

## Younger and Older Adolescents' Thinking about Commitments

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One hundred and sixty-three adolescents listed factors they consider or would consider when choosing a career and a romantic partner, and defined "commitment" in an open-ended essay. Male and female ninth graders, twelfth graders, and college juniors, from public and private schools served as subjects. Gender, grade, and type of school differences were found in the types and number of different types of factors listed for the above commitments, but not in the number of factors listed. Conceptions of the nature of commitment became more complex with grade, and differed as a function of gender and of type of school. Females listed more "internal" factors than did males for romantic commitments. Males described commitment more contractually, women more affectively. Older students focused more upon long-term and internal concerns, and defined "commitment" more in terms of cognitive processing and emotional attachment than younger students. Implications for related areas of work are discussed. © 1990 Academic Press, Inc.

Adolescent developmental tasks include making or preparing to make important commitments, such as choosing a career, a romantic partner, a personal philosophy, or a political ideology (Erikson, 1968; Havighurst, 1972; Marcia, 1966). The transition from childhood to adolescence includes a dramatic change in the degree to which adolescents view themselves as capable of making autonomous choices such as commitments. Indeed, Marcia (1966, 1983) views commitment—a choice among alternatives—to be an essential factor in achieving identity. Only those adolescents who have made a choice (commitment) after experiencing a

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period of doubt and confusion (crisis) can be said to have achieved an identity. Research in this area has assessed the *degree* of commitment to occupations, ideologies, interpersonal relationships, political parties, and the like (Orlofsky, Marcia, & Lesser, 1973; Rowe & Marcia, 1980; Schiedel & Marcia, 1985). However, very little work focuses upon the thinking that goes into making commitments.

Other research, usually using older adolescents (college students) has examined another aspect of thinking about commitment—the development of a personal philosophy of what constitutes a commitment. Issues explored within this paradigm include what role or degree of agency an individual feels vis-a-vis a particular commitment, and how one's view of commitment fits with one's more general epistemological outlook (Clinchy & Zimmerman, 1982; Kitchener & King, 1980; Perry, 1970, 1981).

In this study, we examine how younger (ninth grade), middle (twelfth grade), and older (college juniors) adolescents confront this task. Specifically, we focus upon the changes in the quality, quantity, and complexity of thinking about specific commitments relevant to these age groups, and about the nature of commitment in general.

It is generally held that the ability to make a mature commitment—an examined choice coming after a period of doubt and exploration—is a late developing phenomenon, usually starting to occur just at the end of the college years. Perry (1970, 1981) argues that mature commitments have as a prerequisite a self-constructed set of principles against which possibilities can be assessed, and thus, require attainment of a relativistic epistemology. Commitments come to be seen less as simple exclusions (e.g., "I'll be a banker instead of a lawyer"), and more as affirmations of self in various domains. The mature adolescent makes such choices knowing that no single alternative can realistically be judged to be the only "right" solution. Interestingly, Perry argues that standards and principles for personal life dilemmas are possible only after corresponding standards and principles for intellectual dilemmas—the problems of the classroom—have been constructed.

Recently, several researchers have suggested that men and women have different epistemological outlooks that affect nearly every aspect of their thinking, including moral reasoning and goals in acquiring and using knowledge (Belenky, Clinchy, Goldberger, & Tarule, 1986; Clinchy & Zimmerman, 1982; Gilligan, 1977, 1982; Gilligan & Belenky, 1980; Lyons, 1983). They claim that men seek objectivity and rigor, while women use more intuitive standards in their quest for a personal, subjective understanding. Although the possibility of gender differences in this type of reasoning is intriguing, several investigators have not found such differences on similar tasks (Ford & Lowery, 1986; Galotti & Kozberg, 1987; Walker, 1984; Walker, deVries, & Trevethan, 1987). There-

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fore, the question of whether male and female adolescents will think differently about commitments, either in content or in complexity, is an open one.

Perkins examined thinking about commitments from a cognitive and educational standpoint (1985a, 1985b, 1986; Perkins, Allen, & Hafner, 1983). He began by studying everyday (i.e., nonlaboratory, nonacademic) reasoning, e.g., reasoning about a social or political issue, characterizing this kind of reasoning as involving an underexploration of issues. By this he means that people construct initial and plausible scenarios, but fail to search for alternatives to that initial model, or to critically evaluate their own assumptions. The impact of education (from high school through graduate school) on everyday reasoning performance, although statistically significant, was shown to be surprisingly small (Perkins, 1985a). Reasoning about personal commitments (e.g., what graduate schools to attend, whether to have a child) was later shown to be only slightly better than, and moderately correlated with, reasoning about the other social or political issues (Perkins, 1986).

Galotti and Kozberg (1987) focused directly on older adolescents' reasoning about various academic/vocational and interpersonal commitments. They surveyed 68 students at a private liberal arts college, asking them to list the factors they consider or would consider in making the following commitments: choosing courses, choosing a major, choosing a career, choosing a friend, choosing a romantic partner, and choosing a lifelong partner. Subjects listed more factors, and more types of factors for interpersonal commitments than for academic/vocational commitments. There were few gender or class year differences, and also few differences as a function of whether those commitments had previously been made. Subjects also responded to an open-ended essay question asking them to define "commitment." Various themes (e.g., commitment as a promise, commitment as an ordering of priorities, commitment as an expression of self) were discovered in these essays. However, contrary to expectations, few gender or class year differences in the usage of different themes emerged. Finally, conceptions of commitment, as described in essays, only slightly predicted differences in thinking about specific commitments.

The present study extends the work of Galotti and Kozberg, by using a larger and more heterogeneous sample. The need for a larger and more diverse sample has been indicated in research on moral reasoning, where studies that used samples of college students have been less likely to find gender differences than studies that used samples that included broader ranges of ages and educational experience (Galotti, *in press*). Because Galotti and Kozberg (1987) found few interitem differences in performance, in the present study subjects were asked about two, rather than six, specific commitments. The two employed, "choosing a career,"

and "choosing a romantic partner," were chosen as the most relevant for all age groups. Subjects were also asked to define "commitment" in an open-ended essay.

The present study had three specific goals. The first was to examine demographic (i.e., gender and grade) differences, either qualitative or quantitative, in thinking about specific commitments. As part of this goal we sought to document a developmental pattern of thinking about making commitments. Second, we investigated quantitative and qualitative differences in general conceptions of commitment, again as a function of demographic variables. Here, we attempted to describe differences in philosophies or understandings of what constitutes a commitment. Finally, we examined relationships between thinking about the nature of commitment generally, and thinking about specific commitments.

## METHOD

### *Subjects*

The sample consisted of 163 students: 101 from public schools and 62 from private schools. From the public schools, there were 23 male and 14 female ninth-graders, 24 male and 17 female twelfth-graders, and 10 male and 13 female students in their junior year at a public university. The 62 private school students consisted of 11 male and 11 female ninth-graders, 10 male and 10 female twelfth-graders, and 10 male and 10 female students in their junior year at a private college. None of the private schools had religious affiliations. High-school students (both ninth- and twelfth-graders) came from schools that are predominately white, in suburban Minneapolis, and draw from an upper middle-class population. The private high school enrolls about half the number of students enrolled by the public high school (approximately 2000 vs. 1000). The private college and the public university, both in the Minneapolis area, both enroll a predominately white, upper middle-class student body. The total enrollments are approximately 1700 for the private college, and approximately 28,000 for the public university. Subjects were not compensated for their participation.

### *Materials*

Subjects received a three-page questionnaire.<sup>1</sup> They were asked to list all the factors they consider in choosing a career and in choosing a romantic partner, respectively. On the final page, subjects were asked to define "commitment," considering issues such as what it takes to make a commitment and whether commitments can ever be broken.

<sup>1</sup> The questionnaire is available upon request to the first author.

### Procedure

Investigators distributed the questionnaire during regular class time (in Language Arts [high school] or education, psychology, and foreign language [college] classes), explaining that participation in the study was voluntary. Students were asked to sign a consent form and then to complete the questionnaire if they wished. Fewer than two students in each class declined to participate. On average, subjects took 30 min to complete the questionnaire.

## RESULTS

### *Descriptive Results for the Two Specific Commitments*

The factors that subjects listed for the specific commitments of choosing a career and choosing a romantic partner were categorized according to a revision of two taxonomies previously developed (Galotti & Kozberg, 1987). Table 1 presents these revised taxonomies. The first two authors and three undergraduate assistants who had not participated in the creation of the taxonomies classified all responses. Average interrater reliabilities (calculated by coefficient  $\alpha$ ) ranged from .88 to .97 (median .94) for categories in the "choosing career" taxonomy, and from .95 to .98 (median .93) for categories in the "choosing a romantic partner" taxonomy.

Following previous analyses (Galotti & Kozberg, 1987), we calculated the proportionate use of each category within each taxonomy. For example, if under the item "choosing a career," a subject listed eight factors, two of which had to do with income or other forms of compensation, that subject's proportionate use of that category would be .25. This measure was calculated in order to investigate individual differences in the type of factors typically considered for each commitment. A logarithmic transformation of this measure ( $\ln[x + .5]$ ) was used in all analyses, as distributions of proportions are sometimes skewed. These transformed measures were subjected to  $2(\text{gender}) \times 3(\text{grade}) \times 2(\text{type of school}) \times N(\text{number of categories for a particular commitment})^2$  mixed factorial analysis of variance (ANOVA), with repeated measures on the last factor. The means for the ANOVAs are presented in Table 1.

Table 1 shows the proportion of use of each of the categories, overall, and by gender, grade, and type of school. The ANOVA performed on responses to the "choosing a career" item revealed main effects of category ( $F[6, 906] = 65.42, p < .001$ ), and interactions of category with grade ( $F[12, 906] = 2.99, p < .001$ ), and type of school ( $F[6, 906] = 2.26, p < .05$ ). Specific comparisons (Tukey tests, with  $p < .05$ ) showed

<sup>2</sup> Responses scored into other categories that were used by less than 5% of the total sample were not used in these analyses.

TABLE 1  
PROPORTIONATE USAGE OF FLEXIBILITY CATEGORIES FOR SPECIFIC COMMITMENTS BY GENDER, GRADE, AND TYPE OF SCHOOL<sup>a</sup>

Overall	By gender		By grade			By school type	
	Male 88	Female 75	9th gr. 60	12th gr. 61	Coll. jr. 42	Public 101	Private 62
<b>Categories for "Choosing a Career"</b>							
N	163						
Working/job conditions (.94)	.32	.29	.38	.30	.26	.34	.29
General appeal (.97)	.16	.18	.14	.17	.17	.14	.20
Income/compensation (.96)	.19	.18	.19	.19	.20	.19	.19
Prospects for personal impact/general importance (.88)	.05	.06	.06	.05	.05	.05	.06
Long-term outlook, security, prospects for advancement (.97)	.09	.08	.03	.11	.13	.09	.08
Meshes with talent, education, ability, personality, lifestyle (.93)	.11	.14	.13	.11	.10	.13	.09
Co-workers (.94)	.04	.04	.04	.04	.04	.03	.05
<b>Categories for "Choosing a Romantic Partner"</b>							
Personality/personal characteristics (.98)	.32	.37	.36	.31	.27	.33	.30
Mutual feelings/compatibility (.97)	.13	.19	.07	.14	.21	.12	.16
Looks/physical characteristics (.98)	.20	.15	.27	.18	.12	.22	.16
Interests/activities (.95)	.05	.05	.03	.06	.08	.05	.06
Demographic variables (.98)	.10	.08	.11	.10	.08	.11	.09
Abilities and talents (.96)	.08	.08	.08	.07	.08	.06	.09

<sup>a</sup> Numbers in boldface represent interrater reliabilities over five raters for that category, computed with coefficient  $\alpha$ .

statistically significant grade differences in the categories "Working/job conditions," and "Long-term outlook/security/prospects for advancement." No other effects or interactions were reliable.

Table 1 also presents results for the proportionate usage of the categories for the item, "choosing a romantic partner." The ANOVA on these responses revealed a main effect of category, ( $F[5, 750] = 59.41, p < .001$ ), and interactions of category with gender ( $F[5, 750] = 8.04, p < .001$ ), and grade ( $F[10, 750] = 5.14, p < .001$ ). Specific comparisons revealed gender and grade differences in the use of the categories "Mutual feelings/compatibility," and "Looks/physical characteristics," and gender differences only in use of the category, "Personality/personal characteristics." There were also main effects of gender ( $F[1, 150] = 9.84, p < .01$ ), and grade ( $F[2, 150] = 9.69, p < .01$ ). Specific comparisons showed that the responses of women were more often able to be scored, as were the responses of younger students.

#### *Structure of Responses for the Two Specific Commitments*

To investigate similarities and differences in performance independent of content, we used two measures: fluency and flexibility. *Fluency* is the number of responses given to an item, and *flexibility* is the number of different *types* of responses, operationalized here as the number of different coding categories used, as defined above. Note that these measures are distinct: Several responses coded in the same category would count only once for flexibility, but several times for fluency. Galotti and Kozberg (1987) argued that careful, reflective thinking about a commitment would be indexed by high levels of fluency and flexibility. A 2(gender)  $\times$  3(grade)  $\times$  2(type of school)  $\times$  2(type of item—career or romantic partner) ANOVA, with repeated measures on the last factor, was performed on both the fluency and the flexibility measure.

No reliable effects were found for the fluency measure. For the flexibility measure, statistically significant effects were found for type of school, with private school students using significantly more categories than public school students ( $M = 4.04$  vs.  $3.50$ , respectively,  $F[1, 151] = 10.71, p < .001$ ). A significant interaction between gender and school type was also found ( $F[1, 151] = 7.25, p < .01$ ). Specific comparisons showed that although females in public and private schools used about the same number of categories ( $M = 3.75$  and  $3.82$ , respectively), males in public schools used significantly fewer categories ( $M = 3.31$ ) than did males in private schools ( $M = 4.24$ ). The "career commitments" item elicited responses in significantly more categories than did the "romantic commitments" item ( $M = 3.94$  vs.  $3.47$ ;  $F[1, 151] = 17.56, p < .001$ ). No gender differences, or other higher-order interactions, were statistically significant.

*Qualitative Aspects of Conceptions of the Nature of Commitment*

The essays subjects wrote defining the term "commitment" were scored for the presence of various themes, adapted from Galotti and Kozberg (1987). These themes are shown in Table 2, and the descriptions used for scoring these themes are presented in Appendix 1. A single essay could incorporate none, one, or any number of the themes listed. The three authors and two undergraduate research assistants coded all essays, blind to the subjects' age, gender, school, or responses to any other items. Interrater reliabilities ranged from .68 to .91, with a median of .84.

Table 2 presents the proportion of subjects who used each theme, broken down by gender, grade, and type of school. Three gender differences emerged: Males were more likely to use the theme "Contract" (correlations computed between gender, male = 0 and female = 1, and presence of the theme;  $r[162] = -.17, p < .05$ ), and less likely to use the themes "Being Virtuous" ( $r[162] = .13, p < .05$ ), or "Emotional Attachment" ( $r[162] = .16, p < .05$ ). Several grade differences emerged as well, with linear relationships between grade (coded as 9th grade = 1, 12th grade = 2, and junior year in college = 3) and the presence of the following themes: "Cognitive Processes" ( $r[162] = .18, p < .01$ ), "Emotional Attachment," ( $r[62] = .23, p < .001$ ), and "Devotion of Self" ( $r[162] = .23, p < .001$ ). Finally, significant correlations were found between type of school (coded as public school, 0, and private school, 1) and presence of the following themes: "Cognitive Processes" ( $r[162] = .19, p < .01$ ), "Ordering of Priorities" ( $r[162] = .21, p < .01$ ), and "Devotion of Self" ( $r[162] = .15, p < .05$ ).

Essays written by females incorporated significantly more themes than did essays written by males ( $M = 1.72$  vs  $1.35, F[1, 151] = 5.85, p < .05$ ). Ninth-grade, twelfth-grade, and college juniors' essays showed a mean number of 1.17, 1.59, and 1.91 themes, respectively ( $F[2, 151] = 9.12, p < .01$ ), and specific comparisons showed that the mean for college students was significantly higher than the other two, which did not differ. An interaction between gender and type of school revealed that gender differences in the number of themes evident in an essay held only for public school students: The mean number of essays present was 1.16 for male public school students, 1.71 for male private school students, 1.80 for female public school students, and 1.61 for female private school students ( $F[2, 151] = 5.55, p < .05$ ). No other interactions were statistically significant.

Coders found that boundaries among different categories were not always sharply drawn. Therefore, in another analysis, these 11 themes were classified into four higher-order categories, described as "Responsibility" (including the categories of "Contract," "Promise," "Obliga-



TABLE 2  
PROPORTION OF ESSAYS SHOWING THEMES, BY GENDER, GRADE, AND TYPE OF SCHOOL<sup>a,b</sup>

Theme	Overall	By gender		By grade			By school type	
		Male 88	Female 75	9th gr. 60	12th gr. 61	Coll. jr. 42	Public 101	Private 62
Contract (.91)	.06	.09	.01	.05	.07	.05	.05	.07
Promise (.87)	.13	.11	.15	.15	.10	.14	.10	.18
Obligation (.76)	.10	.07	.13	.10	.07	.14	.07	.15
Cognitive processes (.86)	.08	.08	.08	.03	.07	.16	.04	.15
Ordering of priorities (.68)	.04	.02	.07	.00	.02	.00	.01	.10
Personal growth (.73)	.02	.01	.03	.16	.00	.05	.01	.03
Being virtuous (.84)	.09	.06	.13	.07	.16	.02	.02	.05
Perseverance (.88)	.14	.16	.12	.12	.21	.07	.14	.15
State of being (.82)	.16	.13	.20	.10	.18	.21	.19	.11
Emotional attachment (.80)	.28	.22	.36	.19	.25	.47	.31	.24
Devotion of self (.85)	.49	.44	.53	.36	.49	.65	.43	.58

<sup>a</sup> Numbers in boldface represent interrater reliabilities over five raters for that category, computed with coefficient  $\alpha$ .

<sup>b</sup> Essays could be scored for more than one theme.

tion”), “Decision-Making” (including the categories of “Cognitive Processes,” and “Ordering of Priorities”), “Growth and Devotion” (including the categories of “Personal Growth,” “Being Virtuous,” “Perseverance,” and “Devotion of Self”), and “Emotional Expression” (including the categories of “State of Being” and “Emotional Attachment”). Table 3 shows the proportion of subjects who used each theme, again broken down by gender, grade, and type of school. Gender differences emerged for the metacategory “Emotional Expression” [ $r(162) = .14, p < .01$ ]. Linear relationships with grade were found for “Decision-Making” [ $r(162) = .21, p < .01$ ], “Growth and Devotion” [ $r(162) = .18, p < .05$ ], and “Emotional Expression” [ $r(162) = .21, p < .01$ ]. Type of school differences were found for “Responsibility” [ $r(162) = .16, p < .05$ ], “Decision-Making” [ $r(162) = .28, p < .001$ ], and “Growth and Devotion” [ $r(162) = .14, p < .05$ ].

Loglinear analyses (see Green, 1988) on the use of various metathemes by the various demographic variables revealed one higher-order interaction ( $p < .01$ ) between grade and gender in use of the metatheme “Growth and Devotion.” The mean proportion of subjects showing this metatheme in their essays was .54, .53, and .74 for ninth grade, twelfth grade, and college junior men, respectively, and .42, .89, and .70 for ninth grade, twelfth grade, and college junior women. This suggests that gender differences in use occur selectively for twelfth-grade students.

#### *Relationships between Conceptions of Commitment and Aspects of Thinking about Specific Commitments*

A final analysis was conducted to investigate whether one’s overall philosophy of what constitutes commitment affects one’s thinking about the specific instances of choosing a career or choosing a romantic partner. The use of specific coding categories for the two specific commitments was correlated with the presence/absence of the various themes defined above in their essays, although the correlations were few and for the most part, fairly low. Table 4 presents the statistically reliable correlations. Correlations among presence/absence of themes and overall measures of flexibility and fluency were for the most part not significant. The exceptions were the following relationships: between use of the theme “Ordering of Priorities” and flexibility on the career item [ $r(163) = .13, p < .05$ ], between use of the theme “Emotional Attachment” and flexibility on the romantic partner item [ $r(163) = .24, p < .01$ ], and between use of the theme “Devotion of Self” and flexibility on the romantic partner item [ $r(163) = .26, p < .001$ ].

### DISCUSSION

Individual differences as a function of gender, grade, and type of school were found for both the responses about specific commitments and the

TABLE 3  
PROPORTION OF ESSAYS SHOWING METATHemes, BY GENDER, GRADE, AND TYPE OF SCHOOL<sup>a</sup>

Overall	By gender		By grade		By school type	
	Male 88	Female 75	9th gr. 60	12th gr. 61	Public 101	Private 62
N's	163					
Metatheme						
Responsibility (.25)	.25	.25	.25	.23	.20	.34
Decision-making (.12)	.10	.15	.03	.15	.05	.24
Growth and devotion (.63)	.06	.05	.49	.71	.57	.71
Emotional expression (.39)	.33	.47	.27	.41	.44	.32

<sup>a</sup> Essays could be scored for more than one metatheme.

TABLE 4  
CORRELATIONS OF PRESENCE OF ESSAY THEMES WITH USE OF CAREER AND ROMANTIC  
PARTNER CODING CATEGORIES

Theme	with Career categories	Romantic partner categories
Contract		
Promise		
Obligation		
Cognitive processes		
Ordering of priorities		
Personal growth		.19** (mutual feelings/compatibility)
Being virtuous		
Perseverance		
State of being	.20** (long-term outlook, security, prospects for advancement)	
Emotional attachment		
Devotion of self		

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

more general definitions of the term itself. We begin this section with a consideration of gender and grade differences. We then examine how one's philosophy of commitment (reflected in the essays) affects performance when thinking about specific commitments.

In general, females tended to consider more "internal" factors in their thinking about romantic commitments. Females were more likely than males to list "personality" and/or "mutual feelings/compatibility" factors and less likely to consider "looks/physical characteristics" factors in thinking about choosing a romantic partner. Males were more likely to define "commitment" in terms of a contract, and less likely to see it in terms of emotional attachment than were women. Thus, women tend to use more "affective language" in describing the nature of commitment. This finding is consistent with those reported by Belenky et al. (1986), Clinchy and Zimmerman (1982), Gilligan (1977, 1982), Gilligan and Belenky (1980), Lyons (1983), and Schiedel and Marcia (1985).

It must be noted here that although gender differences in what is thought *about* are indeed evident in the present study, there is little evidence to suggest that female and male subjects differed in the amount or complexity of thinking about commitments. The lack of gender differences in fluency and flexibility for specific commitments speaks instead to a similarity in the complexity of thinking, and presumably, the underlying processes used in thinking about specific commitments, with one exception: Female subjects' essays showed more themes than did those of male subjects, suggesting either more complexity in thinking

about the nature of commitment in general, or possibly, women's greater willingness to display the nuances of their thinking to the experimenters.

Gender differences sometimes occurred as a function of type of school: Male and female public school students often differed more than did their private school counterparts. This finding points to an explanation for the discrepancy between the current findings of gender differences and those of Galotti and Kozberg (1987), whose sample was comprised exclusively of private college students.

Grade differences were also in evidence. In thinking about choosing a career, younger students tended to list more factors having to do with immediate circumstances, than did older students. In thinking about choosing a romantic partner, factors related to mutual feelings increased with grade, while factors related to personality or looks decreased. These findings are consistent with those of Montemayor and Eisen (1977), who asked 10- to 18-year-olds to describe themselves in writing. In that study, older students provided more abstract, more internal, and more subjective descriptions than did younger ones. These findings also reflect what Elkind (1967) would call a decline in adolescent egocentrism, and an increase in what Selman (1980) calls interpersonal understanding.

Older students in the current study used more categories of responses for both specific commitments than did younger students, suggesting more reflective thinking among older students. However, the absolute magnitude of the effect is small, suggesting, perhaps, less of a grade difference than might be expected. This finding supports arguments made by Perkins (1985a, 1985b, 1986; Perkins et al., 1983) that everyday or informal reasoning, even when directed to matters of personal relevance, tends to exhibit a severe "underexploration" of issues.

Older students were more likely than younger students to define the nature of commitment in terms of cognitive activity, emotional attachment, and a devotion of self to someone or something. In addition, the complexity of thinking about the nature of commitment, as indexed by the number of themes present in essays, showed a clearly increasing trend with age, although again, the absolute differences are small.

There were few significant correlations between measures of thinking about specific commitments on the one hand, and the definitions of "commitment" on the other. This may imply that one's "philosophy" of commitment develops independently of one's thinking about specific commitments, a suggestion first offered by Galotti and Kozberg (1987). Interestingly, the "rate" of development of each kind of thinking, as indexed by differences among students in different grades, is approximately the same. However, students with a rich and sophisticated conception of commitment may not necessarily reflect differentially about specific commitments. Thus it remains unclear how one's specific experiences with particular commitments influences, or results from one's

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beliefs about the nature of commitment. Future work must investigate how these two areas of thinking originate, develop, and interrelate. For the present, it again seems that the study of personal philosophies and epistemologies (Belenky et al., 1986; Clinchy & Zimmerman, 1982; Kitchener & King, 1980; Perry, 1970, 1981) addresses separate issues from those involved in the study of thinking about specific instances.

Several issues are introduced by the present investigation. One important question is how performance on our tasks relates to actually making commitments. There is evidence in the moral reasoning literature that reasoning about actual moral dilemmas differs significantly from reasoning about hypothetical dilemmas, although the study of each, in its own right, has been informative (see Rest, 1983, for a review). The question here is whether parallel results would be found for reasoning about commitments. Would subjects actually facing a career choice consider the same factors as they report in our task? Do our tasks elicit more idealized thinking, given that they minimize time pressures and other performance limitations? Or do our tasks, being somewhat abstract and hypothetical, fail to engage the students' best level of performance?

Finally, it remains for future work to explore relationships between this and other kinds of thinking central to the adolescent period of development. How does thinking about commitment fit with the development of logical, moral, and interpersonal reasoning? How strong are the relationships among identity status, type of self-conception, epistemological outlook, and thinking about commitment? Are our tasks subsets of a broader kind of thinking, or do they represent a blend of other kinds of thinking? Further investigation of these questions will inform the understanding of adolescent development, as well as our understanding of thinking and reasoning about important life choices.

## APPENDIX 1

### Coding Descriptions for Essay Themes

- A. *Contract* [Following rules or living up to an explicit agreement, fulfilling legal responsibilities]
- B. *Promise/Word of Honor* [Doing what you say you will, keeping your word, living up to the expectations you have led others to have]
- C. *Obligation/Responsibility* [Discharging duties that one feels one has even in the absence of an explicit agreement, duties one is "supposed" to do]
- D. *Cognitive Processes* [Using cognitive processes and rational (unemotional) decision-making techniques to consider advantages and disadvantages of one or more possibilities]
- E. *Ordering Priorities* [Considering the balance among several commitments, deciding on relative importance, on one thing taking precedence over another]
- F. *Personal Growth* [Focusing on the development of self, acquiring knowledge about the self, maturing, gaining independence]
- G. *Expression of Self* [Communicating self-knowledge to others, communicating one's own values and priorities to others, either explicitly or implicitly]

- H. *Being Virtuous* [Having certain specific and desirable qualities, such as honesty, loyalty, trustworthiness, unselfishness, whether or not these qualities are communicated to others]
- I. *Perseverance* [Sticking with someone or something through thick and thin, not giving up, overcoming obstacles, making something work]
- J. *State of Being* [Having specific feelings (as opposed to characteristics), e.g., happiness, satisfaction, fulfillment, feeling comfortable]
- K. *Establishing an Emotional Attachment* [Setting up a bond, establishing mutual trust, caring for someone or something, sharing, developing knowledge of others]
- L. *Devoting Self/Contributing Effort* [Channeling energies toward a goal, giving part of one's self to someone or something, "being there" for the other person or thing]
- M. *Exclusion* [Choosing one *instead of* other options, shutting doors, turning away from possibilities, the opposite of "keeping one's options open"]

## REFERENCES

- Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women's ways of knowing*. New York: Basic Books.
- Clinchy, B., & Zimmerman, C. (1982). Epistemology and agency in the development of undergraduate women. In P. Perun (Ed.), *The undergraduate woman: Issues in educational equity* (pp. 161-182). Lexington, MA: Lexington Books.
- Clinchy, B., Lief, J., & Young, P. (1977). Epistemological and moral development in girls from a traditional and a progressive high school. *Journal of Educational Psychology*, *69*, 337-343.
- Elkind, D. (1967). Egocentrism in adolescence. *Child Development*, *38*, 1025-1034.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Ford, M. R., & Lowery, C. R. (1986). Gender differences in moral reasoning: A comparison of the justice and care orientations. *Journal of Personality and Social Psychology*, *50*, 777-783.
- Galotti, K. M. (1989). Gender differences in self-reported moral reasoning. *Journal of Youth and Adolescence*, *18*, 475-488.
- Galotti, K. M., & Kozberg, S. F. (1987). Older adolescent's thinking about academic/vocational and interpersonal commitments. *Journal of Youth and Adolescence*, *16*, 313-330.
- Gilligan, C. (1977). In a different voice. *Harvard Educational Review*, *47*, 481-517.
- Gilligan, C. (1982). *In a different voice*. Cambridge, MA: Harvard University Press.
- Gilligan, C., & Belenky, M. F. (1980). A naturalistic study of abortion decisions. In R. L. Selman & R. Yando (Eds.), *New directions for child development: Clinical developmental psychology* (No. 7, pp. 69-90). San Francisco, CA: Jossey-Bass.
- Green, J. A. (1988). Loglinear analysis of cross-classified ordinal data: Applications in developmental research. *Child Development*, *59*, 1-25.
- Havighurst, R. J. (1972). *Developmental tasks and education*. New York: McKay.
- Kitchener, K. S., & King, P. M. (1980). Reflective judgment: Concepts of justification and their relationship to age and education. *Journal of Applied Developmental Psychology*, *2*, 89-116.
- Lyons, N. P. (1983). Two perspectives: On self, relationships, and morality. *Harvard Educational Review*, *53*, 125-145.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, *3*, 551-558.
- Marcia, J. E. (1983). Some directions for the investigation of ego development in early adolescence. *Journal of Early Adolescence*, *3*, 215-223.
- Montemayor, R., & Eisen, M. (1977). The development of self-conceptions from childhood to adolescence. *Developmental Psychology*, *13*, 314-319.

- Orlofsky, J. L., Marcia, J. E., & Lesser, I. M. (1973). Ego identity status and the intimacy versus isolation crisis of young adulthood. *Journal of Personality and Social Psychology*, *27*, 211-219.
- Perkins, D. N. (1985a). Postprimary education has little impact on informal reasoning. *Journal of Educational Psychology*, *77*, 562-571.
- Perkins, D. N. (1985b). Reasoning as imagination. *Interchange*, *16*, 14-26.
- Perkins, D. N. (1986). *Reasoning as it is and could be: An empirical perspective*. Paper presented at the AEA Conference, San Francisco, CA.
- Perkins, D. N., Allen, R., & Hafner, J. (1983). Difficulties in everyday reasoning. In W. Maxwell (Ed.), *Thinking: The expanding frontier* (pp. 177-189). Philadelphia, PA: Franklin Institute.
- Perry, W. G., Jr. (1970). *Forms of intellectual and ethical development in the college years: A scheme*. New York: Holt, Rinehart and Winston.
- Perry, W. G., Jr. (1981). Cognitive and ethical growth: The making of meaning. In A. Chickering (Ed.), *The modern American college* (pp. 76-116). San Francisco, CA: Jossey-Bass.
- Rest, J. R. (1983). Morality. In J. Flavell & E. Markman (Eds.), *Handbook of child psychology: Vol. 3. Cognitive development* (4th ed., pp. 556-629). New York: Wiley.
- Rowe, I., & Marcia, J. E. (1980). Ego identity status, formal operations, and moral development. *Journal of Youth and Adolescence*, *9*, 87-99.
- Schiedel, D. G., & Marcia, J. E. (1985). Ego identity, intimacy, sex role orientation, and gender. *Developmental Psychology*, *21*, 149-160.
- Selman, R. L. (1980). *The growth of interpersonal understanding*. New York: Academic Press.
- Walker, L. J. (1984). Sex differences in the development of moral reasoning: A critical review. *Child Development*, *55*, 677-691.
- Walker, L. J. (1986a). Sex differences in the development of moral reasoning: A rejoinder to Baumrind. *Child Development*, *57*, 522-526.
- Walker, L. J. (1986b). Experiential and cognitive sources of moral development in adulthood. *Human Development*, *29*, 113-124.
- Walker, L. J., de Vries, B., & Trevethan, S. D. (1987). Moral stages and moral orientations in real-life and hypothetical dilemmas. *Child Development*, *58*, 842-858.

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