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Generativity in Multiple Roles

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Interest in the Eriksonian notion of generativity and its role in the lives of mature adults has recently increased. In the present study, we examined generativity separately in the roles of wife, worker, and mother, and examined the utility of our strategy relative to more global measurement strategies in explaining variation in well-being. Two samples of employed mothers were studied, one sample employed in private industry and the other in a university setting. Statistical analyses demonstrated that measurement equivalence existed across the two samples (i.e., that the patterns and magnitudes of factor loadings did not differ significantly). For 8 of 11 indices of well-being examined across the two samples, role-specific measures of generativity explained significantly greater variation than did global measures.

KEY WORDS: Adult development; women; generativity; roles; work.

> Matured adulthood, then, means a set of vital involvements in life's generative activities . . . . Some such combination [of generative ways] must assure the vitality of an order of care to those wide areas of adult involvements which, according to a Hindu expression, guarantee the "maintenance of the world." All this, in short, leads to a participation in areas of involvement in which one can learn to take care of what one truly cares for. (Erikson, Erikson, & Kivnick, 1986, p. 50)

INTRODUCTION

Interest in the Eriksonian notion of generativity and its role in the lives of mature adults has recently increased (see, e.g., Hamachek, 1990; Kotre, 1984; McAdams, 1988; McAdams & de St. Aubin, 1992; McAdams, de St. Aubin, & Logan, 1993; McAdams, Ruetzel, & Foley, 1986; Ochse & Plug, 1986; Peterson & Stewart, 1990; Ryff & Heincke, 1983; Snarey, 1993; Van de Water & McAdams, 1989). Occupying much of adulthood, generativity concerns focus on "establishing and guiding the next generation" (Erikson, 1963, p. 267). Generative expressions may include productivity and creativity in addition to procreativity (i.e., guiding one's own children). In addition, the basic strength or virtue of care is associated with generativity whereby generative individuals take care *of* what they care *for* (paraphrased from Erikson et al., 1986).

Although generativity has sometimes been considered a traitlike characteristic transcending contexts (suggested by the use of personality trait inventories to measure generativity; e.g., Ryff & Migdal, 1984), there are suggestions that generativity may be more or less possible in certain circumstances. Neugarten (1968a) observed that "the higher the individual's career position the greater was [his] willingness to explore the various issues and themes of middle age" (p. 94). Thus, generative expressions are likely to vary across roles or settings depending upon both internal and external circumstances.

Ryff (1987) has characterized as "unfortunate" the lack of attention to social roles and macrolevel social influences in personality research. Consistent with her call for renewed attention to links between personality and social structure, scholars recently

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have suggested more complex ways of thinking about role involvements and generativity (Josselson, 1987). For example, McAdams and de St. Aubin (1992) have distinguished generative concern from commitment and behavior, recognizing that generative *goals* may be distinct from generative *action*. Stewart and Gold-Steinberg (1990) discussed the "breadth of experiential worlds" in their qualitative study of three politically generative women. Van de Water and McAdams (1989) established a link between life commitments and global generativity.

This research represents another effort to link social roles and midlife development. We examined generativity separately in the context of three roles and compare the utility of our measurement strategy relative to more global measurement strategies in explaining variation in well-being. We applied our strategy to two samples of women who were all workers, wives, and mothers.

This role-specific strategy was inspired by Waterman (1985), who has pointed out that different facets of identity may develop at different rates during adolescence and, thus, should be attended to separately. Midlife researchers have echoed Waterman in their calls for greater recognition of the importance of understanding adult development in the context of multiple roles (Archer, 1992; Hornstein, 1986; Josselson, 1987; Juhasz, 1989). Kroger and Haslett (1991), for example, have provided empirical evidence of significant intraindividual variability across identity domains over the life course. The utility of domain-specific measures has been demonstrated in aging research by Lachman (1986), who showed that domain-specific measures are more sensitive to changes related to aging and their correlates. Lachman's results led her to conclude that "age differences can be more clearly and consistently defined with domain-specific measures" (p. 39). Understanding individual differences in intraindividual patterns of perceived generativity across domains or roles may illuminate some of the complexities of adult development.

A role-specific strategy avoids two potential problems encountered in the study of generativity. One problem is that it is difficult to separate generativity from occupancy of particular roles—parents, for example, might seem more generative than nonparents simply because they have children. Vaillant and Milofsky articulated this dilemma in their 1980 study in which clinicians assigned generativity ratings based in part on subjects' occupancy of roles in which they had responsibility for other adults. Erikson and others have emphasized, however, that occupying a role is not necessarily a perfect indicator of, or substitute for, the quality of experience in that role (Barnett & Baruch, 1985; Baruch & Barnett, 1986).

A different problem arises when measurement strategies are adopted which try to isolate generative expression by referring to behaviors that may occur in a *variety* of roles [e.g., "I help people to improve themselves" (Ochse & Plug, 1986); "I am proud of what I have accomplished" (Darling-Fisher & Leidy, 1988)]. With these strategies, interrole variation, if it exists, will not be evident.

We have focused specifically on women because women's development during middle age, in spite of increasing attention, has been understudied (Gergen, 1990). Neugarten (1968b) and Merriam (1979) have lamented a scarcity of well-controlled cross-sectional studies, which would lay foundations for good theory by providing careful descriptions of relevant phenomena. Progress toward understanding women's development during midlife has been hampered by emphases on biological determinism and chronological age, which ignore much of the variability in women's lives (Archer, 1992; Barnett & Baruch, 1978). For example, early studies of women's midlife experiences focused on menopause, based on an unfounded assumption that women would experience a crisis as they lost the ability to bear children (Neugarten, Wood, Kraines, & Loomis, 1968). Specifically with regard to generativity, "it has been generally assumed that women's major generative role is motherhood" (Stewart & Gold-Steinberg, 1990, p. 544; see also Gergen, 1990; Neugarten, 1968a). Such stereotypes have not been limited to research on women: "The core assumption has been that work is [men's] chief activity, their 'master role,' the very essence of what makes them men" (Cohen, 1978, p. 57). A more valid view may be that adult men and women derive their identities from *both* work and family.

In addition to becoming more inclusive with regard to which roles are being examined, it is important to attend to a variety of generative expressions. Several scholars (e.g., Kotre, 1984; McAdams, 1988; McAdams et al., 1986; Peterson & Stewart, 1990, 1993; Stewart, Franz, & Layton, 1988; Stewart, Franz, Paul, & Peterson, 1991) have focused on the degree to which generative expressions are "agentic" (i.e., self-asserting and directed toward mastery) or "communal" (i.e., affiliative and directed toward connection with others) and the possible need for balance between them (Stewart & Malley, 1987). Kotre

(1984) and Snarey (1993) have focused on multiple loci of generative expression, including biological, parental, and societal targets.

The approach with which this study is perhaps most conceptually aligned is exemplified in a series of empirical examinations of the fiction, diaries, and letters of British writer Vera Brittain. Diverse generative themes were identified from Erikson's work and then tracked over time in the documents. The four themes were *productivity* (for Brittain, also a creative act), *parenting, caring for others,* and *a need to be needed.* Generativity in different domains ebbed and flowed during World War II as Brittain context and roles shifted (e.g., with the departure and return of her children).

In the present research, we have considered five generative themes: *productivity, procreativity or guiding the next generation, creativity, nurturance or care,* and *mastery or achievement.* The first four themes are explicitly mentioned by Erikson as manifestations of generativity (Erikson, 1963; Erikson et al., 1986; Hulsizer et al., 1981). The last theme was chosen because it is implicated in the work of generative individuals "to develop and maintain those societal institutions and natural resources without which successive generations will not be able to survive" (Erikson et al., 1986, pp. 73–74).

In an earlier investigation (MacDermid, Heilbrun, & De Haan, in press), we explored two generative themes, procreativity and productivity, in the industry sample used in the present study and a subsample from Baruch and Barnett's (1978) research on women in the middle years. Our findings showed that levels of generativity varied significantly across roles and that the strength of interconnections between generativity and well-being varied across roles. In the present study, we examined all five generative themes of interest with the primary aim of comparing the utility of role-specific and more global measures of generativity in accounting for variation in well-being. We again expected women's reports of generativity and the strength of connections between generativity and well-being to vary across role domains.

METHOD

Participants

Two samples were used in this research; all data were collected during 1991 and 1992. In order to control role occupancy, women were selected for each sample who were involved in all three of the following roles: worker, wife, and mother.

Industry sample

All employees (n = 367) of a medium-sized bank in a community of approximately 50,000 people were invited to participate in a study of families and jobs, in their workplace and during work time. Screening questionnaires administered to the 257 employees who volunteered for the study (70%) identified individuals who had worked at the bank for at least 6 months, who lived with a spouse or partner, and who had children no younger than 6 years of age. Of the 68 women that satisfied these conditions, 59 (87%) completed longer questionnaires tapping well-being, role-specific and global generativity; the 49 women aged 35 years or older were included in the sample for the present research. (We chose to limit our sample in terms of chronological age and family stage to ensure that all members of the sample were, demographically at least, truly "midlife" according to most definitions.) Background characteristics of the generally middle-class and predominantly European-American sample are described in Table I. All participants had between one and seven children ranging in age from 6 to 43 years.

University Sample

Participants here were all employees of a large midwestern university. To include respondents at a wide variety of occupational levels, individuals working in several schools (e.g., education, health sciences) and administrative units were invited to participate in a study of work and family life. All employees in each unit (total n = 1,000) were sent letters and forms from a university office on which to indicate interest and eligibility information. Of the 536 employees who returned the screening forms, the 298 employees who reported having youngest children 6 years of age or older and were willing to participate were sent a questionnaire [97 additional employees with children under 6 years were included in a different study (Buchanan, 1993)]. Fifty-four percent (n = 161) of the eligible respondents with children school-aged or older returned completed questionnaires; of these, 87 were

Table I. Demographic Characteristics of Samples (Sample Sizes Vary Because of Missing Data)

	Industry sample				University sample				
	n	Mean	*SD*	Range	*n*	Mean	*SD*	Range	Test (*t*)
Age in years	48	43.7	6.9	35–62	87	42.6	5.6	35–64	n.s.
Number of children	49	3.0	1.7	1–7	85	1.9	0.7	1–4	4.3[f]
Age of youngest child	49	17.1	6.4	6–30	84	12.5	4.5	6–26	4.4[f]
Education[a]	49	2.7	0.9	2–5	84	3.7	1.7	1–7	4.9[f]
Hours worked per week	49	39.9	7.3	16–55	86	41.3	9.0	20–80	n.s.
Occupational prestige[b]	49	47.7	7.6	26–72	84	46.6	14.8	22.3–73.5	n.s.
Annual income (000s)[c]	49	16.6	7.5	3–40	72	19.1	7.9	2.8–40	n.s.
Spouse education[a]	49	2.9	1.3	1–7	83	3.8	1.8	1–7	3.2[e]
Spouse's job prestige[b]	47	42.3	13.1	16–78	78	49.5	15.5	22.3–86.1	2.7[e]
Spouse's income (000s)	38	29.2	11.9	9.6–64	70	35.8	17.5	8–100	2.3[d]

[a]Education was indicated using the following categories: 1 = some high school or less; 7 = postgraduate work beyond master's degree.
[b]Occupational prestige was indicated using the N.O.R.C. codes which assign values in the 20s to service workers and clerks, in the 40s to sales representatives and bookkeepers, and in the 70s to managers and college and university school teachers.
[c]Three outliers with values between $58,997 and $114,000 were excluded from respondents' annual income information in the university data; information on them included: $20,353.4 (11, 151.7) 2,791–114,000 2.2[d].
[d]$p < .05$.
[e]$p < .01$.
[f]$p < .001$.

married mothers with complete generativity data and were included in the current investigation.

As Table I shows, although both samples were middle class, the university sample appeared to have a socioeconomic advantage over the private-industry sample. The women in the university sample had fewer children and their youngest children were significantly younger than those of the women in the industry sample. Although women in the university sample were more educated, their work hours, job prestige, and income did not differ from the women in the industry sample. The husbands of women in the university sample, however, were significantly more educated, and had higher job prestige and greater incomes than the spouses of women in the industry sample. The availability of higher education to the families of women in the university sample at reduced cost may explain some of these demographic differences. It is also possible that applicants for positions at the university required more education in order to be considered qualified.

We do not consider our samples to be "matched"; rather, we see their socioeconomic diversity as increasing the rigor of the test of our role-specific measures of generativity across the samples.

Measures

Role-Specific Generativity

Measures of generativity in the worker, parental, and spousal roles were constructed using items developed by Baruch, Barnett, and Rivers (1983) to indicate respondents' perceived rewards and concerns in each role. A total of 38 items about the worker role, and 30 and 37 items about the parental and spousal roles, respectively, were administered. All items for a particular role appeared in one section in our questionnaires, but these sections were separated by items measuring other constructs. Based on scholarly literature (Erikson, 1963; Erikson et al., 1986; Hulsizer et al., 1981; McAdams et al., 1986; Ryff & Heincke, 1983), our research team chose one reward and one concern item to represent the best example of each of five possible ways of being generative within each role (productivity, procreativity, creativity, mastery, and care), yielding 10 items for each role. For example, "Feeling proud of how they are turning out" and "Disappointment in what they are like" were our a priori choices of items reflecting the productivity aspect of generativity in the parenting role.

In order to gain some sense of the validity of our a priori selections, we distributed three card decks, each containing the whole pool of items for a particu-

lar role, to three judges (two female and one male, ranging in age from about 30 to 50 years). The judges were instructed to select the five reward and five concern items in each role that best exemplified the five generative expressions. The judges all were familiar with the concept of generativity (e.g., two judges had published in the area of adult development and one was a specialist in gerontology) and each of them read the descriptions we had used to make our a priori selections. After the judges had made their item selections, we calculated percentage agreement [agreements/(agreements + disagreements)] and Cohen's kappa (percentage agreement corrected for chance; Cohen, 1960). Percentage agreement ranged from 68% to 87%, with an average of 78%; Cohen's kappa ranged from .22 to .62, with a mean of .43.

Since our initial interrater reliabilities were only fair (Fleiss, 1981; described in Bakeman & Gottman, 1986), we examined the judges' ratings and when at least two of the judges chose a particular item to represent an aspect of generativity that differed from our a priori choice, we altered our choice to conform to that of the judges. We then calculated adjusted agreement and kappa coefficients. Adjusted agreements ranged from 76% to 92% with a mean of 84%; adjusted kappa coefficients ranged from .32 to .77, with a mean of .59. We consider our adjusted interrater reliabilities to be adequate (Fleiss, 1981; described in Bakeman & Gottman, 1986). Since agreement required that the judges not only agree that a given item reflected generativity, but also which specific aspect of generativity was indicated, the adjusted values may be considered somewhat conservative. A list of the final items selected appears in the Appendix.

It is important to note that the pools of items used to construct our role-specific measures were not identical across roles. Although the item differences across roles raises the possibility of variation in the meaning of generativity across roles, such instability is not eliminated simply by applying the same words to what may be quite different contexts. We relied on our judges to identify those items that best exemplified generativity from pools of items that had been designed specifically for the roles in question.

Establishing Measurement Equivalence

In order to determine whether the measures of role-specific generativity were comparable in the private-industry and the university samples, the factor structures in each sample were compared using LISREL VII software (Joreskog & Sorbom, 1988). We conducted maximum-likelihood tests of a series of nested models, as recommended by Joreskog (1979). Each model specified the same pattern of factor loadings in which reward and concern items loaded on separate but correlated factors. The first model tested the hypothesis that the magnitudes of the loadings of items on the factors were *not* equal across the samples (an "unconstrained" model); the second model tested the hypothesis that loadings *were* equal (a "constrained" model). Measurement equivalence is usually said to exist across samples if the difference between chi-square tests of the fit of each model (a change in chi square test) is not significant. When equivalence has been established, the adequacy of the fit is assessed using criteria including: a chi square/degrees of freedom ratio of less than 2.0 (Joreskog, 1979; Tanaka & Huba, 1984); a goodness-of-fit (GFI) index of .85 or better (Barnett, Marshall, & Sayer, 1991); root mean square residuals (RMSRs) less than .10 (Rupp & Segal, 1989); and t-tests of the significance of each individual factor loading.

Because the sample size did not permit simultaneous estimation of the fit of the model to the data for all roles, each was analyzed separately. In order to maximize fit, it was necessary to drop one item from the worker role (this item is shown in bold in the Appendix). As shown in Table II, the change in chi square from the unconstrained to the constrained model was nonsignificant in all roles. We, thus, concluded that the patterns and magnitudes of factor loadings were equivalent in the industry and the university samples.

Turning to assessment of the adequacy of fit of our model to each of the data sets, all root mean square residuals were less than .10. The ratio of chi square to the degrees of freedom was 2 or less in all cases. Goodness-of-fit indices were .84 or better in the university sample and .82 or better in the industry sample. Further, all the items in all the roles loaded significantly on the respective factors. Based on these results, we did not reject the equivalence model. Although the fit likely could have been improved by permitting some correlation among the error terms for the items, there was no clear theoretical rationale for doing so and we thus took the more conservative approach of constraining all such correlations to zero.

Scale scores for role-specific generativity were calculated by reverse-scoring the negative items and summing all 10 items. Sums were used rather than factor scores because they are easier to interpret and

Table II. Change in Chi Square Across Unconstrained and Constrained Measurement Models

			Industry[a]		University		
χ^2/df	χ^2	(df)	GFI	RMSR	GFI	RMSR	Change in $\chi^2(df)$
			Parental role				
1.8	121.3[b]	(68)	.83	.07	.86	.06	
1.7	130.3[b]	(76)	.82	.08	.85	.06	8.99 (8)
			Spousal role				
1.4	97.5[b]	(68)	.85	.06	.91	.04	
1.5	111.1[b]	(76)	.82	.09	.90	.06	13.58 (8)
			Worker role				
2.0	106.0[b]	(52)	.90	.03	.85	.06	
2.0	119.2[b]	(59)	.86	.05	.84	.07	13.17 (7)

[a]GFI = goodness-of-fit index; RMSR = root mean square residuals.
[b]$p < .01$.

Table III. Characteristics of Measures

	No. of items	Possible range	Industry sample				University sample				
			Mean	*SD*	Range	Alpha	Mean	*SD*	Range	Alpha	*t*-Test
Predictor variables											
Global generativity[a]	9	10–50	37.7	4.9	26–50	.63	39.5	5.1	26–50	.69	2.0[c]
Global generativity[b]	16	16–96	75.6	6.2	63–95	.57	—	—	—	—	—
Role-specific generativity											
Worker	9	10–40	32.2	3.0	26–39	.62	31.5	4.9	16–40	.78	n.s.
Spouse	10	10–40	31.1	5.9	17–40	.87	30.7	5.1	20–40	.84	n.s.
Parent	10	10–40	32.4	3.6	25–40	.56	31.9	4.2	20–40	.75	n.s.
Outcome variables											
Locus of control	7	7–28	21.8	3.8	14–28	.76	—	—	—	—	—
Self-esteem	10	10–40	34.9	4.8	20–40	.84	—	—	—	—	—
Depression	11	11–44	15.1	4.0	11–24	.84	17.6	5.7	11–36	.88	2.9[d]
Life satisfaction	9	8–56	43.0	9.0	25–56	.96	42.5	8.4	15–56	.91	n.s.
Role strain (n = 82)	16	16–80	—	—	—	—	45.9	9.3	21–70	.82	—

[a]Darling-Fisher & Leidy (1988).
[b]Ryff & Heincke (1983).
[c]$p < .05$.
[d]$p < .01$.

because weighting is "seldom worthwhile," according to Gorsuch (1983, p. 269). For scales from which an item had been dropped, scores were prorated to be consistent with the other scales. Cronbach's alphas and other information about each of these measures are included in Table III. Alphas ranged from .56 to .87, with a mean of .74. The role-specific scales were all significantly correlated with one another in the university sample (*r*s of .26, .24, and .21, $p < .05$); in the industry sample, only parent and partner generativity were significantly correlated, $r = .39$, $p < .01$.

Global Generativity: Darling-Fisher and Leidy

The Generativity subscale of the Modified Erikson Psychosocial Stage Inventory (Darling-Fisher & Leidy, 1988) was used in both samples as a global assessment of generativity. Items included "I feel that I have left my mark on the world through my children." Cronbach's alpha in the validation sample of 168 men and women aged 19 to 86 years was .75. Interitem correlations and confirmatory factor analyses conducted for an earlier investigation (DeHaan &

MacDermid, 1995) revealed that Item 4 (i.e., "It is more important to work on behalf of those I care about than to work just for myself") was responsible for distortions of both internal consistency and factor structure. A confirmatory factor analysis specifying a one-factor model and excluding Item 4 adequately fit the data, $\chi^2(27) = 42.5$, $p < .05$; scale scores were thus calculated excluding Item 4. In the present study, Cronbach's alpha was .63 in both samples. As Table III shows, women in the university sample reported significantly higher scores, on average, on this measure than did women in the private-industry sample.

Global Generativity: Ryff and Heincke

This scale was used in the industry sample as a second global assessment of generativity. It measures the concept of generativity in adulthood, describing a high scorer as one who "expresses concern in establishing and guiding the next generation; possesses awareness of responsibilities to children or those younger in age; views self as a norm-bearer and decision-maker; shows awareness of leadership role and has a sense of maximal influence capacity" (Ryff & Heincke, 1983, p. 809). The scale consists of 16 items, to which participants responded using a 6-point answer format ranging from *strongly agree* to *strongly disagree*. A sample question is "My interests and commitments seem to be at a peak level at the present time." Ryff and Heincke obtained a Cronbach's alpha of .79 in their original sample of young, middle-aged, and older men and women, higher than the value of .57 obtained for the more homogeneous sample of women in the present study (this measure was administered only in the industry sample). Although the Cronbach's alpha value was lower than expected, a one-factor model fit the data well, $\chi^2(104) = 119.3$, p = n.s.

Intercorrelations of Global and Role-Specific Generativity

Role-specific generativity was modestly correlated with global generativity. Average intercorrelations between role-specific generativity and global generativity [as measured with the Darling-Fisher & Leidy items (1988)] were .34 in the industry sample and .38 in the university sample. These correlations are consistent with what would be expected among related but distinct constructs.

Outcome Measures

All outcome measures were indices of well-being. Our aim was to select widely used measures with well-established psychometric properties and solid conceptual foundations. Depression and life satisfaction were measured in both samples. Locus of control and self-esteem were measured only in the industry sample. Role strain was measured only in the university sample.

Locus of Control

Perceived control over life circumstances was measured using Pearlin and Schooler's (1978) seven-item scale. Respondents indicated how much they agreed or disagreed with descriptive statements such as, "I have little control over the things that happen to me." Additional information about scale scores and internal consistency is reported in Table III.

Self-Esteem

The 10 items on the Rosenberg Self-Esteem Scale (Rosenberg, 1979) asked respondents to indicate their level of agreement with statements that described themselves. Examples of items in the scale included "At times I think I am no good at all" (reversed).

Depression

Depression was measured with 11 items from the Hopkins Symptom Checklist. Respondents were asked to indicate "How much has each of the following symptoms bothered or distressed you during the past week including today?" using four answer options ranging from *not at all* to *quite a bit*. Sample items included "feeling lonely" and "feeling trapped or caught." Cronbach's alpha was .86 in a large validation sample (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974), comparable to the values obtained in the present research. As Table III shows, women in the university sample reported significantly higher depression on average than did women in the industry sample.

Life Satisfaction

Based on the recommendations of Campbell, Converse, and Rodgers (1976), eight items from their Index of Well-Being and the single Overall Life Satisfaction item were summed to measure life satisfaction in this study. All nine items were semantic differentials.

Role Strain

Sixteen items developed by Bohen and Viveros-Long (1981) were used to indicate job–family role strain. Respondents indicated how often they felt strain on a 6-point scale ranging from *never* to *always*. The scale authors reported a Cronbach's alpha reliability of .71.

RESULTS

Interrole Variability in Levels of Generativity

We first checked to see whether there was significant variation in generativity across roles using a repeated-measures analysis of variance with role as a within-subjects factor. The effect for role was significant, $F(2, 254) = 3.03$, $p < .05$, signaling interrole variability, and there was no main effect or interaction indicating a difference across the two samples. We followed up with t-tests of difference scores across roles, pooling the samples. Average generativity in the spousal role was significantly lower than generativity in the parental role, $t = 2.4$, $p < .05$. No significant differences were found between the spousal and worker, $t = 1.7$, $p < .10$, or parent and worker roles, $t = 0.6$, $p =$ n.s., in terms of generativity.

Comparing Global and Role-Specific Measures

Since the background characteristics and the sets of measures differed across the two samples, analyses were conducted separately by sample. The basic analytic strategy was the same for each sample: Each indicator of well-being was regressed in turn on each indicator of generativity.

Private-Industry Sample

Three sets of regression analyses were conducted; dependent variables in each were locus of

Table IV. Results of Regressing Well-Being on Generativity

	Locus of control		Self-esteem		Depression		Life satisfaction		Role strain	
	F	R^2	F	R^2	F	R^2	F	R^2	F	R^2
Industry Sample										
Global generativity										
Ryff & Heincke (1983)[a] (1, 44)	4.1[d]	.09[d]	2.8[d]	.06[d]	3.1[c]	.07[d]	.31	.01[e]	—	—
Darling-Fisher & Leidy (1988)[a] (1, 44)	13.3[f]	.23[d]	24.3[f]	.36	10.1[f]	.19[d]	35.2[f]	.44[d]	—	—
Role-specific generativity										
Worker spouse, parent[b] (3, 42)	15.6[f]	.53	9.3[f]	.40	16.7[f]	.54	18.4[f]	.57	—	—
University Sample										
Global generativity										
Darling-Fisher & Leidy (1, 80)	—	—	—	—	18.3[f]	.19	17.4[f]	.18	14.0[f]	.15
Role-specific generativity										
Worker, spouse, parent (3, 78)	—	—	—	—	6.8[f]	.21	12.9[f]	.33	2.2[c]	.08

[a] $df = (1, 58)$.
[b] $df = (3, 53)$; significance levels in R^2 column indicate test of increment to variance explained by role-specific model relative to global model.
[c] $p < .10$.
[d] $p < .05$.
[e] $p < .01$.
[f] $p < .001$.

control, depression, self-esteem, and life satisfaction. Two regression analyses were conducted using measures of global generativity as independent variables [i.e., one using the Ryff & Heincke (1983) measure and the other using the Darling-Fisher & Leidy (1988) measure]. The third regression used the three role-specific measures of generativity as independent variables. Increments to R^2 were calculated to test the degree to which role-specific measures accounted for greater variability in well-being than more global measures. The sample size was reduced by missing data in these analyses to 46. The top half of Table IV summarizes the results.

Role-specific generativity in the worker, spousal, and parental roles accounted for significantly more variance in well-being than did global generativity in seven of eight tests [i.e., compared to the Ryff & Heincke (1983) global measure and then the Darling-Fisher & Leidy (1988) global measure on the four dependent variables]. Increments to R^2 ranged from .04 to .56, with an average increment of .33. On average, the Ryff and Heincke measure of global generativity accounted for 6% of the variation in outcome variables, while the Darling-Fisher and Leidy measure accounted for 31% of the variation. The role-specific measures of generativity in the roles of worker, partner, and parent accounted for 51% of the variation in well-being, on average.

Regarding interrole variation in links between generativity and well-being, Table V shows that generativity in the spousal role was most consistently related to well-being (i.e., significantly related to all outcome variables), followed by the worker role (related to locus of control and self-esteem). Standardized regression coefficients for generativity in the spousal role were at least double the magnitude of those for generativity in the worker role for every outcome variable. Generativity in the parental role was not related to well-being.

University Sample

Two sets of regression analyses were conducted; dependent variables in each were depression, life satisfaction, and role strain. One analysis used the Darling-Fisher and Leidy (1988) measure of global generativity as the independent variable while the other used the role-specific measures of generativity as independent variables [the Ryff & Heincke (1983) global measure of generativity was not available in this sample]. The sample size was reduced by missing data to 82. The bottom half of Table IV summarizes the results.

Table V. Regression of Well-Being on Generativity: Standardized Regression Coefficients (Standard Error)

	Locus of control	Self-esteem	Depression	Life satisfaction	Role strain
		Industry sample			
Global generativity[a]	.48 (.11)[f]	.60 (.13)[f]	−.43 (.12)[e]	.67 (.22)[f]	—
Global generativity[b]	.29 (.08)[d]	.24 (.11)[c]	−.26 (.09)[c]	.08 (.21)	—
Role-specific generativity					
Worker	.31 (.13)[e]	.33 (.19)[d]	−.15 (.14)	.12 (.31)	—
Partner	.63 (.07)[f]	.49 (.11)[e]	−.75 (.08)[f]	.74 (.17)[f]	—
Parent	−.08 (.12)	.00 (.17)	.26 (.13)[d]	−.06 (.27)	—
		University sample			
Global generativity[a]	—	—	−.43 (.11)[f]	.42 (.17)[f]	−.39 (.18)[f]
Role-specific generativity					
Worker	—	—	−.11 (.12)	.22 (.17)[d]	−.24 (.21)[d]
Partner	—	—	−.36 (.11)[f]	.42 (.16)[f]	.08 (.20)
Parent	—	—	−.13 (.14)	.15 (.20)	−.11 (.25)

[a]Darling-Fisher & Leidy (1988).
[b]Ryff & Heincke (1983).
[c]$p < .10$.
[d]$p < .05$.
[e]$p < .01$.
[f]$p < .001$.

The increment to R^2 was significant for life satisfaction (increment to $R^2 = .15$). Although role-specific measures accounted for more variability in depression than did the global measure, the increment was not significant. For role strain, role-specific measures accounted for less variability than the global measure. In general, both role-specific and global measures of generativity accounted for substantially less variability in well-being in the university sample than had been the case in the industry sample (average $R^2 = .21$ and .17, respectively).

Generativity in the spousal role was significantly related both to depression and life satisfaction, while generativity in the worker role was significantly related to life satisfaction and role strain. Standardized regression coefficients for generativity in the spousal role were about double the magnitude of those for generativity in the worker role. Once again, generativity in the parental role was not significantly related to any outcome variable.

DISCUSSION

The purpose of this research was to suggest and test a way of thinking about and measuring generativity in the context of social roles. Our analyses yielded moderate support for the hypothesis that role-specific indicators of generativity account for significantly more variance in well-being than do global indicators. In 8 of 11 tests, the increment to R^2 yielded by role-specific measures was significant.

Our analyses also suggested that generativity in the roles of spouse and worker was most consistently related to well-being and that the strength of interconnections was greatest for generativity in the spousal role. The lack of significant relationships between generativity in the parental role and well-being was unexpected given traditional gender role expectations linking women's development to family responsibilities (although note the finding discussed below that the *level* of generativity was highest in the parental role).

Several possibilities could explain the unexpected insignificant link between generativity in the parental role and women's well-being. The most immediate concern is the validity of the items used to measure parental generativity—perhaps our findings were attenuated by a lack of reliability and validity in our generativity measures. This explanation does not seem to be the culprit, however. First, the regression results are not weaker when the reliability coefficients for the included measures are lower. Second, the reliability coefficients in this study were quite comparable to those obtained in other questionnaire studies (e.g., Ochse & Plug, 1986) and we were able to replicate the factor structure of the items across samples. Finally, strong consistency was revealed when the role-specific generativity items used in this study were compared with theoretically derived items in other studies. For example, an item used to indicate the procreativity theme in the parental role in this study was "Helping [my children] develop." Items pertaining to a similar theme in measures for other studies included "An interest in producing and caring for children of their own" (Hamachek, 1990); "I have important skills that I try to teach to others" (McAdams & de St. Aubin, 1992); and "I enjoy guiding young people" (Ochse & Plug, 1986). Taking into account that our items are unique in their exclusive focus on specific roles, we see strong evidence for construct validity.

A stronger possibility for explaining this finding emerges from the existing literature on women's multiple roles and parenthood. There is empirical precedent for the observation of weak relationships between well-being and parenting; Umberson and Gove (1989) characterized the literature prior to their study as reliably indicating that children have minimal impact on the well-being of parents. Their own data revealed no significant differences between parents and nonparents on any measure of affective well-being. Baruch and Barnett (1986) obtained similar findings.

An important strength of this study is the simultaneous consideration of generativity separately in the roles of mother, wife, and worker. The examination of all three roles separately but together revealed important relationships among them, which are consistent with prior research and may explain the unexpectedly weak links between parental generativity and well-being. In their earlier examination of women's well-being as a function of the quality of role experiences, Baruch and Barnett (1986) found that positive experiences in one role could compensate for negative experiences in other roles *with the exception of the marital role*. They concluded that, "for women, it appears that dissatisfaction in the marital role cannot be compensated for by satisfaction in any other role" (p. 136). For the women in our sample, the prominence of experiences in the spousal role (evidenced by the strong regression coefficients) may be

overshadowing links between the parental role and well-being. These patterns could not have emerged previously because a role-specific approach has not been used in the study of generativity.

Our analyses also revealed modest variation in average levels of generativity across roles. Generativity in the parental role was significantly higher than generativity in the spousal role, which might be expected given the prominence of parenthood in gender role expectations for women. Variability in generativity across roles underscores the importance of understanding factors that facilitate or impede generative expression in a variety of roles.

Patterns of findings were similar across the two samples in this study in that generativity in the spousal role displayed the strongest connections to the outcome variables, followed by the worker and parental roles. Role-specific generativity accounted for substantially greater variability in well-being, however, for the women who worked in private industry than for the women who were university employees. Characteristics of both the samples and the measures may explain this discrepancy. For example, women in the university sample had smaller families and younger children even though they were not themselves significantly younger than the women in the industry sample—perhaps generativity was only just becoming salient. No improvement in fit was obtained, however, from analyses of a subset of the university women who had older children and, thus, were more similar to women in the industry sample.

On the hunch that differences in results across the samples might be related to the interrelationships among roles, we examined the zero-order and partial correlations among the role-specific generativity measures. While the zero-order correlations were higher than the partial correlations in the university sample, the opposite was true in the industry sample. That is, the correlation between spousal and parental generativity *rose* when worker generativity was partialed out and this pattern held for other combinations of the generativity variables. According to Pedhazur (1982), such a pattern indicates the presence of suppressor variables that "purify" or reduce the noise in observed relationships among other variables (i.e., well-being and generativity in other roles). In the industry sample, generativity in both the parent and the spousal roles acted as suppressor variables, boosting the ability of role-specific generativity to account for variability in well-being. Although suppressor variables are not common, we see the possibility of their occurrence as an advantage of a role-specific approach.

Of course, there are important limitations that must be taken into account when considering our findings. The research was cross-sectional, precluding any conjecture about the direction of the links between perceived generativity in specific roles and well-being. It is quite possible that individuals with positive well-being simply report perceiving themselves as more generative because they have a generally positive outlook. Although only longitudinal research will sort out this relationship, we did examine the links between role-specific *satisfaction* and well-being, presuming that results for satisfaction and generativity would look quite similar if "generally positive outlooks" were driving the relationships we had observed earlier. In general, however, satisfaction did not explain as much variability in well-being (except for life satisfaction) as did the role-specific generativity measures.

Another concern is that the items we used to indicate generativity were originally developed as indicators of "role quality" (Baruch et al., 1983). In our view, the ability to be generative in a given role may be a very legitimate, though distinct, component of role quality and, based on the work of our judges and our comparisons with other measures, we are confident that the items we selected represented role-specific generativity. Additional support came from the measurement equivalence exhibited across two diverse samples. More important than the specific items, however, is the *approach* we are advocating. Our samples were small and certainly not representative given that all respondents worked for only two employers and that they all had partners and children. We were anxious, however, to choose a sample in which we could control for role occupancy and in that effort were successful.

At least two important research tasks lie ahead. First, it will be useful to study individual generativity profiles across roles so that we can understand which individuals will be generative in which domains under which conditions. It will also be important to understand the relationships between role-specific generativity and the specific characteristics of participating in each role. For example, what factors impede and facilitate generativity in particular roles? Can those factors be manipulated to make it easier for individuals to be generative? There may be many other domains of activity that should be explored as

generative outlets. Respondents should be provided with great freedom to describe their generative thoughts and behaviors. More sophisticated ways of thinking about and measuring the breadth of generative expressions are also needed.

In conclusion, we proposed and tested a new way of operationalizing generativity by embedding our consideration in the roles that occupy individuals. We were able to show that such an approach accounts for significantly more variance in several indicators of well-being than the more common global approach. Our findings also showed that women's generativity varied among roles, reinforcing our conviction that role-specific generativity should be examined in further detail.

APPENDIX

Role-Specific Generativity Items

Worker role	
Helping others develop	Job doesn't fit my skills or interests
Opportunity for advancement	Job conflicts with other responsibilities
Helping others or being needed	Feeling that I'm not helping anyone
Sense of accomplishment or competence	**Not getting advancements I want or deserve**
Challenging, stimulating work	Job's dullness, monotony
Spousal or partner role	
Spouse being a good parent	Conflicts about children
Good communication	Poor communication
Taking care of my spouse	Feeling that my affection is rejected
Feeling competent	Not getting enough appreciation
Doing creative things around the house	Boredom and monotony
Parental role	
Helping them develop	Worry about the teenage years
Feeling proud of how they are turning out	Disappointment in what they are like
Being the best caretaker for them	Too many arguments with them
Taking pride in being a good parent	Not sure if I'm doing the right thing
Being a creative parent	Feeling trapped/bored

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