

THEORETICAL STRUCTURE
OF ADOLESCENT ALIENATION:
A MULTIGROUP CONFIRMATORY FACTOR ANALYSIS

Eric Lacourse, Martine Villeneuve, and Michel Claes

ABSTRACT

This study examined the construct validity of adolescent alienation using second-order confirmatory factor analysis of the five dimensions conceptualized by Seeman (1969). Analysis was based on data from 275 high school students aged 14 to 18. The hypothesized multidimensionality of the construct was confirmed for both boys and girls using a second-order factor labeled alienation. Central dimensions of alienation as a latent construct were self-estrangement and powerlessness. Social isolation, meaninglessness, and especially normlessness were poorly explained by the second-order factor, suggesting that these dimensions entail enough specificity to be considered separately. A different theoretical model relating these dimensions is suggested and discussed.

Throughout the 20th century, the concept of alienation has received substantial attention in the social sciences. Since its introduction by Hegel and Marx, this concept has been defined in a variety of ways that reflect the various disciplines and specific views of researchers who study it. Alienation research peaked during the 1970s and has received declining attention until recently. Many have criticized this concept as being too broadly used to describe nearly any kind of aberrant behavior, ranging from political manifestations to psychopathology (Mackey & Ahlgren, 1977; Israel, 1972; Williamson & Cullingford, 1997). Nonetheless, there has been a recent upsurge of interest in applying the concept to adolescents' experiences, most specifically their scholastic experience (Arnett, 1996; Dean, 1961; Mackey & Ahlgren, 1977; Mau, 1992; Roberts, 1987; Williamson & Cullingford, 1997, 1998). Theoretical and measurement issues still need to be clarified; in the present study we will try to gain a better understanding of the empirical definition of alienation and its manifestations in adolescent boys and girls.

Eric Lacourse, Martine Villeneuve, and Michel Claes, Department of Psychology, University of Montreal.
Requests for reprints should be sent to Eric Lacourse, G.R.I.P. Université de Montréal, Unité de recherche biopsychosociale, Hôpital Ste-Justine, 3175, Chemin de la Côte Ste-Catherine, Montréal, Québec, Canada H3T 1C5. E-mail: eric.lacourse@umontreal.ca

ADOLESCENCE, Vol. 38, No. 152, Winter 2003
Libra Publishers, Inc., 3089C Clairemont Dr., PMB 383, San Diego, CA 92117

The debates surrounding the concept of alienation are numerous and raise important questions. For example, is it a state, a trait, or a self-regulating process? Is it unidimensional or multidimensional? During the past 40 years, empirical studies have tried to determine the psychological manifestations of alienation, mostly in adults but also in adolescents (Dean, 1961; Mackey & Ahlgren, 1977; Mau 1992; Roberts, 1987; Williamson & Cullingford, 1998). In psychological and educational studies, for instance, adolescent alienation has been correlated with externalized behaviors such as drug use (Jessor & Jessor, 1977), truancy, delinquency (Williamson & Cullingford, 1998; Calabrese, 1990), and suicide (Wenz, 1979; Young, 1986). It also has been associated with internalized problems such as low self-esteem (Williamson & Cullingford, 1998), psychological distress, and depression (Abdallah, 1997). Arnett (1996) viewed adolescents' preference for heavy metal music as being related to alienation. Unfortunately, few of these studies offered an adequate empirical definition of alienation before integrating the concept into their statistical models.

Seeman (1969) undertook one of the first studies in social psychology that aimed to clarify the traditionally sociological concept of alienation by examining its multidimensionality. He identified five dimensions: self-estrangement, powerlessness, social isolation, meaninglessness, and normlessness. Subsequently, he added a sixth, cultural estrangement (Seeman, 1972). From Seeman's (1983) perspective, alienation manifests itself through these different dimensions. More recently, Seeman (1991) suggested that normlessness and meaninglessness are manifestations of anomie rather than of alienation. Although Seeman's work has been highly influential, the logical relations between dimensions remain unclear, which may undermine the cohesiveness of alienation as a global concept (Israel, 1972; Roberts, 1987).

Seeman's (1969) original five dimensions were slightly modified by Mackey and Ahlgren (1977) and Mau (1992), and applied to adolescent populations in school contexts. They can be described as follows. *Self-estrangement* has its roots in classical philosophy and taps humanistic ideas mostly related to a discrepancy between actual and idealized self. This dimension manifests itself in adolescents who have low self-esteem and feel bored with life, in which they perceive no purpose. *Powerlessness* reflects fatalism, pessimism, and a perception of losing control over one's own life. This dimension is similar to the psychological notion of external locus of control. *Social isolation* is salient to youths who perceive a lack of intimate relationships, such as with friends, thus leading to a feeling of loneliness. *Normlessness* can be defined as a belief that socially disapproved behaviors may be used to

achieve culturally defined goals. For example, adolescents who strive for good grades in school but perceive that they are not provided with the means to achieve them may cheat during exams. *Meaninglessness*, which is an important dimension to explore within an educational context (Williamson & Cullingford, 1998), characterizes youths who perceive little or no relationship between what they learn in school and what they will do in the future. The two latter dimensions clearly integrate Durkheim's and Merton's theories regarding anomie into Marx's alienation theory.

Seeman's dimensions are derived from very different theoretical frameworks and, as mentioned previously, the logical relations between them are not clear. Conceptually, if these dimensions are related to a single general construct named alienation, they would be expected to share a considerable amount of variance. This covariance would suggest that these dimensions possess common causes and consequences. On the other hand, if these dimensions are too loosely related, it may be more useful to consider them individually and to build theory around each one.

Mackey and Ahlgren (1977), Mau (1992), and Williamson and Cullingford (1998) have empirically explored the multidimensionality of the alienation construct in youth. Mau (1992) developed a 24-item scale to measure Seeman's dimensions of alienation. Based on the preliminary work of Mackey and Ahlgren (1977) with students, and using multidimensional scaling with a sample of 2,056 adolescents from three Hawaiian high schools, Mau (1992) validated an alienation inventory that comprised four subscales: powerlessness, meaninglessness, normlessness, and social estrangement (i.e., social isolation). Williamson and Cullingford (1998) corroborated the multidimensionality of Mau's scale with a sample of 254 adolescents from England, using orthogonal exploratory factor analysis. While both studies confirmed the multidimensionality of this alienation scale, they used orthogonal analysis, which unfortunately does not allow for an elucidation of the relationships between the dimensions. This is an important limitation, since clarifying these relationships is crucial for understanding the structure of the global construct, namely alienation.

Roberts (1987) addresses this methodological issue. In his investigation of the multidimensionality and structure of alienation, data from a multicultural sample of 3,101 male workers from the United States, Poland, and Japan were analyzed using second-order confirmatory factor analysis. The results clearly improve our knowledge regarding the structure of adult alienation. While confirming multidimensionality, Roberts (1987) also argues that self-estrangement and powerlessness

are most closely related to alienation. Further, his statistical model suggests that manifestations of alienation are similar to the original Marxian conceptualization.

The present study investigated the theoretical structure of adolescent alienation by applying the same structural equation methodology (second-order confirmatory factor analysis) used by Roberts (1987). The manifestations of alienation were examined in a sample of boys and girls to determine whether the constructs measured are invariant across gender. This is considered an important step before engaging in further exploration of the risk factors and consequences of alienation.

METHOD

Sample

The sample comprised 275 French-speaking adolescents (aged 14 to 18 years; mean = 16.22) from Montreal, Canada. There were 154 male and 121 female participants, mainly of Canadian origin (89.5%). Parents' education was distributed as follows: father—elementary school (9.4%), high school (32.2%), college and university (51.9%); mother—elementary school (10.6%), high school (40.9%), college and university (49.5%). Furthermore, 24.5% of participants' parents were either separated or divorced. The questionnaires were distributed and completed during class, and a 100% response rate was attained.

Measures

The questionnaire used in this study was a modified and a shorter version of Mau's (1992) 24-item alienation scale. We first added 3 items related to self-estrangement, as suggested by Williamson and Cullingford (1998). These 3 added items were taken from Roberts (1987). We then reduced the questionnaire to a 15-item version (3 items per construct) to rebalance Mau's original version, which contained 10 items to measure social isolation and only 3 for powerlessness. We ensured that rebalancing the scale did not compromise its integrity and that the selected items best defined the five theoretical dimensions we wanted to measure. A Likert-type format was used, with responses ranging from 1 (totally disagree) to 6 (totally agree). The English version of the scale was back-translated by two graduate students until identical French and English versions were obtained.

Analysis

The present study used second-order confirmatory factor analysis (Jöreskog, 1969; Rindskopf & Rose, 1988) to examine responses to the

15 items. This approach was preferred over exploratory factor analysis because it has the flexibility to test different theoretical models conceptualized a priori. In confirmatory factor analysis, items are considered manifestations of unobserved constructs. The structural relations between the constructs under investigation and the items are hypothesized a priori by the researcher and then statistically tested. Shared variance between the items is captured by the latent construct, leaving specific item variation and random variation as measurement error. Two other valuable qualities of confirmatory factor analysis are its ability to model higher order factors to explain the relationships between the first-order constructs, and its ability to test the invariance of a structural model across groups (Byrne, 1989). In structural equation modeling, using Amos 4.0, a variance-covariance matrix of the raw data (with missing values) is analyzed using a full-information maximum likelihood estimation procedure. In the confirmatory factor analysis framework, alternative models can easily be tested, and the software provides goodness-of-fit indexes to assess the adequacy of the models in matching the data. Goodness-of-fit indexes used in the present study included the following: χ^2 likelihood ratio statistic, comparative fit index (CFI), and root mean square error of approximation (RMSEA). The χ^2 likelihood ratio statistic is often used to measure fit and for model comparisons. This *absolute fit* statistic evaluates the discrepancy between the implied covariance matrix and the sample covariance matrix. A *p*-value greater than .05 generally indicates a good fit of the model. One limitation of this statistic is its tendency to reject the true model too frequently when variables follow slightly nonnormal distributions, and the simultaneous use of other indexes is suggested. *Incremental fit* indexes such as the CFI (Bentler, 1990) generally perform better with small samples and are less susceptible to bias caused by nonnormality. The CFI adjusts for degrees of freedom and varies between 0 and 1. Based on our sample size and distribution of variables, values greater than .95 are indicative of a good fit (Willoughby & Curran, 1999). RMSEA (Browne & Cudeck, 1993) compares the model optimal parameter values with the population covariance matrix as if it was available. Values less than .05 indicate good fit, and values between .05 and .08 indicate reasonable fit.

RESULTS

We used a strategy developed by Byrne (1989) to analyze the data. We first tested a second-order factor model where the five dimensions suggested by Seeman were related to a general factor, alienation, in

643

separate groups of boys and girls. The five first-order factors (self-estrangement, powerlessness, social isolation, normlessness, and meaninglessness) were measured by the three selected indicators (a brief description of the items is included in Table 1). After having determined a baseline model for each gender, the next step was to test the factorial equivalence across gender. Using a multigroup structural equation framework, we tested more restrictive hypotheses, each nested within the one preceding: (a) invariance of first-order factor loadings, (b) invariance of second-order factor loadings, and (c) invariance of residual variances.

According to the goodness-of-fit indexes, the second-order factor baseline model fit the data well for both boys and girls (boys: CFI = .99, RMSEA = .06; girls: CFI = .98, RMSEA = .08). First- and second-order factor loadings, presented in Tables 1 and 2, were all significant at $p < .05$. Standardized first-order factor loadings were over .40, except for item 6 in the boys group, which had a loading of .26. Standardized second-order factor loadings varied between .23 and .94 for boys, and between .43 and .92 for girls. These strong variations in loadings suggest that there was not much shared variance between the dimensions, with the exception of self-estrangement and powerlessness, which had the highest loadings. Alienation as a general construct explained more than 75% of the variability of these two dimensions in both boys and girls, but explained only between 5% and 31% of the variability of the other first-order dimensions.

The satisfying fit of the baseline model in both groups enabled us to further test the factorial invariance of the structure of the alienation scale to see if alienation, as a general construct, affected the first-order dimensions in both boys and girls similarly. We first constrained the first-order factor loadings to be invariant across groups. We used the omnibus chi-square difference test ($\Delta\chi^2$) to assess the adequacy of this constraint between these two nested models. A significant difference would indicate that some parameters should be free to be estimated. As reported in Table 3, this constraint did not lead to a significant difference, $\Delta\chi^2(10) = 5.94$. This suggests that the five dimensions and their indicators were similar in both groups. Following this test, we constrained the second-order factor loadings to be invariant across groups, which also seemed to be a plausible constraint since the chi-square difference test was nonsignificant, $\Delta\chi^2(4) = 5.80$. A stronger test of invariance, involving constraint of the residual variances, also led to a nonsignificant difference, $\Delta\chi^2(3) = 2.51$.

The invariance of this measurement model in the two groups could lead us to conclude that alienation is related to the five dimensions in a similar way for each gender, but mainly for self-estrangement and

644

Table 1

First-Order Factor Loadings for Boys and Girls

Item	Boys	Girls
<i>Factor 1 (Self-estrangement)</i>		
1. Feel that there is not much purpose in life	.64	.81
2. Think I am not good at all	.67	.72
3. Feel bored with everything	.69	.78
<i>Factor 2 (Powerlessness)</i>		
4. Problems are too big for me	.62	.73
5. Life will work out the way I want it to	.45	.66
6. The world is changing so fast	.26	.60
<i>Factor 3 (Social Isolation)</i>		
7. Unhappy, I can turn to people for support	.45	.55
8. No one to reach out to	.96	.79
9. No one to confide in	.76	.81
<i>Factor 4 (Normlessness)</i>		
10. Alright to cheat to keep from failing	.55	.73
11. Alright to break the law	.82	.82
12. Like the rules of the school	.46	.50
<i>Factor 5 (Meaninglessness)</i>		
13. School prepares me for the future	.64	.70
14. School is teaching me what I want to learn	.43	.47
15. School will help me get a job	.70	.62

645

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Table 2

Second-Order Factor Loadings for Boys and Girls

Factor	Boys	Girls
1. Self-estrangement	.94 (.88)	.88 (.77)
2. Powerlessness	.93 (.86)	.92 (.86)
3. Social Isolation	.55 (.31)	.49 (.24)
4. Normlessness	.23 (.05)	.50 (.25)
5. Meaninglessness	.55 (.30)	.43 (.18)

Note. Standardized factor loadings (*R*-square statistic in parentheses).

powerlessness. On the other hand, various factors or causes other than alienation could explain a dimension such as normlessness. Since the correlations between the latent constructs of normlessness and meaninglessness were substantial ($r = .43$ for boys and $r = .38$ for girls), we could expect that with a larger sample, the amount of shared variance would probably have led to a poorer fit of the overall model. Unfortunately, in the present study, the groups were relatively small. With a larger sample, however, the size of these correlations could have necessitated the addition of a second higher-order factor to explain the amount of shared variance between these two dimensions.

DISCUSSION

The primary goal of this study was to clarify the construct of alienation using a sample of adolescent boys and girls. Alienation has been defined in past studies as a general construct that manifests itself through five dimensions (Seeman, 1959, 1983; Mau, 1992; Williamson & Cullingford, 1998). While results of the confirmatory factor analysis are consistent with prior research suggesting that a general factor with five dimensions fits the data well, they also show that the shared variance between these dimensions varies greatly. Therefore, using

646

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

only one general term to describe these different phenomena may hamper our understanding of the specific nature and development of alienation during childhood and adolescence.

The present results suggest that self-estrangement and powerlessness best define the concept of alienation in both boys and girls. These results are consistent with those of Roberts (1987), who investigated adults from three countries. This finding also relates to phenomenological observations of alienation noted by Horney (1950), who described the alienated person as having a passive ego, feeling unable to exert any control over the outside world. Alienation is experienced as a negative self-perception, as a loss of meaning in daily activities, and as a feeling of powerlessness. According to Horney, alienation could be related to psychopathological states similar to neurosis, including a delay in the growth and actualization of the individual. Further, Lacourse, Claes, and Villeneuve (2001) found these two dimensions to be associated with suicidal risk after controlling for the other three dimensions.

Normlessness and meaninglessness were moderately correlated but loosely related to alienation, which suggests that the role of these dimensions within our model may need to be reconsidered. As self-estrangement and powerlessness noticeably relate to alienation, perhaps anomie manifests itself through meaninglessness and normlessness (Seeman, 1991).

The concept of anomie has been historically associated with sociologists such as Durkheim (1897/1951) and Merton (1957). According to Durkheim, anomie is a state of society, one that is characterized by deterioration in preestablished moral norms and in the bonds among different social systems (e.g., family, school, and workplace). The present work is closer to Merton's theory applied at the individual-psychological level. By focusing on adolescence as a specific developmental period, we can more easily see the link between meaninglessness as a cognitive process and normlessness as a positive attitude toward deviance. During adolescence, the individual strives to fulfill important goals (e.g., succeeding in school, choosing a career, developing intimate relationships, defining oneself). To achieve these culturally defined goals, adolescents must rely on social institutions, such as school, as primary sources of support. In this context, meaninglessness could be viewed as an individual's perception of failure by the particular social institution to provide support, which could be a precursor to normlessness. For example, adolescents with learning difficulties or disruptive behavior problems may feel that resources within their school are inadequate to meet their needs, possibly leading them to use non-socially

Table 3
Summary Statistics and Goodness-of-Fit Indexes for Tests of Invariance Across Gender

Model	χ^2	df	p	CFI	RMSEA	$\Delta\chi^2$	Δdf
Baseline multigroup model (M1)	279.31	170	.00	.98	.05	—	—
All first-order loadings invariant (M2)	285.25	180	.00	.99	.05	5.94	10
All second-order loadings invariant + M2 (M3)	291.05	184	.00	.99	.05	5.80 ^a	4
All residual variances invariant + M3 (M4)	293.56	187	.00	.99	.05	2.51 ^b	3

^aThis represents $\Delta\chi^2$ between M3 and M2.

^bThis represents $\Delta\chi^2$ between M4 and M3.

sanctioned means to achieve their developmental goals. This rebellious attitude in the long term may also lead to alienation. While all social systems and institutions are significant, school plays an important role in preventing or exacerbating student alienation (Bronfenbrenner, 1986). As Bronfenbrenner has argued, school can function as a setting in which adolescents have the opportunity to learn how to become members of society by learning how to behave toward others and define their responsibilities toward their community.

This study was an important step in understanding the complex relationships between the dimensions of alienation in adolescents, but we must acknowledge some limitations. First, data were collected using a cross-sectional design, which clearly limits conclusions about causality. Longitudinal studies could provide a great deal of information regarding the development of alienation from childhood to adulthood. Second, since our findings are based on a convenience sample from a middle-class neighborhood of Montreal, this study should be replicated with different socioeconomic groups and also with different age groups throughout adolescence. Finally, future studies should conduct more in-depth evaluations of the influence of different school contexts (i.e., public vs. private school, cooperative vs. competitive learning) on these dimensions.

REFERENCES

- Abdallah, T. (1997). Reliability and validity of Palestinian Student Alienation Scale. *Adolescence*, 32, 367-371.
- Arnett, J. (1996). *From the mouths of the metalheads: Heavy metal music and adolescent alienation*. Boulder, CO: Westview Press.
- Benkler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin*, 107, 238-246.
- Bronfenbrenner, U. (1986). Alienation and the four worlds of childhood. *Phi Delta Kappan*, 430-436.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
- Byrne, B. M. (1989). Multigroup comparisons and the assumption of equivalent construct validity across groups: Methodological and substantive issues. *Multivariate Behavioral Research*, 24, 503-523.
- Calabrese, R. L. (1987). Adolescence: A growth period conducive to alienation. *Adolescence*, 22, 929-938.
- Calabrese, R. L., & Adams, J. (1990). Alienation: A cause of juvenile delinquency. *Adolescence*, 25, 435-440.
- Dean, D. G. (1961). Alienation: Its meaning and measurement. *American Sociological Review*, 25, 753-758.
- Durkheim, E. (1951). *Suicide: A study in sociology*. London: Routledge. (Original work published 1897.)

- Horney, K. (1950). *Neurosis and human growth*. New York: Norton.
- Israel, J. (1972). *Alienation from Marx to modern sociology*. Boston: Allyn and Bacon.
- Jessor, R., & Jessor, S. L. (1977). *Problem behavior and psychosocial development*. New York: Academic Press.
- Jöreskog, K. G. (1969). A general approach to confirmatory maximum likelihood factor analysis. *Psychometrika*, 34, 183-202.
- Lacourse, E., Claes, M., & Villeneuve, M. (2001). Heavy metal music and adolescent suicidal risk. *Journal of Youth and Adolescence*, 30, 321-332.
- Mackey, J., & Ahlgren, A. (1977). Dimensions of adolescent alienation. *Applied Psychological Measurement*, 1, 219-232.
- Mau, R. Y. (1992). The validity and devolution of a concept: Student alienation. *Adolescence*, 27, 731-741.
- Merton, R. K. (1967). *Social theory and social structure* (rev. ed.). New York: Free Press.
- Rindskopf, D., & Rose, T. (1988). Some theory and applications of confirmatory second-order factor analysis. *Multivariate Behavioral Research*, 23, 51-67.
- Roberts, B. R. (1987). A confirmatory factor analytic model of alienation. *Social Psychology Quarterly*, 50, 346-351.
- Seeman, M. (1959). On the meaning of alienation. *American Sociological Review*, 24, 783-791.
- Seeman, M. (1972). Alienation and engagement. In A. Campbell & P. E. Converse (Eds.), *The human meaning of social change* (pp. 467-527). New York: Russell Sage.
- Seeman, M. (1983). Alienation motifs in contemporary theorizing: The hidden continuity of the classic themes. *Social Psychology Quarterly*, 46(3), 171-184.
- Seeman, M. (1991). Alienation and anomie. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (Vol. 1, pp. 291-371). San Diego, CA: Academic Press.
- Wenz, F. V. (1979). Sociological correlates of alienation among adolescent suicide attempts. *Adolescence*, 14(53), 19-30.
- Williamson, I., & Cullingford, C. (1997). The uses and misuses of "alienation" in the social sciences and education. *British Journal of Educational Studies*, 45, 263-275.
- Williamson, I., & Cullingford, C. (1998). Adolescent alienation: Its correlates and consequences. *Educational Studies*, 24, 333-343.
- Willoughby, M. T., & Curran, P. J. (1999). *Alternative methods for assessing the fit of structural equation models in developmental research*. Paper presented at the meeting of the Society for Research on Child Development, Albuquerque, NM.
- Young, T. J. (1985). Adolescent suicide: The clinical manifestation of alienation. *High School Journal*, 69, 55-59.