

Eysenck's Theory of Criminality Applied to Women Awaiting Trial*

By LEONARD I. BARACK and CATHY SPATZ WIDOM

SUMMARY American women awaiting trial were administered the Eysenck Personality Questionnaire. Compared to a heterogeneous control group, these women scored significantly higher on the neuroticism and psychoticism scales and on Burgess's 'hedonism' variable, though they did not differ with respect to extraversion or lie scale scores. Women awaiting trial were more likely to fall in the neurotic-extravert quadrant (a trend more marked for non-white women). In general, the results support Eysenck's theory of criminality and the usefulness of Burgess's 'hedonism' variable.

Eysenck's (1970) theory predicts that in comparison to normal subjects criminals should manifest elevated extraversion (E), neuroticism (N) and psychoticism (P) scores. In general, studies on both male (Eysenck and Eysenck, 1970) and female (Eysenck and Eysenck, 1973) offenders have supported these predictions. However, as conflicting evidence has also been reported (e.g. Burgess, 1972; Hoghughli and Forrest, 1970; Passingham, 1972), it would appear that the simple prediction that offender populations should always be characterized by high E, N, and P scores may be unwarranted.

Within the context of Eysenck's theory, Burgess (1972) has suggested additional analyses clarifying the contributions of extraversion and neuroticism to criminal behaviour. He has argued that E and N scores should not be studied independently of one another, but rather that the combination of high E and high N should be related to criminal behaviour. Burgess proposed a new variable, *hedonism*, which he defined as the product of a person's N and E scores, and found higher median hedonism scores in his prison population. A further analysis suggested by Burgess involves calculating the number of criminals and controls in each of the four personality quadrants as defined by two levels of both extraversion

and neuroticism. In his own research, Burgess (1972) found that the EPQ scores of the criminals as compared with the control subjects were much more likely to place them in the neurotic-extravert (N-E) quadrant, as predicted.

In view of the paucity of research on the female offender (see Widom, 1978b), the present investigation was undertaken with several purposes in mind: (i) to increase our general knowledge of the female offender (specifically, the female awaiting trial); (ii) to provide further evidence for the validity of Eysenck's approach; (iii) to assess the extent of the generalizability of Eysenck and Eysenck's (1975) findings to an American population; and finally, (iv) to examine possible racial differences within the female offender population. Eysenck's theory would be enhanced by demonstrating its applicability to offender populations in general, regardless of sex, race, or nationality.

Method

Subjects

Subjects were 60 women in the Awaiting Trial Unit (ATU)¹ at Massachusetts Correc-

¹ It should be noted that not all women in the sample will be found guilty. However, this fact would only render the finding of differences more telling, as the inclusion of such 'non-criminal' women in the ATU sample should have the effect of lowering the ATU means on the relevant dimensions.

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tional Institution at Framingham during the period October 1975 to April 1976. The mean age for the ATU women was 24.65 years (SD = 7.59, range 17–62), and the racial composition of the group was 43.3 per cent white and 56.7 per cent non-white. Their alleged offences included armed robbery, burglary, larceny, alcohol and narcotics violations, and prostitution. Most of the women had been in the unit for only a few days prior to completing the questionnaire. Official information regarding previous arrest records was not available to the experimenters. From self-reports, the majority of the ATU women had had previous convictions, but few (approximately 20 per cent) had actually served prison sentences.

A heterogeneous control group of 51 women was obtained, equivalent to the ATU women in age and socio-economic status. The control group women included members of a women's group at an all-black church in Cambridge, Massachusetts (N = 5), women working as computer data punch operators in the Boston area (N = 7), women from a child-care centre in the Boston area in which most of the mothers were receiving some form of welfare assistance (N = 22), and high-school students in a local community (N = 17).³ The mean age for the control group women was 25.20 years (SD = 9.92, range 15–62), and the racial composition of the group was 53 per cent white and 47 per cent non-white. The ATU and control groups did not differ significantly in age ($F(1,103) = .10$, NS) nor in racial composition ($\chi^2(1) = 1.19$, NS).

Eysenck Personality Questionnaire

The Eysenck Personality Questionnaire (EPQ; Eysenck and Eysenck, 1975) is a 90-item true-false inventory assessing the three personality dimensions of extraversion, neuroticism, and psychoticism. It also contains a lie scale.

Procedure

The questionnaires were administered to the ATU women in the early evening, at which

³ Although none of these small groups by themselves are identical with the ATU women with respect to age, level of education, and approximate social class, the entire control group would appear to be matched approximately for these background variables.

time they were asked to volunteer to participate in the study. Testing was done in small groups of up to four people, although on occasion the questionnaires were administered on an individual basis to allow the experimenters to read the questions aloud to subjects with reading difficulties. The women were told that we did not require their names, and hence they were encouraged to respond as honestly as possible. Upon completion of the questionnaire and background information sheet, the ATU women were given a packet of cigarettes.

The control group women were tested in small groups and were either paid for their participation or, in the case of the church and day-care groups, a contribution was made to their organization.

Results

Table I presents means and standard deviations for psychoticism, extraversion, neuroticism, lie, and hedonism scores for subjects (ATU) and control women. Two-way analyses of variance (ATU vs. control and race) were computed for each of the dimensions. There were significant differences between the ATU woman and the controls on neuroticism ($F(1,107) = 6.83$, $P < .01$) and psychoticism ($F(1,107) = 27.46$, $P < .001$), the ATU women scoring higher on both scales. There were no significant differences due to race, no significant interactions, and no significant differences on the lie scale.³

Table II contains the frequencies with which the ATU women and the controls appear in each of the four personality quadrants. Subjects with extraversion scores greater than 11 (E scale midpoint) were designated *extraverts*. Subjects with neuroticism scores greater than 12 (N scale midpoint) were designated *neurotics*. Subjects scoring at the scale midpoints were not included in the analysis. More than half of the ATU women (56.3 per cent) fell into the neurotic-extravert quadrant in comparison to

³ The high lie scale scores of the ATU women and the controls in the present sample are not atypical (cf. Eysenck and Eysenck, 1975; Friedman *et al.*, 1976). Subjects with elevated lie scale scores were not omitted from the analyses, an acceptable practice according to Eysenck and Eysenck (1975).

TABLE I
Means and standard deviations for women awaiting trial and for control women

Group	N	Psychoticism		Extraversion		Neuroticism		Lie		Hedonism (E X N)	
		M	SD	M	SD	M	SD	M	SD	M	SD
Awaiting trial											
White	26	5.62	2.83	13.08	4.82	14.46	5.05	7.08	4.57	182.69	93.33
Non-White	34	5.24	2.80	13.68	4.27	15.32	4.45	8.27	3.96	207.38	85.45
Combined	60	5.40	2.80	13.42	4.49	14.95	4.70	7.75	4.25	196.68	89.03
Controls											
White	27	2.96	2.80	14.38	5.88	13.37	5.62	9.19	4.89	175.37	90.84
Non-White	24	2.67	1.55	14.17	3.34	11.33	5.70	8.86	3.92	151.42	70.59
Combined	51	2.82	2.30	14.26	4.80	12.41	5.70	9.04	4.42	164.10	82.03

TABLE II
Distribution of ATU and control women in the four quadrants

Group	Quadrant							
	S-E		N-E		S-I		N-I	
	N	%	N	%	N	%	N	%
ATU								
White	6	25	11	46	2	8	5	21
Non-White	5	16	20	65	2	6	4	13
Combined	11	20	31	56.4	4	7.2	9	16.4
Controls								
White	8	35	9	39	0	0	6	26
Non-White	15	63	7	29	0	0	2	8
Combined	23	49	16	34	0	0	8	17

34.0 per cent of the control women. A chi-square analysis was calculated for the frequency of ATU and control women in the neurotic-extravert quadrant as opposed to all other quadrants and yielded a $\chi^2(1) = 5.08$, $P < .05$. These findings support the prediction that there would be a greater frequency of ATU women in the neurotic-extravert quadrant relative to control group women.

When one analyses these same data while controlling for the race of the ATU women, an interesting difference emerges. In comparison to the controls, *non-white* ATU women were much more likely to fall into the neurotic-extravert quadrant ($\chi^2(1) = 7.87$, $P < .01$), whereas *white* ATU women were no more likely than the

controls ($\chi^2(1) = .71$, NS) to score in this quadrant.

As a test of Burgess's (1972) hypothesis that offenders should score higher on hedonism than controls, two-way ANOVAs (ATU vs. control by race) were computed for hedonism scores. As predicted, the ATU women had significantly higher hedonism scores than the control women ($F(1,107) = 3.89$, $P < .05$). There was no significant main effect for race, nor was there a significant interaction.

Comparison with Eysenck and Eysenck's (1975) British female prisoners

A series of t-tests revealed no significant differences between the ATU women and

Eysenck and Eysenck's (1975) British female prisoners on any of the EPQ variables. (The corresponding P, E, N, and L means and standard deviations for the British sample, respectively, were: 6.41 ± 4.07 , 12.32 ± 5.19 , 14.60 ± 5.58 , and 9.01 ± 4.89). The ATU women did, however, score higher than Eysenck and Eysenck's controls on psychoticism and neuroticism [psychoticism ($t(3320) = 8.98$, $P < .001$) and neuroticism ($t(3320) = 3.27$, $P < .01$)].

Discussion

In general, the results of the present investigation provide support for Eysenck's theory of criminality and for the validity of Burgess's 'hedonism' variable. The present sample of American women awaiting trial showed high neuroticism and psychoticism scores in comparison to a control group of women.⁴ The ATU women also scored higher on hedonism and were more likely to fall in the neurotic-extravert quadrant.

As in other research with prison populations, it is possible that the observed differences between the ATU women and controls on neuroticism, psychoticism and hedonism may be due to the effect of *incarceration* rather than to personality predispositions existing prior to incarceration. However, in the present investigation, women *awaiting trial* were studied rather than women convicted and serving long-term prison sentences, and this facet of the design lends support to the argument against the effects of imprisonment on the present findings. But there is an additional issue which has not been addressed which concerns the effects of being *labelled* a criminal. Longitudinal studies of offenders (from arrest through serving long-term sentences) would be one way to disentangle some of these possible effects and clarify the importance of institutionalization and

⁴ Eysenck and Eysenck (1970) have suggested that differences in extraversion should only be expected in those instances where both groups are matched on neuroticism. This qualification stems from the interaction of autonomic reactivity (N) and cortical excitation (E) at the physiological level (Eysenck, 1967): high levels of neuroticism will have the effect of raising one's level of cortical excitation, thus rendering the subject more of an introvert.

labelling on the personality profiles of offender populations.

Regarding the lack of differences between the ATU women and controls on the extraversion dimension, it is interesting to note the results in another recent investigation focusing on *within-group* differences among women awaiting trial which used a different measure of extraversion. In this study, extraversion was the one dimension which did *not* differentiate between the groups identified (Widom, 1978a). It should also be noted that these findings support Burgess's argument for focusing on the *interaction* of E and N, rather than on E alone.

Finally, although the majority of analyses failed to yield significant effects due to race, the reader should note that the tendency for ATU women to fall in the N-E quadrant can be attributed largely to the prevalence of non-white ATU women in this quadrant.

References

- BURGESS, P. K. (1972) Eysenck's theory of criminality: a new approach. *British Journal of Criminology*, **12**, 74-82.
- EYSENCK, H. J. (1967) *The Biological Basis of Personality*. Springfield, Illinois: Charles C. Thomas.
- (1970) *Crime and Personality* (2nd ed.). London: Granada Publishing Ltd.
- & EYSENCK, S. B. G. (1968) *Manual of the Eysenck Personality Inventory*. San Diego: Educational and Industrial Testing Service.
- & EYSENCK, S. B. G. (1975) *Manual of the Eysenck Personality Questionnaire*. San Diego: Educational and Industrial Testing Service.
- EYSENCK, S. B. G. & EYSENCK, H. J. (1970) Crime and personality: an empirical study of the three-factor theory. *British Journal of Criminology*, **10**, 225-39.
- (1973) The personality of female prisoners. *British Journal of Psychiatry*, **122**, 693-8.
- FRIEDMAN, A. F., WAKEFIELD, J. A., BOBLITT, W. E. & SURMAN, G. (1976) Validity of psychoticism scale of the Eysenck Personality Questionnaire. *Psychological Reports*, **39**, 1309-10.
- HOGHUGH, M. S. & FORREST, A. R. (1970) Eysenck's theory of criminality: an examination with approved school boys. *British Journal of Criminology*, **10**, 240-54.
- PASSINGHAM, R. E. (1972) Crime and personality: a review of Eysenck's theory. In Neyblitsyn, V. D. and Gray, J. (eds.) *Biological Bases of Behaviour*. New York: Plenum Press.

- WIDOM, C. S. (1978a) An empirical classification of the female offender. *Criminal Justice and Behaviour*, 5, 35-52.
- (1978b) Toward an understanding of female criminality. In B. Maher (ed.) *Progress in Experimental Personality Research*. New York: Academic Press.

Leonard I. Barack

Cathy Spatz Widom, Ph.D., *Assistant Professor*,

Harvard University, Department of Psychology and Social Relations, William James Hall, 33 Kirkland Street, Cambridge, Massachusetts 02138, U.S.A.

Requests for reprints should be sent to Cathy Spatz Widom, Department of Psychology and Social Relations, William James Hall, Harvard University, Cambridge, Massachusetts, 02138.

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