

EXTRAVERSION AND NEUROTICISM ACROSS CULTURES<sup>1</sup>ABDEL SATTAR IBRAHIM<sup>2</sup>*Kuwait University, Wayne State University, and Northville Psychiatric Hospital, Michigan*

*Summary.*—This research was designed to explore differences in neuroticism and extraversion tendencies of students of three different nationalities: 248 Egyptians, 58 Americans, and 347 British. Egyptians had the highest Neuroticism score and the lowest Extraversion score; Americans exhibited greater tendency toward Extraversion than British, and no significant differences in Neuroticism between British and Americans were noted. The Egyptians' unexpected lower Extraversion score was discussed in light of the subjective culture theory.

Eysenck and his associates have developed a theory of personality having two dimensions, extraversion-introversion (E) and neuroticism-stability (N). The Eysenck Personality Inventory (Eysenck & Eysenck, 1968) was developed to tap these two dimensions. Eysenck (1975) attributes the extraversion and neuroticism dimensions to Jung. However, the tying down of these two concepts in factors uniquely determined on statistical basis (e.g., Cattell & Warburton, 1961; Eysenck & Eysenck, 1968), and in standardized tests for such factors is recent.

According to Eysenck and Eysenck (1968, 1975), extraversion refers to the outgoing, uninhibited, impulsive and sociable inclinations of a person. Neuroticism as contrasted to emotional stability is very much similar to anxiety. High neuroticism scorers, however, are indicative of emotional liability and overreactivity. Thus, a high Neuroticism scorer can be described in light of the Eysenckian theory as being an anxious, worrying individual, over-responsive and depressed. He is overly emotional, reacts too strongly to all sorts of stimuli, and finds it difficult to get back on an even keel after each emotionally arousing experience. His strong emotional reactions interfere with his proper adjustment, making him react in irrational, sometimes rigid ways (see Eysenck & Eysenck, 1975).

Studies on the Eysenck Personality Inventory have shown that it is a useful instrument in describing the behavioral manifestations of personality within normal, physiological, and socio-cultural perspectives. It is disappointing, however, that cross-cultural studies on extraversion and neuroticism as tapped by the inventory are almost absent from the literature.

The general aim of this study was to investigate differences in neuroticism and extraversion of subjects of three different nationalities, Americans, British

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and Egyptians. Following a study by Cattell and Warburton (1961), it was predicted that Americans would show a significantly higher level of neuroticism (anxiety). Also, Americans are more extravert than British, as a result of the greater inhibitions imposed by the English culture and fewer opportunities for 'acting out.'

As far as the Egyptian culture is concerned, it is believed that in developing cultures, e.g., Egypt, the societal restrictions and pressures are more imposed upon individuals than in Western and American cultures. Gotts (1968) has formulated the notion that anxiety and tensions follow a course parallel to the societal restrictions imposed upon individuals in different cultures. It was hypothesized, therefore, that the Egyptians would show more indications of anxiety and liability to neurotic maladjustment under stress than British or Americans. On the other hand, there are indications (Ibrahim, 1967, 1977) that traditions in Mid-Eastern cultures such as the Egyptian culture, place a heavy emphasis on social norms, i.e., persons are expected to behave far more under the control of societal rather than individual determination. In such cultures, extravert behavior and taking part in group-oriented activities are more encouraged than is individually and socially inhibited behavior. Therefore, one would expect that Egyptians would show more inclination to behave in an extravert way than British or American individuals.

#### METHOD

In the Egyptian sample were 248 university students (83 males, 165 females) at the University of Cairo, Egypt. Their mean age was 18.64 yr. ( $SD = 1.96$ ). The American sample had 58 students (22 males, 36 females) at Eastern Michigan University, Ypsilanti, Michigan. Their mean age was 21.51 yr. ( $SD = 2.11$ ). The comparison with the British group was made on the basis of published studies by Eysenck and Eysenck (1968, by permission). The British sample was selected from standardization samples on the basis of similarity in education and method, as well as age. British sample consisted of 347 university students (158 males, 189 females); their mean age was 20.9 yr. ( $SD = 4.9$ ).

Both American and Egyptian subjects were administered the Extraversion and Neuroticism scales of the Eysenck Personality Inventory as part of an ongoing research on cross-cultural differences in personality. Each of the two scales has 24 questions, originally selected on the basis of item and factor analyses, to which the examinee answers "Yes" or "No." The test has two parallel forms, A and B. Comparisons in the present study were based on scores taken from Form A.

Suitable Arabic translation of the Extraversion and Neuroticism scales was done and checked for accuracy by two Egyptian psychologists knowledgeable in both Arabic and English languages. The split-half reliability corrected by

the Spearman-Brown formula was also computed for each scale and for males, females, separately. The reliabilities of the Extraversion and Neuroticism in the male sample were .71 and .77, respectively; for the females corresponding reliabilities were .69 and .79. Although these reliabilities are not very high, they are, on the whole, comparable with those for Americans and English, and, generally, acceptable for group and cultural comparisons. A factor analysis study was carried out to ascertain the validity of both scales in Egypt. The personality patterns of both scales, and especially for the Neuroticism scale, were similar to those reported for the Anglo-Americans.

#### RESULTS AND DISCUSSION

The intercorrelations between the Extraversion and Neuroticism scales for males in the Egyptian, American and British samples were found to be .07, -.10 and -.16, respectively; for the females corresponding intercorrelations were .09, -.23 and -.14. Obviously, figures for males and females are quite low in the three cultural groups. This supports Eysenck's theory that extraversion and neuroticism are orthogonal constructs and independent dimensions of personality. Table 1 displays means, standard deviations by sex and nationality. It also displays the significance of differences between males and females within the Egyptian and American cultures as well as the significance of differences between nationalities. The mean neuroticism score for the females in both Egypt and U.S. was insignificantly larger than the comparable means obtained for the males. The present study, then, presented little indications of differences between males and females. It may be mentioned that

TABLE 1  
MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE OF DIFFERENCES  
ON EXTRAVERSION AND NEUROTICISM

Samples	N	Extraversion		Neuroticism	
		M	$\sigma$	M	$\sigma$
Egyptians					
Males	83	10.76	3.61	13.88	4.05
Females	165	11.19	3.22	14.74	3.71
Americans					
Males	22	12.22	3.99	10.02	4.32
Females	36	12.31	4.05	11.91	3.98
English					
Total	347	11.10	4.05	10.00	5.00
Total Egyptians	248	10.98	3.42	14.31	3.88
Total Americans	58	12.27	4.02	10.97	4.15
Significance of Differences Between Nationalities:					
English/Americans			<.05		<.10
Americans/Egyptians			<.05		<.001
English/Egyptians			<.001		<.001

items giving large sex differences were eliminated during the standardization of the Neuroticism scale (Eysenck & Eysenck, 1975). Also, no significant sex differences were noted with respect to extraversion in the two cultures.

From cross-cultural perspective, the results pointed to some socio-cultural differences of development in the area of emotionality. The Egyptians have the highest neuroticism score which supports the hypothesis that the degree of anxiety and liability to develop neurotic disorders under stress may be a function of the social constraints imposed on individuals. Indeed, the findings by Eysenck (1968) which indicated that there were significant higher neuroticism mean scores for women vs men, working class, urban vs rural, younger vs older, etc., can be taken, along with our data, as supportive of our theoretical expectations.

The absence of significant neuroticism differences between Americans and English suggests that social pressures for both groups may be quite similar. The finding that Americans score high on extraversion tends to confirm the hypothesis that the American culture encourages sociability, excitement, optimism, and decreases emotional constraints, and inhibitions. Along with this line of thinking, Cattell and Warburton (1961) indicated that the American culture is more uninhibited and extraverted, whereas the British culture is more inhibited and introverted.

The mean extraversion score for the Egyptians was much below that reported for the English and American groups, disconfirming our prediction. Speculation about this finding would probably be beyond the limits of the present research. However, based on some years of experience with both Egyptian and American cultures, it seems to the writer that extraversion would be understood by Egyptians differently. Egyptians may consider it appropriate to express their sociable and extravert tendencies by showing more sympathy, intimacy, and conformity with relatives, friends, acquaintances, etc., rather than being extravert in the American and English sense (liking parties, craving excitement, etc.). Obviously further research is needed to explore the subjective connotation of extraversion across cultures. Techniques such as those used by Triandis, *et al.* (1972) in their analysis of the subjective culture theory seem to be very relevant for this purpose.

#### REFERENCES

- CATTELL, R. B., & WARBURTON, F. W. Cross-cultural comparison of patterns of extraversion and anxiety. *Brit. J. Psychol.*, 1961, 52, 3-15.
- EYSENCK, H. J., & EYSENCK, S. B. G. *Manual of the Eysenck Personality Inventory*. San Diego: Educational & Industrial Testing Services, 1968.
- EYSENCK, H. J., & EYSENCK, S. B. G. *Manual of the Eysenck Personality Questionnaire*. San Diego: Educational & Industrial Testing Services, 1975.
- GOTTS, E. E. A note of cross-cultural by age-group comparison of anxiety scores. *Child Develpm.*, 1968, 39, 945-947.

- IBRAHIM, A. S. Some personality correlates of authoritarian conservatism. *National Review of Social Sciences*, 1967, 10, 489-498.
- IBRAHIM, A. S. Dogmatism and related personality variables among Egyptian university students. *J. Psychol.*, 1977, 95, 213-216.
- TRIANDIS, H. C., KILTY, K., SHANMUGAN, A. V., TANAKA, Y., & VASSILIOU, V. (Eds.) *The analysis of subjective culture*. New York: Wiley, 1972.
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