Epistemological loneliness refers to the isolation adolescents may experience as the result of cognitive relativism, ushered in by the emergence of formal operational thought. To examine the relationship between cognitive relativity, epistemological loneliness, and depression in adolescence, 108 adolescents (29 seventh graders, 29 ninth graders, 21 high school juniors, and 29 college freshmen) completed a battery of tests. The battery included the Defining Issues Test, the UCLA Loneliness Scale, the Adolescent Depression Scale, and the Epistemological Relativity Scale. An analysis of the results showed a significant relationship between cognitive relativism and clinical loneliness and depression. Contrary to expectations, no relationship was found between relativism and advanced social cognitive development, as measured by moral reasoning. The findings support the notion that cognitive relativity has affective consequences. (BL)
Loneliness, Depression, and Epistemological Relativity in Early and Late Adolescence

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Abstract

The purpose of this pilot study was to examine the relationship between cognitive relativity, epistemological loneliness, and depression in adolescence. Subjects from grades 7, 9, 11 and college participated. To assess advanced social cognitive reasoning in adolescence an objective measure of moral judgment, the short form of the Defining Issues Test (DIT), was employed. The revised UCLA Loneliness Scale and the Adolescent Depression Scale (ADS) were also used to assess two dimensions of epistemological loneliness. A special scale, the Epistemological Relativity (ER) scale, was devised to assess cognitive relativity. Results indicated a significant relation between cognitive relativism and clinical loneliness and depression. Contrary to expectations, no relation was found between relativism and advanced social cognitive development. Limitations of this study regarding the inclusion of moral thought rather than formal operations as a dependent variable are discussed. Studies currently in progress addressing more fully the construct validity of epistemological loneliness are discussed.
Loneliness, Depression, and Epistemological Relativity
in Early and Late Adolescence

Introduction

Chandler (1975) has recently suggested that the sense of isolation and estrangement during adolescence can be best understood as a result of cognitive relativism ushered in by the emergence of formal operational thought. With the emergent ability to cognize multiple perspectives comes the realization that there is perhaps no standard or touchstone by which to evaluate the plurality of perspectives. According to Chandler (1975), the manifold of unique perspectives refuses "epistemological unification." As a result of this "vertigo of relativity," the adolescent may experience a sense of isolation, which Chandler calls "epistemological loneliness." Epistemological loneliness may be a particularly important construct for understanding adolescent cognition and behavior, since it may serve to blunt the enthusiasm with which adolescents' embrace conceptual accomplishment. It may discourage their attempts to consolidate intellectual gains, and it may further divert their subsequent developmental progress.

Chandler suggests a number of regressive solutions to the problem of epistemological loneliness, or the "solitude of one's own perspective." One solution may involve clique formation. In the absence of non-relativistic standards adolescents may negotiate a group-shared consensus which then serves as the pressure of other perspectives. A second solution may involve the
search for a less ambitious sense of commonality. The need for intimacy and privacy may represent a retreat from a search for group consensus and a retrenchment into a plurality of two. Stereotypy may represent a third solution. Individuals who are not part of the clique may be abstracted in stereotypic entities and dispensed with en masse. Adolescents may also appeal to prepackaged world views which advocate a particular or mutually exclusive act of religious or secular beliefs, perhaps leading to religious or scientific intolerance for the young adult. Finally, adolescents may retreat from the plurality of perspectives through their ability to engage in abstract thought. Through selective attention descriptive discrepancies are avoided, providing a sort of intellectual consensus.

Hence, the problem of epistemological loneliness has been theoretically linked (by Chandler) to a variety of adolescent behaviors, namely, clique formation, intimacy, stereotypy, intolerance, and intellectualization. The purpose of this pilot study is to begin the validation process of this potentially important construct. As a first step it was thought necessary to establish the empirical relation between cognitive relativity and the sense of isolation and loneliness. It is unclear from Chandler's writings whether epistemological loneliness is meant to implicate clinical loneliness, or whether epistemological loneliness represents a different type of loneliness altogether. Hence, the present study includes measures designed to assess
epistemological relativity, clinical loneliness, and depression. It was also thought necessary to demonstrate a relationship between cognitive relativity and advanced cognitive development in adolescents. While Chandler's theory implies a theoretical relation between formal operations and epistemological loneliness (relativity), we substituted a measure of social cognitive development, the Defining Issues Test, rather than a measure of cognitive development (formal operations) since the problem of epistemological loneliness seems to be related to interpersonal understanding.

**Method**

**Subjects and Procedure**

A total of 108 subjects participated in this pilot study. There were 29 seventh-graders, 29 ninth-graders, 21 high school juniors, and 29 college freshmen. The administration of the dependent measures took place in group settings. The order of instrument presentation was randomly determined to control for order effects. All of the instruments were administered and scored according to standard instruction.

**Instruments**

To assess advanced social cognitive reasoning an objective measure of moral judgment, the short form of the Defining Issues Test (DIT, Rest, 1979) was employed. The short form DIT consists of three moral dilemmas. After reading each dilemma, subjects are asked to respond to 12 issue statements by indicating on a
5-point scale the importance of each issue in resolving the dilemma. These issues represent prototypic action choices thought to characterize the various stages of moral reasoning. After rating each issue subjects are then asked to rank order the four most important issues out of the original 12. These latter four choices are then assigned a weighted score that is determined by the statement's ordinal rank. The most often used index yielded by the assessment, the $p$-score, is determined by summing the weighted score of those statements reflecting principled stage reasoning, across the three dilemmas. There are external checks against random responding and attempts to fake high moral responding. The excellent psychometric properties of the DIT have been demonstrated in many studies, which are reviewed in Rest (1979, 1984).

The revised UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978) and the Adolescent Depression Scale (Reynolds, 1982) were employed to assess two dimensions of epistemological loneliness. The UCLA scale is a completely balanced Likert-test which asks subjects to indicate the frequency of which they have felt isolated, lonely, or withdrawn. The scale provides a four-step continuum ranging from "often" to "never." The Adolescent Depression Scale (ADS) is also a balanced Likert scale. Subjects are required to indicate how often a selected affective tendency characterizes themselves, ranging from "most of the time"
to "almost never." An example of some representative items includes "I feel happy," "I feel good," "I feel like crying," and "I feel loved."

To assess cognitive relativity, a special scale was constructed. This Epistemological Relativity (ER) scale consists of 25 items arranged in a five-step Likert format. The items were chosen from a larger pool of items based on high inter-rater consensus that the items reflect a belief in relativism. Examples of some representative items include the following:

When you think about it, everyone's opinion is just as good as everyone else's.
There is no such thing as the truth.
Some opinions are not as good as others, and there is usually a way to tell.

The ER scale is completely balanced. High scores on the scale represents a strong belief in relativism. Three scale items are repeated to assess consistency.

**Results**

The analyses of interest in this study included assessments of scale reliability, trend analyses on the dependent variables to assess their developmental characteristics, ANOVA to establish group differences, and correlational analysis to assess the relationship between relativity, moral judgment and the two dimensions of loneliness.

The results indicated a significant monotonic trend for
moral judgment, attending to its developmental character. A series of one factor (Grade) ANOVAs were conducted for each of the dependent variables. These analyses revealed a significant grade effect for moral reasoning ($p < .05$) and for loneliness ($p < .05$), and a marginally significant effect for relativism. Post-hoc contrasts using the Scheffe procedure showed that, for moral reasoning, college students differed significantly from subjects in grades 7, 9, and 11, and that eleventh-graders differed significantly from ninth-graders. Eleventh-graders scored significantly higher on the loneliness scale than did college undergraduates. No grade differences emerged on the depression variable. Table 1 reports the dependent variable means by grade.

Table 2 reports the correlation matrix for the dependent measures. Cronbach's coefficient Alpha is reported along the main diagonal. The instruments seem to have demonstrated adequate reliabilities, with the possible exception of the ER scale ($\alpha = .53$). The relationships of particular interest in this table is the significant correlation of cognitive relativity with both loneliness ($r = .23$) and depression ($r = .19$), both $p < .05$. It should be noted that these observed correlations may be attenuated because of the relatively modest reliability of the ER scale. The DIT did not correlate significantly with any dependent measure.

Discussion

The purpose of this pilot study was to provide some preliminary
evidence regarding the construct "epistemological loneliness," first identified by Chandler. The results of this study indicated that the sense of relativity which is presumed to emerge in early adolescence is positively and significantly related to clinical loneliness and depression. This supports Chandler's (1975) notion that cognitive relativity has affective consequences. This study is not able to offer any conclusions regarding the developmental character of epistemological relativity, as there were no developmental or group differences evident. Quite possibly, cognitive relativism remains stable at least across the age ranges sampled in this study. Epistemological relativity was not significantly correlated with moral reasoning. In retrospect, the choice of moral judgment as a dependent variable was probably inappropriate. Our intention in using the DIT was to show that the emergence of cognitive relativity was associated with advanced levels of social cognitive development. In theory, epistemological loneliness is the result of the adolescent's ability to cognize multiple points of view, which is also the mechanism thought to motivate advanced levels of moral thought. However, it is doubtful that principled moral reasoners are thoroughgoing relativists. A more satisfactory test of the cognitive dimensions of epistemological loneliness would have been to include assessments of formal thought.

A number of additional studies are currently in progress which speak more forthrightly to the construct validity of
epistemological loneliness. One study is comparing the revised ER scale to formal operations and loneliness, and to subscales of the California Personality Inventory which reflect tolerance, flexibility and conformance. A second study is attempting to replicate the ER-formal operations-loneliness relationship, while also examining the relationship between relativism and estheticism, thinking introversion and personal integration, as measured by the Omnibus Personality Inventory. The subscales from the two personality inventories reflect each of the regressive solutions to epistemological loneliness as hypothesized by Chandler (1975).

It is hoped that these studies will provide a more clear assessment of the construct validity of epistemological loneliness.
References

Chandler, M. Relativism and the Problem of Epistemological Loneliness. 


### Table 1

**Dependent Variable Means by Grade**

<table>
<thead>
<tr>
<th>Grade</th>
<th>College</th>
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<tbody>
<tr>
<td></td>
<td>7</td>
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<tr>
<td>Moral Judgment</td>
<td>21.26</td>
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<tr>
<td>Depression</td>
<td>60.27</td>
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<tr>
<td>Relativity</td>
<td>73.27</td>
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<tr>
<td>Loneliness</td>
<td>35.37</td>
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</tbody>
</table>

### Table 2

**Pearson Correlation Matrix**

<table>
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<th>Moral Judgment</th>
<th>Loneliness</th>
<th>Relativity</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral Judgment</td>
<td>.63</td>
<td>-.14</td>
<td>.15</td>
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<tr>
<td>Loneliness</td>
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<td>.24*</td>
<td>.31*</td>
</tr>
<tr>
<td>Relativity</td>
<td></td>
<td>.53</td>
<td>.17*</td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

1. Coefficient alpha is reported along the main diagonal.