

1997

What Contributes to Adolescents' Achievement Motivation?
A Path Analysis of the Influence of Peers

Erika D. Taylor

University of Michigan

This research was supported by a grant from the Mac Arthur Foundation Research Network on Successful Adolescent Development Among Youth in High-Risk Settings awarded to Jacquelynne S. Eccles. We would like to thank the following people for their assistance: Jacquelynne S. Eccles (P.I.), Arnold Sameroff (P.I.), Elaine Belansky, Nick Butler, Diane Early, Kari Fraser, Ariel Kalil, Linda Kuhn, Sarah Lord, Karen McCarthy, Sherri Steele, Cindy Winston, Leslie Morrison, Carol Wong, Oksana Malanchuk, Alice Michael, Robert Roeser, Todd Bartko, Dairia Ray, Kate Rosenblum and Stephen Peck.

Introduction

- Researchers have consistently found a relation between peer influence and educational outcomes (e.g., Berndt, 1979; Berndt, Laychak & Park, 1990; Kindermann, 1993). However, the magnitude of this relation, and the mechanisms of peer influence are unclear.
- One of the main concerns about peer influences in the school context is that the peer group's overall attitude toward achievement may have an impact on the adolescent's achievement motivation .
- For African-Americans specifically, research pertaining to peer influences in the school context has commonly found evidence of an "oppositional orientation" (e.g., Fordham & Ogbu, 1986; Ogbu, 1978, 1991), which posits that African-American students view doing well in school as "acting White".
- Interestingly, while some research has found that African-Americans are pressured not to achieve, other research indicates that African-Americans have a high value of education and academic achievement (Graham, 1994; Senior & Anderson, 1993; Steinberg, Dornbush & Brown, 1992).
- Additionally, studies (e.g., Arroyo & Zigler, 1995; Purcell, Gable & Caillard, 1994) have found that oppositional attitudes toward academic achievement are not found exclusively within the African-American community. Adolescents are pressured not to do well in school, regardless of ethnic background.
- Some research has indicated that there may be gender differences in the degree to which, as well as the way in which, adolescents are influenced by their peers (Berndt, 1979; Brown, 1982; Steinberg & Silverberg, 1986), which may also have an impact in the school domain.

Rationale for Study

- There is little research pertaining specifically to African-Americans' perceptions of their peers, because most of the work that has been conducted within the peers domain has utilized samples that are predominantly, if not entirely European-American.
- Moreover, those studies that include African-Americans are traditionally of a comparative nature and tend to employ a "deficit approach" toward behaviors and values that deviate from the established norm.
- Since the overall experiences of African-American adolescents in the school domain may be different than other ethnic groups, as a result of racism and social status, it is important to investigate phenomena that may occur within groups as well.
- Previous research has indicated that African-American adolescents' perceptions of the negative behavior of their peers has more of a negative impact on the school utility value of males, compared to females.
- Therefore, I investigated the relations between peer influence and utility value of school, with a normative sample comprised of African-American and European-American adolescents.

Hypotheses

1. Both positive and negative peer values should have significant relations to school utility value.
2. There will be gender differences in peer influence on school utility value.
3. Peer orientation should have a significant impact on school utility value for both African-American and European-American students.

Methods

Participants

- The participants in this study are part of a larger ongoing, longitudinal investigation of adolescents' development (Maryland Adolescent Growth in Context Study); Principal Investigators: Jacquelynne Eccles & Arnold Sameroff.
- The 1067 adolescents and their families were recruited from 23 area middle schools.
- The adolescents completed face-to-face and self-administered interviews during the summer following their eighth grade year.
- One of the interesting qualities of this sample is that both the African-American and European-American adolescents' families comprise a socioeconomically diverse group of participants.

Measures

The responses for Positive and Negative Peer Characteristics were on a five-point scale (1=none of them, 2= a few of them, 3=about half of them, 4=most of them, 5=all of them). The response scale for Conventional and Unconventional Peer Values was also a five-point scale (1=very uncool; 5=very cool).

Positive Peer Characteristics ($\alpha=.74$).

Six item scale comprised of questions describing peer behaviors commonly considered to be positive or socially acceptable (e.g., How many of your friends do well in school?; How many of your friends that you spend most of your time with think it's very important to be respectful of teachers?)

Negative Peer Characteristics ($\alpha=.81$)

Eight item describe peer behaviors commonly considered to be negative or socially unacceptable (e.g., How many of your friends are in gangs?; How many of your friends pressure you to drink?). Eight-item scale.

Negative Peer Values ($\alpha=.82$).

Eight item scale describing socially unacceptable behaviors that adolescents' peer group may endorse (e.g., Would your friends think it was cool or uncool if you did risky things? Would your friends think it was cool or uncool if you talked back to teachers?)

Positive Peer Values ($\alpha=.76$).

Six item scale that captures adolescent perceptions of their peers' endorsement of socially acceptable, prosocial activities (e.g., Would your friends think it was cool or uncool if you got a sports scholarship; Would your friends think it was cool or uncool if you went to a lot of parties?)

Negative Peer Orientation ($\alpha=.67$)

Four item scale that contains questions assessing the adolescents' susceptibility to peer pressures to engage in negative behaviors (e.g., How often is it okay to break some of your parent(s) rules in order to keep your friends?; How many of your friends think it's okay not to do their homework if their friends want to do something else instead?). Four-item scale.

Utility Value of School ($\alpha=.69$)

Four item scale that assesses how important the adolescents think school is for their future (e.g., I have to do well in school if I want to be a success in life).

Results

Descriptive Statistics: see Tables 1 & 2.

Direct Effects: see Figures 1-4, Tables 3 & 4.

Hypothesis #1: The relation between Positive and Negative Peer values and Characteristics and school utility value

- Negative Peer Characteristics is negatively related to school utility value for both African-American and European-American males.
- Positive Peer Values is positively related to school utility value for both African-American and European-American females.

Hypothesis #2: Gender Differences in the relation between peer influence and school utility value

African-American adolescents:

- Males' utility value of school was negatively related to Negative Peer Characteristics, while for African-American females, this relation was nonsignificant ($p < .05$).
- The effects of ability on school utility value were stronger for African-American females, than for African-American males ($p < .05$).
- Moreover, Negative Peer Orientation was more strongly related to Positive Peer Characteristics for African-American females, in comparison to African-American males ($p < .01$).

European-American adolescents:

- Negative Peer Orientation is negatively related to school utility value for European-American females ($p < .01$).
- However, Negative Peer Characteristics is negatively related to the school utility value of European-American males ($p < .05$).

Hypothesis #3: The relation between Negative Peer Orientation and School Utility Value

- Negative Peer Orientation was negatively related to school utility value for all groups except European-American males.
- Negative Peer Orientation is positively related to both Negative Peer Characteristics and Negative Peer Values, and negatively related to Positive Peer Characteristics for all groups.

Indirect Effects: See Tables 5 & 6

- The indirect effects of Negative Peer Orientation on school utility value are not different from the direct effects, except for European-American females.

Discussion

- Peer Characteristics and Values were related to adolescents' utility value of school. Therefore, adolescents' perceptions of the types of behavior in which their friends engage or endorse may have either an adverse or positive impact on how useful they believe school to be for their future.
- Interestingly, for both African-American and European-American females, Positive Peer values were related to school utility value. Therefore, the school utility value of adolescent females in this study was positively impacted by their perception of whether or not their friends' endorsed certain socially acceptable behaviors.
- However, for males, Negative Peer Characteristics was negatively related to utility value. Thus, their perception of how many of their friends engaged in certain socially unacceptable behavior had an adverse effect on their utility value of school.
- The indirect effects of Negative Peer Orientation on school utility value were not different from the direct effects for both African-American males and females, and European-American males. Therefore, the degree to which these adolescents are susceptible to socially unacceptable behavior has the same impact upon their value of school as their perceptions of the behaviors in which their friends engage or endorse.
- However, for European-American females, the direct effect of Negative Peer Orientation has more impact upon school utility value than their perceptions of their peers' behavior and values. That is, the European-American females' susceptibility to peer influence has a more adverse impact upon their school utility value than their perceptions of their friends' behaviors and values. This may explain the European-American females' resistance to influence in previous work (e.g. Billy & Udry, 1985).
- Within-group differences found among African-American adolescents are further evidence that research on specific ethnic groups is warranted and needed if we are to fully understand the mechanics and magnitude of adolescent peer influence.

References

- Arroyo, & Zigler, E. (1995). Racial identity academic achievement, and the psychological well-being of economically disadvantaged adolescents. Journal of Personality and Social Psychology, 69, 5, 903-914.
- Berndt, T. (1979). Developmental changes in conformity to peers and parents. Developmental Psychology, 15, 6, 608-616.
- Berndt, T.J., Laychak, A.E. & Park, K. (1990). Friends influence on adolescents' academic achievement: an Experimental study. Journal of Educational Psychology, 82, 4, 664-670.
- Billy, J. & Udry, J. (1985). The influence of male and female best friends on adolescent sexual behavior. Adolescence, 20, 77, 21-31.
- Brown, B.B. (1982). The extent and effects of peer pressure among high school students: a Retrospective analysis. Journal of Youth and Adolescence, 11, 2, 121-133.
- Fordham, S & Ogbu, J. (1986). Black students' school success: Coping with the burden of "acting White". Urban Review, 18, 3, 176-206.
- Graham, S. (1994). Motivation in African-Americans. Review of Educational Research, 64, 4, 622-632.
- Kindermann, T. (1993). Natural peer groups as contexts for individual development: The case of children's motivation in school. Developmental Psychology, 4, 3, 334-337.
- Ogbu, J.U. (1991). Minority coping responses and school experience. Journal of Psychohistory, 18, 4, 433-456.
- Purcell, J. Gable, R.K., Caillard, F. (1994). Attitudes of suburban high school students toward behaviors associated with high achieving peers: Development and validation of the peer assessment scale. Educational and Psychological Measurement, 54, 2, 383-393.

Senior, A.M. & Anderson, B.T. (1993). Who's who among African-American students groups in high school: an Exploratory investigation of peer subcultures. Urban Review, 25, 3, 233-249.

Steinberg, L., Dornbush, S. & Brown, B.B. (1992). Ethnic differences in adolescent achievement: an Ecological perspective. American Psychologist, 47, 6, 723-729.

Table 1

Descriptive Statistics for African-American adolescents' Peer Characteristics and Values

	Girls (n=298)		Boys (n=339)	
	M	SD	M	SD
Negative Peer Characteristics	1.46*	.507	1.62*	.680
Positive Peer Characteristics	3.33**	.644	3.12	.622
Negative Peer Values	2.50	.749	2.59	.741
Positive Peer Values	4.24	.595	4.15	.667
Negative Peer Orientation	1.73**	.628	1.95**	.760

* p<.01. **p<.001.

Table 2

Descriptive Statistics for European-American adolescents' Peer Characteristics and Values

	Girls (n=177)		Boys (n=157)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Negative Peer Characteristics	1.39	.511	1.56*	.575
Positive Peer Characteristics	3.34**	.678	3.04	.685
Negative Peer Values	2.35**	.771	2.80**	.758
Positive Peer Values	4.25*	.565	4.14*	.649
Negative Peer Orientation	1.88**	.602	2.14	.723

* p<.01. **p<.001.

Table 3

Summary of Unstandardized Effects of African-American Male and Female Adolescents' Perceptions of Peer Influence on their School Utility Value

	<u>Females</u>		<u>Males</u>	
	<u>B</u>	<u>SE B</u>	<u>B</u>	<u>SE B</u>
Socioeconomic Status	-.173**	.054	-.058	.062
Ability	.099***	.024	.027	.027
Negative Peer Orientation	-.764***	.143	-.801***	.147
Positive Peer Characteristics	.104	.114	.235*	.093
Negative Peer Characteristics	-.179	.180	-.609**	.165
Positive Peer Values	.017*	.008	.008	.009
Negative Peer Values	-.008	.066	.088	.079

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 4

Summary of Unstandardized Effects of European-American Male and Female Adolescents' Perceptions of Peer Influence on their School Utility Value

	<u>Females</u>		<u>Males</u>	
	<u>B</u>	<u>SE B</u>	<u>B</u>	<u>SE B</u>
Socioeconomic Status	-.173**	.054	-.100	.095
Ability	.099***	.024	.035	.032
Negative Peer Orientation	-.764***	.143	-.065	.207
Positive Peer Characteristics	.104	.114	.129	.103
Negative Peer Characteristics	-.179	.180	-.648***	.156
Positive Peer Values	.017*	.008	.105	.113
Negative Peer Values	-.008	.066	-.047	.115

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 5

Indirect effects of negative peer orientation on African-American adolescents' school utility value

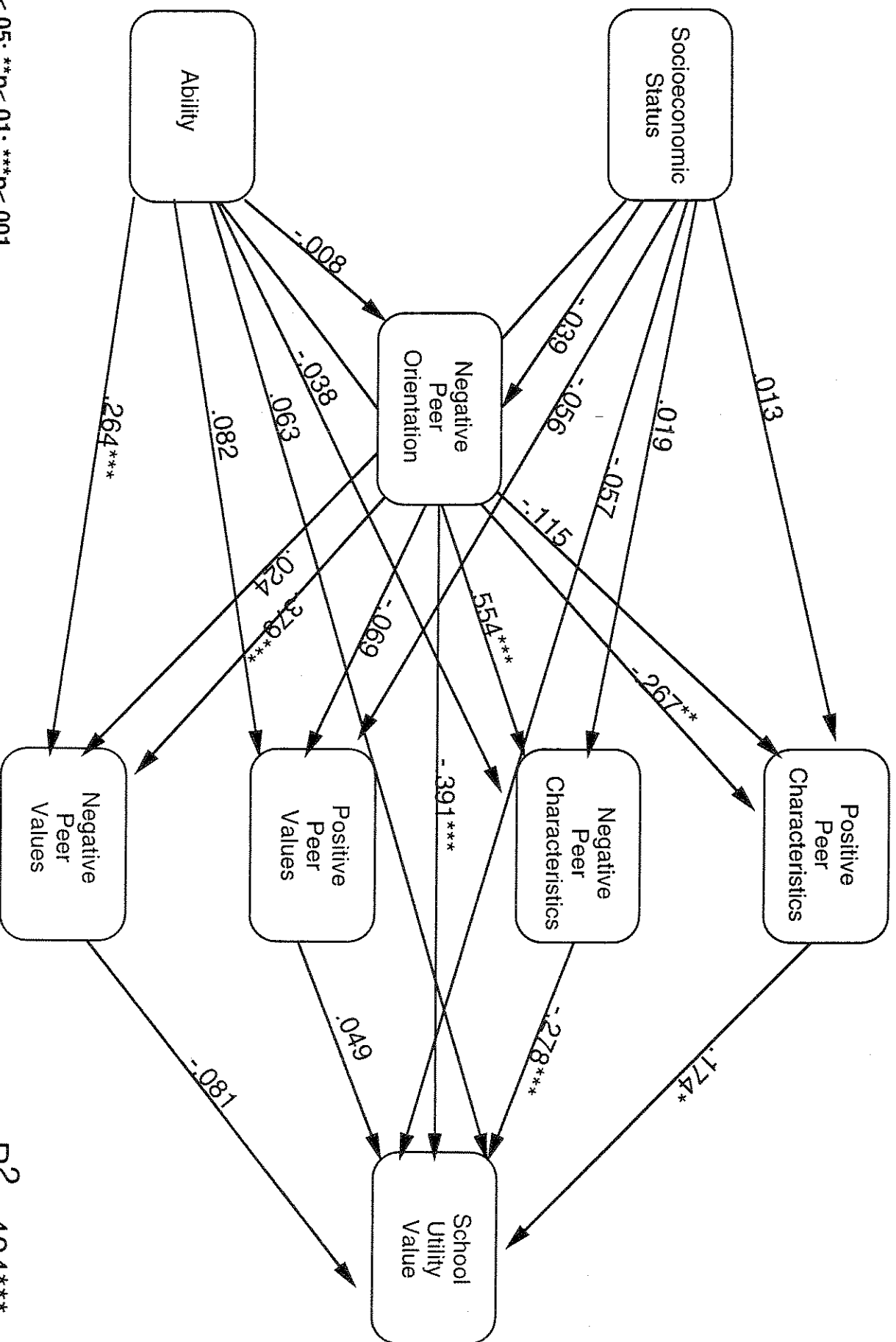
Indirect Path	Females		Males	
	Beta Coefficients	Indirect Effects	Beta Coefficients	Indirect Effects
Positive Peer Characteristics	(-.425)(.114)	-.048	(-.237)(.174)	-.041
Negative Peer Characteristics	(.418)(-.080)	-.338	(.554)(-.278)	-.154
Positive Peer Values	(-.069)(.294)	-.020	(-.069)(.049)	-.003
Negative Peer Values	(.427)(-.009)	-.004	(.379)(-.081)	-.031
Total Indirect Effects		-.410		-.229
Direct Effect (Negative Peer Orientation)		-.395		-.391

Table 6

Indirect effects of negative peer orientation on European-American adolescents' school utility value

Indirect Path	Females		Males	
	Beta Coefficients	Indirect Effects	Beta Coefficients	Indirect Effects
Positive Peer Characteristics	(-.353)(.096)	-.034	(-.277)(.129)	-.036
Negative Peer Characteristics	(.391)(-.109)	-.043	(.516)(-.469)	-.242
Positive Peer Values	(-.039)(.116)	-.005	(-.077)(.083)	-.006
Negative Peer Values	(.429)(-.096)	-.041	(.512)(-.049)	-.025
Total Indirect Effects		-.123		-.309
Direct Effect (Negative Peer Orientation)		-.315		-.391

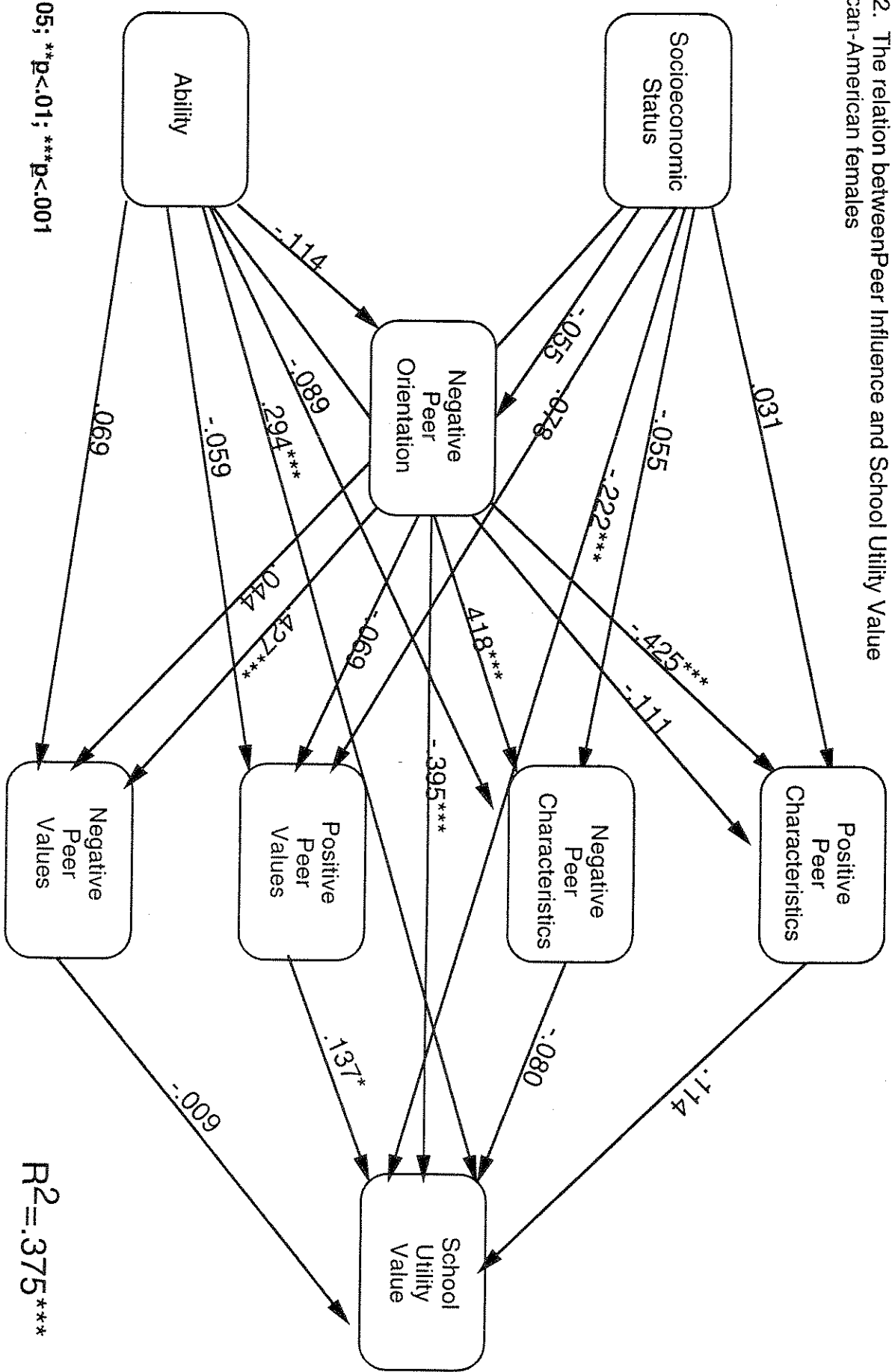
Figure 1. The relation between Peer Influence and School Utility Value for African-American males.



*p<.05; **p<.01; ***p<.001

R² = .404***

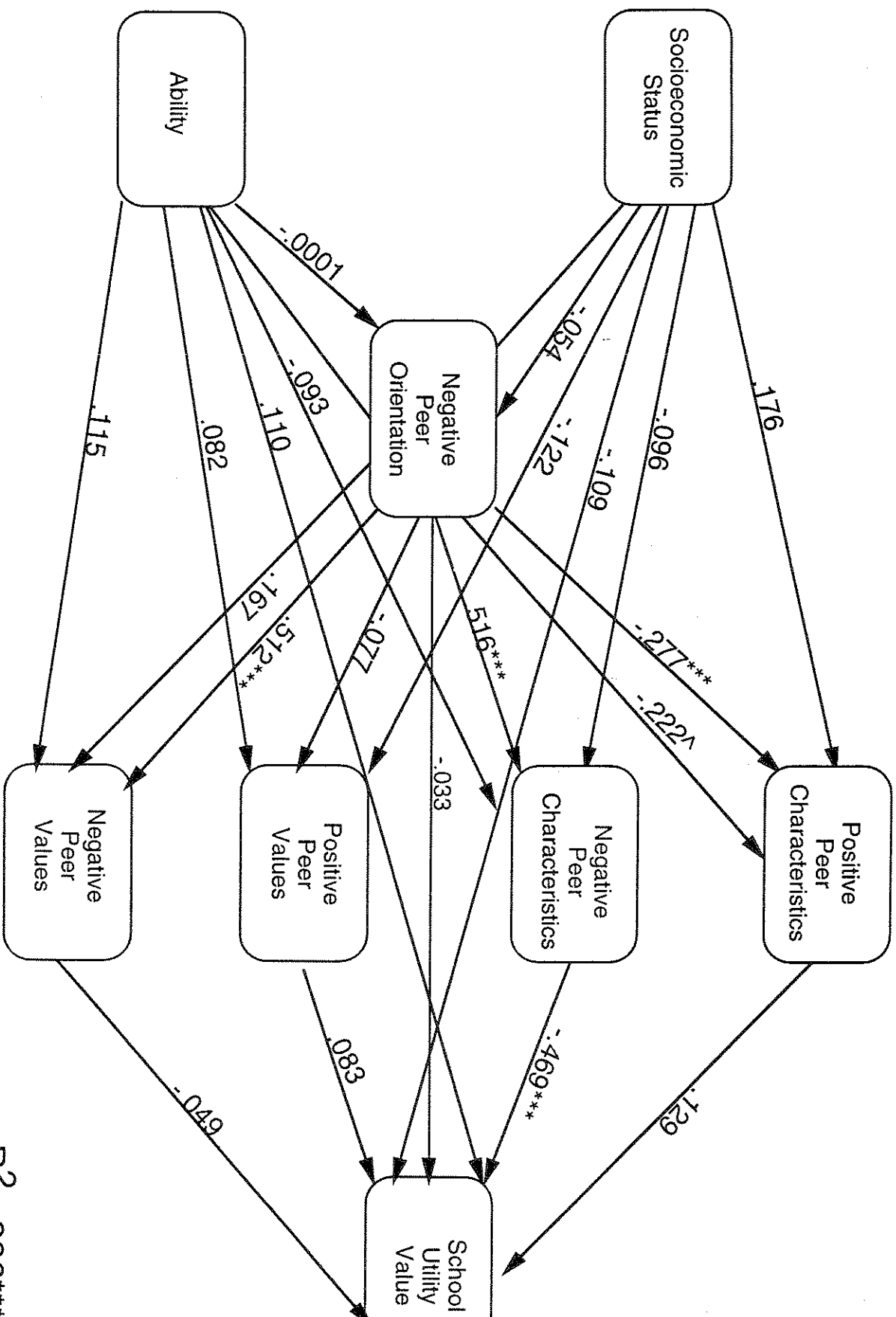
Figure 2. The relation between Peer Influence and School Utility Value for African-American females



*p<.05; **p<.01; ***p<.001

R² = .375***

Figure 3. The relation between Peer Influence and School Utility Value for European-American males.



R² = .386***

Figure 4. The relation between Peer Influence and School Utility Value for European-American females.

