate and respiration were recorded. The principal findings were that alcohol intoxication during the crime reduced detectability with detection scores derived from the measurement of skin resistance responses on the Control Question Test and on the Guilty Knowledge Test. analyses of quilt/innocent classifications to be affected by alcohol intoxication. [author abstract] Being intoxicated at the time of the mock crime significantly reduced the detectibility. Being intoxicated at the time of the polygraph test did not reduce the detectability. [Ed.]

Event Related Potentials

Ira Fishler, Paul A. Bloom, Donald G. Childers, Salim E. Roucos, and Nathan W. Perry, Jr. "Brain Potentials Related to Stages of Sentence Verification." Psychophysiology 20(4)(July 1983): 400-409.

Subjects were shown the terms of simple sentences in sequence (e.g., "A sparrow/is not/a vehicle") and manually indicated whether the sentence was true or false. When the sentence form was affirmative (i.e., "X is a Y"), false sentences produced scalp potentials that were significantly more negative than those for true sentences, in the region of about 250 to 450 Msec following presentation of the sentence object. In contrast, when the sentence form was negative (i.e., "X is not a Y"), it was the true statements that were associated with the ERP negativity. Since both the false-affirmative and the true-negative sentences consist of "mismatched" subject and object terms (e.g., sparrow/vehicle), it was concluded that the negativity in the potentials reflected a semantic mismatch between terms at a preliminary stage of sentence comprehension, rather than the falseness of the sentence taken as a whole. Similarities between the present effects of semantic mismatches and the N4-- associated with incongruous sentences (Kutas & Hillyard, 1980) are discussed. The pattern of response latencies and of ERPs taken together supported a model of sentence comprehension in which negatives are dealt with only after the proposition to be negated is understood.[Author abstract]

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Law

Thomas J. Moses. "The Polygraph in California: A Heartbeat Away From Admissibility." The Pacific Law Journal 14(4)(July 1983): 1113-1143.

The author states that the time for recognition of polygraphic evidence as an important tool in the search for truth has come. He observes that the theory of polygraphy, that the unconscious reactions of the body have been proven accurate and reliable by laboratory experiments and field applications. He notes that the "Truth-in-Evidence" provision of Proposition 8, a Constitutional change in California, may require courts to admit the results if relevant. Citing Witherspoon, as holding that the blanket exclusion of polygraphic evidence can no longer be maintained, he warns that evidence, to be admitted, must be the product of competent and qualified polygraph examiners who must meet judicially established standards as expert witnesses. The author provides some suggestions for the qualifications of an examiner who is to testify as an expert witness, including provisions of the California Evidence Code, particularly Section 720 and Section 801.

Meditation and Arousal

David S. Holmes. "Meditation and Somatic Arousal Reduction: A Review of the Experimental Evidence." <u>American Psychologist</u> 39(1)(January 1983): 1-10.

The conceptual and methodological issues associated with research on the effects of meditation are reviewed. A summary of the reserach in which the somatic arousal of meditating subjects was compared to the somatic arousal of resting subjects did not reveal any consistent differences between meditating and resting subjects on measures of heart rate, electrodermal activity, respiration rate, systolic blood pressure, diastolic blood pressure, skin temperature, oxygen consumption, EMG activity, blood flow, or various biochemical factors. Similarly a review of the research on the effects of meditation in controlling arousal in threatening situations did not reveal any consistent differences between meditating and non-meditating (nn-treatment, antimeditation, or relaxation) subjects. The implications of these findings for research and practice are discussed. [Author abstract]. References.

Requests for reprints should be sent to David S. Holmes, Department of Psychology, University of Kansas, Fraser Hall, Lawrence, Kansas 66045.

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