Cross-Sectional and Longitudinal Tests of the Personality and Role Identity Structural Model (PRISM)

Dustin Wood and Brent W. Roberts

University of Illinois, Urbana-Champaign

ABSTRACT A conceptual hierarchy termed the Personality and Role Identity Structural Model, or PRISM, is offered as a framework for incorporating situational information into trait models. PRISM assumes that personality is structured hierarchically with general dispositions subsuming context-specific dispositions (role identities), which, in turn, subsume role-based thoughts, feelings, and behaviors. At Wave 1 ($N = 149$), we found that general traits account for commonalities across traits measured within role identities and that role identities mediate the relationship between general traits and role criteria. In a longitudinal follow-up of a subsample of the original participants (Wave 2; $N = 62$), we found that general traits and role-identity traits were more stable than role experiences over time. Also, changes in role experiences were related to changes in role-identity traits, and, in turn, changes in role-identity traits were related to changes in general traits. The potential of PRISM for use in understanding the development of personality traits is discussed.

Trait models of personality have long been criticized for their failure to successfully incorporate the effect of context on behavior. The classic form of the trait hierarchy may be traced to Eysenck's (1970) multilevel personality structure, where supertraits (e.g., Extraversion) can be decomposed into intercorrelated but conceptually distinct narrower traits (e.g., Sociability, Activity, Excitability). These narrower traits are made up of habits, which, in turn, are related to "stimulus-response" patterns, or what might be described as the behaviors manifested in specific situations. Although this and derivative modern models have demonstrated utility in the prediction of behavior, the "stimulus" in Eysenck's model, which reflects the situation, is poorly conceptualized and seldom well-defined (Hogan & Roberts, 2000). The failure to incorporate a more fully elaborated understanding of the situation severely limits the scope and theoretical relevance of trait models to capture the intrinsic variability of human behavior (Cervone, 1999; Fleeson, 2001).

Several attempts have been made to integrate trait and situation constructs. As a first note, we should remember that no trait measure is truly "decontextualized" (Tellegen, 1991). For instance, forming self-ratings on such vague trait adjectives as "sociable," "extraverted," or "shy" will generally be done by scanning behavior in a subset of situations involving interactions with other people. Nonetheless, the situation is seldom explicitly identified in these approaches, placing a burden on psychologists to operationalize "situations" in a way that can be informed and integrated with personality traits (Funder, 2001).

Hogan and Roberts (2000) argued that the *role* construct both captures the psychological meanings of situations to people and can be incorporated into typical trait models. Roles represent the sets of expectations and demands that define the parts people play in social interactions (Sarbin, 1964). As people inhabit numerous roles throughout their lives and even within a given day, the contingencies for behavior can shift rapidly. For example, individuals enacting a "manager" role may be expected to act in an assertive and controlling fashion (Fournier, Moskowitz, & Zuroff, 2002) and yet be expected to act very differently around their spouses. These expectations are generally derivative of role-related goals (e.g., be assertive in order to increase employee productivity) and are associated with affective outcomes (e.g., worrying about getting fired, pride at being promoted). As such, the behaviors we perform within

roles have many of the criteria that have been suggested as important for the identification of ``situations'' (Mischel & Shoda, 1995).

While these properties of roles make them a meaningful conception of situations, roles also have many properties that suggest avenues of integration with trait models. For instance, acting in the role of a ``manager'' at work is manifest in most, if not all, interactions with subordinates, such as leading meetings, providing feedback, and communicating plans and ideas. Thus, the roles individuals play are comparable to the Big Five in that they represent higher-order aggregations of more molecular situations (Hull, 2002). There are also considerable individual differences in how roles are enacted, and the particular manner in which people enact and experience roles also shows a marked degree of stability over time. For instance, Robins, Caspi, and Moffitt (2002) found that individual differences in quality and conflict within romantic relationships were relatively stable across time, even among individuals who had entered into new relationships between time periods. Developmentally, the stability of role experiences and expectations make them one of the more promising avenues to understanding personality development (Caspi & Roberts, 1999), and increasing evidence has demonstrated that role involvement is associated with personality change. For instance, increasing evidence has accumulated showing that personality traits such as responsibility and dominance can be influenced by experiences in work (Roberts, 1997; Roberts, Caspi, & Moffitt, 2003) and in romantic relationships (Roberts & Bogg, 2004; Robins et al., 2002; Neyer & Asendorpf, 2001).

Given the parallels and relationships between roles and traits, we suggest that these units can be effectively merged in what has been called a *role identity* (Donahue & Harary, 1998; Roberts & Donahue, 1994; Stets & Burke, 2003). Role identities represent the characteristics attributed to oneself within a social role, such as how one sees oneself as a coworker or a friend (Showers, 2002; Stryker & Statham, 1985). Previous research investigating the nature of role identities and related constructs has primarily focused on how mean levels of role-specific trait ratings differ from general ratings (Donahue & Harary, 1998; Roberts & Donahue, 1994) or how these types of ratings enhance predictive validity of specific outcomes (Bing, Whanger, Davison, & Vanhook, 2004; Schmit, Ryan, Stierwalt, & Powell, 1995). In this article, we consider how role identities may be used to understand the relationship between general personality

traits and role-specific experiences by constructing a new model of personality that conceptually parallels the classic trait hierarchy. This new model is organized around previously unacknowledged hierarchical relationships among personality ratings, role identities, and role thoughts and feelings. A number of hypotheses suggested by this broader conceptualization are then explored.

The Personality and Role Identity Structural Model

The structure we have proposed is constructed from hierarchically arranged character representations that we have termed the *Personality and Role Identity Structural Model* (PRISM). The PRISM largely parallels the structure of a trait hierarchy in that the PRISM can be thought of as a hierarchy with multiple levels of varying breadth: (a) the *general identity*, representing how the person sees oneself in general; (b) *role identities*, which represent perceptions of narrower, context-specific dispositions (e.g., "how I see myself as a worker"); (c) aggregated role outcomes, such as general thoughts, feelings, and behavioral patterns occurring within to the role; and (d) single occurrences of outcomes occurring in a given role (see Figure 1). The term *identity* is narrowly restricted in the present analysis to one's conscious understanding of one's personality traits in general or in particular roles. The PRISM is conceptualized to be a trait counterpart to hierarchies that have been proposed to exist for constructs such as self-esteem (Marsh, Byrne, & Shavelson, 1988; Shavelson, Hubner, & Stanton, 1976), attachment systems (Collins & Read, 1994; Pierce & Lydon, 2001), and life satisfaction (Heller, Watson, & Ilies, 2004), whereby contextualized constructs (e.g., work satisfaction) are seen to affect broader but conceptually parallel constructs (e.g., life satisfaction). The cross-sectional and longitudinal implications of the hierarchical structure of the PRISM are elaborated below.

Cross-sectional implications.   Based on previous research, we expect that individuals will successfully integrate qualities into their role identities that are consistent with general role expectations and experiences. Specifically, we expect to find mean-level differences in traits across different role identities that are consistent with the expectations and demands of each role. For instance, Donahue and Harary (1998) found that individuals describe themselves as having higher mean levels of conscientiousness in their work identity than
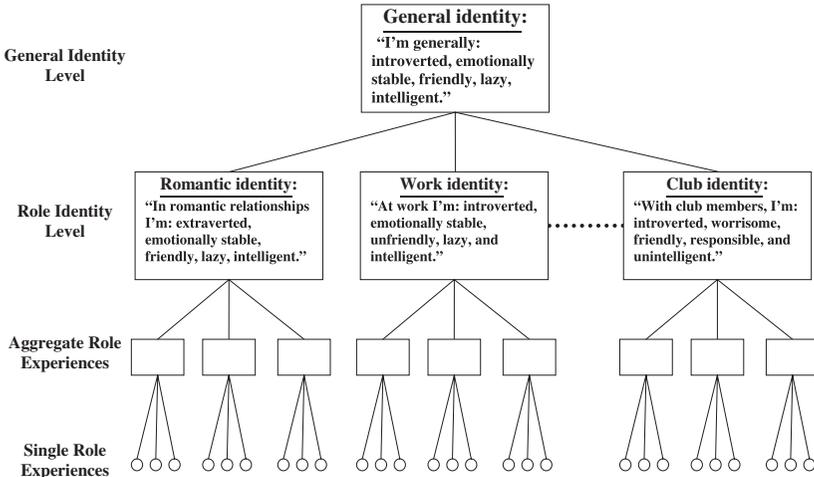
Figure 1
Personality and Role Identity Structural Model (PRISM), illustrated with typical trait terms.

their general identity. In addition, we also propose two previously unconsidered relationships among the levels of the model. First, we propose that the commonality of how an individual sees oneself in different roles can be accounted for by a person's general identity. This hypothesis is predicated on the assumption that the general identity largely represents an aggregation of distinct role identities (e.g., Gergen, 1991). Thus, the correlations existing between role-identity trait ratings, which are typically quite high (Roberts & Donahue, 1994), will be substantially reduced when the shared variance with matching general identity ratings is removed.

Second, relationships existing between general personality traits and role-relevant experiential outcomes, such as thoughts, feelings, and behaviors, are expected to be fully mediated by the same traits assessed at the role-identity level of analysis. For instance, a person who is *generally* dependable and responsible should perform better in work contexts than someone who is not (Barrick & Mount, 1991), but we would imagine that this is mainly because that individual has fashioned a hard-working, self-disciplined style at work, and, in turn, this narrower manifestation of the trait is what predicts work performance. Imbedded in this hypothesis is the assumption that role outcomes should be more highly correlated with role-identity trait ratings than with general identity ratings (Bing et al., 2004; Roberts & Donahue, 1994).

Implications for personality development.   Role experiences do not always impact people solely within their roles—sometimes they "spill over" into different domains as well. For instance, Kohn and Schooler (1983) noted that individuals who went into more intellectually demanding careers later increased in their involvement with intellectually stimulating activities in their leisure time. One hope in examining role identities alongside general ratings of personality, then, is that role identities may offer a way to understand how life experiences affect general personality traits over time. There has been a recent understanding that role enactment may be a key mechanism for personality trait change, especially in young adulthood (Caspi & Roberts, 1999; Roberts & Wood, in press), and a number of empirical studies suggest that a variety of role experiences predict personality change (e.g., Roberts et al., 2003; Robins, Caspi, & Moffitt, 2003; Vaidya, Gray, Haig, & Watson, 2002). Similarly, the assumption that a person's general identity is formed of a combination of more context-specific identities (e.g., Gergen, 1991) is fundamentally a developmental hypothesis, suggesting that role identities should show a particularly important mediating role between life experiences and personality change. When noted and acknowledged by a person, the thoughts, feelings, and behaviors that a person has in roles may then be integrated into his or her role identity and then gradually internalized into how the person sees himself or herself in general. For instance, a woman who has been consistently performing well at work may come to see herself as a more conscientious worker and eventually come to see herself as dependable and responsible in a more general sense.

While such a bottom-up process may help to explain trait development, it may also help explain why life experiences do not have more impact on general traits. Research on self-structures has demonstrated that "lower-level" self-structures such as role identities serve to buffer individuals from the negative impact of stressful events (Linville, 1987). This research suggests that people may be able to insulate themselves from role experiences that could reflect negatively on their character by isolating it to a particular role identity. We suggest, however, that role identities may lower the impact of role experiences on general trait change more generally due to structural qualities of the PRISM. A particular role identity may change substantially because of role-related experiences, even while these experiences only lightly affect a person's general identity, due only to the

role identity's closer proximity to role experiences in the identity hierarchy and the fact that the general identity is composed of a number of additional role identities. Returning to our previous example, after performing well at work for a long period we might imagine our woman sees herself as a more conscientious person. However, she may tell us that we are misinformed, saying, "Yes, I'm a more dependable *worker* than I used to be, but I'm still no more dependable with my friends and family than I've ever been." In essence, the effect of the experience in one role is muted at the general personality level, which considers not just the identity one has in one's job but also self-views among one's friends, spouse, children, parents, and so on.

Several developmental hypotheses can be derived directly from the PRISM structure. First, we would expect a hierarchy of consistency that conforms to the hierarchy of breadth in the model. Given the likely functioning of role identities as buffers between the role experiences and the general identity, the general identity level should be most consistent, followed by role identities, with the least consistent constructs being role experiences. Second, we expect that the PRISM is a dynamic structure, with levels mutually influencing one another. To the extent that the PRISM involves bottom-up processes that transmute role experience information slowly up to the general disposition level, we expect that role experiences will lead to change in role identities. Subsequently, role identities should lead to change in general personality traits. As role identities should serve as a mediator between role experience and general traits, we expect that role experience will be most highly correlated with changes at the level of the role identity, and that changes in role-identity traits should mediate the relationship between changes in role experiences and general traits.

The Present Study

We address the implications of a role-identity-based hierarchical model of personality outlined above in a short, two-wave longitudinal study. In the first wave, we test our hypotheses concerning the utility of role identities as predictors of experiences and as mediators of personality-role experience relationships. Participants completed adjective-based trait measures in rating their general personality, their identity within romantic relationships, and their identity within a university activity (such as a soccer or crew team). The domains of romantic relationships and university activity domains were selected

because they address very different life domains (the first involving intimacy goals, the latter involving larger group affiliations and/or achievement goals; Bugental, 2000; Hogan & Roberts, 2000). Distinct role domains were desired in this study in order to make the associated role identities as unique as possible by lowering psychological similarity across role domains (Mischel & Shoda, 1995). Participants also completed measures of role-based experiences, namely role burnout, satisfaction, and perceived performance, which were then related to both the general and role-identity measures. After approximately 6 months, a subset of participants was asked to complete the materials a second time to explore the longitudinal hypotheses concerning the stability and development of the PRISM structure.

METHOD

Participants

Participants were 149 undergraduate students from a small midwestern university, of whom 68% were female; the median age was 19. Most participants were selected from sports teams or social organizations, with 9 (6%) from the school's crew club, 23 (15%) from the men's soccer team, 16 (11%) from the women's soccer team, 12 (8%) from the women's softball team, 10 (7%) from the women's volleyball team, 15 (10%) from a college fraternity, 16 (11%) from a college sorority, 18 (12%) from a program in sports training, and 30 (20%) from a psychology class. Participation was completely voluntary with no consequences for participating except for the participants in the psychology class, who were given partial class credit for their participation.

A subset of participants from the first time period were asked to complete the measures again approximately 6 months after the first survey (the student sample was not asked to complete the second assessment). Again, participation in the study was voluntary. A total of 62 participants from Wave 1 out of a possible 110 completed the materials at Wave 2 (56%). Participants at Wave 2 included 3 crew members (5%), 4 trainers (6%), 8 fraternity members (13%), 12 men's soccer members (19%), 11 softball members (18%), 7 sorority sisters (11%), 8 volleyball members (13%), and 9 women's soccer members (15%).

Measures

General and role-identity traits. Participants completed an adjective-based personality inventory in relation to their perception of themselves in general (general identity), their perception of themselves in romantic

relationships (romantic identity), and their perception of themselves in the "key role," which was the role participants were recruited for, as described earlier (key role identity).[1] For the role-identity ratings and for the role experience ratings that follow, the items were adjusted for each participant according to which group he or she was recruited from (e.g., participants recruited as volleyball players were asked, "How do you see yourself as a volleyball player?"). Although the key role materials always preceded the romantic relationship materials, the order of the presentation of the general identity ratings was counterbalanced with the general identity questions, appearing first for approximately half of the participants, and last for the other half.[2] For each identity, participants completed a broad 87-item personality inventory designed to measure the Big Five personality characteristics using single-word adjectives that load highly on the Big Five personality factors. These items were selected to sample the broad domains of the Big Five as captured in Hofstee, de Raad, and Goldberg's (1992) AB5C circumplex model of personality trait structure. This resulted in scales with greater breadth than previously developed short-length Big Five adjective marker scales (e.g., Saucier, 1994). Each scale was composed of between 16 to 20 items, and all items were rated on a 1 to 5 scale (where 1 = *Strongly disagree* and 5 = *Strongly agree*). The internal consistencies of the trait scales appeared to be comparable whether measured as a general personality measure (Extraversion $\alpha = .76$, Agreeableness $\alpha = .82$, Conscientiousness $\alpha = .84$, Emotional Stability $\alpha = .77$, Intellect $\alpha = .58$), as a key role-identity measure (Extraversion $\alpha = .82$, Agreeableness $\alpha = .79$, Conscientiousness $\alpha = .81$, Emotional Stability $\alpha = .79$, Intellect $\alpha = .60$), or as a romantic identity measure (Extraversion $\alpha = .76$, Agreeableness $\alpha = .81$, Conscientiousness $\alpha = .73$, Emotional Stability $\alpha = .81$, Intellect $\alpha = .55$). In subsequent research, these scales were highly correlated with the Big Five Mini-Markers developed by Saucier (1994) (mean $r = .87$; Wood, 2004).

Role burnout. Burnout within both the key role and the romantic role was measured using a 9-item measure adapted from the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981). Items from this scale included, "I feel I'm working too hard on [the role]" and "I frequently think

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1. We chose to assess only two role identities so as to streamline the assessment that increases substantially with the addition of each identity and to keep from overburdening our participants with excessive numbers of trait ratings.

2. The results of this study did not appear to be systematically affected by whether the general identity measures preceded or followed the role-identity measures, whether considering the mean levels of general traits or their relationships with other levels of the PRISM.

of quitting [the role]." All items for these and other role experience measures except perceived key role performance were rated on a 1 to 5 scale (where $1 = $ *Strongly disagree* and $5 = $ *Strongly agree*). The items demonstrated good internal consistency in both the key role ($\alpha = .88$) and the romantic role ($\alpha = .94$).

Key role satisfaction.   Satisfaction within the key role was assessed using a shortened, 4-item version of Hackman and Oldham's (1975) Job Satisfaction subscale of the Job Diagnostic Survey (JDS) adapted to the specific role being assessed (e.g., "I am very satisfied with my fraternity"). The scale showed a reliability of $\alpha = .62$.

Perceived key role performance.   Role performance in the key role was measured with the item "Lately, my performance as a [key role member] has been … . " with response options of "Excellent," "Better than average," "Average," "Less than average," and "Poor." Participants were told to circle one of the responses, and responses were coded from 5 to 1, respectively.

Romantic relationship satisfaction.   Satisfaction within romantic relationships was measured using the Marital Satisfaction and Commitment Scales (MSCS) developed by Jones, Adams, Monroe, and Berry (1995). Items were adjusted to refer to relationships instead of marriage. The Satisfaction scale consists of 15 items, with items such as "I am satisfied in this relationship" and "My partner and I do not communicate very well" (reverse scored), The Satisfaction subscale showed an internal consistency of $\alpha = .90$ in the present sample. Items were again rated on a 1 to 5 scale (where $1 = $ *Strongly disagree* and $5 = $ *Strongly agree*).

WAVE 1 RESULTS: CROSS-SECTIONAL TESTS OF THE PRISM

Relationships Between Experience Measures

We first correlated the satisfaction, burnout, and performance measures with one another. The burnout and satisfaction scales were very highly correlated within the key role domain ($r = -.61$, $n = 150$, $p < .05$) and the romantic relationship domain ($r = .88$, $n = 149$, $p < .05$). We thus determined it sensible to combine into a single "positive role experience" measure for each domain by reversing the burnout scale and then averaging the two scales. Key role positive experience and romantic relationship positive experience were not significantly related ($r = .15$, $n = 149$, $p = .07$). Performance in the

Table 1
Means of Big Five Traits for General Personality and Role Identities

Big Five Trait	General Personality	Key Role Identity	Romantic Identity	F
Extraversion	3.58 (.49)$_a$	3.55 (.55)$_a$	3.66 (.47)$_b$	4.62*
Agreeableness	4.09 (.49)$_a$	3.88 (.50)$_b$	4.17 (.47)$_c$	32.86*
Conscientiousness	3.68 (.54)$_a$	3.76 (.48)$_b$	3.64 (.42)$_a$	7.70*
Emotional Stability	3.25 (.55)$_a$	3.29 (.59)$_a$	3.23 (.60)$_a$	1.65
Intellect	3.63 (.43)$_a$	3.46 (.46)$_b$	3.58 (.43)$_a$	15.70*

Note: $N = 148$ for all analyses. As all measures of a given trait are given on commensurate scales and within individuals, repeated-measures F tests are reported, and significance values are given from the lower-bound degrees of freedom of $df_1 = 1$ and $df_2 = 147$. Different subscripts on means within the same row indicate that scores are significantly different by t-tests for paired observations.
*$p < .05$.

key role correlated significantly with key role positive experience ($r = .33$, $n = 146$, $p < .05$) but not with romantic relationship positive experience ($r = -.05$, $n = 145$, $p = .57$).

Mean Levels in General and Role-Identity Trait Ratings

As shown in Table 1, there were differences between the mean levels of general and role-identity characteristics for all traits except emotional stability ($Fs(2,146) \geq 4.62$, $ps < .05$). Individuals rated themselves higher on extraversion ($ts(148) \geq 2.10$, $ds \geq .17$, $ps < .05$) in the romantic identity than in their general identity. These differences likely reflect the fact that the romantic identity is intrinsically interpersonal. In contrast, individuals saw themselves as less agreeable, intellectual, and more conscientious in their key role than in general ($|ts(148)| = 2.78$, $|ds| = .16$, $ps < .05$). These differences reflect the fact that most of the key roles focused on achievement and focused effort and competition. We also compared trait means across the key role and romantic role identities. Finally, participants rated themselves as more extraverted and agreeable, and less conscientious and intellectual in the romantic role than in the key role ($|ts(148)| = 2.44$, $|ds| = .22$, $ps < .05$).

Because of the large number of key role activities (e.g., students, volleyball, softball, fraternities), we also attempted to decompose the

key role-identity means into more coherent groups. We compared whether individuals who were in sports teams, Greek organizations, and students systematically differed in how they saw themselves within that context (as the sports trainers group had a class format, they were grouped with the psychology students). We found modest differences across the three groups in key role ratings of agreeableness ($F(2,146) = 5.25$, $\eta^2 = .07$, $p < .05$) and intellect ($F(2, 146) = 4.18$, $\eta^2 = .05$, $p < .05$). Individuals reported the lowest levels of contextualized agreeableness as a member of a sports team ($M = 3.75$) and highest levels as a member of a fraternity or sorority ($M = 4.05$), and individuals reported the lowest levels of intellect as a member of a sports team ($M = 3.35$) and highest as a student ($M = 3.59$).

Relationship Between General and Role-Identity Traits

Table 2 shows the correlations between role-identity traits across the romantic and key role identities and the relationship between the role-identity trait ratings and general trait ratings. Despite selecting very different roles, trait ratings were highly correlated across role identities (rs ranged from .49 to .61). Consistent with previous research, the role-identity ratings were also highly correlated with the general trait ratings, with correlations between role and general identity traits ranging from .59 to .75.

   We had hypothesized that the common meaning of traits across roles would be captured by the trait ratings taken at the general level. Correlations between role-identity traits and general personality traits were regularly higher than the correlations between the two distinct role identities. Using a test of differences between dependent correlations (Steiger, 1980), we found that the general extraversion and conscientiousness measures correlated more highly with the same traits measured in the key role and romantic role than the two role identities did with one another (all zs ≥ 2.57, ps $< .05$). As such, the correlations between the same traits in different role identities reduced substantially after controlling for the general identity. The correlations between extraversion and conscientiousness across role identities were insignificant after controlling for trait ratings taken at the general level (partial rs $\leq .14$, ps $> .05$), and the correlations between agreeableness, intellect, and emotional stability were reduced substantially (all partial rs between $-.01$ and .36). Given the high

Table 2

Zero-Order and Partial Correlations Between Measures of Big Five Traits Across General and Role Identities

Big Five trait	Key Role and General	Romantic and General	Romantic and Key Role
Extraversion	.75*$_a$ (.66*)	.65*$_a$ (49*)	.49*$_b$ (− .01)
Agreeableness	.59* (.35*)	.60* (40*)	.58* (.36*)
Conscientiousness	.71*$_a$ (.54*)	.69*$_a$ (.50*)	.57*$_b$ (.14)
Emotional Stability	.76*$_a$ (.58*)	.69*$_{ab}$ (44*)	.61*$_b$ (.19*)
Intellect	.62*$_{ab}$ (.38*)	.70*$_a$ (54*)	.57*$_b$ (.23*)

Note: $N = 145$. The first three columns represent zero-order correlations between the same trait measured in two different sets (general, romantic or key role). The values in parentheses show the same correlation after controlling for the third identity rating (e.g., the first cell shows key role and general extraversion after controlling for romantic extraversion). Different subscripts on zero-order correlations within the same row indicate the correlations are significantly different via tests of dependent correlations.
*$p < .05$.

relationships between all identities, it might be expected that controlling for any role identity will decrease the association of two others considerably. However, relationships between role identities and general identities remained high even when controlling for a second role identity (all partial rs between .35 and .66). Considered together, the findings support our view of the general identity as the principle source of communality between distinct role identities.

Relation of Role Experiences to General and Role-Identity Traits

We next tested hypotheses concerning the relationships between general traits, role-identity traits, and role feelings and performance. Our first expectation was that relationships would be higher between role-identity trait ratings and role experiences than between general trait ratings and role experiences. Our second expectation was that the relationship between the general traits and the role experiences would be mediated through the matching role-identity traits.

As can be seen in Table 3, relationships between matching role-identity traits and role criteria were larger than the relationships between general trait ratings and role criteria. Considering first general trait relationships with role criteria, we found general Extraversion

and Emotional Stability to be associated with reporting a more positive experience in both the key role ($rs \geq .30$) and romantic relationship ($rs \geq .18$). Additionally, general Agreeableness was related to more positive experiences in relationships ($r = .25$), and general Conscientiousness with positive experiences in the key role ($r = .18$). Finally, key role Conscientiousness was significantly associated with key role performance ($r = .27$).

Although a number of relationships existed between general traits and role experiences, the correlations between traits and role experiences were regularly higher for role-identity trait measures than general trait measures. Using Steiger's (1980) test of dependent correlations, we found that role Extraversion and Emotional Stability measures regularly showed higher correlations with role outcomes than the same general measures (all $zs > 2.30$, $ps < .05$). Similar increases in the relationship between traits and role outcomes were found for key role-identity measures of intellect in predicting both key role performance ($z = 3.04$, $p < .05$), and romantic identity intellect with positive experience within romantic relationships ($r = 2.56$, $p < .05$). As would be expected given the narrow nature of role-identity measures, relationships were smallest across role identities. For instance, romantic extraversion and Emotional Stability predicted positivity of key role experiences ($rs \leq .20$, $ps < .05$), but these relationships were smaller than the relationships with either the same general or key role traits (all $rs \geq .30$).

We next tested whether controlling for role identities would significantly reduce the relationship between general traits with role outcomes, as would occur if role identities represented intervening (e.g., mediating or confounding) variables (MacKinnon, Krull, & Lockwood, 2000). We chose to do so by using Olkin and Finn's (1995) test for the difference between simple and partial correlations, as this test has demonstrated accurate Type I error rates for highly correlated variables relative to many other tests of intervening relationships (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002), and, equally importantly, does not make assumptions about the direction of the relationships among the three variables involved in the analysis. In other words, unlike tests of mediation (e.g., Baron & Kenny, 1986), a priori statements do not need to be made concerning whether general traits cause the role outcomes or vice versa.

These tests revealed that general trait relationships with role outcomes were regularly reduced when controlling for the matching

Table 3
Correlations Between General and Role-Identity Trait Ratings and Role Criteria

Scale	Key Role		Romantic
	Perf.	Pos. Exp.	Pos. Exp.
Extraversion			
Key Role	$.35_a$	$.44_a$	$.13_a$
Romantic	$.13_b$	$.20_b$	$.54_b$
General	$.15_b$	$.30_b$	$.18_a$
GI.RI	$-.18^\dagger$	$-.04^\dagger$	$-.27^\dagger$
Agreeableness			
Key Role	$.10$	$.07$	$.17_a$
Romantic	$.05$	$.12$	$.37_b$
General	$.03$	$.11$	$.25_{ab}$
GI.RI	$-.03$	$.09$	$.04^\dagger$
Conscientiousness			
Key Role	$.32_a$	$.17$	$.09$
Romantic	$.16_b$	$.15$	$.18$
General	$.27_{ab}$	$.18$	$.13$
GI.RI	$.07^\dagger$	$.09$	$.00$
Emotional Stability			
Key Role	$.26_a$	$.50_a$	$.15_a$
Romantic	$.02_b$	$.28_b$	$.50_b$
General	$.12_b$	$.38_b$	$.21_a$
GI.RI	$-.11$	$.01^\dagger$	$-.21^\dagger$
Intellect			
Key Role	$.18_a$	$.19_a$	$.08_a$
Romantic	$.01_b$	$.02_b$	$.31_b$
General	$-.04_b$	$.12_{ab}$	$.15_a$
GI.RI	$-.19$	$-.01$	$-.10^\dagger$

Note: N range from 145 to 149 due to missing values. Perf. = Performance, Pos. Exp. = Positive Experience. GI.RI = General Identity trait controlling for the matching Role-Identity trait (i.e., Key Role Identity for key role outcomes, and Romantic Identity for romantic outcomes). All correlations equal or greater to .17 are significant ($p < .05$). Different subscripts on correlations within the same column indicate the correlations between the role outcome and the trait measured under different instructional sets (general, key role, romantic) are significantly different via tests of dependent correlations. No subscript is given when the three correlations did not differ significantly.
$\dagger$Indicates that the general identity relationship is significantly smaller after controlling for the role-identity trait by Olkin and Finn's (1995) test.

role-identity trait. Considering first the key role identity, controlling for the key role Extraversion reduced the relationships between general Extraversion and key role performance and positive experience ($zs \geq 2.37$, $ps < .05$). We found similar reductions of the relationships between general Emotional Stability and key role positive experience ($z = 3.87$, $p < .05$), and general Conscientiousness and key role performance ($z = 1.99$, $p < .05$). For romantic relationship outcomes, controlling for romantic identity traits significantly reduced the effect of general identity traits on positive relationship experience for Extraversion, Agreeableness, Emotional Stability, and Intellect ($z = 2.36$, $p = .05$).

Supporting the argument that role-identity traits mediate the relationship between general identity traits and role outcomes, in no case did a significant relationship between the general identity and role outcomes remain significant in the same direction after controlling for the matching role-identity trait. As can be seen in Table 3, controlling for the matching role-identity trait always caused the general identity trait either to become insignificant in relation to the role outcome or to reverse the direction of the relationship. While the modal tendency showed that controlling for role-identity traits caused the relationship to become insignificant, there were a large number of instances where a significant relationship between general traits and role outcomes only emerged after controlling for the role-identity trait (i.e., suppression), or where controlling for the role-identity trait caused the direction of the relationship to reverse, going from significantly positive to significantly negative. For instance, for both Intellect and Extraversion, a significant negative relationship emerged between the general trait and perceived key role performance when the key role trait was controlled ($rs \leq -.18$, $p < .05$). Similar effects were found in predicting the positive experience in relationships; the associations between general Extraversion and Emotional Stability and positive relationship experience were significant and positive before controlling for role-identity level traits, but after controlling for these traits, both were significant in the opposite direction ($rs \leq -.21$, $ps < .05$). Across both role domains, every significant relationship between a general trait and a role outcome after controlling for the role identity trait was in the "counter-intuitive" direction, with residuals of general Extraversion and Emotional Stability being associated with a less positive experience in the organization or lower performance. As residuals of highly correlated

variables measured on the same scale are similar to difference scores, these findings indicate that seeing oneself as less extraverted (lower positive affect) or emotionally stable (more negative affect) in a role than in general is associated with a more negative role experience. Nonetheless, the results are consistent with our hypothesis that role-identity traits fully mediate the direct relationship of the general traits with these role criteria.

WAVE 2 ANALYSES: LONGITUDINAL EXTENSION OF THE PRISM

Preliminary Longitudinal Analyses

Attrition. Before beginning the investigation of longitudinal hypotheses concerning the PRISM, we first examined the extent to which selection effects caused the longitudinal subsample to vary significantly from the larger cross-sectional sample. Attrition analyses found participants who completed both surveys to be different from individuals who only completed the first survey on 1 of the 20 variables measured in our materials at Wave 1. Individuals who participated in both studies reported more burnout in their key role at the administration of the first survey ($M = 2.76$ and 2.30, respectively; $t(118) = 2.75$, $p < .05$). No other variables were significantly different between the two groups.

Romantic relationship consistency. Investigation of the romantic relationship data suggested that the ratings were not appropriate for longitudinal analyses. Only 19 (30%) of the respondents reported being in a relationship at both Time 1 and Time 2, while 16 (26%) had started a relationship after being single at Time 1. Another 5 (8%) reported being single after being in a relationship at Time 1, and 22 (36%) reported being single through both time periods. In short, over 40% of the ratings were obtained from people who would be making fully retrospective ratings of romantic relationships rather than actual relationship experiences that occurred during the 6-month period. Given the relatively small resulting subsample for the romantic role identity, we limited our analyses to the key role identity, which we will refer to simply as the *role identity*.
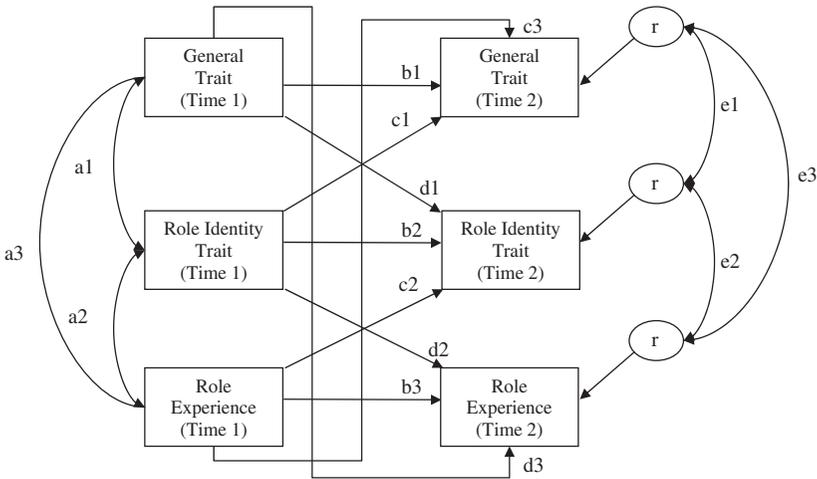
Figure 2
Conceptual model for analyzing longitudinal multilevel relations of the PRISM.

Framework for analyzing change across time. In moving to analyze the longitudinal implications of the PRISM, we determined that the two-wave, three-level data structure would be better served with path analysis. A relatively simple model of the longitudinal relationship between general traits, role-identity traits, and role experiences is shown in Figure 2, and it will serve as the basis of the analyses that follow.

The cross-sectional paths considered earlier in Wave 1 constitute the nondirected paths labeled "a" in the model. When the PRISM is considered longitudinally, this model demonstrates that the general identity, role identities, and role experiences may be related across time through various paths. The "b" paths represent the autocorrelations between same levels of the model over time, demonstrating the degree of test-retest stability in the measures. The "c" paths represent *prospective change* paths and are the strongest longitudinal operationalization of the bottom-up hypothesis concerning the transmission of lower-level information to higher levels of the identity structure. A significant "c1" path, for instance, would suggest that the general identity continues to be modified by role identity characteristics over time. Conversely, the "d" paths represent similar tests of prospective paths for top-down effects. Finally, the "e" paths represent the correlations between residuals of the measured variables at Time 2, where all antecedent paths are controlled (Guay, Marsh, & Boivin, 2003;

Roberts & Bogg, 2004). These final paths reflect the relationship between changes over time in one level and changes over time in a second level and operationalize *contemporaneous change* effects. Unlike prospective change effects, the direction of these contemporaneous effects cannot be inferred statistically. For example, a significant e2 path would suggest that changes in role-identity ratings and changes in role experiences are related over the 6 months between assessments but would not indicate whether change in role identities caused change in role experiences or vice versa.

The following analyses involved examining progressive segments of the structural model outlined in Figure 2 to test our longitudinal hypotheses concerning the PRISM. We focus on the domains of Extraversion and Emotional Stability because of the strong relationships between these traits and the outcomes at Time 1 (see Table 3). A full correlation matrix between the Extraversion, Emotional Stability, and the key role performance and positive experience measures among individuals who completed both surveys is displayed in Table 4 and serves as the basis for the analyses that follow. The path analyses were conducted by first specifying only the three Time 1 cross-sectional correlations (the "a" paths) and then entering the Time 2 variables and adding only the stability coefficients (the "b" paths) to explore whether the three levels of the PRISM are differentially stable. We next entered prospective change paths leading from Time 1 variables to Time 2 variables on different levels by simultaneously adding the prospective "c" and "d" paths. Finally, we entered the paths labeled "e" in Figure 2 to test for contemporaneous change effects, or correlated change among the residuals in the structure.

Consistency of General, Role-Identity, and Role-Experience Levels

We hypothesized that general traits may be more consistent than role-identity traits, which, in turn, are more consistent than role experiences. To assess the relative consistency of variables at the general, role-identity, and role-experience levels, the variables were standardized, and then the consistency paths (the "b" paths in Figure 2) were entered into a structural equation model. This and all subsequent path models were run using AMOS 5 with maximum likelihood estimation, and all results are reported as beta coefficients or as correlations.

Contrary to expectations, we found comparable stability between the general and role-identity ratings of Extraversion and Emotional

Table 4

Correlations Between Extraversion and Emotional Stability Traits and Key Role Outcomes Across Time (From Wave 2 Subsample)

	Scale	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1.	Gen Extraversion (T1)	3.55	.52	—	.27	.74	.08	.15	.35	<u>.74</u>	.14	.54	.10	.26	.26
2.	Gen Stability (T1)	3.18	.58		—	.37	.77	.14	.41	.16	<u>.71</u>	.19	.63	.14	.31
3.	KR Extraversion (T1)	3.55	.50			—	.18	.20	.43	.67	.20	<u>.72</u>	.12	.20	.22
4.	KR Stability (T1)	3.26	.60				—	.31	.51	.01	.66	.08	<u>.79</u>	.19	.39
5.	KR Performance (T1)	3.42	.64					—	.29	.16	.00	.20	.26	<u>.32</u>	.22
6.	KR Pos.Experience (T1)	3.45	.72						—	.31	.35	.34	.44	.26	<u>.42</u>
7.	Gen Extraversion (T2)	3.53	.48							—	.12	.73	.08	.32	.36
8.	Gen Stability (T2)	3.19	.44								—	.20	.68	.09	.32
9.	KR Extraversion (T2)	3.56	.51									—	.24	.34	.39
10.	KR Stability (T2)	3.20	.60										—	.42	.50
11.	KR Performance (T2)	3.52	.84											—	.52
12.	KR Pos.Experience (T2)	3.65	.82												—

Note: $N = 62$ for all cells. T1 = Time 1, T2 = Time 2, Gen = General Identity, KR = Key Role Identity. *$p < .05$. Test-retest correlations are underlined.

Stability. General ratings of Extraversion showed high stability ($\beta = .74$, $SE = .09$, $p < .05$), as did role-identity ratings ($\beta = .72$, $SE = .09$, $p < .05$). When equality constraints were placed on the Extraversion stability coefficients, this did not lower the fit of the model relative to the unconstrained model ($\Delta\chi^2_{(1)} = 0.04$, $p = .84$) indicating that the general and role-identity characteristics were equally stable. Emotional Stability also showed high stability for general ratings ($\beta = .71$, $SE = .09$, $p < .05$) and for role identities ($\beta = .79$, $SE = .08$, $p < .05$). Again, constraining the two paths to be equal did not significantly decrease the fit of the model ($\Delta\chi^2_{(1)} = 0.5$, $p = .48$), indicating that general and role-identity ratings were comparably stable over time.

On the other hand, the two role experience variables showed lower levels of consistency than either the general or role-identity ratings. Role positive experience showed only moderate stability ($\beta = .42$, $SE = .12$, $p < .05$), as did performance ratings ($\beta = .32$, $SE = .12$, $p < .05$). When the stabilities of role experience variables were separately constrained to be equal to the average stability of role and general extraversion ratings (i.e., the less stable matching trait ratings were constrained to be equal), model fit significantly decreased for role positive experience ($\Delta\chi^2_{(1)} = 5.3$, $p < .05$) and for role performance ($\Delta\chi^2_{(1)} = 8.6$, $p < .05$). These results indicate that while general and role-identity ratings are comparably stable, both self-structures are more stable than the role experiences. It should be noted also that the positive role experience measure was as internally consistent as the identity trait measures, indicating that the differential stability of role experiences is not attributable to differential amounts of internal consistency within the ratings.

Change in General Traits, Role-Identity Traits, and Role Experiences Over Time

Prospective change. To examine these prospective change relationships between general and role-identity traits, we first entered the c1 and d1 paths to the path model that included the "a" and "b" paths (without constraints). When these paths were entered, we found prospective relationships from Time 1 role-identity traits to Time 2 general traits for both extraversion ($\beta = .28$, $SE = .12$, $p < .05$) and the same effect for emotional stability ($\beta = .27$, $SE = .14$ $p < .05$), suggesting that general trait change from Time 1 to Time 2 could

be predicted by role-identity traits at Time 1. We did not find the reverse relationships, where general extraversion or emotional stability related to later changes in the matching role-identity traits ($\beta = .02$, $SE = .12$, and $\beta = .06$, $SE = .13$, respectively, $ps > .60$). These findings suggest that the direction of change between role identities and general identities may be more from the bottom-up than the top-down. When other pairs of relations were examined separately (i.e., the c2 and d2 paths, and c3 and d3 paths) for the role outcomes, no other significant relationships were found (all βs $\leq .23$, $ps > .07$), indicating that prospective relationships between general or role-identity traits and the role experience variables were either negligible or could not reliably be observed in the small current sample.

Contemporaneous change. These relationships are denoted by the "e" paths between variable residuals in Figure 2, which were added to the model tested above (with all "c" and "d" paths specified) to create a saturated "full-forward" longitudinal SEM model (Marsh, Byrne, & Yeung, 1999). As these residuals are contemporaneous, they are interpreted in the strict correlational sense and causality cannot be inferred. We first assumed that change between the levels of the PRISM would be correlated. As expected, change in general Extraversion was related to change in role extraversion ($r = .53$, $p < .05$), and change in general Emotional Stability was correlated with change in role emotional stability ($r = .36$, $p < .05$). These results indicate that general and role-identity trait change was correlated, although not indicating the source of this relationship.

Further, as with the cross-sectional model, we expected that the correlated change relationship between role experiences and role-identity traits would be greater than those between role experiences and general identity traits (i.e., path e2 > path e3). We thus investigated the relative strength of the correlations between change in role-identity and general traits with change in role experiences. As expected, change in role Extraversion was related to change in role experiences for the four variables we assessed. Change in role Extraversion was significantly related to change in role positive experience ($r = .35$), and role performance ($r = .28$). On the other hand, change in general Extraversion was related to role positive experience ($r = .28$), but not role performance ($r = .20$, $p = .13$). Similarly,

changes in role Emotional Stability were significantly related to changes in role positive experience ($r = .45$) and role performance ($r = .46$), while change in general Emotional Stability was unrelated to both role positive experience ($r = .10$, $p = .44$) and role performance ($r = .03$, $p = .84$). Despite the fact that relationships between role-identity traits and role outcomes were somewhat larger than relationships between general-identity traits and role outcomes in all cases, however, when we constrained the e2 and e3 paths to be equal, this significantly reduced the fit of the model in only one of these four cases: the relationship between changes in role performance and changes in Emotional Stability ($\Delta\chi^2_{(1)} = 8.8$, $p < .05$; all others $\Delta\chi^2_{(1)} \leq 2.4$, ps $> .12$). In summary, we found promising but inconclusive support of our expectation that the most distal levels of the PRISM (i.e., role experiences and general traits) should show smaller correlations between each other, whether cross-sectionally or with longitudinal change, than the same levels would show with relevant role identities.

Illustrative Final Models

We present two final, illustrative "full-forward" longitudinal path models of the PRISM for Extraversion and Emotional Stability's relationship with role positive experience. Figure 3 shows the manifest variable path model for Extraversion and also the model for Emotional Stability. Note that the values associated with the different paths are not the same as those reported earlier in the results; this is due to the earlier results being reported from models with fewer paths specified (e.g., the "b" paths were reported without the "c," "d," or "e" paths included, and the c1, c2, and c3 paths were tested separately). In both models, change in role-identity traits was related to both change in general traits and role experiences contemporaneously (all rs $\geq .35$, ps $< .05$); however, general traits and role experiences showed somewhat lower relationships (rs $\leq .28$). In turn, the strongest prospective effects in both cases involved antecedent standing on role identities predicting change at the general identity level (βs $\geq .27$, ps $< .07$). In both models, having a more positive role experience over time was associated with increases in role-identity traits of Extraversion and Emotional Stability, and both antecedent standing on these role-identity traits and increases in role-identity traits over time were associated with increases in general trait levels
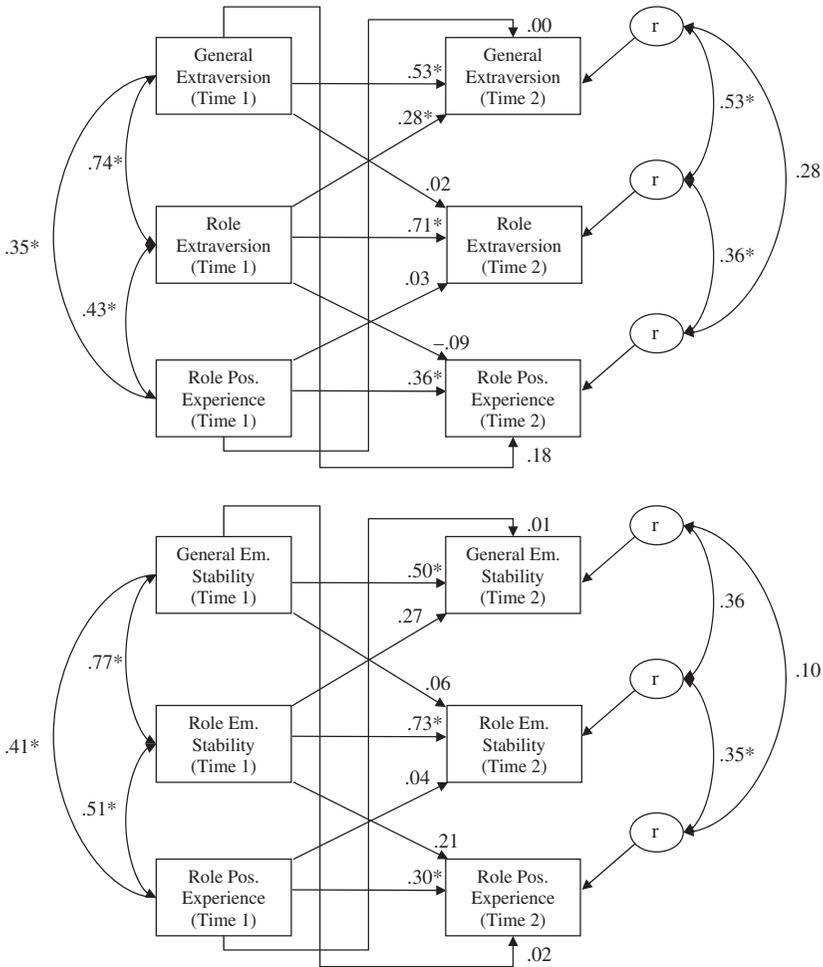
Figure 3
PRISM models for Extraversion and Emotional Stability With Role
Positive Experience.

over time. The existence of both contemporaneous and prospective change relationships existing between different levels of the hierarchy and similarly across two relatively unrelated personality traits ($r = .27$ and $.12$ at Time 1 and Time 2, respectively) supports our conception of the PRISM is a dynamic structure that can help to explain the effect of role experiences on personality trait development, even over short periods of time.

DISCUSSION

The cross-sectional analyses in Wave 1 provided some support for the central ideas underlying the PRISM approach to assessment. Most significantly, we found support for the hypothesized relations between general and role identities within the PRISM. Trait ratings made in the two distinct role identities we assessed were highly correlated, but these relationships were substantially reduced when controlling for the trait ratings made at the general level. This supported our hypothesis that the general identity could account for commonalities in the different identities that an individual possesses across role domains. Further, the hypothesized function of role identities as an intermediary of the relationships between personality traits and role experiences was supported. The relationships between traits and role criteria were regularly stronger at the role-identity level than in the general level, and controlling for traits assessed at the role-identity level regularly reduced the relationship between role criteria and the same traits assessed at the general personality level.

In a short longitudinal follow-up of the sample, we were able to find support for several of the developmental implications of the PRISM. For example, role experiences were less stable than either general or role-identity traits. We found no evidence, however, that general level traits were more stable than role-identity traits. This is not without precedent. For instance, Marsh and Yeung (1998) found that measures of specific self-competencies in school (e.g., "I am good at math") were as stable as more general competence ratings (e.g., "I am good at most school subjects"), and Pierce and Lydon (2001) found relationship-specific attachment styles to be as stable as general attachment styles. Together, the findings suggest that differential stability may not be a necessary quality of self-perceptions varying in situational breadth.

We also found some support concerning the interplay of levels of the PRISM over time. Consistent with our expectations, the correlated change findings showed that change at one level of the hierarchy was associated with change in contiguous levels of the hierarchy over six months. As expected, changes in role experiences were related to changes in role identities, while changes in role-identity traits, in turn, were highly correlated with change in general traits. Additionally, in considering prospective change paths, we found evidence that role-identity traits are gradually assimilated into the general identity, as

antecedent standing on role-identity traits predicted changes in the same general traits over time. This finding gives important indications that the bottom-up processes that are being found for life satisfaction (Heller et al., 2004) the academic self-concept (Guay et al., 2003), and attachment systems (Pierce & Lydon, 2001) have parallel counterparts in personality trait development.

Implications, Limitations, and Conclusions

Although James (1890) argued that an individual "has as many different social selves as there are distinct groups of persons about whose opinion he cares," Allport (1937) replies that this "decidedly overstates the case" (p. 146) and that individuals are likely to see themselves quite similarly across multiple contexts. In the present study, we found that while individuals can report on distinct selves, the relationship between how an individual sees oneself in different contexts for any given trait is likely to differ more in degree than in kind. Recognizing this connection between general and domain-specific identities serves to inform the debate concerning the appropriate level of analysis that should be used to assess dispositions in personality psychology. On one side, many theorists have come to emphasize domain-specific self-conceptions over the "decontextualized" self (Cervone, 1999; Mischel & Shoda, 1995). On the other hand, Funder (1991) suggested that general traits may possess causal power in explaining behavior and that, ironically, domain-specific traits are the constructs that suffer most from the criterion-predictor or circularity problem that social cognitive psychologists have leveled against general traits (e.g., Bandura, 1999; Cervone, 1999). While the present study and others have found that appropriate role identities can often predict role outcomes better than general ratings that would be predicted by these theorists, we also found that the general trait ratings demonstrated a breadth in predicting outcomes across role domains that the role-specific ratings did not.

Despite finding preliminary support for most implications of the PRISM, this study did have a number of methodological limitations. First, the key role was defined variously as the participant's role on a sports team, in a classroom, or in a fraternity or other club. A narrower definition of the key role identity to a single group would have permitted more in-depth measurement of role experiences. Although proposed as a structure that can be used to understand change

relationships across a range of role experiences and traits, the role experiences assessed in the present study were limited to general positivity of experience and role performance. Future investigators will want to expand the role outcomes assessed to include ones that are not simply self-reported. Some natural possibilities include peer reports and behavioral observations, formal roles within groups (e.g., club president or secretary), and so on.

Other limitations were associated with the longitudinal analysis. The longitudinal analyses were particularly underpowered and consequently could not serve as an adequate test of many of the developmental hypotheses associated with the PRISM structure. This appeared to be particularly true for some of the tests of differences in correlations or for indirect relationships, such as the hypothesis that change in role experiences was related to change in role identities, which, in turn, was responsible for change in the general identity. Additionally, while many processes thought to underlie the PRISM are directional, such as this upward filtration of role experiences to the general self-concept, the longitudinal findings more regularly showed nondirectional correlated change (the ''e'' paths in Figure 2) than prospective change (the ''c'' or ''d'' paths). While the existence of these paths indicate that transactions are occurring among different levels of the PRISM over time, correlated change findings cannot give clear evidence as to whether the nature of the transactions is top-down, bottom-up, or even due to third variable confounds. This question may be addressed by varying the length of time between assessments and adding additional waves of data. If the effects of role experiences on role identities are transmitted quickly (e.g., failure or success in a role has an immediate impact on one's role identity), issues of direction may be resolved in studies with short time spans between assessments, such as with experience sampling or daily diary studies. While the current study gives indications that levels of the PRISM are changing in parallel, these limitations within the current study leave questions concerning the direction of this influence across these levels.

Much of the research concerning the relation between role experiences, role identities, and the general personality remains to be done. For example, longitudinal studies of the PRISM with the assessment of a greater number of role domains would provide more definitive tests of overflow of experiences from one domain to another over time. Moreover, future research could investigate the

factors that moderate translation of changes at one level into changes at another. A number of coping and defense strategies, for example, may be employed to facilitate or inhibit the influence of a negative experience on one's self-views (Roberts & Wood, in press). Research in social cognition also suggests a number of other implications for the PRISM. For instance, more levels within the hierarchy could be theoretically specified (Kilhstrom & Cantor, 1984). Although we purposefully selected two distinct role identities here, it may be desirable in some cases to assess more specific, related role identities. For instance, "How I act with my manager" may be a lower-order identity nested under "How I act at work," in much the same way that both are lower-order identity structures of the general identity. Future research could investigate how diverse types of identities of differing specificity (e.g., role identities, relational selves, reflected appraisals, and so on) are related to one another and to the general identity. Although more research is clearly needed, the greater integration of role identities into our understanding of personality suggested by the PRISM may offer a number of useful avenues for understanding the relationship between life experiences and personality traits.

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