

ATTITUDES OF CO-EDUCATED AND SINGLE-SEX EDUCATED UNIVERSITY STUDENTS TOWARDS THE OPPOSITE SEX*

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Using the semantic differential technique, 274 first-year university students rated the concept 'the opposite sex' producing scores on three factors: 'evaluation', 'potency' and 'activity'. The difference between the ratings given by men and women on 'potency' was greater for those from single-sex schools than for those from co-educational schools ($P < 0.05$), with the co-educating men rating women more highly on 'potency' than did those from boys' schools and the co-educating women placing men lower on this scale than did those from girls' schools. The co-educating men also tended (not significantly) to rate women as more 'active' than did those from boys' schools. On 'potency' and 'activity' women rated the opposite sex much higher than did men ($P < 0.001$) with near equality on 'evaluation'.

Recent research suggests that there is an appreciable difference in atmosphere between co-educational and single-sex schools (2), and that education in the two types of school is associated with differences in attitude towards the opposite sex. Atherton (1) claims that this variable also affects happiness in marriage, though in view of the difficulties of working in this area one would view this finding tentatively until it is either confirmed or questioned by further work.

In this article attitudes towards the opposite sex of university students who had attended either a co-educational or a single-sex secondary school are studied, using the semantic differential technique developed by Osgood, Suci and Tannenbaum (6) and recently reviewed by Heise (4). The subjects rated the concept 'the opposite sex' on a series of seven-point scales, the poles of which were defined by pairs of adjectives such as good-bad, hard-soft, etc. Combinations of certain of these scales provide measurements on three different and independent factors labelled by Osgood *et al* (6) 'evaluation', 'potency' and 'activity'.

PROCEDURE

Sample

The sample was originally drawn from the 1968-69 and 1969-70 first-year classes at the University College of Swansea. It was limited to the

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316 students in the Faculties of Arts and Pure Science who had sat the Joint Education Committee A-level examination and were taking at least one of the following subjects: French, History, Geography, Applied Mathematics, Pure Mathematics, Physics, Chemistry and Botany, but there were 24 non-cooperators, and 18 who had attended both types of school. A further 18 were randomly eliminated to make analysis of variance easier. This left 128 men and 128 women, all of whom had attended day grammar or comprehensive schools. Sixty-eight members of each sex had been to a co-educational school.

Method

In the second and third weeks of the winter term the students were asked to co-operate in a large survey, of which a semantic differential test formed a part. They were usually tested in large groups but occasionally individually. Students were asked to rate the concept 'the opposite sex' on 11 seven-point scales, five of which loaded on evaluation, and three each on potency and activity. The rating scales and method of scoring are detailed in the appendix.

Before calculating the mean differences between the principal groups, the A-level attainment, faculty and social class variables were inspected by choosing from the main group a special 'balanced' sample, all the subcells of this sample had nearly equal proportions of students from the two faculties who were also of comparable categories of A-level attainment and of social class. As, however, the results from this 'balanced' sample proved to be closely similar to those from the full sample it was assumed that the above variables need not be controlled at this educational level and the reported results are therefore those from the full sample. Although more single-sex than co-educational schools were situated in urban areas, examination showed that this variable also could be discounted as it did not appear to affect the ratings when type of school was kept constant. After these preliminary checks, two-way analyses of variance on the male-female and co-education-single-sex variables were carried out for the evaluation, potency and activity factors.

RESULTS

The means on 'evaluation', 'potency', and 'activity' are set out in Table I.

TABLE 1

MEAN RATINGS OF THE OPPOSITE SEX' USING SEMANTIC DIFFERENTIAL TECHNIQUE

	COMBINED SAMPLES			
	MEN (N=128)		WOMEN (N=128)	
	Co educated (N=68)	Single sex educated (N=60)	Co educated (N=68)	Single-sex educated (N=60)
Evaluation				
Range 5-35	30.96	30.28	31.04	30.88
Potency				
Range 3-21	10.28	9.63	13.65	14.27
Activity				
Range 3-21	15.01	14.53	16.91	16.98

Male-female differences Although there is no sex difference on evaluation, females see men as more potent and active than men see women (Potency $F=124.5$, $df=1,252$, $p<0.001$, Activity $F=40.4$, $df=1,252$, $p<0.001$)

Difference associated with co-educational and single-sex schooling (a) *Evaluation* Comparing the mean scores of the co-educated men and women, taken separately, with those from single-sex schools, there is no consistent tendency in the 'evaluation' of the opposite sex. The only points of interest here are the similarity between the mean scores of the co-educated and single-sex educated women, and the higher overall rating of women by the co-educated men than by men from boys' schools, though this is a little way from statistical significance. (b) *Potency* The results were more consistent on the potency factor. The co-education-X-sex interaction nearly reaches significance ($F=3.17$, $df=1, 252$, $p<0.1$) with the co-educated men rating the women as more potent, i.e. severe, strong and hard, than the men from boys' schools rated them, and the co-educated women rating the men as less potent than the women from girls' schools rated them. When the 18 randomly eliminated cases are reincluded and a t test of the difference between differences is made, a significant result does emerge ($t=2.03$, $df=270$, $p<0.05$), confirming the impression from the analysis of variance. (c) *Activity* On the activity scale there was a tendency for the co-educated men to assess women as

more active than did the men from boys schools (not statistically significant) but a near equality between the mean scores of the women's groups

DISCUSSION

The difference between the ratings given by men and by women on all three concepts is smaller within the co-educated than within the single-sex educated group of students, though only on the potency scale does this last difference reach the 0.05 level of significance (using the *t* test of the difference between differences). Throughout research on co-education there are frequent hints that experience in a co-educational secondary school modifies the conception that each sex has of the other (2), here the tendency appears to be for the co-educated men to view the women as less lenient, soft and weak and perhaps less passive, dull and slow than do men from boys schools, while there appears to be a comparable tendency for women from girls' schools to have an exaggerated view of the 'manly' qualities of men, viewing them as more severe, strong and hard, than do women from co-educational schools.

Undoubtedly co-educational communities are very different in atmosphere from single-sex ones (2), and one might expect day by day working with the opposite sex to have some effect on understanding them and to modify extreme views about them that might arise if the sexes were deprived of each others presence. Indeed, it may seem surprising that the co-educational-single-sex variable appears in this study to produce so few and such small differences in attitude to the opposite sex. One explanation is that day school occupies only a part of a person's time. There are many opportunities outside school hours for the single-sex educated pupil to meet the opposite sex and to compensate for the deprivation. Furthermore, many of these pupils will have siblings of the opposite sex, and this too may considerably dampen any over-idealistic notions they may entertain.

The results are also dependent on the individual scales comprising the factors, e.g. for the evaluation factor, the scale 'pleasant-unpleasant' might yield a difference in one direction which could be cancelled out by one in the opposite direction on the scale 'trivial-important'. However there appears to be no compelling logical reason to expect such interactions in the present study, and an inspection of the separate scale scores for 60 of the subjects showed little sign of any. The Potency and Activity schooling differences might, however, have been more clear-cut had additional scales loading on these factors been included.

Another interesting problem concerns the stability of the differences

found. In general, this is an open question. Some recent work (3, 5) has tended to show that the effects of co-education on attitudes to university and on first year university academic performance are relatively slight. On the other hand there are Atherton's (1) findings on the better adjustment in marriage of co-educated adults. Perhaps, if long term effects are confirmed, they will be found predominantly in areas of the understanding of the opposite sex, where experience at school, while growing up, might be helpful.

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