

TABLE 4.—Accuracy of polygraph reported in experimental studies

Type of investigation	Reference	Number of cases	Accuracy (percent)				Comments
			Verified reports	Indeterminable cases	Proved error	Inconclusive polygraph	
Noncriminals.....	Marston, 1921.....	35	94.2	-----	-----	-----	Emphasis placed on GSR and cardiac amplitude; accuracy not defined.
Do.....	Rucknick, 1936.....	50	86.0	-----	-----	-----	
Students.....	Summers, 1939.....	221	98.0	-----	-----	-----	
Experimental cases.....	MacNitt, 1942.....	194	99.1	-----	-----	-----	
Imaginary crimes.....	do.....	17	99.0	-----	-----	-----	81 college men, all judged innocent of a dormitory theft; after 1-5 retests Cardio-vascular responses categorized on 1st test only:
Card tests.....	do.....	36	75.0	-----	-----	-----	
Innocent students.....	Bitterman and Marcuse, 1947.....	81	-----	-----	-----	-----	
			-----	-----	-----	-----	
			-----	-----	-----	-----	No reaction..... 38
			-----	-----	-----	-----	Moderate, scattered..... 28
			-----	-----	-----	-----	Extensive..... 25
			-----	-----	-----	-----	More pronounced to relevant than irrelevant, i.e., guilty..... 9
			-----	-----	-----	-----	Total..... 100
			-----	-----	-----	-----	Agreement between 3 judges in categorizing responses 0.87 to 0.96 (cont. coef.).
Distinguish guilt from knowledge about the "crime" in a mock theft.	Baeson, Chung, and Yang, 1948.	100	86.0	-----	-----	-----	In 75 percent of cases, guilty person in each pair (rather than person with guilty knowledge) produced evidence required for identification.
Mock theft.....	Rourke and Kubis, 1948.....	(1)	97.0	-----	-----	-----	1 or 2 trials insufficient but accuracy can reach 97 percent if many retests are permitted; no difference in polygraph response between delinquents and non-delinquents.
Card guessing.....	van Buskirk and Marcuse, 1954.....	50	72.0-84.0	-----	-----	-----	Errors could be reduced 50 percent and accuracy would rise to 92 percent if more indeterminate judgments made; but those on whom polygraph could be used would drop from 100 to 72 percent (for this sample). Reliability: Records could be read in same way 1 month later in 84 to 94 percent of cases.

See footnote at end of table.