

Functional Morals: Attitude Functions and Moral Reasoning

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Functional theories of attitudes address why people hold attitudes. The current study had two main goals: to extend the study of attitude functions, and to relate these functions to moral development. One hundred seventy-four participants filled out a revision of Herek's (1987) Attitude Functions Inventory (AFI) and a short form of Rest's (1979) Defining Issues Test (DIT). Factor analysis on the AFI revealed 7 factors, corresponding to several defined attitude functions. Multiple regression analyses revealed that moral stage-typical reasoning, as assessed by the DIT, is significantly related to attitude functions in a theoretically consistent manner. Implications for the future study of attitude functions and their bases in moral thought are discussed.

Functional theories of attitudes are interesting--and perhaps intuitive--for several reasons (Herek, 1987). Most notably, functional theories address why people hold attitudes. This allows researchers to answer ultimate questions rather than descriptive questions of structure. Second, functional theories are attractive because of their "self-conscious eclecticism and orientation toward integration" (Herek, 1987, p. 286); this property makes functional theories amenable to the researchers who wish to seek connections between attitudes and the more global aspects of personality. Finally, functional theories provide a framework for combining concerns about motivational bases of attitudes with the traditional emphasis on social cognition.

After nearly 20 years of relative empirical inactivity, functional theories of attitudes have begun to re-emerge (Shavitt, 1989). What long retarded the use of these theories was the difficulty in operationalizing the functions. Research (DeBono, 1987; Herek, 1987; Maio & Olson, 1994) has provided several strategies for assessing the functions that attitudes hold in a given situation.

A Taxonomy of Attitude Functions

Functional theories began as separate endeavors of three research groups (Katz, 1960; Kelman, 1961; Smith, Bruner, & White, 1956). Each set out to classify attitudes according to the functions that they serve. While the list of functions and the focus of the research varied, some common ground was covered. Several authors have pointed out these similarities, seeking to establish a basic taxonomy of attitude functions. Abelson and Prentice

noted "that all function theorists seem to agree on at least one major functional dichotomy" (1989, p. 361). Attitudes are seen as serving either an Experiential/Instrumental or a Symbolic function for the individual (see also, Herek, 1986). Greenwald (1989) observed that these two functional roles both involve object appraisal but that they differ in focus: the Experiential/Instrumental function focuses on one's relation to exterior objects, while the Symbolic role focuses on the self. Thus, symbolic functions may be most closely aligned with personality or ability variables (Herek, 1986), like moral reasoning.

The Experiential/Instrumental Function. The Experiential/Instrumental classification incorporates several of the functions outlined by Smith, Bruner, and White (1956) and by Katz (1960). The definition is derived from Smith, Bruner, and White's object appraisal function: entities are evaluated in terms of their relevance to the person's goals and concerns. In a similar vein, Katz specified an adjustive/instrumental function for attitudes as they account for how people will relate to objects in order to meet individual needs. The Experiential/Instrumental function could also incorporate Katz's knowledge function. Here, individuals hold attitudes because they afford an understanding of the way the world works.

Several authors (Greenwald, 1989; Shavitt, 1989) have argued that the three functions subsumed by the Experiential/ Instrumental function (object appraisal, instrumental, and knowledge) may show considerable overlap. As a point of support, Herek (1987), through the use of content analysis and factor analysis, found that there seems to be one major function (which he referred to as the Experiential/Schematic function) that accounts for these ideas.

The Symbolic Function. The other major functional role served by an attitude is Symbolic (Abelson & Prentice, 1989). Here the focus is on appraisal of the self (Greenwald, 1989). The function being served by an attitude is related to the way in which the individual wishes to be perceived by others or on the personal expression of the attitude (Herek, 1986). The Symbolic

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function has been subdivided according to the role played by the attitude in relation to the self. First, as Shavitt (1989) noted, "attitudes can play a major role in maintaining self-esteem" (p. 313). This role directly corresponds to Smith, Bruner, and White's externalization function and also to Katz's ego-defense function. Both of these designations claim that attitudes can exist in order to "protect the ego from intrapsychic conflict through defense mechanisms" (Shavitt, 1989, p. 313). Herek's (1987) work demonstrated that this defensive function is a major aspect of attitudes.

Greenwald (1989) proposed three inter-related subdivisions of the Symbolic function, separable according to which facets of the self—the public, the private, or the collective—becomes focal. Greenwald stated that "when the *public facet* is emphasized, the person should display attitudes that are agreeable to significant others [emphasis in original]" (1989, p. 436). That is, the individual may display an attitude which he or she may not have internalized. This corresponds directly to Smith, Bruner, and White's social-adjustive function. This function was also found in Herek's (1987) work, where this function is referred to as the social-expressive function. Both Greenwald (1989) and Shavitt (1989) noted that this function shares many similarities with Kelman's notion of compliance as a way of reacting to social influence.

For Greenwald, "the *collective facet* of the self establishes self-worth by helping to achieve the goals of important reference groups (family, church, profession, etc.) [emphasis in original]" (Greenwald, 1989, p. 436). This facet differs from the public facet in that a wider range of individuals is considered; the public facet is concerned with a small set of significant individuals whereas the collective facet is concerned with group ideals. While this facet has no direct parallel in either Smith, Bruner, and White's (1956), Katz's (1960), or Herek's (1987) systems, it is a function that is also recognized by Abelson and Prentice (1989) and Shavitt (1989) as a group identification function. It can be seen as corresponding to Kelman's identification process.

Finally, Greenwald (1989) asserted that "the *private facet* of the self earns self-regard by meeting or exceeding internalized criteria of success [emphasis in original]" (p. 436). This facet, then, conforms to Katz's value-expressive function. Similarly, this function appeared in the research by Herek (1987). Additionally, Shavitt (1989) and Greenwald (1989) recognized the similarities between Kelman's social influence process of internalization and the value-expressive function.

Levels of Moral Development in Relation to Attitude Functions

Attitude functions have long been conceptualized as addressing the "why" of attitudes—the answer to the ultimate question of causality (Herek, 1987). Accordingly,

functions are seen as the foundation of an attitude. In many cases, moreover, an attitude takes on a decidedly moral tone. Abelson and Prentice (1989) noted that an attitude can be regarded as "an evaluative belief, a belief that some social object or policy is good or bad, right or wrong" (p. 363, footnote 1). It is this evaluative belief as something being right or wrong that is at the center of the morality concept.

Perhaps the most widely used conception of morality in the psychological literature is that of Kohlberg (1984). At its most general organization, Kohlberg's theory states that individual cognitive reasoning regarding the justice components of morality can be typified according to three levels. The first level—the Preconventional level—contains Stage 1, involving a punishment and obedience orientation often in regard to authorities, and Stage 2, an individualistic perspective whereby one serves his or her self-interest in making decisions. Thus, the individual's motivation at the Preconventional level can be characterized as concerning the personal consequences of the behavior. The second level (titled Conventional) encompasses Stage 3, where moral reasoning focuses on interpersonal relationships as the basis for rules, and Stage 4's social system orientation. Here the standards of the wider society become the source from which an individual derives his or her rules. The Postconventional level comprises the two highest stages of moral development. In stage 5, individuals assert the equal rights of all equals in the community. At stage 6, people make decisions based on individual principles. Accordingly, Postconventional reasoners contend that individually derived principles may be more important than the rules set forth by society.

Each of these levels of moral reasoning appear to have their parallels in Kelman's (1961) three processes of social influence and the classic functional attitude theories of Smith, Bruner, and White (1956) and Katz (1960). Where Preconventional reasoners focus on obedience and punishment, the compliance strategy involves "yielding to influence in the presence of powerful others" (Greenwald, 1989, p. 436). Likewise, this general orientation corresponds to Greenwald's (1989) public facet of self, which includes the Smith, Bruner, and White's social adjustment attitude function. Greenwald summarized Kelman's identification strategy as "the acceptance of influence that comes from admired others, corresponding to the collective self's strategy of adopting reference-group attitudes" (1989, p. 437). This process is highly similar to Kohlberg's Conventional level, whereby individuals focus on the rules of groups and society at large. This strategy is also comparable to Shavitt's (1989) group identification function. Finally, Kohlberg's Postconventional level is similar to Kelman's process of internalization, where internalization "is the acceptance of influence that is consistent with established values" (Greenwald, 1989, p. 436). Internalization is comparable to Greenwald's private facet of the self, which itself includes Katz's value-

expressive function. Following these parallels, the levels and stages of moral reasoning are seen as having their basis in varying attitude functions.

Research Questions and Purposes

The current study seeks to address two issues: the number of functions and their relationships to the stages of moral development. First, as only Herek's (1987) original study has examined the AFI, it seems wise to re-examine his attitude function assessment procedure with new attitude targets. Second, are the levels/stages of moral development consistently related to the functional anchorage of attitudes? Can the conceptual ties at the theoretical level between the various functions of attitudes and the levels/stages of moral development be demonstrated empirically? As far as we know, no study has addressed the relationship between attitude functions and moral reasoning.

Attitudes can serve multiple, inter-related function within a single individual (Herek, 1987). Therefore, it is not only of interest how an *individual* attitude function is related to a particular mode of reasoning, but it is important to determine how these multiple functions *as a set* are related to the mode of reasoning. This view conceptualizes attitude functions as predictors of individual moral reasoning stages, much in the sense that they define the components of a qualitative stage. Overall, the second research question becomes: how well do the multiple functions being served by individuals' attitudes predict their likelihood to endorse stage-typical reasoning?

Method

Participants

Participants for this study were drawn from a larger study concerning moral reasoning and justice rule usage (Wendorf, Alexander, & Firestone, 2002). One hundred seventy-four participants were recruited from the college population at a large Midwestern, metropolitan university. Testing was done in groups of up to 20 individuals at a time. All students were given extra credit at their instructors' discretion for their participation.

Of the 174 participants, 7 were deleted from the data on the basis of major inconsistencies in responding to the Defining Issues Test (Rest, 1979) and/or the propensity to rate meaningless items as important. That is, participants were dropped from the current sample if they were deemed outliers on either the inconsistency or the "meaningless" measure.

Of the remaining 167 participants, 70.9% were female and 29.1% were male. Ages ranged from 18 to 52, with a mean age of 22.5 (SD = 6.93) and a median of 20.00. Approximately 49.1% of the sample identified themselves as Caucasian-American, 29.7% were African-American, 5.5% were Arab-American, 5.5% were Asian-American, and 3.6% were Hispanic-American. The remaining 6.6%

either belonged to other groups or did not provide their ethnic group membership.

Measures

The Defining Issues Test. The Defining Issues Test (DIT; Rest, 1979) served as the instrument for assessing moral reasoning level. The short form of the DIT is a paper and pencil measure that consists of 3 vignettes. Individuals are asked to respond to 12 items in terms on a 5-point Likert-type scale, thus providing rating-based information about the importance of that particular issue. Each of the 12 items are indicators of a particular stage of reasoning. This general format is maintained for each of the 3 dilemmas.

It should be noted that the DIT is a recognition rather than a production task, and scores for higher stages of moral reasoning are much more likely to be obtained compared to Kohlberg's interview-based assessment. Therefore, the DIT assumes a complex-stage model, whereby a participant is not classified into a single stage. Instead, each participant is given a series of stage scores, which represent the relative usage of each stage. As was done in the parent study (Wendorf, Alexander, & Firestone, 2002) and in other studies utilizing the DIT (cf., Ma & Cheung, 1996), stage scores were calculated by taking the mean of the items keyed to each stage. For example, the stage 2 score was derived by averaging the importance ratings given to all items designed to reflect Stage 2 reasoning.

Modifying Herek's Attitude Functions Inventory. Work by Herek (1987) has attempted to facilitate attitude function measurement. Based on content-analyzed essays and subsequent cluster analysis, Herek found that attitudes met four primary functions: Experiential-Schematic, Social-Expressive, Defensive, and Value-Expressive. Following this, Herek created an objectively scored Attitude Functions Inventory (AFI) to provide a self-report assessment of attitude functions.

New items were written for the current study because, as Shavitt (1989) has noted, function questions depend upon the nature of the attitude objects. Those used by Herek--homosexuality, AIDS, mental illness, and cancer patients--differ markedly from the moral issues used in the DIT: racism, the legal system, and assisted suicide. Second, Herek's system does not include items corresponding to a Group Identification function. Thus, modification of the AFI was deemed necessary, although modification reopens the question of the construct validity of the AFI.

Following Herek's (1987) suggestion, items were written to correspond to new attitude objects and in order to make the AFI conform to the DIT more directly. While our revised items incorporated the general wording used by Herek ("My opinions about [target] are mainly based on . . ."), care was taken to hold to the definitions of the

Table 1
Factor Pattern Matrix for Factor Analysis on AFI Items using Alpha Factoring Extraction and Promax Rotation

Function	Target	Item	1	2	3	4	5	6	7	
Experiential/ Schematic	Legal	1		.569						
		2		.843						
		3		.551						
		4		.770						
	Racism	1				.686				
		2				.733				
		3				.568				
		4				.726				
	Suicide	1					.564			
		2					.877			
		3					.713			
		4					.901			
Defensive	Legal	5					.734			
		6					.578			
	Racism	5						.530		
		6						.366		
	Suicide	5						.744		
		6						.439		
Social- Adjustive	Legal	7		.773						
		8	[.474]a	[.583]						
	Racism	7				.628				
		8	.435							
	Suicide	7		[.392]			[.320]a			
		8	.532							
	Social Identity	Legal	9	.859						
			10	.475						
Racism		9	.877							
		10	[.256]a		[.301]					
Suicide		9	.800							
		10	.533							
Value Expressive	Legal	11					.870			
		12							.844	
	Racism	11						.801		
		12							.758	
	Suicide	11						.754		
		12							.808	

Note. Loadings less than .4 are not shown unless they represent the highest loading achieved for that particular item. Loadings in parentheses represent split loadings.

^a For the sake of theoretically consistent factor scores, this loading--rather than the split loading--was deemed primary. See text for further discussion.

various functions as outlined earlier. The Social-Expressive items were worded such that they reflected a focus on other individual's opinions, consistent with Greenwald's (1989) notion of the public self. This allowed the addition of a Group Identification function, which involves a concern with the opinions of groups in general (Greenwald, 1989). As an example, the items for the assisted suicide target are included in the Appendix.

Procedure

Immediately following participation in a parent study (Wendorf, Alexander, & Firestone, 2002) in which participants filled out the short form of the DIT, individuals were given the opportunity to fill out a follow-up survey. This follow-up survey contained a consent form/information sheet, instructions, and the modified AFI. Participants rated each of the 36 items--12 for each attitudinal object--on a nine-point scale ranging from "not at all true of me" to "very true of me." Participants were told that this survey constituted a separate study. No attempt was made to randomize the presentation of items; all participants responded to the items for the assisted suicide target, followed by the legal system and racism targets.

Results

Factor Analysis

In order to replicate the findings of Herek (1987), the 36 items in the modified AFI were subjected to exploratory factor analysis. Exploratory rather than confirmatory factor analysis was used as Herek's findings were based on a small sample ($n=69$). The current study focused on new attitude targets and included several new items as well.

Using Alpha factoring extraction to insure maximal internal consistency of factors, 8 factors with eigenvalues greater than 1 were extracted. However, inspection of the scree plot as well as the reproduced and residual correlation matrices indicated that a 7-factor solution, which accounted for 64.73% of the total variance, suitably explained the relationships among the items. Because an individual's attitude can serve multiple functions (Herek, 1987), an oblique rotation was used. The factor pattern matrix associated with this Promax rotation is given in Table 1. Loadings less than .40 are not given, unless they represent the highest loading available for the item.

Factor 1 was composed of identification items from each of the three targets. Respondents indicated that their attitudes are anchored by those of individuals they respect, the stance of reference groups, and that of society in general. Accordingly, the first factor was labeled Social Identification. Factors 2, 3, and 4 included all the experiential statements, clustered separately for each content domain. Respondents strongly endorsing these items claim that the basis of their attitudes flows from their own direct experience with the attitude targets or the

experiences of individuals who are close to them with these targets. Accordingly, these factors have been labeled Legal System Schematic, Racism Schematic, and Assisted Suicide Schematic. All six items reflecting the aversiveness of the targets, and respondents concomitant refusal to think about them as the basis of their attitudes, clustered together to define a factor labeled Defensive. The sixth factor included items that stated that attitudes toward targets derived from concern about the protection of Civil Liberties. The last factor brings together the items for each target asserting that the basis of respondents' attitudes are their "moral beliefs about how things should be."

Factor scores were created for each of the 7 factors by calculating the mean of the "true of me" ratings assigned to those items deemed to have loaded on that factor.¹ In the case of split loadings, factor assignment was made on the basis of conceptual consistency. For example, while item number 7 of the assisted suicide target loaded more strongly on the Legal System Schematic factor, it was scored on the Assisted Suicide Schematic factor in order to maintain theoretical continuity with the factor construct labels given above. The same was true for the other two items with split loadings: item 8 of the legal system target and item 10 of the racism target were keyed to the Social Identification factor. Estimates of the internal consistency for each factor score (Cronbach's alpha) are given on the diagonal in Table 2.

Intercorrelations among the factor scores are presented in Table 2. Significant intercorrelations ranging from +.36 to +.49 were found among the three schematic factors/functions, indicating that the personal experience bases of attitudes tend to show some stability across attitude targets. Attribution of attitudes to one's experiences was positively associated with seeing the opinions of significant others and societal reference groups as the sources of one's attitudes ($r = .45$). Unexpectedly, the Defensive attitude function was also significantly associated with the Social Identification ($r = .55$) and the experiential schematic ($r = .39$) functional bases of attitudes. Except in a few cases, Civil Liberties Concerns and the likelihood of attitudes being based on Moral Beliefs were significantly correlated with the other functions.

Relationship between the AFI and the DIT

The factor scores produced above were used to investigate the relationship between attitude functions and DIT stage scores. Correlations for each of the five DIT stages are given in Table 2.

¹ Equal weighting of items was used in the creation of factor scores as regression-based procedures capitalize on chance and are generally more vulnerable to shrinkage.

Table 2
Intercorrelations and Coefficient Alphas for Unit Weighted Factor Scores

Factor (Attitude Function)	1	2	3	4	5	6	7
1. Social Identification	[.867]	.414**	.508**	.421**	.555**	.034	.153*
2. Legal System Schematic		[.827]	.454**	.489**	.398**	.140	-.041
3. Racism Schematic			[.823]	.362**	.456**	.102	.078
4. Assisted Suicide Schematic				[.853]	.330**	.111	-.209**
5. Defensive					[.764]	-.059	.136
6. Civil Liberties Concerns						[.838]	.082
7. Moral Belief Expressive							[.843]

Note. Numbers on the principal diagonal and in brackets represent coefficient alpha for a given factor. Numbers above the principal diagonal are zero-order correlations. See text for the description of factor score creation as well as the naming of factors.

* $p < .05$

** $p < .01$

Stage 2 reasoning was significantly positively correlated with the Social Identification function and with the Racism Schematic factor. This indicates that self-interested reasoning was associated with statements noting that attitudes are based on the opinions of respected others, reference groups, and society in general. Additionally, as this individualistic perspective increased, people's opinions about racism tended to be based more heavily on personal experience.

Stage 3 reasoning was significantly correlated with all three Schematic factors, and the Social Identification and Defensive functions. As preference for reasoning that focused on the interpersonal basis for rules of conduct increased, so too did the tendency to show preference for statements implicating personal experience as the functional basis of attitudes. Similarly, such interpersonal focus in moral reasoning was positively associated with the tendency to see respected individuals, reference groups, and society as influencing attitudes. Finally, stronger preferences for Stage 3 reasoning showed a stronger aversiveness toward the attitude targets.

Stage 4 reasoning was significantly positively correlated with the Racism Schematic factor, and the Social Identification and Moral Belief Expressive functions. Like the increase with Stage 2 reasoning, an increase in Stage 4 reasoning was parallel to an increased tendency to support statements of social reference and personal experience as functional bases of attitudes. Additionally, higher importance attached to the social system perspective was related to higher importance given to statements reflecting "the way things ought to be."

Stage 5 reasoning was significantly negatively correlated with the Defensive and Social Identification functions, and significantly positively correlated with Civil Liberties Concerns. This indicates that individuals, as they show stronger preference for equal rights, tend to base their attitudes less than on other people's opinions or on

their relative resistance toward the attitude target, and more on their general concerns for civil liberties.

Surprisingly, no factors or functions were significantly correlated with Stage 6 reasoning.

One way to interpret attitude functions is to consider them the motivational foundation for a particular attitude. Such interpretation allows the researcher to use the attitude functions as predictors of stage-typical reasoning. Thus, multiple regression was used to attempt to predict each of the 5 stage scores separately; the standardized regression coefficients, multiple correlations, and squared multiple correlations produced through the use of simultaneous entry of predictors are given in Table 3. The seven factors/functions significantly predicted Stage 3 scores ($R = .335$), $F(7, 153) = 2.766$, $p = .010$, Stage 4 scores ($R = .358$), $F(7, 148) = 3.108$, $p = .004$, and Stage 5 scores ($R = .344$), $F(7, 148) = 2.838$, $p = .008$. The prediction of Stages 2 and 6 did not yield significant multiple correlations ($ps > .40$).

The standardized regression coefficients address the issue of which attitude function uniquely predicts the most variance within a stage. That is, the coefficients may implicate which function serves as the foundation for a particular stage of reasoning. While approximately 11.2% of the variance in Stage 3 reasoning can be accounted for by the attitude functions as a set, only the Defensive function emerged as a significant unique predictor. Thus, among the functions assessed, concern about the unpleasantness of the attitude topics is most clearly associated with high ratings of the importance of Stage 3 moral reasoning. Stage 4 moral reasoning, with its focus on the social system as the appropriate standard for judging right and wrong, was most clearly associated with the Racism Schematic and Moral Belief Expressive factors. Finally, Stage 5 moral reasoning was predominately predicted by Civil Liberties Concerns.

Table 3
Zero-Order Correlations, Standardized Regression Coefficients, and Multiple Correlations Predicting DIT Rating-Based Stage Scores from Factor Scores

Factor (Attitude Function)	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
1. Social Identification	.173* (.119)	.211** (.055)	.180* (.090)	-.162* (-.093)	.025 (-.081)
2. Legal System Schematic	.084 (-.036)	.256** (.162)	.050 (-.067)	-.149 (-.168)	.029 (-.069)
3. Racism Schematic	.176* (.126)	.165* (-.048)	.266* (.302)**	-.026 (.117)	.095 (.082)
4. Assisted Suicide Schematic	.117 (.036)	.154* (.007)	.031 (.008)	-.050 (.034)	.113 (.141)
5. Defensive	.112 (-.004)	.269** (.204)*	.064 (-.133)	-.203* (-.123)	.064 (.048)
6. Civil Liberties Concerns	-.017 (-.037)	.096 (.088)	-.007 (-.047)	.233** (.235)**	.052 (.037)
7. Moral Belief Expressive	-.016 (-.037)	.054 (.024)	.215** (.202)*	-.063 (-.061)	.026 (.045)
Multiple R	.213	.335**	.358**	.344**	.160
R ²	.045	.112	.128	.118	.026

Note. For each cell, numbers listed first are zero-order correlations, whereas numbers enclosed in parentheses are standardized regression coefficients.

* $p < .05$ ** $p < .01$

Discussion

Clarifying the Taxonomy and the AFI

The first goal of the current study was to extend the use of Herek's (1987) Attitude Functions Inventory. For this reason, the current findings are discussed not only in terms of the findings within this study, but also on how they differ from those of Herek. First and foremost, the factor analysis produced seven factors rather than the four general functions found by Herek or the five functions (Herek's four plus a group identification function) delineated by the taxonomy given earlier. In general, Herek's study found a "high degree of stability in functions across the three attitude domains [i.e., AIDS, mental illness, and cancer patients]" (p. 298). For the current study, cross-target stability was found for the expressive/symbolic functions of attitudes, but not for their experiential/schematic functions.

As Herek qualified, "undoubtedly this stability is partly due to the fact that all three versions of the AFI dealt with attitudes toward persons with a stigmatized disability" (p. 298). Rather than a single Experiential/Schematic function as Herek (1987) found, the findings here demonstrate that the Experiential/Schematic items cluster

best within a particular target. That is, there appears to be a separate Experiential/Schematic function for each attitudinal target. In the current study, the attitude targets were selected as ideological concerns relevant to the study of moral reasoning; perhaps they lacked such a unifying concept that would allow for a single factor.

That such a factor structure should emerge is not surprising. The items for the Experiential/Schematic function are grounded in personal experience. Levels of personal interaction with each of the attitude targets may vary greatly across these domains. For example, personal experience with racism may be more frequent when compared to personal experience with assisted suicide.

Should the three schematic factors be considered separate attitude functions? The analysis shows that the pertinent items are most closely correlated within rather than across targets. It does not indicate that the motivational underpinnings of each factor are *qualitatively* different. That is, these three factors may still be considered indicative of a single function. Higher-order factor analyses on another sample could clarify the relationships among Experiential/Schematic factors.

Another point related to these Experiential/Schematic factors concerns the factor loadings of items originally

written to represent the social-adjustive function. Item 7 for each target, "My opinions about [target] mainly are based on my perceptions of how specific individuals that I care about have responded to [target]", tended to load on the Experiential/Schematic factor for that target. This may be the result of the similarity of this item to the Experiential/Schematic items in terms of its focus on individual caring relationships ("My opinions about [target] mainly are based on whether someone I care about has been involved with [target].").

Two separate "social" functions, social-adjustive and group identification, were anticipated based on a theoretical distinction given by Greenwald (1989) and Shavitt (1989). This distinction did not emerge from the data of the current study. The social-adjustive and group identification items tended to load onto one factor. Respondents did not differentiate between the attitudes and opinions of respected individuals or those of groups with whom the person identifies as distinct bases for their attitudes.

Whereas separate factors did not emerge for the theoretically distinct social functions, a distinction did emerge within the value-expressive function. Two separate, *uncorrelated* factors emerged from the items intended to reflect value-expressive concerns: civil liberties and moral oughts. Whether this finding reflects the identification of a new attitude function or some other facet of personality deserves further research attention. One example of the utility of this distinction follows in the section on moral development.

Unlike the differentiation that occurred for the Experiential/Schematic function across attitude domains, cross-target stability was observed for the Expressive/Symbolic functions. This finding shows that Expressive/Symbolic functions may be more generalizable than Experiential/Schematic functions across multiple attitude targets. Perhaps such stability across attitude domains is indicative of relatively stable, trait-like personality tendencies for attitudes to assume a particular expressive function, a distinction which has been shown to be relevant to the study of attitude functions (Eagly & Chaiken, 1998). For example, research has shown that high self-monitors tend to be more social-adjustive, whereas low self-monitors tend to be more value-expressive (for example, see DeBono, 1987) in the functional basis of their attitudes.

Overall, the current study partially replicated the functional distinctions found by Herek (1987), while clarifying theoretical distinctions made by others. The dimensions found in the current study were based on factor analysis are thus dependent upon the wording, scope, and number of items included. Just as Herek saw the AFI as a flexible method rather than a fixed instrument, here too it is recommended that researchers broaden the scope of their research concerning attitude functions. Future research should attempt to clarify the functional distinctions and

factor structures obtained with objectively scored instruments.

Relating Attitude Functions and Moral Development

The second main goal of this study was to examine the relationships between attitude functions and moral development. Here, too, the distinction between Experiential/Schematic functions and Expressive/Symbolic functions proved useful. Accordingly, the relationships between attitude functions and moral stages will be addressed according to the type of function involved.

With regard to the three emergent Schematic functions, significant correlations with stage 3 importance scores (versus all other stages) were found. Stage 3 reasoners were more likely to base their attitudes, at least in part, on the dynamics of interpersonal relationships. Correspondingly, this suggests that the tendency to hold an attitude for Experiential/Schematic reasons is most strongly noted at Stage 3.

Only the Racism Schematic factor showed significant correlations with scores for stage 2 and 4. The pervasiveness of personal experience with the attitude target of racism is a likely explanation for these results, recalling that approximately 50% of the respondents were members of minority groups. That is, the Racism Schematic factor may be a correlate of pre-conventional and conventional reasoning because it remains a salient concern for the participants.² By the same logic, the lack of a correlation between post-conventional stages (Stages 5 and 6) and the Racism Schematic factor is enlightening; as reasoning at the post-conventional level involves internalized and self-realized ideals and principles, it would be expected not to be based on localized and self-interested concerns.

With regard to the Symbolic/Expressive functions for attitudes, results indicated that Stages 2, 3, and 4 were

² This argument suggests the need for post hoc analyses of these relationships for each ethnic group separately. First of all, the minority groups in comparison to Caucasians demonstrated a significantly higher mean on the Racism Schematic factor, $t(160) = 4.075$, $p < .001$. This indicated that non-Caucasians were more likely to state that their attitudes were based on their personal experiences with racism. Furthermore, the Racism Schematic factor did not correlate significantly with any of the stage scores for the non-Caucasian participants ($ps > .10$). Thus, the pervasiveness of personal experience with racism may have made the issue salient for all minorities, regardless of level of reasoning. For Caucasians, Racism Schematic scores were correlated significantly with both Stage 2 reasoning, $r = .257$, $p = .017$, and Stage 4 reasoning, $r = .329$, $p = .013$. This finding differs from that of the other Schematic factors, which all correlated significantly only with Stage 3.

correlated with the social identification function. These relationships are not surprising. As reasoning approaches the conventional level, individuals are hypothesized to base their rules of fair practice on socially determined principles (Kohlberg, 1984). Stage 3 additionally was significantly correlated with the Defensive function. Perhaps at this stage of reasoning, there is the unique combination of defensive processing and social identification--of relying on others' opinions in order to avoid having to think about the issues for oneself.

Stage 5 was positively associated with Civil Liberties Concerns--the virtual definition of Stage 5 reasoning itself (see Kohlberg, 1984)--as well as negatively correlated with the Defensive and Social Identification functions. These significant negative correlations may be indicative of the Stage 5 reasoners ability and need to derive moral principles on his or her own, rather than avoiding thinking about the issue or relying on another's opinion.

Stage 6 scores were not correlated with any of the emergent factors. Our theoretical expectation was that Stage 6 reasoners would be most likely to base their attitudes on their moral beliefs; alas, this was not so. Instead of Stage 6 scores being correlated with the Moral Beliefs factor, Stage 4 scores showed a significant correlation with the Moral Beliefs factor. Perhaps Stage 4 reasoners equate society's norms with moral beliefs, thereby being unable to differentiate what is with what ought to be. Future research should serve to determine the reliability and rationale of such a finding.

One final point of import must be made about the relationships of Stage 2 and Stage 6 scores with the attitude functions. The 3-story version of the DIT used here suffers from a relative lack of indicators for these two stages. Those two stages were represented by only two items each. By way of comparison, eight, ten, and seven items represented Stages 3, 4, and 5 respectively. The different amount of indicators (see Rest, Thoma, & Edwards, 1997, for more about the unequal number of stage-typical items) has direct implication for the reliability of measurement. The paucity of relations of attitude functions to stages 2 and 6 is in part due to the lesser reliability of their measurement.

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Appendix follows on Next Page

Appendix: Revised AFI Items for the Assisted Suicide Target

The Experiential/Schematic Function

1. My opinions about assisted suicide are mainly based on whether someone I care about has considered assisted suicide.
2. My opinions about assisted suicide mainly are based on my personal experiences with people who are candidates for assisted suicide.
3. My opinions about assisted suicide mainly are based on my judgment of how likely it is that I will interact with assisted suicide candidates in any significant way.
4. My opinions about assisted suicide mainly are based on my personal experiences with people whose family members or friends have considered assisted suicide.

The Defensive Function

5. My opinions about assisted suicide mainly are based on the fact I would rather not think about assisted suicide.
6. My opinions about assisted suicide mainly are based on my personal feelings of discomfort or revulsion at assisted suicide.

The Social-Adjustive Function

7. My opinions about assisted suicide mainly are based on my perceptions of how specific individuals that I care about have responded to assisted suicide.
8. My opinions about assisted suicide mainly are based on learning how assisted suicide is viewed by the individuals whose opinions I respect the most.

The Group Identification Function

9. My opinions about assisted suicide mainly are based on how the groups I identify myself with (i.e., church, profession, etc.) view assisted suicide.
10. My opinions about assisted suicide mainly are based on my perceptions of how society in general has reacted toward assisted suicide.

The Value-Expressive Function

11. My opinions about assisted suicide mainly are based on my concern that we safeguard the civil liberties of all people in our society.
12. My opinions about assisted suicide mainly are based on my moral beliefs about how things should be.