of subjects consists of admitted alcoholics under treatment.) (c) Will the arrangement of the questions into seven groups stand up to an objective analysis? (d) Will the arrangement be repeated with other subjects? More generally the notion that alcoholics have distinctive personality patterns which are markedly different from those of other groups (both normal and abnormal) has come under fire. Reviews of work based on the idea that alcoholism is associated with particular personality patterns 1 suggest that nothing of this sort has so far been sufficiently clearly demonstrated to provide a practical basis for test construction. Consequently one cannot readily see how the test may be used in either clinical practice or research.

For reviews by Charles H. Honzik and Albert L. Hunsicker, see 4:68.

# [ 138 ]

\*Maudsley Personality Inventory. College and adults; 1959-62; 2 scores: neuroticism, extraversion; H. J. Eysenck. \*

a) BRITISH EDITION. 1959; I form (2 pages); manual (8 pages); may be administered as a short scale; 6s. 9d. per 25 tests; 4d. per single copy; 2s. per set of keys; 2s. 6d. per manual; postage and purchase tax extra; [5] minutes for short scale, [15] minutes for full scale; University of London Press Ltd.
b) UNITED STATES EDITION. 1962; I form ('62, c1959—62, 2 pages, items identical with British edition); manual (21, pages); \$2, page 25, tests; \$7, pages); \$4, pages 25, tests; \$7, pages

b) UNITED STATES EDITION. 1962; I form ('62, c1959-62, 2 pages, items identical with British edition); manual (21 pages); \$3 per 25 tests; \$1 per set of test booklet hand scoring stencils; separate answer cards may be used; \$5 per 100 IBM port-a-punch cards; \$1.25 per manual; \$1.75 per specimen set; postage extra; (10-15) minutes; manual by Robert R. Knapp; Educational & Industrial Testing Service.

## REFERENCES

1. Bendig, A. W. "Extraversion, Neuroticism, and Manifest Anxiety." Abstract. J Consult Psychol 21:398 O '57. \*
2. Bendig, A. W. "Extraversion, Neuroticism, and Verbal Ability Measures." J Consult Psychol 22:464 D '58. \* (PA 33:9928)

3. Bendig, A. W. "Identification of Item Factor Patterns Within the Manifest Anxiety Scale." Abstract. J Consult Psychol 22:158 Ap '58. \* (PA 35:3448)

4. EYSENCK, H. J. "Hysterics and Dysthymics as Criterion Groups in the Study of Introversion-Extraversion: A Reply."

J Abn & Social Psychol 57:250-4 S '58. \* (PA 33:10806)

EVENCK H. I. "A Short Questionnaire for the Manuae

5. EYSENCK, H. J. "A Short Questionnaire for the Measurement of Two Dimensions of Personality." J Appl Psychol 42:14-7 F'58. \*

6. Jensen, Arthur R. "The Maudsley Personality Inventory." Acta Psychologica 14(4):314-25 '58. \* (PA 33:9958)
7. Sigal, John J.; Star, Kolman H.; and Franks, Cyril M. "Hysterics and Dysthymics as Criterion Groups in the Measure of Introversion-Extraversion: A Rejoinder to Eysenck's Reply." J Abn & Social Psychol 57:381-2 N '58. \* (PA 33:10825)

8. SIGAL, JOHN J.; STAR, KOLMAN H.; AND FRANKS, CYRIL M. "Hysterics and Dysthymics as Criterion Groups in the Study of Introversion-Extraversion." J Abn & Social

Psychol 57:143-8 S'58. \* (PA 33:10826)
9. Storms, Lowell H., and Sigal, John J. "Eysenck's Personality Theory With Special Reference to The Dynamics of Anxiety and Hysteria." Brit J Med Psychol 31:228-46 pts

3 & 4 '58. \*
10. BARTHOLOMEW, ALLEN A. "Extraversion-Introversion

1 SYME, LEONARD. "Personality Characteristics and the Alcoholic: A Critique of Current Studies." Q J Stud Alcohol 18: 288-302 Je'57.

and Neuroticism in First Offenders and Recidivists." Brit J Delina 10:120-0 O'50. \*

ceptibility to Methylpentynol: Personality and Other Variables." J Mental Sci 105:957-70 O'59. \*

12. BARTHOLOMEW, ALLEN A., AND MARLEY, EDWARD. "The

Temporal Reliability of the Maudsley Personality Inventory."

J. Mental Sci. 105:238-40 Ja '59. \* (PA 34:1000)

Validity of the Pittsburgh Revisions of the Maudsley Personality Inventory." J Psychol Studies 11:12-7 S-O '59. \* (PA 34:4053)

14. Bendig, A. W. "The Relationship of Scales of Extraversion-Introversion and Emotionality to Guilford's O, F, and P Scales." J Psychol Studies 11:49-51 N-D '59. \* (PA 34:5597) 15. Bendig, A. W. "Score Reliability of Dichotomous and Trichotomous Item Responses on the Maudsley Personality Inventory." Abstract. J Consult Psychol 23:181 Ap '59. \* (PA 34:1339, title only)

16. Bendig, A. W., and Vaughan, Charles J. "Extraversion, Neuroticism, and Motor Learning." J Abn & Social Psychol 59:399-403 N '59. \* (PA 34:6003)

17. Brengelmann, J. C. "Differences in Questionnaire Responses Between English and German Nationals." Acta Psychologica 16(5):339-55 '59. \* (PA 34:5788)

18. EYSENCK, H. J. "The Differentiation Between Normal and Various Neurotic Groups on the Maudsley Personality Inventory." Brit J Psychol 50:176-7 My '59. \* (PA 34:2991) 19. EYSENCK, H. J. "Personality and the Estimation of Time." Percept & Motor Skills 9:405-6 D '59. \* (PA 34:5610) 20. Franks, C. M., and Leigh, D. "The Theoretical and Experimental Application of a Conditioning Model to a Consideration of Bronchial Asthma in Man." J Psychosom Res 4:88-98 D '59. \* (PA 34:8218)

21. KELTY, EDWARD JOHN. Normal Electrocortical Activity in Relation to Personality Factors. Doctor's thesis, Duke University (Durham, N.C.), 1959. (DA 20:756)

22. Lynn, R. "Two Personality Characteristics Related to Academic Achievement." Brit J Ed Psychol 29:213-6 N '59. \* 23. Ray, Oakley S. "Personality Factors in Motor Learning and Reminiscence." J Abn & Social Psychol 59:199-203 S '59. \* (PA 34:2691)

24. SMITH, C. M., AND HAMILTON, J. "Psychological Factors in the Narcolepsy-Cataplexy Syndrome." Psychosom Med 21:40-9 Ja-F '59. \* (PA 34:1858)

25. VALENTINE, MAX. "Psychometric Testing in Iran." J

Mental Sci 105:93-107 Ja '59. \* (PA 34:1065)
26. Bendig, A. W. "Extraversion, Neuroticism, and Student Achievement in Introductory Psychology." J Ed Res 53:

263-7 Mr'60. \*

27. Bendig, A. W. "Factor Analyses of 'Anxiety' and 'Neuroticism' Inventories." J Consult Psychol 24:161-8 Ap

'60. \* (PA 34:8195)
28. Bendig, A. W. "Item Factor Analyses of the Scales of the Maudsley Personality Inventory." J Psychol Studies 11:

104-7 Ja-F '60. \* (PA 34:7366)
29. Brengelmann, J. C.; Hahn, H.; Pedley, J. C.; and Amato, J. G. "Learning and Personality: 1, A Pilot Experiment." Acta Psychologica 17(2):113-8 '60. \* (PA 35:784)

30. Bronzaft, A.; Hayes, R.; Welch, L.; and Koltuv, M. "Relationships Between Extraversion, Neuroticism, and Ascendance." J Psychol 50:279-85 O '60. \* (PA 35:6475)

31. Bronzaft Arline: Hayes Roslyn: Welch Living

31. BRONZAFT, ARLINE; HAYES, ROSLYN; WELCH, LIVING-STON; AND KOLTUV, MYRON. "Relationship Between PGR and Measures of Extraversion, Ascendance, and Neuroticism." J Psychol 50:193-5 O '60. \* (PA 35:6522)

32. CARRIGAN, PATRICIA M. "Extraversion-Introversion as a Dimension of Personality: A Reappraisal." Psychol B 57:329-60 S'60. \* (PA 35:4976)

33. CLARIDGE, GORDON. Chap. 2, "The Excitation-Inhibition Balance in Neurotics," pp. 107-54. In Experiments in Personality: Vol. 2, Psychodiagnostics and Psychodynamics. Edited by H. J. Eysenck. London: Routledge & Kegan Paul Ltd., 1960. Pp. viii, 333. \*

34. EYSENCK, H. J. Chap. 5, "A Factor Analysis of Selected Tests," pp. 234-44. In his Experiments in Personality: Vol. 2, Psychodiagnostics and Psychodynamics. London: Routledge & Kegan Paul Ltd., 1960. Pp. viii, 333. \*

35. EYSENCK, H. J. "Reminiscence, Extraversion and Neuroticism." Percept & Motor Skills 11:21-2 Ag '60. \* (PA 35:3499)

36. EYSENCK, H. J. The Structure of Human Personality, Second Edition. London: Methuen & Co. Ltd., 1960. Pp. xix, 448.

37. EYSENCK, H. J.; TARRANT, MOLLIE; WOOLF, MYRA; AND ENGLAND, L. "Smoking and Personality." Brit Med J (5184): 1456-60 My 14'60. \*

38. EYSENCK, S. B. G. "Social Class, Sex, and Response to a Five-Part Personality Inventory." Ed & Psychol Meas 20:47-54 sp '60. \* (PA 34:7381)

39. HOLLAND, H. C. Chap. 4, "Measures of Perceptual Functions," pp. 193-233. In Experiments in Personality: Vol. 2, Psychodiagnostics and Psychodynamics. Edited by H. J. Eysenck. London: Routledge & Kegan Paul Ltd., 1960. Pp. viii, 333. \*

40. Knowles, John. "Maudsley Personality Inventory." Psychometric Res B (6):[22-5] su '60. \*

41. Knowles, John B. "The Temporal Stability of MPI Scores in Normal and Psychiatric Populations." Abstract. J Consult Psychol 24:278 Je '60. \*

42. Sainsbury, P. "Psychosomatic Disorders and Neurosis in Out-Patients Attending a General Hospital." J Psychosom Res 4:261-73 Jl '60. \* (PA 36:1JU61S)

43. VINSON, D. B., AND ROBBINS, L. R. "Objectivity in the Assessment of the Thyrotoxic Patient." J Psychosom Res 4:236-43 Mr '60. \* (PA 36:11B36V)

44. Vogel, Muriel D. "The Relation of Personality Factors to GSR Conditioning of Alcoholics: An Exploratory Study." Can J Psychol 14:275-80 D'60. \* (PA 35:5200)

45. WILLETT, R. A. Chap. 3, "Measures of Learning and Conditioning," pp. 157-92. In Experiments in Personality: Vol. 2, Psychodiagnostics and Psychodynamics. Edited by H. J. Eysenck. London: Routledge & Kegan Paul Ltd., 1960. Pp. viii, 333. "

46. Bendig, A. W. "A Factor Analysis of Scales of Emotionality and Hostility." J Clin Psychol 17:189-92 Ap '61. \*

(PA 38:1034)

46a. Cowie, Valerie. "The Incidence of Neurosis in the Children of Psychotics." Acta Psychiatrica Scandinavica 37(1):37-71 '61. \* (PA 36:4JV37C)

47. Das, Gita. "Standardisation of Maudsley Personality Inventory (M.P.I.) on an Indian Population." J Psychol Res 5:7-9 Ja '61. \* (PA 35:5540)

48. FIELD, J. G. "An Interpersonal Validation of the MPI." Acta Psychologica 18(5):351-3 '61. \* (PA 37:1202)

49. FIELD, J. G., AND BRENGELMANN, J. C. "Eyelid Conditioning and Three Personality Parameters." J Abn & Social Psychol 63:517-23 N '61. \* (PA 37:369)

50. Foulds, G. A. "The Logical Impossibility of Using Hysterics and Dysthymics as Criterion Groups in the Study of Introversion and Extraversion." Brit J Psychol 52:385-7 N'61. \* (PA 36:4HI85F) Comments by H. J. Eysenck and J. G. Ingham and reply by G. A. Foulds. Brit J Psychol 53:455-9 N '62. \*

51. Franks, C. M.; Holden, E. A.; and Phillips, M. "Eysenck's 'Stratification' Theory and the Questionnaire Method of Measuring Personality." J Clin Psychol 17:248-53 J1 '61. \* (PA 38:8489)

52. FURNEAUX, W. D. "Neuroticism, Extraversion, Drive, and Suggestibility." J Clin & Exp Hypnosis 9:195-214 O '61. \* (PA 36:4II95F)

53. Furneaux, W. D., and Gibson, H. B. "The Maudsley Personality Inventory as a Predictor of Susceptibility to Hypnosis." J Clin & Exp Hypnosis 9:167-77 Jl '61. \* (PA 36:3II67F)

54. KEEHN, J. D. "Response Sets and the Maudsley Personality Inventory." J Social Psychol 54:141-6 Je '61. \* (PA 36:2HF41K)

55. LIPMAN, RONALD S., AND SPITZ, HERMAN H. "Cortical Conductivity and Vocabulary." J Abn & Social Psychol 63: 459-60 S'61. \* (PA 37:200)

56. Lucas, C. J. "Personality of Students With Acne

Vulgaris." Brit Med J 2(5248):354-6 Ag 5 '61. \* 57. LYNN, R., AND GORDON, I. E. "The Relation of Neu-

roticism and Extraversion to Intelligence and Educational Attainment." Brit J Ed Psychol 31:194-203 Je '61. \* (PA 36:3HD94L) 58. RIM, Y. "Dimensions of Job Incentives and Personality."

Acta Psychologica 18(5):332-6 '61. \* (PA 37:2113)

59. SHANMUGAM, T. E. "Voluntary Inhibition and Disinhibition in Relation to Personality Traits." Psychol Studies 6: 36-40 Ja '61. \* (PA 37:1319)

60. SINGH, S. D.; SHARMA, N. R.; AND VIMAL, KUMARI. "Personality Differences in Fluctuation of Attention." Psychol Studies 6:55-60 Ja '61. \* (PA 37:1320)

61. VOGEL, MURIEL D. "GSR Conditioning and Personality Factors in Alcoholics and Normals." J Abn & Social Psychol 63:417-21 S'61. \* (PA 37:1725)

62. Bendig, A. W. "Factor Analyses of the Guilford Zimmerman Temperament Survey and the Maudsley Personality Inventory." J General Psychol 67:21-6 Jl '62. \* (PA 37:3169) 63. BENDIG, A. W. "A Factor Analysis of Personality Scales Including the Buss-Durkee Hostility Inventory." J General Psychol 66:179-83 Ap '62. \* (PA 37:1246)

64. BIGGS, J. B. "The Relation of Neuroticism and Extraversion to Intelligence and Educational Attainment." Brit J

Ed Psychol 32:188-95 Je '62. \* (PA 37:3123) 65. Bonier, Richard Joseph. Relationships of Psychosomatic States to Emotional Disturbance and Diffuse Autonomic Activity. Doctor's thesis, Michigan State University (East Lansing, Mich.), 1962. (DA 23:1417)

66. Eysenck, H. J. "Response Set, Authoritarianism and Personality Questionnaires." Brit J Social & Clin Psychol

I:20-4 F'62. \* (PA 37:1252) 67. EYSENCK, H. J., AND CLARIDGE, G. "The Position of Hysterics and Dysthymics in a Two-Dimensional Framework of Personality Description." J Abn & Social Psychol 64:46-55 Ja '62. \* (PA 37:1281)

68. EYSENCK, S. B. G. "The Validity of a Personality Questionnaire as Determined by the Method of Nominated Groups." Life Sci 1:13-8 Ja '62. \* (PA 37:1253)

69. EYSENCK, S. B. G., AND EYSENCK, H. J. "Rigidity as a Function of Introversion and Neuroticism: A Study of Unmarried Mothers." Int J Social Psychiatry 8:180-4 su '62. \* (PA 37:6932)

70. Firch, J. H. "Two Personality Variables and Their Distribution in a Criminal Population: An Empirical Study." Brit J Social & Clin Psychol 1:161-7 O'62. \* (PA 37:5449) 71. GIBSON, H. B. "The Lie Scale of the Maudsley Personality Inventory." Acta Psychologica 20(1):18-23 '62. \* (PA 37:3173)

72. HOLLAND, H. C. "A Note on Differences in the Duration of the Spiral After-Effect Following Continuous and Intermittant Stimulation." Acta Psychologica 20(4):304-7 '62. \* (PA 38:3539)

73. HOLLAND, H. C. "The Spiral After-Effect and Extraversion." Acta Psychologica 20(1):29-35 '62. \* (PA 37:2296) 74. JENSEN, ARTHUR R. "Extraversion, Neuroticism, and Serial Learning." Acta Psychologica 20(2):69-77 '62. \* (PA 37:6773)

75. Keenn, J. D. "Neurotic Questionnaire Responses as Simulated by Normal Individuals." Austral J Psychol 14: 65-8 Ap '62. \* (PA 38:6086)

76. Kissen, David M., and Eysenck, H. J. "Personality

in Male Lung Cancer Patients." J Psychosom Res 6:123-7 Ap-Je '62. \* (PA 37:5531) 77. LANG, PETER J., AND LAZOVIK, A. DAVID. "Personality

and Hypnotic Susceptibility." J Consult Psychol 26:317-22 Ag '62. \* (PA 38:4433)

78. McGuire, Ralph J. "A Study of the M.P.I. Used With Psychiatric In-Patients." Abstract. B Brit Psychol Soc 47:56-7 Ap '62. \*

79. Papaloizos, Antoine. "Personality and Success of Training in Human Relations." Personnel Psychol 15:423-8 w '62. \* (PA 38:1462)

80. Savage, R. D. "Three Experiments Using the Junior Maudsley Personality Inventory: 2, Personality Factors and Academic Performance." Brit J Ed Psychol 32:251-3 N '62. \* (PA 37:8275)

81. Star, Kolman H. "Ideal-Self Response Set and Maudsley Personality Inventory Scores." Psychol Rep 11:708 D'62. \* (PA 38:1003)

82. Walton, D., and Mather, M. D. "Differential Response to Questionnaire Items of Neuroticism by 'Defensive' and 'Non-Defensive' Subjects." J Mental Sci 108:501-4 Jl '62. \* (PA 37:3243)

83. Bartholomew, A. A. "Some Comparative Australian Data for the Maudsley Personality Inventory." Austral J Psychol 15:46-51 Ap '63. \*

84. Beech, H. R., and Adler, F. "Some Aspects of Verbal Conditioning in Psychiatric Patients." Behav Res Ther 1: 273-82 D'63. \* 85. Bendig, A. W. "A Note on Cattell's Radicalism (Q1)

Scale." J Social Psychol 60:107-13 Je '63. \* (PA 38:4173) 86. Bendig, A. W. "The Relation of Temperament Traits of Social Extraversion and Emotionality to Vocational Interests." J General Psychol 69:311-8 O'63. \* (PA 39:1800)

87. BENDIG, A. W., AND MARTIN, ANN M. "The Factor Structure of Temperament Traits and Needs." J General Psychol 69:27-36 Jl '63. \* (PA 38:4297)

88. BERG, PAUL SAUL DAVID. Neurotic and Psychopathic Criminals: Some Measures of Ego Syntonicity, Impulse Socialization and Perceptual Consistency. Doctor's thesis, Michigan State University (East Lansing, Mich.), 1963. (DA 24:2559) 89. Choppy, Maryse, and Eysenck, H. J. "Brain Damage

and Depressant Drugs: An Experimental Study of Interaction," pp. 313-23. In Experiments With Drugs: Studies in the Relation Between Personality, Learning Theory and Drug Action. Edited by H. J. Eysenck. New York: Macmillan Co., 1963. Pp. xii, 421. \* (PA 38:5527)

90. CLARIDGE, G. S., AND HERRINGTON, R. N. Chap. 5, "Excitation-Inhibition and the Theory of Neurosis: A Study of the Sedation Threshold," pp. 131-68. In Experiments With Drugs: Studies in the Relation Between Personality, Learning Theory and Drug Action. Edited by H. J. Eysenck. New York: Macmillan Co., 1963. Pp. xii, 421. \* (PA 38:5527)

91. CLARIDGE, G. S., AND HERRINGTON, R. N. "An EEG Correlate of the Archimedes Spiral After-Effect and Its Relationship With Personality." Behav Res Ther 1:217-29 D'63. \* 92. Coppen, Alec, and Kessel, Neil. "Menstruation and Personality." Brit J Psychiatry 109:711-21 N '63. \* (PA

38:8347) 93. Costello, C. G., and Smith, C. M. "The Relationships Between Personality, Sleep and the Effects of Sedatives." Brit J Psychiatry 109:568-71 J1 '63. \* (PA 38:4487)

94. CROOKES, T. G., AND HUTT, S. J. "Scores of Psychotic Patients on the Maudsley Personality Inventory." J Consult Psychol 27:243-7 Je '63. \* (PA 38:994)

95. DAVIFS, M. H.; CLARIDGF, G. S.; AND WAWMAN. R. J. "Sedation Threshold, Autonomic Lability and the Excitation-Inhibition Theory of Personality: 3, The Blood Pressure Response to an Adrenaline Antagonist as a Measure of Autonomic Lability." Brit J Psychiatry 109:558-67 J1 '63. \* (PA 38:3795)

95a. Evans, Frederick J. "The Maudsley Personality Inventory, Suggestibility, and Hypnosis." Int J Clin & Exp Hyp.

nosis 11:187-200 Jl '63. \* (PA 38:6273) 96. EYSENCK, S. B. G., AND EYSENCK, H. J. "Acquiescent Response Set in Personality Questionnaires." Life Sci 2:144-7 F'63. \* (PA 38:995)

97. EYSENCK, S. B. G., AND EYSENCK, H. J. "On the Dual Nature of Extraversion." Brit J Social & Clin Psychol 2:46-55 F'63. \* (PA 38:916)

98. Eysenck, Sybil B. G., and Eysenck, H. J. "The Validity of Questionnaire and Rating Assessments of Extraversion and Neuroticism, and Their Factorial Stability." Brit J Psychol 54:51-62 F'63. \* (PA 37:8009)

99. Forrest, D. W. "Relationship Between Sharpening and Extraversion." Psychol Rep 13:564 O'63. \* (PA 38:8488) 99a. Furneaux, W. D. "Neuroticism, Extraversion, and Suggestibility: A Comment." Int J Clin & Exp Hypnosis II:20I-2 Jl '63. \*

100. Furneaux, W. D., and Lindahl, L. E. H. "How Valid Are Questionnaire Validity Studies?" Abstract. B Brit Psychol Soc 16:19A Ap '63. \*

101. HESELTINE, G. F. "The Site of Onset of Eczema and Personality Trait Differences: An Exploratory Study." J Psychosom Res 7:241-6 D'63. \* (PA 38:8360)

102. HILGARD, ERNEST R., AND BENTLER, P. M. "Predicting Hypnotizability From the Maudsley Personality Inventory." Brit J Psychol 54:63-9 F '63. \* (PA 37:8091)

103. Howarth, E. "Some Laboratory Measures of Extraversion-Introversion." Percept & Motor Skills 17:55-60 Ag '63. \* (PA 38:7242)

104. Kissen, David M. "Personality Characteristics in Males Conducive to Lung Cancer." Brit J Med Psychol 36(1):27-36 '63. \* (PA 38:921)

105. LITTLE, ALAN. "Professor Eysenck's Theory of Crime: An Empirical Test on Adolescent Offenders." Comments by H. J. Eysenck. Brit J Criminol 4:152-63 O'63. \* (PA 38: 6477)

106. LOVIBOND, S. H. "Conceptual Thinking, Personality and Conditioning." Brit J Social & Clin Psychol 2:100-11 Je '63. \* (PA 38:3654)

107. McGuire, R. J.; Mowbray, R. M.; and Vallance, R. C. "The Maudsley Personality Inventory Used With Psychiatric Inpatients." Brit J Psychol 54:157-66 My '63. \* (PA 38:1032)

108. Manne, Sigmund H.; Kandel, Arthur; and Rosen-THAL, DAVID. "The Relationship Between Performance Minus Verbal Scores and Extraversion in a Severely Sociopathic Population." J Clin Psychol 19:96-7 Ja '63. \* (PA 39:1676) 109. MEZEY, A. G.; COHEN, SAMUEL I.; AND KNIGHT, E. J.

"Personality Assessment Under Varying Physiological and Psychological Conditions." J Psychosom Res 7:237-40 D'63. \* (PA 38:8527)

110. RATH, R., AND MISRA, S. K. "Change of Attitudes as a Function of Some Personality Factors." J Social Psychol 60:311-7 Ag '63. \* (PA 38:4182)

111. Robinson, J. O. "A Study of Neuroticism and Casual Arterial Blood Pressure." Brit J Social & Clin Psychol 2:56-64 F '63. \* (PA 38:1347)

112. RUTTIGER, KATHERINE FORD. "Individual Differences in Reaction to Meprobamate: A Study in Visual Perception." J Abn & Social Psychol 67:37-43 Jl '63. \* (PA 38:419)

113. SINGER, JEROME L., AND ANTROBUS, JOHN S. "A Factor-Analytic Study of Daydreaming and Conceptually-Related Cognitive and Personality Variables." Percept & Motor Skills 17:187-209 Ag '63. \* (PA 38:7418)

114. SINGH, S. D. "Extraversion, Neuroticism, and Conformity Behaviour." J Psychol Res 7:66-71 My '63. \* (PA 38:4253)

115. STANLEY, GORDON. "Personality and Attitude Characteristics of Fundamentalist Theological Students." Austral J Psychol 15!121-3 Ag '63. \* (PA 38:6037)

116. Tauss, W. "A Note on Stability and Equivalence of Long and Short Forms of the M.P.I." Austral J Psychol 15:118-20 Ag '63. \*

117. VENABLES, ETHEL. "Personality Scores and Achievement Among Technical College Students." Abstract. B Brit Psychol Soc 16:58-9 Jl '63. \*

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By all criteria of excellence in test development the MPI is an impressive achievement. It has grown out of years of intensive re- the manual itself summarizes much of the pubsearch on the dimensional analysis of personality. A great amount of evidence (36) has shown that two relatively independent superfactors, identified by Eysenck as neuroticism and extraversion-introversion, represent most of the variance in the personality domain.

While it is possible to slice the variance in this domain into many different ways of making up "scales" consisting of various combinations of many kinds of personality inventory items, these scales are almost always highly intercorrelated, despite their widely differing labels. When they are factor analyzed, either at the scale level or at the item level, the first two or three independent factors almost invariably account for all the appreciable common factor variance in the lot. The MPI has been developed to measure two of the most comprehensive factors, Neuroticism (N) and Extraversion (E). Neuroticism refers to general emotional instability, emotional overresponsiveness, and predisposition to neurotic breakdown under stress. Extraversion refers to outgoing, uninhibited, impulsive, and sociable inclinations. The method of developing the inventory was factor analytic and is adequately described in both the British and American editions of the manual.

The MPI consists of 48 items, of which 24 are keyed to N and 24 to E. Unlike some personality inventories (e.g., the MMPI), none of the items could be construed as socially objectionable; thus the inventory can be used with adolescents or adults in almost any setting. Though the MPI takes only about 10 or 15 minutes, there is also a short form—described in the British manual and by Jensen (6)—consisting of six items from each scale. The short form has satisfactory reliability and high correlations with the total scales and can be useful when time is very limited.

The MPI derives much of its importance from its theoretical underpinnings. Probably no other psychological test—certainly no other personality inventory—rivals it in psychological rationale. This is particularly true of the E dimension, which has been the subject of intensive experimental research in Eysenck's laboratory for more than a decade. A review of this research is, of course, impossible here. The manual prepared by Robert Knapp for the American edition has a bibliography of II2 items of the most relevant literature, and lished findings. Factor-analytically sophisticated readers are also referred to Carrigan's (32) critical appraisal of E as a dimension of personality.

norms. A great deal of normative data are presented, both for English and American sub-

jects. The American manual presents American college norms (percentiles and stanines based on 1,064 university undergraduates). Means and standard deviations are presented for 32 different groups, including various psychiatric, prison, and industrial populations, totaling over 7,000 subjects (including the American norms group of 1,064 and the Enghas published some Australian norms, which differ little from the English, except that the Australians seem to be slightly more extraverted, as are the Americans.

There are slight sex and social class differences on both the N and E scales; these are fully discussed in the manual. The scales are not correlated with intelligence.

.90 in various samples. N consistently has slightly higher internal consistency than E. Test-retest reliabilities range from .70 to .90. In short, the reliability of the MPI is among the highest to be found for personality inventories. The MPI has also been studied for These seem to be negligible.

Assessment of the validity of the MPI is a complex matter. There can be little question of its factorial validity. That is to say, the N and E scales invariably have high loadings on factors that are also heavily represented in other measures considered to be indicative of neuroticism or extraversion, and there is little factorial overlap between the scales. Though they were intended to be completely indepencorrelated about -.15-slightly more or less depending upon the population sampled. The negative correlation is somewhat higher (usually about -.30) in psychiatric and college populations. Data on correlations with other personality inventories are presented in the manuals. Note, for example, that the N scale correlates almost as highly (.76) with the would allow. There is, however, a slightly greater negative correlation between the Taylor scale and the E scale than between the N and E scales.

Descriptive validity of the MPI has been adequately established by the method of nominated groups. Judges rated people on the basis of observable characteristics in terms of neuroticism and extraversion. These ratings show highly significant correlations with the relevant dimensions measured by the MPI.

Most important, but also the most difficult to evaluate, is the "construct validity" of the MPI, that is, the elaborate network of theory, predictions, and experimental findings concernlish norms group of 1,800). Bartholomew (83) ing the N and E dimensions. Adequate discussion of this topic must presuppose the reader's knowledge of Eysenck's theory of personality which relates neuroticism to autonomic lability and extraversion to cortical inhibition.<sup>1</sup> Since an exposition of the theory and the related research is beyond the scope of this review, the reviewer can only give his overall impression of this vast body of work RELIABILITY AND VALIDITY. Split-half and as it relates to the MPI. First, there is no Kuder-Richardson estimates of item intercor- doubt that both N and E scales have shown relations for each scale are between .75 and significant and replicable correlations with experimental phenomena in the fields of perception, motor learning, verbal learning, pain tolerance, and attitudes. Some of these relationships are predictable from Eysenck's and others' theories. All of the research, of course, has not unequivocally supported Eysenck's effects of various types of "response set." theoretical deductions and there is a large fringe of ambiguity on the growing edge of the theory which is perhaps somewhat underemphasized in the MPI manuals. It is this area of far reaching, but as yet inadequately substantiated, implications of the theory that has provided Eysenck's critics with an easy target for their often premature unfavorable evaluations. But if one reviews the research of the Maudsley group over the years, it is clear that the theory of personality associated with the dent measures, it has been found that they are MPI is sensitive to experimental findings and is constantly undergoing careful modification and development. It seems to be Eysenck's personal style, more than the facts of the matter, which stimulates criticism and a counsel of caution, since Eysenck tends to stride each step of the way with a rather bold assurance. All in all, it seems safe to say that no other personality test is based upon a body of psycho-Taylor Manifest Anxiety Scale as reliability logical theory so far reaching and so diligently and ably researched as is the MPI. The chief reason for this is that the MPI is one of the few personality measures that has grown out of a theory concerned with basic psychological

<sup>1</sup> EYSENCK, H. J. The Dynamics of Anxiety and Hysteria: An Experimental Application of Modern Learning Theory to Psychiatry. London: Routledge & Kegan Paul Ltd., 1957. Pp. xiv, 311.

processes rather than out of purely empirical criteria.

USES OF THE MPI. The MPI has been little used in clinical diagnosis. It is not listed in used tests in clinical practice in the United States. The reasons are not hard to find: Clinicians generally want more detailed information than is provided by a subject's scores on two broad dimensions of personality; the MPI dimensions do not correspond at all well to the presently used diagnostic categories (nor are they intended to), and the psychological theory associated with N and E has not been generally incorporated in diagnostic or therapeutic practice. Those who wish to see how the theory underlying the MPI is related to psychiatric diagnosis and therapy are referred to a discussion by Eysenck.3 As yet this reviewer has not seen evidence of the practical use of the MPI in clinical settings. Certainly it is not of any value for conventional psychiatric diagnosis. McGuire and others (107) gave the MPI to an unselected group of psychiatric patients and found that the N scale differentiated controls, but neither the N nor the E scale differentiated significantly among the diagnostic groups. Other studies have shown significant differences among various diagnostic categories, but these differences have not been sufficiently reliable to support the use of the MPI for individual diagnosis. Since in the McGuire study all psychiatric groups averaged 10-15 points higher on the N scale than the normal controls, it is suggested that the MPI might be valuable as a psychiatric screening device.

Also, for screening and group prediction in educational and industrial settings, the MPI shows promise based on research. College examination failure rate and academic achievement, for example, have been shown to be related to N and E in ways predictable from Eysenck's theory. Persistence in menial and monotonous tasks also is related to the MPI dimensions.

The present reviewer has had most experi-

<sup>2</sup> Sundberg, Norman D. "The Practice of Psychological Testing in Clinical Services in the United States." Am Psychol 16:79-83 F '61. \*

3 Eysenck, H. J. Chap. 3, "A Rational System of Diagnosis and Therapy in Mental Illness." In Progress in Clinical Psychology, Vol. 4. Edited by Lawrence E. Abt and Bernard F. Riess. New York: Grune & Stratton, Inc., 1960. Pp. ix, 181.

ence with the MPI as an adjunct to laboratory attempts to predict certain currently practical research in the field of human learning. The MPI can be used by experimentalists who believe personality factors may play a part in the psychological phenomena under investiga-Sundberg's 2 survey of the 62 most widely tion and who wish to account for more of the "between subjects" variance as a means of increasing the precision of experiments. The relevance of anxiety in learning and conditioning experiments, for example, has been amply demonstrated with research using Taylor's Manifest Anxiety Scale. The N scale of the MPI can serve the same purpose as the MAS, with the added advantage that it is shorter, more reliable, and has a greater body of psychological research behind it. It has been found that the importance of the neuroticism factor increases as task complexity becomes greater (74). We have also found in our own work that subjects with high N scores are less apt to stand up well throughout an arduous laboratory experiment and are less able to follow complex directions in an experiment, even though they may have high intelligence. The relevance of E to experimental variables, though called for by Eysenck's theory, is not all diagnostic groups from the nonpsychiatric so clearly established at present and must await further investigation. But it is in the realm of experimental psychology, as a covariate in studies of perception, conditioning, learning, persistence, attention, concept attainment, and the like, that this reviewer sees the most immediate potential usefulness of the MPI. The American manual also discusses the uses of the MPI in market research and in vocational selection and counseling.

> A word about the British and American editions of the manuals. Both cover the essentials expected of any test manual, but the American edition is more up-to-date and therefore more complete in its coverage of relevant research. Indeed, it is an exemplary model of what a test manual should be.

> In summary, the MPI is a brief and highly reliable measure of two relatively independent broad factors of personality—neuroticism and extraversion-introversion. Much sophisticated research has gone into its construction, and the large body of normative data, plus the psychological theory and experimentation associated with the MPI, make it one of the most important of all personality inventories, and certainly the preferred measures of neuroticism (or anxiety) and extraversion.

the MPI, called the Eysenck Personality In- 24 items for each trait were selected on the ventory (EPI), has been published by the American publisher of the MPI. The EPI is described in a preliminary edition of the manual (August, 1963) as an attempt to make the MPI scales more useful for certain purposes. The EPI measures the same two factors as the MPI, but the slight correlation that United States edition is commendably successexists between N and E in the MPI scales ful in meeting the various criteria of technical has been removed entirely, by adding, subtracting, and rewriting items and subjecting them to repeated factor analyses. Also, many of the items have been reworded in such a way as to increase their reliability when used with subjects of low intelligence or little education. There are two equivalent forms of the EPI. The EPI also contains a "lie" scale (borrowed from the MMPI), a worthwhile addition if the inventory is to be used for screening or selection purposes where subjects might be inclined to "fake good." For experimental work the "lie" scale is usually superfluous, however. The reliability of the EPI scales is slightly higher than for the MPI and the normative data for the English population are quite adequate. American users will have to develop their own norms until such data become available. For experimental use with college subjects the EPI does not seem to offer many substantial advantages over the MPI (unless one insists on eliminating the slight correlation between N and E or wishes to do a retest on an equivalent form) and it has the slight disadvantage of being more time consuming, since it contains 9 more items than the MPI. Further research should make possible more valid and detailed comparisons between the MPI and EPI. Potential users should, of course, examine specimen sets of both the MPI and the EPI to decide which inventory might best suit their purposes in terms of the available norms, etc.

James C. Lingoes, Associate Professor of Psychology, The University of Michigan, Ann Arbor, Michigan.

The Maudsley Personality Inventory (MPI) is a theoretically based instrument designed to measure the two rather pervasive and relatively independent personality dimensions of extraversion-introversion (E) and neuroticismstability (N) found by Eysenck and others in

The American edition of a new version of a large number of factor analytic studies. The basis of both item and factor analyses as being the purest questionnaire measures to date of Eysenck's factors.

> The MPI is an easily administered, quick, reliable, and fairly simply scored test. With the following exceptions, the manual to the excellence stipulated in the APA Technical Recommendations. Some minor criticisms of the manual are: (a) that the professional qualifications necessary to administer and interpret the test are omitted, and (b) that falsepositive and false-negative rates are missing in the discussion of validity by nominated groups. Significant mean differences are insufficient to assess properly the value of such studies. More serious deficiencies in the manual are: (a) the omission of tables of item intercorrelations and factor loadings as well as other item statistics, essential ingredients for factor based scales; and (b) the very inadequate delineation of the N factor as a descriptive or clinical concept to aid the user interpretatively in the individual case, one of the inportant recommended uses of this test. The user should satisfy himself on the above points by referring to the relevant literature listed in the 112-item bibliography of the manual.

Of more crucial concern to the prospective user are the following observations regarding the test itself and its relationships with other tests purporting to measure the same traits or factors.

First, the MPI is not a general personality test, even though the traits it assesses account for most of the variance in personality inventories. One should not confuse statistical significance with clinical importance, as Eysenck himself would acknowledge. Consequently, if one is looking for a more complete personality profile on a subject, other tests would be more pertinent, e.g., the Guilford-Zimmerman Temperament Survey or Cattell's 16PF, being logical choices among factor based tests, or the MMPI, being the best among clinical personality instruments. As a clinical tool the MPI would serve best in an ancillary role, supplementing data from other tests. A two-dimensional approach to personality is insufficient to encompass all the functions and purposes

typical of the average clinical setting, no matter how pervasive or important the factors may be.

Second, it has not been established that even for the traits that the MPI measures, it measures them better than comparable instruments. It should be noted that E is only one of several kinds of extraversion, i.e., social, and a number of studies reported in the manual indicate that this trait is measured at least as well by other tests as it is by the MPI if one takes the internal consistency data as a yardstick. Thus, E correlates to the extent of .81 with social extraversion from the Minnesota T-S-E Inventory and -.80 with Heron's introversion scale. These validity coefficients lie within the range of Kuder-Richardson and split-half reliability coefficients for E, i.e., between .75 and .85 with the majority above .80, and they are certainly higher than the equivalent forms coefficients (.75) reported for the Eysenck Personality Inventory. Furthermore, based upon the original sample of 400 cases used in the item analysis of the MPI, E correlated .79 with the rhathymia scale of the Inventory of Factors STDCR and N correlated .92 with the cycloid disposition scale, the latter coefficient being higher than the split-half or K-R reliability coefficients reported for N.

Admittedly, other factors must be considered in a consumer's decision to use one test as opposed to others, e.g., cost, ease of administration, ease of distortion or deception, professional time spent in interpretation, the purposes to be served by testing, readability of the items, appeal to the examinees, etc., and while some of the foregoing would favor the MPI, comprehensiveness may well determine the choice in the final analysis given equally good data on reliability and validity.

In conclusion, the present evidence on the MPI would suggest that there was little reason to omit in the American manual the caution expressed in the original British manual, i.e., "In all its applications, the M.P.I. should primarily be regarded as a research instrument." Within Eysenck's theoretical system, the MPI and its revision, the Eysenck Personality Inventory, may well indeed be the tests of choice, but more evidence is needed on superior reliability and validity to warrant their supplanting other comparable and better established tests.

William Stephenson, Professor of Psychology, University of Missouri, Columbia, Missouri.

The MPI is excellently produced. The American manual is especially informative and comprehensive, listing 112 references up to the end of 1962. The American norms are for 1,064 university and college students. Validation is with respect to mean differences for groups of subjects (sample sizes range from as few as 8 to as many as 1,800 and total some 7,200) variously described as Australian prisoners, psychopaths, industrial apprentices, psychosomatics, hysterics, English normals, recidivist prisoners, neurotics, dysthymics, etc., mostly in Britain.

It would not be difficult, in the present reviewer's judgment, to find other compilations of personality statements which, when subjected to such gross validation procedures, would fare no better or no worse than the set of 48 put together for the MPI. It is possible that they may be useful in experimental studies using samples of the order 100 to 1,000 persons. What is not so certain is the credibility of the data the test provides. The public is warned in this respect. But there is an issue which, it seems to the reviewer, requires consideration as psychology grows professionally. After a very careful review of Eysenck's major work, Storms and Sigal (9) have to conclude that the attributes of extraverts and introverts listed by Eysenck in certain studies have not, in fact, been unequivocally demonstrated. Doubt was raised about the validation of the E continuum.

The reviewer would raise again the improbability that a scale based on R-methodological grounds can ever really indicate dynamic conditions such as Eysenck has persistently proposed to examine. Davis,<sup>2</sup> for example, reminded us, and Eysenck in particular, that following a traumatic situation immediate reactions to the situation were apt to be ones of overactivity, or of psychological withdrawal; subsequently, recovery from the shock was attended by preoccupation and fixation of memories, with the establishment of defenses, with the abandonment of defenses, and with a phase of working through the memories.

<sup>1</sup> EYSENCK, H. J. The Dynamics of Anxiety and Hysteria: An Experimental Application of Modern Learning Theory to Psychiatry. London: Routledge & Kegan Paul Ltd., 1957. Pp. xiv, 311. \*

2 Davis, D. Russell. "Clinical Problems and Experimental Researches." Brit J Med Psychol 31:74-82 pt 2 '58. \*

These, it seems to the reviewer, are typical of human reactions: to imagine for a moment that either E or N in general have anything to contribute to such a flow of phenomena seems to the reviewer to be clutching at feathers in the wind. Moreover, there is a simple be brought to light, using Eysenck's 48 statements but in the form of a Q-sample so that each person can use the statements relative to one another to display fixations, defenses, etc. The E and N scales never do anything of the kind because they are by definition measurements of behavior in a general context. The proof of the matter, that at least one factor Eysenck to note. It is astonishing that so diligent a worker has not looked to see what that one factor, at least, could mean for his studies.

Philip E. Vernon, Professor of Educational Psychology, Institute of Education, University of London, London, England.

Despite the enormous number of available personality inventories, Eysenck's test could well meet a need for a short, simple instrument for use in mental hospitals, in student counseling, and in a variety of experimental researches where it is desired to control major personality differences among the subjects. Only 48 items are included, selected on a factorial basis to give highly saturated measures of extraversionintroversion and neuroticism-stability or anxiety. Reasonable Kuder-Richardson and repeat reliability coefficients ranging from .75 to .85 of the test items, clearly involves the social for Extraversion and from .85 to .90 for Neuroticism are obtained in 10-15 minutes' of the extraversion scale with another test is testing time, and the two scores are virtually .81 with the social introversion-extraversion uncorrelated except in certain selected groups. The scoring of the American edition can be done by punched card or, in less than a minute per blank, by stencils; the British edition is scored by transparent stencil.

stressed the pervasiveness of these two personality factors, and in The Structure of Human Personality (36) he makes a strong case for reducing most of the manifold factors that have been claimed in questionnaire data, ratings, and objective personality tests, to these same dimensions. Much as Spearman, Burt, and the present writer prefer to cover as much variance as possible in abilities by means of g

and major group factors, and to regard Thurstone's, Guilford's, and other multiple factors as minor subdivisions—so Eysenck considers personality as hierarchically organized, with these two factors as the most inclusive. Moreover, during the ensuing 16 years, he has linked way to show that dynamic factors can in fact these with a nomological network based on Hullian learning theory, and collected a considerable amount of experimental evidence to support his theoretical deductions covering extraversion and neuroticism, albeit many of these theories and experimental results are open to dispute. He can reasonably claim, therefore, that scores on this inventory possess a good deal of construct validity derived from common to Q couldn't possibly appear in data positive experimental findings in the field of derived from R (and vice versa), is there for conditioning and the effects of drugs, from factor loadings, from differentiation between such pathological groups as psychopaths and dysthymic neurotics on the one hand and neurotics and normals on the other, and from correlations with other well known tests of related constructs.

> Some comment is called for on the extraversion measure. In many of his writings Eysenck has criticized the American conception of extraversion as consisting largely of sociability, and the consequent tendency for extraversion tests to give rather high negative correlations with neuroticism or emotional instability. He favours, rather, Guilford's notion of rhathymia, or uninhibited carefreeness, as being orthogonal to neuroticism and closer to Jung's original description. However, the definition in the manuals of the present test, together with many aspect of extraversion; the highest correlation scale of the Minnesota T-S-E Inventory. Indeed the fairly good reliability for so short a scale may be largely due to the reiteration of questions about social mixing. The content of the neuroticism items is, however, more varied.

Since his first book in 1947, Eysenck has In the American manual, percentile norms for American college students (one college only) and tables of group means and standard deviations are given. The latter reveal interesting differences. Thus on Extraversion, psychopaths average 31 (out of a possible 48), American women students 29, English students and normal adults around 25, hysterics 24, and dysthymics and neurotics 19. On Neuroticism, the means of psychopaths and

neurotics mostly fall in the 32-38 range, English students 23-27, American students 20-21, and English normal population 18-20. Negligible relations are reported with sex, social class, and intelligence, except that men are slightly more extraverted than women and women are slightly more neurotic than men. Among English college students both introversion and neuroticism correlate appreciably with academic achievement. One would have thought that this could be more simply explained in terms of the weaker gregarious interests and greater introspectiveness of the serious student than by means of learning theory constructs.

Responses indicative of extraversion may be either Yes or No, but all neurotic responses are Yes. The author of the American manual draws attention to the possibility of acquiescent it. No mention is made of the effects of social desirability. The American manual is well designed, with due attention to the APA Committee's suggestions. But the manual to the original British edition, published in 1959, is much more brief and should be brought up to date.

In general the test should be of some use in educational guidance and personality counseling as a quickly obtained index of two important personality trends. It could be given in mental hospitals by nurses as a preliminary aid in psychological assessment, or included in a battery of tests for surveying a population, for example, in market research or, as already indicated, in experimental researches with normal adult subjects.

Brit J Psychol 51:185-6 My '60. A. Bursill. [Review of the British manual.] This Manual reports up-to-date information available on this Yes, No. ?-type questionnaire (MPI) comprising two scales of 24 items each, one purporting to measure neuroticism (N), the other introversion-extraversion (I-E). \* The scales can be conveniently adapted to form an even shorter questionnaire (SMPI) comprising six have a low correlation (-0.15 for the MPI, and -0.05 for the SMPI) for normal samples —the correlation increases to the rather unsatis factory dimension of -0.3 to -0.4 in neurotic groups. Eysenck assigns these anomalies

to the non-linearity of the regression lines. The argument is supplemented by a graph of regression lines for 1,200 normal subjects which does not show a serious state of affairs except I-scores below about 10. But the explanation as it stands is hardly sufficient to give rise to such large negative correlations between N and I-E in neurotic groups, whose mean scores lie well within the distributions given for the whole range of the population. This needs investigating in more detail. Meanwhile, when attempting to assess the effects of varying degrees of extraversion in any experiment, Eysenck suggests matching criterion groups of I and E for N. A table containing the size of samples, mean scores and S.D.'s for the different standardization groups is given—but the reader is left to work out the significance of response set affecting the latter, but dismisses the differences. Unfortunately, the original sources of much of the data are omitted, or are still not available, so that the procedures whereby subjects were selected cannot be ascertained in detail. Two methods of validation are presented: (i) comparison of the standardization groups on N and I-E; (ii) construct validity—i.e. a set of interlocking predictions forming a theory confirmed by experiment. In a strict sense, neither method can yet be said to have reached satisfactory standards in empirical confirmation. \* unusual answers to some two to three items are sufficient to place an individual amongst the most extreme group of dysthymics on I, whereas some ten unusual answers are required to place an individual amongst dysthymics on N. At the very least there is some reason for attempting—in subsequent versions of the test—to stretch the I-Edimension somewhat. But the reviewer is not certain whether the data cannot be taken as undermining one of Eysenck's basic tenets, which is not merely that hysterics are more extraverted than dysthymics but that they are also more extraverted than normals. In view of Hildebrand's similar findings with objective tests (Brit. J. Psychol. 1958, 49, 1-11), thereis an increasing likelihood that the position of items each for N and I-E, simply by utilizing these various abnormal groups is a true feature the first page of the printed form only. \* The of this I-E dimension, and not some distortion two scales N and I-E intended to be orthogonal, in its scale units—particularly at the E end. In fact, Eysenck hints at this situation in the Manual and elsewhere, without explicitly recognizing that it contravenes his and Jung's theoretical position. A factor to be taken into consideration, however, is that presumably this

scale measures sociability rather than the other facets of extraversion emphasized by Jungsince I-E correlates highly with the "social" scale and lowly with the "thinking" and "emotional" scale of the Minnesota TSE. Another feature worth noting is the limited range of items, many of which closely overlap in content. There might here be a tendency to sacrifice validity for reliability. Possibly a source of distortion on the N-scale, on the other hand, resides in the fact that in all items neurotic responses are scored in the affirmative (yes). Space does not permit an appraisal of Eysenck's attempt to demonstrate "construct validity" in his Dynamics of Anxiety and Hysteria, as claimed in the Manual. However worthy this Hamilton, D. E. Broadbent, R. L. Reid, Taylor and Rechtsscaffer, Spivac and Levine) of the evidence presented for the various components of the theory in this monograph. Eysenck's adroit defences do not altogether dispel these criticisms. Consequently, the reader may have to exercise caution in accepting the construct validity as indeed valid. Generally, Prof. Eysenck is to be congratulated on obtaining such an unusual amount of data on one personality test. It is to be hoped that a more detailed Manual will soon make its appearance; some of the original work is published in rather inaccessible foreign journals. \* There is the danger that subjects selected on an N and I-E basis alone will unduly bias and filter the human material and cause much of importance to the clinician to be omitted. \*

I Consult Psychol 23:563 D'59. Edward S. Bordin. [Review of the British Edition.] This brief questionnaire of 48 items and its even briefer short form (12 items) have played an integral part in the author's well known research on personality. Many instruments have been launched for full scale use with much less ehind them. The manual represents the height English diffidence. Only the briefest summary is given of a few of the salient results of research and the reader is referred to the relevant publications. He is told that "the M.P.I. should be regarded as a research instrument. Different firms, organizations, hospitals, universities, and other bodies have different problems, deal with different samples of the population, and aim at different solutions of their problems. Only applied research

can determine whether instruments such as the M.P.I. can be successfully used by them, and just what form such use can best take." No high powered American merchandising here!

J Psychosom Res 5:66 S'60. G. A. Foulds. [Review of the British Edition.] \* The standardization data call for some comment. Neurotics were diagnosed by experienced psychiatrists, or else had their case-papers carefully scrutinized by three experienced clinical psychologists, who arrived at a unanimous diagnosis independently. In his reply (I. abnorm. soc. Psychol. 1958, 57, 2) to the paper by Sigal, Starr and Franks (ibid) Eysenck rather deplores the latter method. It is unfortunate that their somewhat conflicting results were attempt was, there has been a growing tide of not available for the Manual, since the claim criticism (e.g. by Storms and Sigal, Vernon that "successive samples from different hospitals showed great stability in means and variances" might have required some modification. Eysenck believes that the results obtained on the M.P.I. "in a sense....serve as validation of the scales." This, unfortunately, can only be in an illogical sense. It is not possible to validate the theory and the inventory at the same time. It would be palpably absurd to claim—and certainly Jung did not that Hysteria and Extraversion are one and the same thing. What Jung said, in effect, was most neurotic extraverts have the characteristics of Hysteria; most neurotic introverts have the characteristics of Dysthymia. A demonstration of differences between Hysteria and Dysthymia does not necessarily tell us anything at all about extraversion:introversion. The differences in the particular instance may be due to quite other characteristics. The M.P.I. has, of course, considerable face-validity for at least some aspects, particularly social, of that elusive concept extraversion. It is doubtful whether reliance on "construct validity" is of any value when there is a large logical hole in the nomological network. In respect of the extraversion:introversion continuum, the position of the recidivist prisoners and the psychosomatic cases is close to the hysterics, a finding which to Eysenck is not unexpected. The reviewer would have expected recidivist prisoners to be closer to hospital psychopaths than to hysterics. With regard to the psychosomatic group, at least one large sub-group consists of people whose intense affective disturbance has resulted in physiological changes such as are rare in hysteria. If Stanley Cobb's

two broad categories are correct, one might expect to find the psycho-somatics somewhere between hysterics and dysthymics with a standard deviation larger than either. The Neuroticism scale seems to be of much more certain value.

## [ 139 ]

\*Maxfield-Buchholz Scale of Social Maturity for Use With Preschool Blind Children. Infancy-6 years; 1958; revision of Maxfield-Fjeld Adaptation of the Vineland Social Maturity Scale; manual title is A Social Maturity Scale for Blind Preschool Children; individual; I form ['58]; manual ['58, 46 pages]; record form ['58, 7 pages]; no data on reliability; 75¢ per manual; 10¢ per record form; postpaid; Kathryn E. Maxfield and Sandra Buchholz; American Foundation for the Blind, Inc. \*

#### REFERENCES

1. Norris, Miriam; Spaulding, Patricia J.; and Brodie, Fern H. Blindness in Children. Chicago, Ill.: University of Chicago Press, 1957. Pp. xv, 173. \* (PA 32:824)
2. Maxfield, Kathryn E., and Buchholz, Sandra. A

Social Maturity Scale for Blind Children: A Guide to Its Use. New York: American Foundation for the Blind, Inc., [1958]. Pp. iv, 43.

# [ 140 ]

\*Memory-For-Designs Test. Ages 8.5 and over; 1946-60; brain damage; individual; I form ('60, 15 cards, identical with cards distributed by the authors in 1946); revised manual ('60, 43 pages, reprinted from 12 below); norms-scoring examples booklet (12 pages, reprinted from manual); \$8.50 per set of test materials including manual; \$2.50 per manual; cash orders postpaid; (5-10) minutes; Frances K. Graham and Barbara S. Kendall; Psychological Test Specialists. \*

### REFERENCES

6. Armstrong, Renate Gerboth. "The Consistency of Longitudinal Performance on the Graham-Kendall Memory-for-Designs Test." J Clin Psychol 8:411-2 O '52. \* (PA 27:6017) 7. Hunt, Howard F. Chap. 7, "Testing for Psychological Deficit," pp. 91-107. In Progress in Clinical Psychology, Vol. 1. Edited by Daniel Brower and Lawrence E. Abt. New York: Grune & Stratton, Inc., 1952. Pp. xi, 328. \* (PA 27:3529)

8. RAPPAPORT, SHELDON R. "Intellectual Deficit in Organics and Schizophrenics." J Consult Psychol 17:389-95 O '53. \* (PA 28:6365)

9. Howard, Alvin R., and Shoemaker, Donald J. "An Evaluation of the Memory-for-Designs Test." Abstract. J. Consult Psychol 18:266 Ag '54. \* (PA 29:4063, title only)

10. GARRETT, EPHRAIM S.; PRICE, A. COOPER; AND DEABLER, HERDIS L. "Diagnostic Testing for Cortical Brain Impairment." A.M.A. Arch Neurol & Psychiatry 77:223-5 F '57. \* (PA 32:1926)

11. Burdus, J. A., and Gilliand, J. "Memory for Designs Test." Psychometric Res B (4):[21-3] Ag '59. \*

12. GRAHAM, FRANCES K., AND KENDALL, BARBARA S. "Memory-for-Designs Test: Revised General Manual." Percept & Motor Skills 11:147-88 O '60. \* (PA 35:2185)

13. Hovey, H. Birnet. "An Analysis of Figure Rotations."

J Consult Psychol 25:21-3 F '61. \* (PA 36:3HI21H)

14. Walters, C. Etta. "Reading Ability and Visual-Motor Function in Second Grade Children." Percept & Motor Skills 13:370 D'61. \*

15. FLYNN, PAUL SPENCER. Correlation of Form Memory and Academic Achievement at the Fifth Grade Level. Doctor's thesis, University of Virginia (Charlottesville, Va.), 1962. (DA 23:4222)

16. Kendall, Barbara S. "Memory-for-Designs Performance in the Seventh and Eighth Decades of Life." Percept & Motor Skills 14:399-405 Je '62. \* (PA 37:2954)

17. LETON, DONALD A. "Visual-Motor Capacities and Ocular Efficiency in Reading." Percept & Motor Skills 15:407-32 O

'62. \* (PA 37:8253)

18. TAYLOR, FREDERICK RICHARD. Two New Psychological Tests for Diagnosing Organic Brain Damage. Doctor's thesis, University of Utah (Salt Lake City, Utah), 1962. (DA

22:4414)
19. Brilliant, Patricia J., and Gynther, Malcolm D.

"Relationships Between Performance on Three Tests for Organicity and Selected Patient Variables." J Consult Psychol 27:474-9 D'63. \* (PA 38:8404)
20. CRADDICK, RAY A., AND STERN, MICHAEL R. "Effect of

Pre- and Post-Stress Upon Height of Drawings in a Perceptual-Motor Task." Percept & Motor Skills 17:283-5 Ag '63. \* (PA 38:7219)

21. FRIEDMAN, ELLEN C., AND BARCLAY, ALLAN. "The Discriminative Validity of Certain Psychological Tests as Indices of Brain Damage in the Mentally Retarded." Mental Retardation 1:291-3 O '63. \* (PA 38:8935)

22. KORMAN, MAURICE, AND BLUMBERG, STANLEY. "Comparative Efficiency of Some Tests of Cerebral Damage."

J Consult Psychol 27:303-9 Ag '63. \* (PA 38:2985)

23. Tortorella, William M. A Study of the Performance of Normal Children and Feebleminded Adults of Similar Mental Ages on the Graham-Kendall Memory-for-Designs Test. Master's thesis, Fordham University (New York, N.Y.), 1963.

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In this immediate memory test the subject is required to draw each of 15 geometric designs after it has been shown for five seconds. The test is comparable to other visual memory tests, such as the drawing of figures in the Wechsler Memory Scale and the Benton Visual Retention Test, and supplements such non-visual memory tests as the digit span, sentence repetition, and similar techniques, all of which have been shown to be sensitive to brain pathology.

Since its first publication in 1946, the MFD has been considerably refined in scoring technique and a sizable amount of data has been published. The correlation with age and intelligence to be expected in a test of this kind has been accounted for by the presentation of expected score tables for adults and children (age range 8-6 to 60 years) although one subsequent study (22) claimed that such a correction was unnecessary for their groups, and another (19) found a significant age correlation even after their data had been adjusted on the basis of the expected score tables. Adequate scoring samples are provided in the new manual. An attempt has been made to add a copying of designs administration to the test, but the difficulty level of the test items was found too low for such a procedure.

The original validation was supplemented to two cross validation samples of brain damage patients and controls (including neurotics as psychotics). With a cutoff point set at a level which would give 4 per cent false positives in the control groups, the correct identification of brain damaged patients varied between 42 and 50 per cent. It should be noted that in these validation studies diagnostic criteria were relatively strict so that a higher proportion of severely brain damaged patients was likely to