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Influence of Adolescent Social Crowds on the Development of Vocational Identity

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A major gap in Holland's theory of vocational identity has been specification of the developmental antecedents of the six personality types. The present paper extends Geoffrey Kelso's work on the developmental antecedents of Holland's types by examining the relationship between membership in adolescent social crowds and vocational identity in early adulthood. In four samples (total N = 274), membership in five junior high school crowds—Motorheads, Brains, Freaks, Politicos, and Conformists—was found to be associated with higher scores on the Realistic, Investigative, Artistic, Enterprising, and Conventional scales, respectively, of Holland's Self-Directed Search and Vocational Preference Inventory in early adulthood. The relative impact of temperament, family, and peer variables on the development of vocational identity is discussed. © 1987 Academic Press, Inc.

Holland's (1985a) theory of personality types and vocational identity has provided the most widely used conceptual framework in vocational psychology today. Holland's taxonomy of six personality/vocational types—Realistic, Investigative, Artistic, Social, Enterprising, Conventional—is currently used to organize and interpret the Strong–Campbell Interest Inventory (Campbell & Holland, 1972) and the Dictionary of Occupational Titles (Viernstein, 1972), as well as his own widely used Self-Directed Search (SDS; Holland, 1985b) and Vocational Preference Inventory (VPI; Holland, 1985c). Numerous clones of Holland's taxonomy abound in the career development marketplace, testifying to the usefulness of Holland's theory.

Holland's theory—qua personality theory—lacks, however, a detailed

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specification of the developmental antecedents of the six personality types (Kelso, 1976). Vondracek, Lerner, and Schulenberg (1983) are particularly critical of Holland's failure to consider the influence of social context on vocational development across the life span. The research described here specifies some possible developmental social antecedents of Holland's types and investigates the magnitude of their influence on vocational development.

Holland (1985a, pp. 15–19) *has* sketched the *broad* outlines of a theory of type development. He suggests that both inborn temperamental dispositions and parental demands create in children preferences for some types of activities and aversions to others. Preferred activities that continue to bring intrinsic satisfaction and rewards from others are pursued, while unrewarding activities are neglected. This leads to the development of more specialized and differentiated competencies, interests, values, and personality characteristics. After a person reaches young adulthood, changes in personality and vocational interests become less likely, because cumulative learning and environmental resistance to change grow stronger over the life span (Costa, McCrae, & Holland, 1984).

The empirical evidence for Holland's developmental theory is most abundant for parental and family influences. Holland (1985a) cites over a dozen studies supporting his views on parent–child interactions. Vondracek et al. similarly cite over two dozen studies on the influence of family context upon vocational development. Empirical evidence for peer influences on the development of vocational identity during early adolescence, however, is meager. Vondracek et al. do not cite any studies on vocational development in early adolescence. Holland's (1985a) review of peer influences sheds some light on college age, but not young, adolescents. Kelso's (1976) research did find that high school friends tended to share the same vocational interests; furthermore, students tend to reject and shun students with highly dissimilar interests. For example, girls with Investigative (scientific) vocational interests tended to associate with each other and to reject girls with Conventional (clerical) interests. (Similarity versus dissimilarity of vocational types is defined by a hexagonal model, wherein adjacent types are most similar and opposite types most dissimilar—Holland, 1985a).

Holland's and Kelso's research suggest that the relationships between peer associations and vocational identity are real, but not of great magnitude. Holland's (1964) χ^2 tests of 6 × 6 tables *generally* supported his predictions and but failed to reach the .05 level of significance for females. Kelso (1976) found statistically significant correlations only for the Investigative and Conventional groups for girls, and only for the Realistic, Conventional, Artistic, and Social groups for boys. Due to his large *N*s, Kelso's correlations were significant at the .05 level, but their magnitudes were mostly in the .15–.25 range. Only through multivariate analyses

that also included family and individual variables was Kelso able to produce canonical correlations in the .40–.70 range.

The research reported here extends Holland's and Kelso's earlier work by tracing membership in early adolescent social crowds to vocational identity in late adolescence. Linking Holland's work to existing research on adolescent social crowds would seem to be a fruitful wedding, given the success of Holland's ideas in the field of vocational psychology and the rich, venerable history of peer socialization research. The concept of peer socialization dates at least back to Cooley's (1902) and Mead's (1934) symbolic interactionist proposals, that is, that our sense of identity develops according to how we regard others' perceptions of us. More recently, Erik Erikson (1968) has provided his widely known analysis of peer group influence on identity development.

A number of researchers (Buff, 1970; Coleman, 1961; Cusick, 1973; Dunphy, 1963; Larkin, 1979, Oetting & Beauvais, 1986; Varenne, 1982) have discussed how social crowds affect the development of identity in adolescence. Building upon this earlier work, Brown and his colleagues (Brown, Eicher, & Petrie, 1986; Brown & Lohr, 1983, 1987; Brown, Lohr, & Trujillo, 1985; Clasen & Brown, 1985a, 1985b) have found that peer influence is multidimensional, varying in degree across different social-psychological variables (social involvement, school involvement, self-esteem, misconduct, etc.) and adolescent crowd types.

Crowd types identified by Brown et al. included brains, druggies, jocks, loners, normals, outcasts, populars, toughs, special interest groups (e.g., band buddies), hybrids (e.g., preppie-brains), and unassignable (idiosyncratic, miscellaneous) names. Different social crowds appear to possess distinct stereotypic traits, which—at least in part—define the identities of the crowd members. Thus, they found that there is more to being a druggie than using drugs, more to being a jock than athletic prowess, etc. These crowd types were of special interest to the present study, given their prima facie resemblance to the stereotypic descriptions of the six personality/vocational types described by Holland (1985a).

It was hypothesized that, among the universe of adolescent social crowds, six crowds could be found whose members exhibit interests, values, and personality traits similar to Holland's six personality types: Realistic (asocial, masculine people who like to work with their hands); Investigative (intellectual, curious people interested in science); Artistic (original, nonconforming people interested in art); Social (friendly, outgoing people interested in social activities); Enterprising (ambitious, energetic people interested in politics); and Conventional (conforming, orderly people interested in business). If such peer groups exist, perhaps experience within a given crowd might act as a socializing agent that would direct and form adolescents' identities toward the corresponding Holland types.

The research program described below contains three studies conducted

over a 5-year period. The first study sought to replicate the taxonomy of social crowd types spontaneously generated by the Brown et al. midwestern samples, and to reach an informal consensus on six social crowds that most resemble the Holland types. The first study also contained an initial empirical investigation of the links between social crowd membership, self- and peer personality ratings, and vocational identity.

Study 1 contained an unavoidable confound between knowledge of Holland-type characteristics and the personality ratings and vocational identity scores. Study 2 avoided this confound by assessing crowd type, personality, and vocational interests before discussing their interrelationships with the subjects. Finally, Study 3 sought to replicate the results of the first two studies with more refined measures of social crowd membership. Because some of the results are pooled across studies, single Predictions, Results, and General Discussion sections follow the three separate descriptions of Subjects and Procedures.

STUDY 1

Subjects

Subjects in the first study were 34 introductory psychology students (12 male, 22 female) from Towson State University in Maryland. The social class background of the sample was approximately 70% working class and 30% middle class. Not all subjects completed all procedures; details on incomplete data are described below. All subjects who completed the procedures did so as part of their course experience.

Procedure

Subjects were divided into five discussion groups whose purpose was to generate a list of naturally existing social crowds in junior high schools. From these lists the students indicated to which crowd they belonged when they attended junior high school. The students then completed Holland's Self-Directed Search (SDS; 1985b), which determines an individual's resemblance to Holland's six personality types. Next, the author described Holland's six personality types to the entire class and, through group discussion, the class reached an informal consensus on which social crowds were most similar to the Holland types.

At the end of the group discussion, subjects were asked to rate all of the other persons in their discussion group on five 10-point Likert scales corresponding to the five broad dimensions of personality that have recurred persistently during the past 40 years of factor analyzing personality scores (Hogan, 1986; Norman, 1986). Subjects were provided with the following definitions of each dimension to guide their ratings:

Adjustment: freedom from anxiety, depression, confusion, and self-doubt;

Social Ascendance: energy level, initiative, dominance, leadership qualities;

Intellectuality: the degree to which a person is bright, creative, and interested in cultural and educational matters;

Conventionality: the tendency to "fit in" by being well-behaved, responsible, and self-controlled;

Likability: the degree to which a person is friendly, sensitive, receptive, and cooperative.

Twenty-five subjects were present for the entire testing procedure and thus received three or four independent ratings on the five dimensions. These ratings were averaged across raters. The ratings clearly could not have as much validity as ratings gathered from individuals who have known each other for a long period of time. Nonetheless, the salience of the six dimensions, coupled with the excellent track record of single Likert scales (Burisch, 1984) and the inherent reliability of composite ratings (Block, 1961) assured at least some measure of validity to the peer ratings.

Finally, a week after the group discussion, subjects completed Gough's California Psychological Inventory (CPI; 1975). (Nine additional subjects who did not participate in the peer ratings completed at this time the CPI, SDS, and indicated the social crowd to which they had belonged.) The CPI is regarded by many as the best available inventory of normal individual differences in personality (Kelly, 1965; Kleinmuntz, 1967).

A χ^2 analysis was used to assess the relationship between junior high school crowd membership and current Holland vocational type. Subjects were also assigned a dichotomous score for each of the six social crowds (0 = not member; 1 = member). Several students indicated membership in two crowds and were assigned a "1" for both, but for the most part, coding for crowd membership was mutually exclusive. Scores on these dichotomous scales were correlated with vocational scores ($N = 34$), peer ratings ($N = 25$), and the 18 standard CPI scales ($N = 34$).

One problem with the Towson data is that the students openly discussed trait characteristics of the social crowds and helped to define the crowd types on the basis of Holland's typology. This created a possible confound between crowd membership and the Holland and personality scores. Determining the unconfounded relationship between crowd membership and Holland and personality scores required a new study.

STUDY 2

Subjects

Subjects were 34 male and 34 female students in an introductory psychology class at the Pennsylvania State University at DuBois. Social class composition was nearly identical to the Towson State sample. As

was the case with the previous sample, not all subjects completed all procedures; details on incomplete data are described below. All subjects who completed the procedures did so as part of their course experience.

Procedure

All 68 subjects were present on the first day of assessment and were asked to identify to which of the six social crowds, identified in the previous study, they belonged when they attended junior high school. Afterward they completed Holland's Self-Directed Search. The same χ^2 analysis used in the previous study was used on the present data to determine whether associations existed between adolescent crowd types and Holland types.

On a separate day, the 49 subjects who were present in class were divided into small groups to discuss the question, "What, if any, are the universal motives of human nature?" At the end of the hour discussion, subjects were asked to rate two other subjects in their group on the same five dimensions of personality described in Study 1. This time the subjects rated each other with a set of 7-step Likert scales anchored by bipolar adjectives. The single-scale scores were then aggregated into five scores representing the five broad dimensions and averaged across raters. The adjective rating sheet has in the past demonstrated acceptable levels of reliability and validity (Hogan & Johnson, 1981; Johnson, Cheek, & Smither, 1983).

A week after the above activities, all subjects completed the CPI. As before, subjects were assigned a 0 or 1 score for the six social crowd types, and these dichotomous scores were correlated with the Holland vocational scales ($N = 68$), peer ratings of personality ($N = 49$), and 18 standard CPI scales ($N = 68$).

Study 2 corrects for the confound between knowledge of social crowd traits and vocational interests and personality. However, both of the previous studies are limited in that crowd types are defined categorically by either/or membership. The χ^2 analyses also used a categorical definition of Holland types, that is, a subject who scored highest on the Realistic scale was defined as a Realistic type. In reality, Holland scores are continuous and membership in a crowd can be a matter of degree. The final study examined correlations between continuous Holland scores and continuous measures of crowd membership.

A second technical limitation of the previous two studies derives from the categorical definition of crowd membership, viz., the correlations between social crowd membership and the personality measures are biserial. Skewness of scores can occasionally affect biserial correlations, and the use of nonparametric measures of association does not always correct the problem. The use of continuous measures of both variables in Study 3 corrects the biserial problem. Correlations in Study 3 that

replicate the findings of Studies 1 and 2 can be accepted as valid with a fair degree of confidence.

STUDY 3

Subjects

Two groups of subjects participated in the final study: 79 students (43 male, 36 female) from a mental health course at the Pennsylvania State University, DuBois Campus, and 93 students (52 male, 41 female) from an introductory psychology course at the DuBois Campus. Social class composition was similar to the first two studies. Care was taken to see that all subjects completed all measures. All subjects completed the procedures described below as part of their course experience.

Procedure

The students in the mental health course completed five measures. The first three were standard psychometric instruments: Holland's Vocational Preference Inventory (VPI; 1985c), which measures the same six Holland types assessed by the Self-Directed Search; the CPI, described above; and Cheek's Identity Scales (Cheek & Briggs, 1983; Cheek & Hogan, 1983; Hogan & Cheek, 1983), which measure a person's involvement in personal identity (personal values, emotions, thoughts) and social identity (popularity, interpersonal relationships, group memberships). The fourth measure, the Antecedents of Identity Scales (AIS), used in a previous study of identity (Johnson, 1984), was a revision of Collins, Martin, Ashmore, and Ross's (1973) measure of inner- versus other-directedness. The AIS contains four subscales to measure Parental Orientation, Peer Orientation, Inner-Directedness, and Other-Directedness.

The fifth measure, Social Crowd Membership, was designed for the present study. It consists of six, 5-step Likert scales to denote the degree to which a person feels that he or she belonged to the six common social crowds identified in the first two studies in this report: Motorheads, Brains, Freaks, Socialites, Politicos, and Conformists. A "1" indicated the person was definitely not a member; a "5" indicated the person definitely was a member.

Pearson correlation coefficients were computed between the Likert ratings of social crowd membership and the remaining measures.

The 93 Penn State students enrolled in introductory psychology completed the VPI, CPI, and a slightly different version of the Social Crowd Membership measure. The revised measure used a 7-point, anchored rating scale rather than a 5-point scale. The anchors were also redefined to allow for degrees of association as follows: 7 = a leader or core member of the crowd; 6 = a member; 5 = sometimes associated with crowd, but not a member; 4 = liked the people in the crowd but didn't associate much with them; 3 = neutral; 2 = disliked people in the crowd

somewhat; and 1 = shunned people in the crowd. For both groups Pearson correlation coefficients were computed between Social Crowd Membership scores and the VPI and CPI.

PREDICTIONS

Predictions centered on two areas—(1) the personality characteristics of the social crowd types and (2) the relationship between social crowd membership and vocational identity scores. It was predicted that among the social crowd types identified, six would be defined by a set of personality traits that also define the six Holland vocational types. Thus, I expected to find a social crowd that would appear to be masculine and asocial (Motorheads = Realistic type); a crowd that would appear to be intellectual and curious (Brains = Investigative type); a crowd that would appear to be impulsive and creative (Freaks = Artistic type); a crowd that would appear to be friendly and outgoing (Socialites = Social type); a crowd that would appear to be ambitious and energetic (Politicos = Enterprising type), and a crowd that would appear to be orderly and conforming (Conformists = Conventional type).

The predicted personality correlates of social crowd membership were expected to reach statistical significance, but not to exceed the magnitude of correlations typically found (about .20—cf. Holland, 1985c, Table 20) between the California Psychological Inventory and Vocational Preference Inventory.

Two sets of predictions were made concerning the relationship between social crowd membership (SCM) scores and Holland vocational identity scores. First, SCM scores were expected to correlate most highly with their hypothesized primary sequelae: Motorheads with Realistic, Brains with Investigative, etc. Second, SCM scores were predicted to show trends toward positive correlations with similar Holland type scores and negative correlations with dissimilar Holland type scores, as defined by Holland's (1985a) RIASEC hexagonal model. Thus, Motorhead scores were expected to correlate somewhat positively with Investigative and Conventional scores, and somewhat negatively with Artistic, Social, and Enterprising scores, and so forth.

Again, the predicted correlations between SCM scores and Holland scores were expected to reach statistical significance, but were not expected to exceed by much the correlations Kelso (1976) found between peer ratings and vocational identity scores (mostly in the .2 range). Significant, yet small-in-magnitude, correlations are most consistent with Holland's (1985a) theoretical outline of vocational development. According to his theory, peer influences on vocational identity during adolescence are less profound than earlier temperamental and family influences.

RESULTS

Crowd Types

When the five small Towson State discussion groups reassembled, we found that each discussion group had identified between 6 and 10 crowd types. The list of crowd types seemed to mirror the list presented by midwestern researchers Brown (Brown & Lohr, 1983; Clasen & Brown, 1985a, Footnote 1): brains, druggies, jocks, loners, normals, outcasts, populars, toughs, special interest groups, hybrids, and idiosyncractic, miscellaneous types. Six crowds resembling the Holland vocational types had been identified by one label or another by *every* discussion group.

The labels varied, but the nature of the crowds appeared invariant. These six crowds identified by all subjects were (1) Motorheads, a predominantly male crowd, not academically oriented, who enjoyed shop classes and working on cars (cf. Holland's Realistic type and Brown's toughs); (2) Brains, who were teachers' pets and who excelled in science and math courses (cf. Holland's Investigative type and Brown's brains); (3) Freaks, who dressed unconventionally, enrolled in art, music, and theater courses, and were marginally delinquent (cf. Holland's Artistic type); (4) Socialites, who were well-dressed, popular, and were members of athletic teams or cheerleaders (cf. Holland's Social type, Brown's jock-populars); (5) Politicos, the student leaders who were interested in school politics and activities like the debate club (cf. Holland's Enterprising type and Coleman's 1961, "leading crowd"); and (6) Conformists, who were well-behaved, conventional students (cf. Holland's Conventional type and Brown's normals and loners.)

Personality Characteristics of Crowds

A complete matrix of correlations between CPI scores and social crowd type across four samples and considering sexes separately would yield 864 correlations. Adding to this figure 120 correlations between peer ratings and crowd type scores makes it obvious that some data reduction is necessary. Initially, correlations were computed separately by sex, but results were considered similar enough to combine data for males and females. Of the 432 CPI-crowd membership correlations, 86 (20%) were significant at the .05 level, and 31 (7%) at the .01 level, indicating that nonchance relationships were probably present.

One further strategy for data reduction might have been to normalize crowd type scores within each sample and combine all samples into one large sample. An alternate strategy would be to retain the separate samples and look for correlations that replicated across samples. This second strategy was chosen. All correlations between CPI scales and crowd membership that did not reach at least the .05 level of significance in at

least two samples were discounted from further consideration. That left 68 (16%) correlations significant at at least the .05 level.

The final reduction of data was conducted by grouping CPI scales according to the five major dimensions of personality previously mentioned (Norman, 1986). Factor analyses of the CPI (Megaragee, 1972) have converged on the same five-factor model, with its 18 scales marking the factors as follows:

Adjustment (Self-Control, Good Impression, Well-Being, Achievement via Conformance, Responsibility);
Social Ascendance (Dominance, Capacity for Status, Sociability, Social Presence, Self-Acceptance);
Intellectuality (Achievement via Independence, Flexibility, Intellectual Efficiency, Tolerance, Psychological Mindedness);
Conventionality (Socialization, Communality);
Agreeableness (Femininity).

All significant CPI-crowd membership correlations were converted to z scores by Fisher's transformation, averaged within their factor group, and converted back to Pearson correlation coefficients.

Organizing the CPI according to the same five dimensions assessed by the peer ratings enabled placing the CPI and peer correlates of crowd membership in the same table for comparison and summarizing (see Table 1). Table 1 also contains correlations between crowd membership and the additional measures of identity administered to the sample of 79 introductory psychology students.

The correlations in Table 1 seem to confirm the stereotypic personality characteristics of the six adolescent social crowds. The following descriptions are informed by Gough's (1968) interpreter's syllabus for the CPI.

Motorheads appear to be the most "sociopathic" crowd (low social ascendance, low conventionality, low parent orientation) and least well adjusted (low adjustment) of the crowds. They tend to be tough and masculine (low agreeableness) and anti-intellectual (low intellectuality). This description fits the image of the low social status, mechanically inclined student who is alienated from academics.

Brains do not project a consistent image according to peer ratings, but according to the CPI results they are well-adjusted, intellectually inclined, conventional, and agreeable. Their identities can be described as personal and inner-directed.

The few significant correlations for the Freaks suggest that, like the Brains, they are intellectual, but in a more self-aggrandizing (high social ascendance) and individualistic and rebellious way (high personality identity, low parent orientation and low other-directedness).

Predictably, Socialites are extraverted and appearance conscious (high

TABLE 1
Personality and Identity Correlates of Social Crowd Membership

Personality dimension & sample[a]	Crowd					
	Motorheads	Brains	Freaks	Socialites	Politicos	Conformists
Adjustment						
Peer 1						
Peer 2					30*	
CPI 1–4	−26**	32**		−21*	18*	
Social Ascendance						
Peer 1	−57**			33*		−36*
Peer 2						
CPI 1–4			21*	22*	33**	−29**
Intellectuality						
Peer 1	−37**		34*			
Peer 2				−24*		24*
CPI 1–4	−30**	25*	28**	−28**	23*	
Conventionality						
Peer 1	−35*					
Peer 2						24*
CPI 1–4		23*				35**
Agreeableness						
Peer 1						
Peer 2				−26*		
CPI 1–4	−31**	27**				
Identity measures[b]						
Personal ID		24*	23*		24*	
Social ID				39**		
Parent orientation	−36**		−37**	38**		
Peer orientation				57**		
Inner directedness		44**		−34**		
Other directedness			−32*			

Note. Decimal points omitted from all Pearson correlation coefficients in the table. Only significant correlations reported.

[a] Peer 1 are peer ratings from the first sample, $n = 25$; Peer 2 are peer ratings in the second sample, $n = 49$, CPI 1–4 are CPI scores from all four samples, total $n = 274$, but significance test for correlations based on average sample size ($n = 68$).

[b] $n = 79$.

* $p < .05$ (one tailed).

** $p < .01$ (one tailed).

social ascendancy, high social identity, high parent orientation, high peer orientation, low inner-directedness). However, they also seem to be somewhat immature, academically unable, and narrow-minded (low adjustment, low intellectuality, low agreeableness). This is consistent with Block's (1971) finding that superificial popularity in adolescence has little to do with social adjustment in adulthood.

Politicos appear to combine qualities of the Brain and Freak crowds. Like both of these crowds, they are intellectual and have a strong sense of personal identity. Like the Brains, they show good adjustment, and, like the Freaks, they are socially ascendant. The Politicos seem to be unique in that they steer a middle course between the conventionality of the Brains and the rebelliousness of the Freaks.

The Conformists, as expected, are the cautious, inhibited wallflowers. They might be good students (high intellectuality on one set of peer ratings), but are also submissive, inhibited, withdrawn, and shy (low social ascendance).

Relationship between Crowds and Vocational Types

The $\chi^2(25, N = 34)$ value for the Towson State data was 65.2, $p < .001$, indicating that crowd types were not evenly distributed across Holland types. A detailed examination showed that all Motorheads were Realistic types; two-thirds of the Socialites were Social types and one-third, Enterprising types; all Politicos were Enterprising types; and two-thirds of the Conformists were Social types with the remainder split between Enterprising and Conventional types.

The $\chi^2(25, N = 68)$ value for the Penn State students was 67.4, $p < .001$, replicating the findings for the Towson State students. The detailed analysis yielded results highly similar to the first analysis, with two slight differences. First, the Realistic and Social dimensions were more interrelated, with some Motorheads scoring as Social types and some Socialites scoring as Realistic types. Second, there was a stronger association between the Conformist crowd and Conventional vocational interests.

Correlations between membership in social crowds and Holland vocational scores for all samples are presented in Table 2 (recall that data from the first two samples were recoded to yield biserial correlations). The a priori predictions were borne out for at least two out of four samples for Motorheads (high in Realistic interests), Freaks (Artistic interests), and Conformists (Conventional interests). Predictions were confirmed in only one sample for Brains (Investigative interests) and Politicos (Enterprising interests). Socialites failed to show a definite pattern of Social interests, but seemed, rather, to be drawn most to the Conventional occupations. That finding is not inconsistent with the Socialites' concern with appearance, a conventional value (the Conventional and

TABLE 2
Vocational Interest Correlates of Social Crowd Membership

	Crowd											
	Motorheads		Brains		Freaks		Socialites		Politicos		Conformists	
Sample[a]	1 3	2 4	1 3	2 4	1 3	2 4	1 3	2 4	1 3	2 4	1 3	2 4
VPI/SDS												
R	25	24*	−01	−09	−14	08	−19	−04	−18	−24*	−03	06
	14	43**	−14	08	01	−21*	−51**	−02	−26**	06	−10	08
I	−08	−06	24	25*	24	14	−14	05	20*	−08	−21	00
	−16	06	10	08	05	10	−20*	−14	−03	05	−13	−16
A	−47**	−13	24	01	12	43**	−32*	−09	16	21	−06	−30*
	−20*	−10	13	11	47**	36**	−15	−16	09	09	−16	−23*
S	−20	−15	−13	−28*	−18	41**	25	−08	27	29*	−25	−25*
	−15	13	−04	02	28**	10	08	03	12	19*	−03	−18*
E	−02	−16	−33*	−45**	−08	11	10	09	27	38**	−01	05
	−09	05	09	15	13	10	09	25**	05	17	00	−02
C	22	−16	−27	−19	−11	−19	43**	04	03	05	−22	34**
	−12	20*	29**	15	06	06	19*	08	09	−07	23*	06

Note. Decimal points omitted from all Pearson correlation coefficients.
[a] Sample sizes: Group 1, $n = 34$; Group 2, $n = 68$: Group 3, $n = 79$; Group 4, $n = 93$.
* $p < .05$ (one tailed).
** $p < .01$ (one tailed).

Artistic types define a continuum of psychological conformity—cf. Johnson, 1983).

The several significant "off-diagonal" correlations are also interpretable in light of Kelso's (1976) and Holland's (1985a) past research. The Motorheads seem to be adverse to Artistic pursuits, which is consistent for the stereotype for this group. The Brains in two samples were adverse to business (Enterprising) careers, which is consistent with Holland's placing the Investigative and Enterprising types on opposite sides of his hexagonal model. Freaks scored high on Social interests in two samples, which confirms the exhibitionistic part of the Artistic stereotype. The Socialites' off-diagonal correlations were discussed above. The socially ascendant Politicos seem to have no use for lower status Realistic activities, and the shy, conventional Conformists dislike Social and Artistic occupations.

GENERAL DISCUSSION

A possible methodological limitation of the present research is that it relies on retrospective accounts of social crowd membership rather than on a true longitudinal design. Thus, a number of assumptions had to be made—for example, that college students can accurately remember the early adolescent social crowds to which they belong, and that the CPI personality profiles obtained from the subjects reflected their personalities from junior high school. Although personality shows some stability from junior high school to young adulthood, some individuals are more stable than others (Block, 1971). The assumption of stability and other assumptions inherent in a retrospective study may or may not be warranted.

Acknowledging the limiting assumptions in the present methodology, one can still note that the essential hypotheses of the study were supported by the data. First of all, as predicted, six adolescent social crowd types resembling Holland's vocational types can be found in the adolescent subculture. These crowd types are phenomenologically real in the sense that subjects enthusiastically confirmed the idea that they described each other in terms of crowd membership when they were young adolescents. Furthermore, subjects readily and effortlessly identified their earlier membership in these crowds.

Personality ratings and self-descriptions of the subjects were consistent with Holland's (1985a) depiction of the six types and with the stereotypes reported in the earlier literature on adolescent crowds. For example, Motorheads—in addition to being mechanically inclined—are seen as reckless, tough, masculine, irresponsible, and antisocial. Brains—in addition to being intelligent students—are seen as considerate, conscientious, responsible, and organized. The finding of unique personality correlates for each crowd is consistent with Clasen and Brown's (1985a) suggestion

that "there is more to being a druggie than using drugs, just as there is more to being a jock than athletic prowess."

What kind of influence do crowd stereotypes exert on the identities of adolescents, particularly their vocational identities? Perhaps the best available theoretical framework for understanding the relationship between peer group affiliation and identity can be found in Brown and Lohr's (1987) recent integration of principles from ego identity and symbolic interactionist theories. They note that ego identity theorists (Erikson, 1968; Newman & Newman, 1976) view identity formation as a period of experimentation. This implies that adolescents can try out different social identities by admitting themselves to different crowds and evaluating how well the crowd's attitudes and activities suit them. Empirical studies contradict this suggestion, however, indicating that identifying with a crowd is not an entirely volitional process. Adolescents are often "assigned" to crowds based on peer assessments of their predominant characteristics. These studies support the symbolic interactionist claim (Cooley, 1902; Mead, 1934) that our identities are—at least in part—socially bestowed.

Once an adolescent identifies (willingly or unwillingly) with a particular crowd, he or she is subject to peer pressures, both from without and within that crowd. Pressures from without the crowd (including parents and teachers as well as other adolescents) include expectancies for how the adolescent is supposed to act, according to the stereotype for that crowd. The degree to which these expectancies can result in the kind of "self-fulfilling prophecies" described for younger age groups is an empirical question requiring further research.

Pressures from within a peer group have been found to vary across the type of group, the issue under consideration, and even the specific school setting. Clasen and Brown (1985a) found, for example, that "druggie-toughs" experienced relatively strong pressure toward misconduct, whereas "jock-populars" perceived greater pressure toward school involvement. The relative pressure on "loners" toward school involvement varied, however, between an urban and rural school setting. One might expect that pressure toward vocational choice would also vary across crowds and samples, and this seemed to be the case. For some crowds (e.g., Freaks) we find numerous correlations between crowd membership and vocational identity that replicate across samples, but for other crowds (e.g., Socialites), the pattern of correlations are less consistent.

In conclusion, the results of the present study show links between experiences within early adolescent crowds and later vocational identity, links that are interpretable within the scope of Holland's theory. The magnitude of these relationships is modest and varies across types of crowds, yet past research by Holland and by Brown predicts these results. According to Holland, the structure of vocational identity is set primarily

by temperament and early family influences, and hence would not be influenced strongly by peer pressure. Brown would add that the degree of pressure would vary across the type of peer group and the larger socioeconomic status of the community.

Future research in this area might apply the methodology of Clasen and Brown (1985a) to the study of peer pressure on vocational choice. This would require asking adolescents to rate each other regarding crowd membership and to respond to an instrument designed to measure perceived peer pressure regarding vocational matters. An ambitious, yet important, extension of such research would follow-up the adolescents at a point where they were actually making career decisions, to evaluate more accurately the magnitude of adolescent peer influences on adult vocational choice.

REFERENCES

Block, J. (1961). *The Q-sort method in personality assessment and psychiatric research.* Springfield, IL: Thomas.

Block, J. (1971). *Lives through time.* Berkeley, CA: Bancroft Books.

Brown, B. B., Eicher, S. A., & Petrie, S. (1986). The importance of peer group ("crowd") affiliation in adolescence. *Journal of Adolescence,* **9,** 73–96.

Brown, B. B., & Lohr, M. J. (1983, April). *Adolescent peer group stereotypes, member conformity, and identity development.* Paper presented at the biennial meeting of the Society for Research in Child Development, Detroit.

Brown, B B., & Lohr, M. J. (1987). Peer group affiliation and adolescent self-esteem: An integration of ego identity and symbolic interaction theories. *Journal of Personality and Social Psychology,* **52,** 47–55.

Brown, B. B., Lohr, M. J. & Trujillo, C. M. (1985). *Adolescents' perceptions of peer group stereotypes.* Unpublished manuscript.

Buff, S. A. (1970) Greasers, dupers, and hippies: Three responses to the adult world. In L. K. Howe (Ed.), *The white majority* (pp. 60–77). New York: Random House.

Burisch, M. (1984). Approaches to personality inventory construction: A comparison of merits. *American Psychologist,* **39,** 214–227.

Campbell, D. P., & Holland, J. L. (1972). Applying Holland's theory to Strong's data. *Journal of Vocational Behavior,* **2,** 353–376.

Cheek, J. M., & Briggs, S. R. (1983). Self-consciousness and aspects of identity. *Journal of Research in Personality,* **16,** 401–408.

Cheek, J. M., & Hogan, R. (1983). Self-concepts, self-presentations, and moral judgement. In J. Suls & A. Greenwald (Eds.), *Psychological perspectives on the self* (Vol. 2, pp. 249–273). Hillsdale, NJ: Erlbaum.

Clasen, D. R., & Brown, B. B. (1985a). The multidimensionality of peer pressure in adolescence. *Journal of Youth and Adolescence,* **14,** 451–468.

Clasen, D. R., & Brown, B. B. (1985b). *Peer group differences in adolescents' school involvement and self-esteem; Implications for school psychologist.* Unpublished manuscript.

Coleman, J. S. (1961). *The adolescent society.* New York: Free Press.

Collins, B. E., Martin, J. C., Ashmore, R. D., & Ross, L. (1973). Some dimensions of the internal–external metaphor in theories of personality. *Journal of Personality,* **41,** 471–492.

Cooley, C. H. (1902). *Human nature and the social order.* New York: Scribners.

Costa, P. T., Jr., McCrae, R. R., & Holland, J. L. (1984). Personality and vocational interests in adulthood. *Journal of Applied Psychology,* **69,** 390–400.

Cusick, P. A. (1973). *Inside high school.* New York: Holt, Rinehart & Winston.

Dunphy, D. C. (1969). *Cliques, crowds, & gangs: Group life of Sydney adolescents.* Melbourne, Australia: F. W. Cheshire.

Erikson, E. H. (1968). *Identity, youth, and crisis.* New York: Norton.

Gough, H. G. (1968). *An interpreter's syllabus for the California Psychological Inventory.* Palo Alto, CA: Consulting Psychologists Press.

Gough, H. G. (1975). *Manual for the California Psychological Inventory* (rev. ed.) Palo Alto, CA: Consulting Psychologists Press.

Hogan, R. (1986). *Hogan Personality Inventory: Manual.* Minneapolis, MN: National Computer Systems.

Hogan, R., & Cheek, J. M. (1983). Identity, authenticity, and maturity. In T. R. Sarbin & K. E. Scheibe (Eds.), *Studies in social identity* (pp. 339–357). New York: Praeger.

Hogan, R., & Johnson, J. A. (1981, September). *The structure of personality.* Paper presented at the 89th Annual Convention of the American Psychological Association, Los Angeles, CA.

Holland, J. L. (1964). *Explorations of a theory of vocational choice: V. A one-year prediction study.* Moravia, NY: Chronical Guidance Professional Service.

Holland, J. L. (1985a). *Making vocational choices* (2d ed.). Englewood Cliffs, NJ: Prentice–Hall.

Holland, J. L. (1985b). *Professional manual for the Self-Directed Search.* Odessa, FL: Psychological Assessment Resources, Inc.

Holland, J. L. (1985c). *Vocational Preference Inventory (VPI) manual—1985 edition.* Odessa, FL: Psychological Assessment Resources, Inc.

Johnson, J. A. (1983). Criminality, creativity, and craziness: Structural similarities in three types of nonconformity. In W. S. Laufer & J. M. Day (Eds.), *Personality theory, moral development, and criminal behavior* (pp. 81–105). Lexington, MA: Heath.

Johnson, J. A. (1984, August). *Personality correlates of the organicism-mechanism dimension.* Paper presented at the 92nd Annual Convention of the American Psychological Association, Toronto, Ontario, Canada.

Johnson, J. A., Cheek, J. M., & Smither, R. (1983). The structure of empathy. *Journal of Personality and Social Psychology,* **45,** 1299–1312.

Kelly, E. L. (1965). Review of the California Psychological Inventory. In O. K. Buros (Ed.), *The sixth mental measurements yearbook* (pp. 168–170). Highland Park, NJ: Gryphon.

Kelso, G. I. (1976). Explorations of the developmental antecedents of Holland's occupational types (Doctoral dissertation, Johns Hopkins University, 1976). *Dissertation Abstracts International,* **37,** 440B.

Kleinmuntz, B. (1967). *Personality measurement.* Homewood, IL: Dorsey.

Larkin, R. W. (1979). *Suburban youth in cultural crisis.* New York: Oxford.

Mead, G. H. (1934). *Mind, self, and society.* Chicago: Univ. of Chicago Press.

Megargee, E. I. (1972). *The California Psychological Inventory handbook.* San Francisco: Jossey–Bass.

Newman, P. R., & Newman, B. M. (1976). Early adolescence and its conflict: Group identity vs. alienation. *Adolescence,* **11,** 261–274.

Norman, W. T. (Chair). (1986, August). *What are the basic dimensions of personality?* Symposium conducted at the 94th Annual Meeting of the American Psychological Association, Washington, DC.

Oetting, E. R., & Beauvais, F. (1986). Peer cluster theory: Drugs and the adolescent. *Journal of Counseling and Development,* **65,** 17–22.

Viernstein, M. C. (1972). The extension of Holland's occupational classification to all

occupations in the Dictionary of Occupational Titles. *Journal of Vocational Behavior,* **2,** 107–121.

Varenne, H. (1982). Jocks and freaks: The symbolic structure of the expression of social interaction among American senior high school students In G. D. Spindler (Ed.), *Doing the ethnography of schooling* (pp. 210–235). New York: Holt, Rinehart & Winston.

Vondracek, F. W., Lerner, R. M., & Schulenberg, J. E. (1983). The concept of development in vocational theory and intervention. *Journal of Vocational Behavior,* **23,** 179–202.

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