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Chapter 3: Measuring Triune Ethics Orientations
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Although prior moral motivation research has focused on prototypic views of moral character—i.e., prosociality—in these studies we identify a broader set of ethical orientations, based on Triune Ethics Metatheory. These reflect different types of motivated cognition[1] that correspond to different neurobiological patterns of social response (see also chapter 4 for additional varieties).

In this chapter, we report on studies where Triune Ethics Meta-theory was used to develop and validate several measures of adult triune ethics dispositional orientations. The purposes of these studies were to create a measure of the three basic ethical orientations (protectionism, engagement, and imagination) derived from triune ethics meta-theory, validate the measure, and assess how ethical orientation might act as a mediator of relations among developmental foundations (dispositions and early experiences) and moral outcomes. In several studies, we examined their relation to personality and behaviour, reporting on three samples here.[2]

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[1] Jost, Glaser, Kruglanski & Sulloway, 2003

[2] Initially, samples were collected to examine the types of personality traits presumed to cohere into TEM orientations, using items from the International Personality Item Pool (Goldberg et al., 2006) (Narvaez, Brooks & Mattan, 2011a, 2011b). Protectionism was represented by personality measures of anger, distrust, and dominance; Engagement was represented by empathy, forgiveness and capacity for love; Reflective imagination was represented by judgment/open-mindedness, perspective/wisdom and equity/fairness. Each set performed as expected with Protectionism correlated positively with attachment insecurity, and negatively with conscientiousness, agreeableness, honesty, and integrity. Engagement was positively related to agreeableness, conscientiousness, emotional stability, correlated with openness, honesty, integrity, negatively with insecure attachment and personal interests on the Defining Issues Test (DIT) of moral judgment. Reflective Imagination performed similarly to Engagement, positively correlating with agreeableness, conscientiousness, honesty, integrity, but also openness, and negatively with insecure attachment and personal interests on the DIT, but also DIT maintaining norms.

Study 1: Development of a Multidimensional Ethical Orientation Measure

The purpose of this study was to develop and validate a multidimensional measure of ethical orientation. We created the items, assessed the factor structure, and examined associations with a number of covariates to establish convergent and divergent validity. We developed a measure of ethical orientation that uses a combination of items involving self-perception and perceptions of what others think of the self. One's perception of how others perceive the self taps into the adaptive unconscious, an aspect of the self that the individual generally has difficulty perceiving.[3] Thus an orientation in this case includes both one's habits in social life but also how one thinks others perceive the self. We anticipated that the different ethical orientations would exhibit different patterns of relations to developmental proxies, moral capacities and outcomes. Engagement and reflective imagination orientations are more adaptive across contexts, while a protectionism orientation is generally less adaptive. Thus, we anticipated relations with covariates would demonstrate this pattern.

Method

Participants were undergraduates in over 40 different majors (e.g., Business, Psychology, and Biology) from a Midwestern private university ($N = 341$; M_{age} = 19 years, SD_{age} = 1.26; 47% male; 74% Euro-American). They were recruited to take a set of measures online, and received course credit for their participation. All measures were self-report. Unless otherwise specified, composite scores were created by averaging the items.

Triune Ethics Orientations (TEO). We first identified a set of characteristics representative of each ethic as follows: (a) Protectionist orientation: *controlled, tough, unyielding, competitive*; (b) Engagement orientation: *caring, compassionate, merciful, cooperative*; and (c) Reflective Imagination orientation: *reflective, thoughtful, inventive, reasonable*.

To examine the coherence of the groups of terms, we conducted a preliminary study with a small sample of USA adults recruited through Amazon Mechanical Turk ($n = 31$; Mage= 35.13, SD=13.06; 35% female, 77% White Euro-American). Participants were given the list of 15 terms to sort into three piles. "Here we identify three types of morality: the type of morality displayed by loving mothers (engagement), dutiful soldiers (protectionist) and wise people (reflective imagination). Please drag and drop 4 characteristics from the left column into the box where it fits best. In the end you should have 4 different characteristics in each box." A chi-square

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[3] Wilson, 2002

test of independence indicated that there was no difference between the ideal sort of the terms (created theoretically) and the way that the respondents sorted the terms (Cochran-Mantel-Haenszel $M^2 = 241.6008$, $df = 4$, $p < 2.2e\text{-}16$).

Next, we used the terms to create an assessment of the three ethics following Aquino and Reed's[4] format for measuring moral identity internalization. Each set of words is presented followed by eight statements regarding self-perception of those characteristics (e.g., "Being someone who has these characteristics is an important part of who I am" and "My friends think I have these characteristics"). The 341 participants in the present study rated how much they agreed with the statements (1=*strongly disagree*, 5=*strongly agree*).

Principal components analyses were conducted to explore the factor structure of the 24 items. We used several criteria to determine the factor structure. First, using the total variance accounted for by the whole solution, the variance accounted for by each factor, and the scree plot, the three factors seemed to best summarize the data. Next, we ran a principle components analysis constraining the solution to three factors. Then, examining the factor loadings, we identified for omission any items with a factor loading of less than .50 for any of the three sets of terms. For example, if one of the statements had factor loadings of .60 and .70 for two sets of words, but only a loading of .40 for another set, this item was dropped. Using this criterion, four of the 8 statements were dropped, leaving four to be used for rating the three sets of terms, two representing moral goals and two representing others' perceptions of self (12 items total; see Table 3.1 for items). The reliabilities for these final sub-scales were as follows: Protectionism (α = .90), Engagement (α = .84), and Reflective Imagination (α = .85).

Table 3.1
Triune Ethics Orientations Items and Standardized Factor Loadings

| Item | Factor Loadings Study 1/Study 2/Study 3 | | |
	Protectionist Orientation	Engagement Orientation	Reflective Imagination Orientation
1. Being someone who has these characteristics is an important part of who I am.[1] [protectionism words]	.84/.90/.93		
2. I strongly desire to have these characteristics.[1] [protectionism words]	.67/.82/.86		
3. My friends think I have these characteristics.[2] [protectionism words]	.93/.72/.83		
4. My family thinks I have these characteristics.[2] [protectionism words]	.89/.72/.82		
1. Being someone who has these characteristics is an important part of who I am.[1] [engagement words]		.84/.67/.84	
2. I strongly desire to have these characteristics.[1] [engagement words]		.72/56/.73	
3. My friends think I have these characteristics.[2] [engagement words]		.79/.89/.85	
4. My family thinks I have these characteristics.[2] [engagement words]		.66/.82/.86	
1. Being someone who has these characteristics is an important part of who I am.[1] [imagination words]			.77/.62/.78
2. I strongly desire to have these characteristics.[1] [imagination words]			.69/.54/.63
3. My friends think I have these characteristics.[2] [imagination words]			.84/.92/.86
4. My family thinks I have these characteristics.[2] [imagination words]			.80/.90/.84

Big-five personality traits. To measure big-five personality factors, we used the 10-item scales from the International Personality Item Pool (IPIP[5]); 1=*disagree strongly*, 5=*agree strongly*): *agreeableness* (α = .85), *conscientiousness* (α = .87), *openness to experience* (α = .82), *emotional stability* (α = .89), and *extraversion* (α = .90). Participants indicate how strongly they agreed with statements that might describe them (e.g., "is helpful and unselfish with others").

Positive character traits. *Empathy* (8 items; α = .84), *forgiveness* (10 items; α = .85), and *fairness* (9 items; α = .84), were assessed using items from the International Personality Item Pool (IPIP[6]); 1=*very inaccurate*, 5=*very accurate*).

Negative character traits. *Anger* (10 items; α = .85), *distrust* (10 items; α = .87), *social dominance* (11 items; α = .82), were also assessed using items from the IPIP.[7]

Moral outcomes. We used two measures of moral action. (1)

[4] Aquino & Reed, 2002

[5] Goldberg et al., 2006

[6] ibid

[7] ibid

Integrity was assessed using the Integrity Scale[8] (n=18; α = .85), which assesses level of commitment to ethical principles independent of context (1=*strongly disagree*, 5=*strongly agree*). (2) *Public moral action* for the less fortunate[9] (n=9; α = .84) asks respondents how much of certain actions they have taken (e.g., "I have volunteered at an agency that helps the less fortunate;" 1=*never*, 6=*almost always*). The statements are generic so that they can apply to any kind of "less fortunate."

Social desirability. Socially desirable responding was assessed using the Crowne-Marlowe Social Desirability Scale[10] (n=9; α = .64).

Results and Discussion

Descriptives for the twelve ethical orientation items as well as the scale composites for the covariates are presented in Table 3.2. To assess the factor structure of the ethical orientation measure we estimated a confirmatory factor analysis using Mplus (version 7.1). We specified the four items for each of the three sub-scales as loading on their particular factor but not the other factors, we estimated covariances between the three factors, and we added correlated errors between the same items across sub-scales (e.g., we added correlated errors between the first items for protectionism, engagement, and reflective imagination, since the item wording was identical, and only the reference trait terms were different). This model was a moderate fit to the data, $\chi^2 (39) = 147.13$, $p = .0001$, CFI = .95, RMSEA = .09. The standardized factor loadings (see Table 3.1) were all significant and sufficiently large in size (ranging from .66-.93). All bivariate correlations between the three factors were significant and medium in strength (see Table 3.3), with engagement and reflective imagination being positively correlated with each other and negatively correlated with protectionism. Thus, the factor structure was good and the factor intercorrelations were as expected.

[8] Schlenker, 2008
[9] Brooks, 2011
[10] Crowne & Marlowe, 1960

Table 3.2
Descriptive Statistics

Variables (Possible Range)	Study 1 (N = 341) M (SD)	Study 2 (N = 342) M (SD)	Study 3 (N = 1519) M (SD)
Tri-Ethics			
Protectionism – Item 1 (1-5)	2.49 (1.13)	2.82 (1.06)	2.55 (1.08)
Protectionism – Item 2 (1-5)	2.57 (1.17)	2.81 (1.00)	2.59 (1.06)
Protectionism – Item 3 (1-5)	2.53 (1.03)	2.94 (1.03)	2.64 (1.04)
Protectionism – Item 4 (1-5)	2.66 (1.24)	3.03 (1.06)	2.67 (1.08)
Engagement – Item 1 (1-5)	4.09 (.82)	4.11 (.79)	3.97 (.82)
Engagement – Item 2 (1-5)	3.90 (.81)	4.08 (.84)	3.99 (.85)
Engagement – Item 3 (1-5)	4.24 (.82)	3.85 (.67)	3.86 (.77)
Engagement – Item 4 (1-5)	4.07 (.83)	3.91 (.70)	3.90 (.80)
Reflective Imagination – Item 1 (1-5)	3.93 (.76)	3.92 (.78)	3.86 (.79)
Reflective Imagination – Item 2 (1-5)	3.81 (.74)	3.89 (.79)	3.97 (.79)
Reflective Imagination – Item 3 (1-5)	4.03 (.85)	3.77 (.70)	3.76 (.74)
Reflective Imagination – Item 4 (1-5)	3.92 (.75)	3.83 (.71)	3.78 (.77)
Big Five Personality Traits			
Extraversion (1-5)	3.40 (.80)		
Agreeableness (1-5)	4.05 (.56)	4.01 (.58)	
Conscientiousness (1-5)	3.48 (.74)		
Neuroticism (1-5)	3.30 (.80)		
Openness (1-5)	3.58 (.61)		
Positive Character Traits			
Empathy (1-5)	3.96 (.58)		
Forgiveness (1-5)	3.46 (.72)		
Fairness (1-5)	3.89 (.62)		
Negative Character Traits			
Anger (1-5)	2.47 (.70)		
Distrust (1-5)	2.51 (.68)		
*Social Dominance (1-5)	2.75 (.63)	2.78 (.88)	
Moral Actions/Outcomes			
Integrity (1-5)	3.69 (.49)	3.66 (.50)	3.77 (.58)
Public Moral Action (1-6)	2.85 (.91)		
Maintaining Norms Reasoning (0-68)		30.91 (11.78)	
*Postconventional Reasoning (0-95; 0-9)		38.40 (14.06)	6.61 (2.51)
Moral Intuitions – Binding (1-8)			6.82 (1.23)
Moral Intuitions – Individualizing (1-8)			7.40 (1.02)
Worldviews			
Tomkin's Normativism (1-5)		2.56 (.43)	
Tomkin's Humanism (1-5)		4.00 (.48)	
Fixed Orientation (1-5)		2.91 (.78)	

Growth Orientation (1-5)	3.27 (.70)	

Other

Social Desirability (1-2)	1.60 (.25)	
Attachment Security (1-7)		4.19 (1.93)
Positive Emotionality (1-7)		5.14 (.78)
(Prototypic) Moral Identity (1-7)		5.89 (1.02)

Note. Means and standard deviations are estimated within the confirmatory factor analyses including all variables.

∗ These variables were assessed using measures that differed somewhat across studies.

Table 3.3
Estimated Bivariate Correlations Among Tri-Ethics Orientation Factors

	Protectionism Study 1/ Study 2/ Study 3	Engagement Study 1/ Study 2/ Study 3	Imagination Study 1/ Study 2/ Study 3
Protectionism	1	-.33***/-.15*/-.10***	-.20**/-.14*/-.04
Engagement	-.33***/-.15*/-.10***	1	.46***/.46***/.48***
Reflective Imagination	-.20**/-.14*/-.04	.46***/.51***/.48***	1

Note. $^+ = p < .10$, $* = p < .05$, $** = p < .01$, $*** = p < .001$.

To examine validity, a second model was estimated adding 14 observed covariates and their covariances with the three latent ethical orientation factors. This model was similarly a moderate fit to the data, χ^2 (165) = 341.32, p = .0001, CFI = .96, RMSEA = .056. In terms of links to the big-five personality traits, extraversion was negatively associated with protectionism and uncorrelated with engagement and reflective imagination; agreeableness correlated negatively with protectionism and positively with engagement and reflective imagination; conscientiousness only correlated positively with engagement; neuroticism only correlated negatively with protectionism; and openness only correlated positively with reflective imagination. The three positive character traits correlated negatively with protectionism and positively with engagement and reflective imagination, while the three negatively character traits correlated positively with protectionism and negatively with engagement and reflective imagination. Similarly, the two measures of moral action correlated negatively with protectionism and positively with engagement and reflective imagination. Lastly, social desirability correlated positively with protectionism, and negatively with engagement and reflective imagination.

These findings suggest that each ethical orientation offers a different window on moral functioning, with engagement the most morally prototypic. Yet the findings support the notion of multiple ethical orientations as protectionism and reflective imagination showed different patterns from engagement. We examined the differences further in study 2.

Study 2: Replication, Validity and Correlated Constructs

The purposes of this study were to check the psychometric properties and factor structure of the ethical orientation measure in a second sample and to further establish the validity of the measure. We added measures of worldviews, assumptions about human nature, including Tomkins'[11] morally-driven ideo-affective postures, normativism (an untrusting, controlling and negative view of human nature) and humanism (an optimistic, unfearful view of human nature), expecting these to play out differently among the ethical orientations, with protectionism related to normativism and engagement to humanism. Tomkins' two postures are postulated to be formed by parenting and incorporated into the personality, influencing attitudes and behavior. We also added measures of Dweck's[12] fixed and growth orientations (re: human capacities), expecting the former to be related to protectionism and the latter to reflective imagination. We tested a mediation model linking personality and worldviews to moral outcomes via ethical orientation. Again, it was anticipated that engagement and reflective imagination ethical orientations would be more prototypically adaptive while protectionism would be less adaptive.

Method

Undergraduates from a Midwestern private university (n = 342, M_{age} = 19; 51% male, 74% Euro-American) received course credit for taking a set of measures online.

Ethical orientation measure. The same 12-item measure was used as described above (Protectionism: α = .89, Engagement α = .83, and Reflective Imagination α = .85).

Personality. We used two measures of personality, one positive and one negative. (1) The positive trait of *agreeableness* was assessed again using the 10-item (α = .84) IPIP scale.[13] (2) The negative trait of *social dominance* was assessed using the 16-item Social Dominance Orientation

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[11] Tomkins, 1965
[12] Dweck, 2006
[13] Goldberg et al., 2006

scale[14] (α= .83), which assesses preference for social hierarchy (sample item: "Some groups of people are simply inferior to other groups;" 1=*strongly disagree*, 7=*strongly agree*).

Worldview. We used two measures of worldview. (1) We used an adapted version of Tomkins' Polarity Scale[15] to assess normativism and humanism. Based on pilot data we adapted the response format to a simple Likert-type scale (1= strongly disagree, 5 = strongly agree) and factor analyzed items into smaller sets. The *normativism* posture (14 items; α= .72) is focused on external standards and denial of one's affect (sample item: "Some people can only be changed by humiliating them"). The *humanism* posture (10 items; α= .81) is focused on self-expression and supportive relationships (sample item: "Children must be loved so that they can grow up to be fine adults"). (2) Mindset orientation[16] was assessed via 8 items tapping two dimensions: *fixed orientation* (α= .72; e.g., "An individual is a certain kind of person, and there is not much that can be done to really change that") and *growth orientation* (α= .70; "You can always change basic things about the kind of person you are"). Respondents used a 5-point Likert scale (1=*strongly agree*, 5=*strongly disagree*). Items were recoded so higher scores indicate higher fixed or growth mindset orientation.

Moral outcomes. There were two measures of moral outcomes. (1) As in Study 1, *integrity* was assessed with the 18-item Integrity Scale[17] (α = .87). (2) *Moral reasoning* was assessed using the Defining Issues Test-2 (DIT-2)[18], a self-report measure that presents five dilemmas for which respondents are asked to make an action choice, and then rate twelve statements regarding how important they were in making the decision. After rating the statements, respondents rank order the four most important considerations. We used two scores: the maintaining norms schema, which emphasizes law and order, and the postconventional score, which represents the ability to consider multiple viewpoints when deliberating about moral action. Scores were obtained from the Center for Ethical Development at the University of Alabama.

Results and Discussion

Descriptives for the 12 ethical orientation items and the covariate scale composites are presented in Table 3.2 and correlations in Table 3.4. To check the factor structure of the ethical orientation measure we estimated a

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[14] Pratto, Sidanius, Stallworth, & Malle, 1994
[15] Stone & Schaffner, 1988; Tomkins, 1965
[16] Dweck, 2006
[17] Schlenker, 2008
[18] Rest, Narvaez, Thoma & Bebeau, 1999a

confirmatory factor analysis using Mplus (version 7.1). We specified the four items for each of the three sub-scales as loading on their particular factor but not the other factors, we estimated covariances between the three factors, and we added correlated errors between the same items across sub-scales (e.g., we added correlated errors between the first items for protectionism, engagement, and imagination, since the item wording was identical, and only the reference trait terms were different). To achieve moderate fit we added two additional correlated errors between two similarly-worded protectionism items and between two similarly-worded imagination items. This model was a moderate fit to the data, $\chi^2(37) = 116.31$, $p = .0001$, CFI = .97, RMSEA = .08. The standardized factor loadings (see Table 3.1) were all significant and sufficiently large in size (ranging from .54-.92). All bivariate correlations between the three factors were significant and medium in strength (see Table 3.3), with engagement and imagination being positively correlated with each other and negatively correlated with protectionism. Thus, the factor structure and factor intercorrelations found in Study 1 held in Study 2.

Table 3.4
Estimated Bivariate Correlations with Covariates

Covariates	Protectionism	Engagement	Reflective Imagination
Study 1 (N = 341)			
Extraversion	.12*	.06	.08
Agreeableness	-.38***	.76***	.39***
Conscientiousness	-.03	.16**	.11[+]
Neuroticism	-.11*	.11[+]	.09
Openness	-.02	.11[+]	.44***
Empathy	-.27***	.61***	.35***
Forgiveness	-.35***	.53***	.29***
Fairness	-.37***	.62***	.31***
Anger	.27***	-.33***	-.25***
Distrust	.23***	-.44***	-.20***
Social Dominance	.54***	-.41***	-.09
Integrity	-.15**	.42***	.28***
Public Moral Action	-.21***	.35***	.28***
Social Desirability	.22***	-.32***	-.17***
Study 2 (N = 342)			
Agreeableness	-.27***	.62***	.34***
Social Dominance	.38***	-.25***	-.28***

Tomkin's Normativism	.49***	-.35***	-.26***
Tomkin's Humanism	-.25***	.49***	.33***
Fixed Orientation	.13*	-.05	-.10+
Growth Orientation	-.04	.06	.14*
Integrity	-.11	.29***	.22***
Maintaining Norms Reasoning	.20***	.05	-.08
Postconventional Moral Reasoning	-.20**	.04	.10+
Study 3 (*N* = 1519)			
Attachment Security	-.11***	.27***	.20***
Positive Emotionality	-.003	.47***	.49***
Moral Identity	-.19***	.44***	.34***
Integrity	-.18***	.24***	.19***
Postconventional Moral Reasoning	.03	.20***	.15***
Moral Intuitions – Binding	-.06*	.12***	.04
Moral Intuitions - Individualizing	-.15***	.17***	.14***

Note. + = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

A second model was estimated adding nine observed covariates and their covariances with the three latent ethical orientation factors. This model was similarly a moderate fit to the data, $\chi^2 (118) = 272.66$, $p = .0001$, CFI = .96, RMSEA = .06. In terms of personality characteristics, agreeableness related negatively with protectionism and positively with engagement and imagination, while social dominance performed oppositely. In terms of worldviews, fixed orientation correlated positively with protectionism, growth orientation correlated positively with imagination, normativism correlated positively with protectionism and negatively with engagement and imagination, and humanism correlated negatively with protectionism and positively with engagement and imagination. Lastly, for moral outcomes, integrity was positively linked to engagement and imagination, while both moral reasoning variables were related to protectionism (negatively for post-conventional and positively for maintaining norms). Hence, each of the three ethical orientations were linked to at least one of the moral outcomes, with protectionism functioning distinctly from engagement and imagination.

A third model was estimated to test a mediation model whereby personality characteristics and worldviews were linked to moral outcomes by way of ethical orientation. This model included all of the added correlated errors added in the previous two models. Additionally, covariances were added between exogenous predictors, between mediators, and between endogenous outcomes. Indirect effects were tested using the Model Indirect command in Mplus. The model fit the data moderately well, $\chi^2 (136) =$

404.51, $p = .0001$, CFI = .91, RMSEA = .08. There were seven significant indirect effects. Agreeableness ($\beta = .15$, $p = .0001$) and humanism ($\beta = .09$, $p = .002$) were both positively predictive of integrity via engagement. Additionally, social dominance ($\beta = -.04$, $p = .02$) and normativity ($\beta = -.08$, $p = .002$) were negatively predictive of postconventional reasoning via protectionism. Lastly, agreeableness ($\beta = .07$, $p = .04$) was positively linked to maintaining norms via engagement, while social dominance ($\beta = .04$, $p = .01$) and normativity ($\beta = .09$, $p = .001$) were positively linked via protectionism. These patterns support the earlier findings that moral outcomes are mediated by ethical orientations, and generally protectionism is distinct from engagement and imagination in its relations to other variables. Both engagement and protectionism were related to maintaining norms morality, suggesting different personality factors may lead one to a law orientation. Engagement generally reflects a more normative route for prosocial development, whereas protectionism reflects a more hierarchical morality.

Study 3: Comparison of Triune Ethics Measure with Other Morality Measures

The purposes of this study were to use a large, adult representative sample to further check the factor structure of the ethical orientation measure, establish validity of the measure, and assess ways in which ethical orientation might mediate between developmental precursors and moral outcomes. In this case the developmental precursors of interest were attachment and positive emotionality where we expected positive relations to engagement and imagination but negative relations to protectionism. The moral outcomes of interest included, as before, moral integrity and postconventional reasoning. We added a measure of moral foundations[19] to assess moral intuitions built from experience. There are two types: so-called *individualizing* intuitions about fairness and harm, and *binding* intuitions that include intuitions about purity, authority and ingroup. Based on studies 1 and 2, we anticipated that protectionism would be negatively related to the so-called individualizing intuitions (fairness and harm) whereas engagement and imagination would be positively related because these intuitions reflect concern for others. We did not make a prediction for the binding foundations since they are a mix of relationally-focused items that would be of varying import to all the orientations. Additionally, in this study we used Aquino & Reed's[20] measure of moral identity internalization as a control variable.

[19] Graham & Haidt, 2012
[20] Aquino & Reed, 2002

Method

Participants were 1,519 (50.5% female; *M* age = 50.19 years, *SD* = 16.72) adults. The ethnic/racial makeup of the sample was 72.1% White, Non-Hispanic; 10.1%, Black, Non-Hispanic, 11.5% Hispanic). Data were collected by Knowledge Networks.

Measures.

Ethical orientation. Ethical orientation was assessed using the same measure as before (protectionism α =.93, engagement α =.89, imagination α =.86).

Attachment. Attachment style was assessed using a single-item rating of an attachment paragraph representing *secure* attachment from the Close Relationship Questionnaire[21] (7-point scale: 1=*not at all like me,* 7=*very much like me*). The paragraph reads: "It is relatively easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me."

Positive emotionality. Positive emotionality was assessed with the composite score of the Dispositional Positive Emotion Scales[22] (n=21; 1=*strongly disagree*, 7=*strongly agree*), designed to measure seven emotion dispositions: joy, contentment, pride, love, compassion, amusement, and awe (α = .93).

Moral identity. Moral identity was assessed using the internalization scale from Aquino and Reed[23] (n=5; α = .81). Participants are asked to picture a person with nine (moral) traits (caring, moral, cooperative, compassionate, kind, fair, generous, amicable, and honest) and to rate statements about themselves ("Being someone who has these characteristics is an important part of who I am"; 1=*completely disagree*, 7=*completely agree*).

Moral intuitions. Moral intuitions were assessed using the Moral Foundations Sacredness Scale–Short Version[24] (n=15) which includes subscales representing harm, fairness, ingroup, authority, and purity. Instructions are: "Try to imagine *actually doing* the following things, and indicate how much money someone would have to pay you, (anonymously and secretly) to be willing to do each thing. For each action, assume that nothing bad would happen to you afterwards. Also assume that you cannot

use the money to make up for your action." Response choices use an 8-point scale: 1=do it for free, 2=$10, 3=$100, 4=$1000, 5=$10,000, 6=$100,000, 7=$1 million dollars or more, and 8=never for any amount of money. The five subscales comprise two basic composite scores.[25] *Binding* foundations (α = .79) includes Ingroup ("Break off all communications with your immediate and extended family for 1 year"); Authority ("Make a disrespectful hand gesture to your boss, teacher, or professor"); and Purity ("Sign a piece of paper that says 'I hereby sell my soul, after my death, to whoever has this piece of paper'"). *Individualizing* foundations (α = .81) include Fairness ("Throw out a box of ballots, during an election, to help your favored candidate win") and Willingness to Harm ("Stick a pin into the palm of a child you don't know").

Integrity. As in Study 1, integrity was assessed with the Integrity Scale[26] (α = .77).

Moral reasoning. We used the "Heinz and the Drug" dilemma from the Defining Issues Test (DIT).[27] After reading the dilemma, respondents made an action choice and then rated twelve statements regarding how important they were in making the decision. Then, respondents rank ordered the four most important considerations from which we calculated a postconventional score. Scores ranged from 0-9.

Results and Discussion

Descriptives for the 12 ethical orientation items and the covariate scale composites are presented in Table 3.2. See correlations in Table 3.4. To check the factor structure of the ethical orientation measure we estimated a confirmatory factor analysis using Mplus (version 7.1). We specified the four items for each of the three subscales as loading on their particular factor but not the other factors, we estimated covariances between the three factors and added correlated errors between the same items across subscales (e.g., we added correlated errors between the first items for protectionism, engagement, and imagination, since the item wording was identical, and only the reference trait terms were different). To achieve moderate fit we added additional correlated errors between two similarly-worded protectionism items. This model was a moderate fit to the data, $\chi^2(38) = 463.22$, $p = .0001$, CFI = .97, RMSEA = .086. The standardized factor loadings (see Table 3.1) were all significant and sufficiently large in size (ranging from .63-.93). Again, engagement and imagination associated positively with each other and negatively with protectionism (see Table 3.3; although the correlation

[21] Bartholomew & Horowitz, 1991
[22] Shiota, Keltner, John, 2006
[23] Aquino & Reed, 2002
[24] Graham & Haidt, 2012
[25] Graham, Haidt, & Nosek, 2009
[26] Schlenker, 2008
[27] Rest, Narvaez, Bebeau & Thoma, 1999b

between protectionism and imagination was not significant in this study). Thus, the factor structure and factor intercorrelations found in the prior two studies largely held.

To test developmental foundations, a second model was estimated adding 7 observed covariates and their covariances with the three latent ethical orientation factors. As before, this model fit moderately to the data, $\chi^2(101) = 660.21$, $p = .0001$, CFI = .96, RMSEA = .06. As expected, attachment security was negatively associated with protectionism, while attachment security and positive emotionality were both positively associated with engagement and imagination. In terms of ethical orientation and moral outcomes (integrity, moral reasoning, and the two sets of moral intuitions), protectionism was negatively associated with all but postconventional reasoning (with which it was not significantly correlated); engagement was positively related to all of them, and imagination was positively linked to all but binding moral intuition (with which it was not significantly correlated). The findings suggest that different developmental experiences lead to different moral capacities and intuitions.

A third model was estimated to test a mediation model whereby developmental foundations (attachment security and positive emotionality) were linked to moral outcomes (integrity, moral reasoning, and two moral intuitions) by way of ethical orientations, controlling for moral identity (which was added as an additional predictor of the moral outcomes). This model included all of the added correlated errors added in the previous two models. Additionally, covariances were added between exogenous predictors, between mediators (including between the ethical orientations and moral identity), and between endogenous outcomes. Indirect effects were tested using the Model Indirect command in Mplus. The model fit the data moderately well, $\chi^2(109) = 682.46$, $p = .0001$, CFI = .96, RMSEA = .059. There were nine significant indirect effects. Attachment security was positively predictive of integrity ($\beta = .01$, $p = .003$) and individualizing moral intuition ($\beta = .01$, $p = .002$), and negatively predictive of postconventional reasoning ($\beta = -.01$, $p = .045$) via protectionism. In other words, higher attachment meant lower protectionism, and lower protectionism meant higher integrity; thus, higher attachment meant higher integrity, via the process of lower protectionism. Additionally, attachment security was positively linked to postconventional reasoning ($\beta = .02$, $p = .0001$), binding moral intuition ($\beta = .02$, $p = .003$), and individualizing moral intuition ($\beta = .01$, $p = .02$), via engagement. Lastly, engagement also mediated positive emotionality's predictions of postconventional reasoning ($\beta = .07$, $p = .0001$), binding moral intuition ($\beta = .05$, $p = .0001$), and individualizing moral intuition ($\beta = .04$, $p = .01$). The findings suggest that emotional developmental variables (attachment security, positive emotions) contribute to predicting moral

outcomes. The buffered route fosters secure attachment and positive emotions, leading to normative moral capacities and commitments whereas the less-optimal route forgoes attachment security and positivity, resulting in non-normative moral capacities and ethical orientation. In both cases ethical orientations mediate some of the relationships even after controlling for prototypic moral identity.

General Discussion

We examined some of the factors that lead to adult ethical orientations. We developed and validated a measure of three ethical orientations (protectionism, engagement, imagination) that involve a combination of goal self perception and social perceptions of the self (what other people think of me). We tested relations among the three orientations and other aspects of life experiences, including attachment, personality functioning, and moral outcomes. Using three different sizeable datasets, we had sufficient power to conclude that the measure successfully identified different ethical orientations, that the measure of morality is psychometrically sound and can be used to identify different patterns of development. Our predictions were mostly confirmed in expected ways. Validity was established not only with undergraduates but with an adult population. See Table 3.4 for correlations across studies.

Engagement demonstrated a consistent and predicted pattern across the three studies. Engagement orientation was related to secure attachment and the characteristics previously associated with secure attachment and moral behavior—agreeableness, conscientiousness, and empathic concern—as well as with a humanistic worldview.[28] Engagement strongly related to moral outcomes of fairness, forgiveness, and integrity. Engagement represents the compassionate ideal that is historically and globally the aim of most religious traditions.[29]

Reflective imagination aligned with engagement but also was distinctive. The pattern of relations of a reflective imagination orientation with other variables was similar in many ways to engagement orientation in terms of agreeableness, conscientiousness, moral outcomes, secure attachment and positive emotions. But there were critical distinctions. Unlike engagement scores, reflective imagination scores were significantly correlated with openness, growth orientation and postconventional moral reasoning in Study 2 and were not related to binding foundations. Interestingly, unlike theory about postconventional reasoning might predict,

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[28] Kochanska, 2002; Sroufe, Egeland, Carlson & Collins, 2005; Tomkins, 1965; Frimer & Walker, 2009
[29] Armstrong, 2007

imagination was significantly predicted by attachment and dispositional positive emotions, suggesting the importance of emotional development in building capacities for reflection, as suggested by developmental scholars.[30] It would be worthwhile to examine the imagination ethic's distinctive subtypes, which include emotionally-detached imagination, as found in moral disengagement,[31] and vicious imagination, such as taking action based on a sense of a "moral mandate," imposing one's will on others.[32] These subtypes are examined in studies presented in Chapter 5.

Protectionism was a distinct orientation. The protectionist orientation, as a measure of self-protective ethics, does not fall into the typically expected, normative range for morality—i.e., it does not come to mind when ideas of prototypic moral character are probed, which instead evokes prosocial terms like responsibility and kindness.[33] Nevertheless, protectionism was significantly related to maintaining norms (law-and-order) moral reasoning and Tomkins' normative ideo-affective posture. The findings suggest that it may be worthwhile to include protectionism-orientation in future examinations of morality because it demonstrated a distinctive pattern from the more normative measures of morality and allows for greater explanation of common human attitudes. For example, egoism[34] has increased in popularity in recent decades and is a culturally-acceptable ethical stance in the USA. Moreover, in a post-9/11 world, it may be more socially acceptable to adopt a protectionism orientation for moral purposes, to withdraw from social relations or emphasize dominance and control of others.[35] The immediate forms of protectionism, social withdrawal, social opposition, and their respective intentional forms, detached and vicious, are examined in Chapter 5. In longitudinal studies, characteristics correlated with protectionism orientation as measured here have been linked to insecure attachment, which is characteristically associated with less agreeableness, empathy and trust, more aggression and greater difficulty with peer relations.[36] Insecure attachment is increasing in the college population[37] so further study of the effects of attachment on morality may be warranted. Secure and insecure attachment are variables examined in the next chapters.

Limitations and Future Directions

There are a number of limitations to the present studies. First, all data were cross-sectional, limiting the ability to draw conclusions regarding longitudinal relations between variables across time. Future studies should seek to examine longitudinal trends and associations from childhood to adulthood. Second, most measures used self-report. Future studies should involve more varied measurement formats, such as behavior observations or other-reporter data. Third, the various subtypes of protectionism orientation (combative, compliant) and imagination orientation (detached, vicious) need to be studied because they can be rooted in different emotional systems and likely show distinctive patterns of behavior.[38] Chapter 5 takes a step in this direction.

Because triune ethics orientations (TEO) are presumed to shift with the situation as shown for prototypical morality as well,[39] future work should examine situational variability. A protectionism orientation may be more easily triggered under threat conditions, and engagement under relational support, as implicated in terror management theory research.[40] Social-cognitive theory predicts orientation will have a person-by-context interactivity.[41] Individuals may vary from moment to moment and situation to situation in terms of which ethical orientation is active, based on the hormonal and cognitive sets that goals, situations and relationships evoke.[42] A person may adopt a protectionism orientation in one relationship or situation but take up an engagement orientation in another relationship or situation. As with dynamic perceptual theory,[43] affordances for action shift with one's orientation and one's goals. Moreover, those with a more established prosocial moral personality may be less susceptible to manipulation. Indeed, those who are more agreeable are less influenced by situational provocation.[44] Clearly, much more work needs to be done to explore these issues.

Because TEO emphasize implicit and explicit processes in ethical orientation, implicit measures should be developed and tested against the explicit measures and their alternatives.[45] Implicit motives are presumed to represent more primitive motivational systems rooted in affective experience, whereas explicit self-attributions emerge more from elaborated cognitive

[30] Greenspan & Shanker, 2004
[31] Bandura, 1999
[32] Skitka & Morgan, 2009
[33] Lapsley & Lasky, 2001; Walker, 1999
[34] Rand, 1964
[35] Pyszczynski, Solomon & Greenberg, 2003
[36] Kochanska, 2002; Sroufe et al., 2005
[37] Konrath, Chopik, Hsing & O'Brien, 2014

[38] Narvaez, 2013a
[39] Shao, Aquino and Freeman, 2008
[40] Mikulincer & Shaver, 2005
[41] Lapsley & Narvaez, 2004
[42] see Narvaez, 2008, 2013a, 2014
[43] e.g., Gibson, 1979
[44] Meier, Robinson & Wilkowski, 2006
[45] Perugini & Leone, 2009

constructs.[46] Any of the orientations can be adopted for cultural reasons and not be related to early life experience. This actually could lead to a split mind in that the implicit mind could be stress- reactively oriented to protectionism but the explicit mind oriented to engagement or imagination, leading to moral hypocrisy.[47] Or, subscribing to an ideology may override deep aversion to harming others, as in Syndrome E.[48] Thus the implicit and explicit aspects may need to be tested in observational studies when shifts in ethics or even clashes among them may be more apparent.

Finally, more detailed examination of childhood experience on TEO is needed as the data presented here are only suggestive. Specific types of childhood experiences need to be studied for their effects both in childhood and in adulthood. Chapter 4 travels in this direction by examining the Evolved Developmental Niche and its relation to childhood and adult wellbeing and morality.

Conclusion

A relational-developmental-systems view of moral development allows for alternative developmental pathways that encompasses a range of orientations beyond the prototypical prosociality. This chapter provided preliminary evidence that attachment is linked to personality, ethical orientation, and moral outcomes in adulthood. The next chapter looks at early experience in more detail, focusing on the Evolved Developmental Niche.

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[46] McClelland, Koestner, & Weinberger, 1989

[47] Bazerman & Tenbrunsel, 2011

[48] Fried, 1997

Table 3.1
Triune Ethics Orientations Items and Standardized Factor Loadings

	Factor Loadings Study 1/Study 2/Study 3		
Item	Protectionist Orientation	Engagement Orientation	Reflective Imagination Orientation
5. Being someone who has these characteristics is an important part of who I am.[1] [protectionism words]	.84/.90/.93		
6. I strongly desire to have these characteristics. [1] [protectionism words]	.67/.82/.86		
7. My friends think I have these characteristics. [2] [protectionism words]	.93/.72/.83		
8. My family thinks I have these characteristics. [2] [protectionism words]	.89/.72/.82		
5. Being someone who has these characteristics is an important part of who I am. [1] [engagement words]		.84/.67/.84	
6. I strongly desire to have these characteristics. [1] [engagement words]		.72/56/.73	
7. My friends think I have these characteristics. [2] [engagement words]		.79/.89/.85	
8. My family thinks I have these characteristics. [2] [engagement words]		.66/.82/.86	
5. Being someone who has these characteristics is an important part of who I am. [1] [imagination words]			.77/.62/.78
6. I strongly desire to have these characteristics. [1] [imagination words]			.69/.54/.63
7. My friends think I have these characteristics. [2] [imagination words]			.84/.92/.86
8. My family thinks I have these characteristics. [2]			.80/.90/.84