

(1999) In C.D. Ryff & V. W. Marshall  
(Eds.) *The Self and Society in Aging  
Processes* (pp 247-278), New York:  
Springer Publishing Company

## CHAPTER 9

# Forging Macro-Micro Linkages in the Study of Psychological Well-Being

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Carol D. Ryff, William J. Magee,  
Kristen C. Kling, & Edgar H. Wing

### INTRODUCTION

Psychological well-being is a fundamentally micro-level construct that conveys information about how individuals evaluate themselves and the quality of their lives. In this chapter we describe a progression of scientific inquiry that initially tended to ignore social structural influences on well-being, or treat them as “noise” factors to be statistically controlled. More recently, we have incorporated macro-level influences, specifically socioeconomic standing, as part of the substantive scientific focus. In so doing, we have carried the study of positive psychological functioning beyond its disciplinary origins into sociological domains.

The ultimate vision guiding our venture is to steer clear of the “over-psychologized” nature of the person, which assumes that what is in the

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This research was supported by the John D. and Catherine T. MacArthur Foundation Research Network on Successful Mid-Life Development (Orville Gilbert Brim, Director). Additional support was provided by the National Institute on Aging, Grants R01AG08979 and R01AG13613.

head (i.e., cognitive orientations, coping strategies, intellectual abilities), heart (i.e., emotions, moods, feelings), or actions (i.e., behaviors, choices) of individuals is sufficient to make sense of their well-being. The alternative “over-socialized” conception of the person (Wrong, 1961), also to be avoided, assumes that the “master variables” of the human condition are what is in the social structure, be it the invisible hand of normative guidelines contouring paths of conformity, or the strong arm of power structures controlling resource allocation and governing social organization.

We argue that both perspectives, in and of themselves, are wanting—their inadequacy is evident not only in empirical criteria (e.g., variance explained), but also in terms of theoretical scope and comprehensiveness. Individual and societal level factors are both requisite to a full understanding of human well-being, which inextricably links persons and the broader social world. The central question, thus, is not whether to bridge these realms, but how to do it. Using psychological well-being as the illustrative case, we propose that the study of well-being must simultaneously involve the assessment of social structural and individual-level variables.

More important, such inquiry must provide a conceptual and empirical formulation of the mechanisms that link these macro-micro levels of analysis. Social comparison processes will be advanced as one route through which structural and individual factors can be connected. These comparisons, we argue, follow, in part, from one’s location in the social structure, and they have consequences for well-being. As such, social comparisons constitute a bridge linking macro- and micro-levels of analysis.

### PSYCHOLOGICAL WELL-BEING: WHAT IS IT AND HOW HAS IT BEEN STUDIED?

We subscribe to a theory-driven, multidimensional formulation of psychological well-being (Ryff, 1989a/b, 1995a) that goes beyond absence-of-illness criteria of mental health (e.g., not being depressed or anxious). Key aspects of psychological well-being were derived from life-span developmental theories, which formulate the unfolding tasks and challenges of human growth; clinical accounts of what it means to be self-actualized, mature, fully functioning, or individuated; and formulations of positive criteria of mental health. Collectively, these formulations, sum-

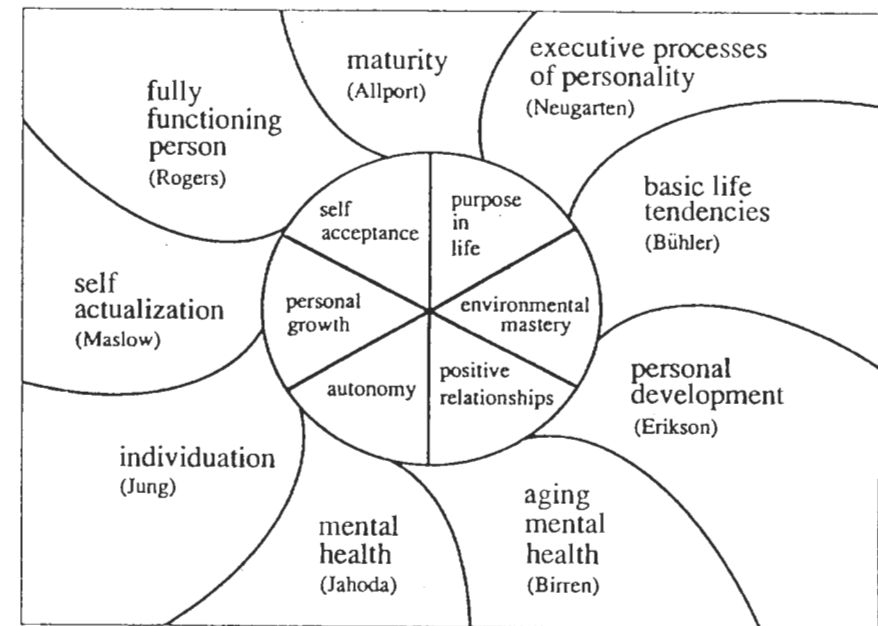


Figure 9.1 Core dimensions of well-being and their theoretical origins.

marized in the outer circle of Figure 9.1, elaborate diverse features of well-being. Points of convergence among them (see inner circle of Figure 9.1) have been the targets for empirical operationalization (Ryff, 1989b).

Definitions of the six key dimensions are provided in Table 9.1. Together, they encompass a breadth of wellness that includes positive evaluations of one’s self and one’s life, a sense of continued growth and development, the view that life is purposeful and meaningful, engagement and involvement in quality relations with others, the capacity to manage effectively one’s surrounding world, and a sense of self-determination. Using structured self-report instruments (see Ryff, 1989b; Ryff & Keyes, 1995), these aspects of well-being have been studied in local community and national probability samples as well as in cross-sectional and longitudinal designs. Summarized below are key findings from these prior investigations.

### Age and Gender Differences in Well-Being

Do people of different ages or gender report different profiles of positive functioning? The original validation sample ( $N = 321$ ), based on commu-

Table 1. Definitions of Theory-Guided Dimensions of Well-Being

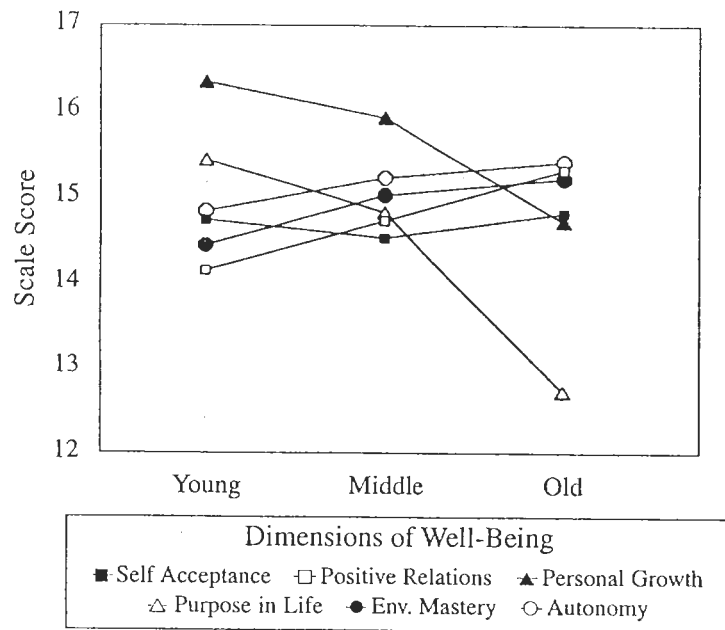
Dimension	Characteristics of a high scorer	Characteristics of a low scorer
Self-acceptance	Possess positive attitude toward self; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life	Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different than what he or she is
Positive relations with other people	Has warm, satisfying, trusting relationships with others; is concerned about the welfare of others; is capable of strong empathy, affection, and intimacy; understands give-and-take of human relationships	Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; is not willing to make compromises to sustain important ties with others
Autonomy	Is self-determining and independent; is able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards	Is concerned about the expectations and evaluations of others; relies on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways
Environmental mastery	Has sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; is able to choose or create contexts suitable to personal needs and values	Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world
Purpose in life	Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living	Lacks sense of meaning in life; has few goals or aims, lacks sense of direction; does not see purpose in past life; has no outlooks or beliefs that give life meaning
Personal growth	Has feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness	Has sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviors

nity volunteers in a cross-sectional design (Ryff, 1989b), showed that certain aspects of well-being, such as environmental mastery and autonomy, show incremental scores with age. Personal growth and purpose in life, on the other hand, showed age decrements, particularly from midlife to old age. Self-acceptance and positive relations with others showed no significant age differences across the three age groups. Highly similar findings were evident in a second local community study ( $N = 308$ ) (Ryff, 1991)—namely, age-incremental profiles on environmental mastery and autonomy; age-decremental profiles on personal growth, and stability profiles on self-acceptance and positive relations.

Because both investigations were conducted with community volunteers, generalizability of these findings was questionable. Thus, another investigation (Ryff & Keyes, 1995) was conducted with a national sample ( $N = 1,108$ ). This inquiry involved a significant reduction in the number of items used to operationalize each dimension of well-being—thereby exemplifying the trade-offs in allocation of scientific resources between depth of measurement and sampling adequacy. Moreover, items for the reduced measures were selected to represent the multifactorial subdimensions of each scale, rather than to maximize internal consistency, the usual psychometric priority in large survey research.

Such decisions illustrate the compromises required to advance macro-micro linkages. What was gained by the willingness to loosen depth-of-measurement priorities of the psychologist was the opportunity to evaluate distributions of well-being in more socioeconomically diverse and representative sample. What was gained by the willingness to lessen the internal consistency priorities of the survey researcher was the possibility of carrying a theory-driven conception of psychological well-being to the realm of a national study.

Remarkably, many of the prior age patterns were replicated with these sharply reduced measures (see Figure 9.2) (Ryff & Keyes, 1995). Environmental mastery and autonomy again showed increases with age; purpose in life and personal growth showed declines with aging; and self-acceptance revealed no age differences. For positive relations, the results, contrary to prior findings of age stability, showed age increments. The consistency of the age findings across diverse samples and different scale lengths underscores the strength of the message that well-being is not uniform across different periods of the life course (or different cohorts, see below). Importantly, the strikingly recurrent incremental (environmental mastery, autonomy) and decremental (purpose in life, personal growth) age patterns from select community samples with much greater depth of measurement



**Figure 9.2** Age differences in three-item scales of well-being.

From "The Structure of Psychological Well-Being Revisited," by C. D. Ryff and C. L. M. Keyes, 1995, *Journal of Personality and Social Psychology*, 69, p. 722. Copyright 1995 by APA. Reprinted with permission.

could be generalized to larger, more diverse groups, wherein assessment procedures were much curtailed.

Longitudinal studies are needed to clarify whether these age patterns represent developmental changes, maturational changes, or cohort/historical influences. However they are to be interpreted, the findings point to diverse age trajectories in which older cohorts of adults reveal some psychological advantages (e.g., mastery), but also notable disadvantages (e.g., purpose, growth) relative to younger individuals. The replicative consistency of the latter may, in fact, be meaningfully linked to social structural influences (Ryff, 1995a). That is, lower self-ratings on purpose in life and personal growth among the aged may point to micro-level consequences of "structural lag"—namely, that social institutions currently lag behind the added years of life that many individuals now experience (Riley, Kahn, & Foner, 1994).

Gender differences in well-being have also shown replicative consistency. Women, across all studies, score higher than men on positive rela-

tions with others, and sometimes higher on personal growth as well. For the remaining dimensions, the above studies revealed no gender differences. Because women have been shown to suffer greater vulnerability to psychological depression than men (Strickland, 1992), findings on the positive side of mental functioning are particularly significant for revealing psychological strengths among women. Most recently, assessments with less educationally advantaged respondents have shown gender differences on multiple dimensions favoring men (Wing & Ryff, 1998). Thus, the most precise statement regarding gender differences in psychological well-being is that, when given opportunities for higher education, women reveal comparable, or even advantaged, profiles of well-being relative to their male counterparts.

### Well-Being via Life Experience and Life Transition Studies: Where Is Social Structure?

Apart from descriptive questions about age and gender differences, initial studies of well-being also examined variation, or change, in well-being as a function of individuals' life experiences and their life transitions. Among the experiences we have studied are parenthood (Ryff, Lee, Essex, & Schmutte, 1994; Ryff, Schmutte, & Lee, 1996); health events (Heidrich & Ryff, 1993a, 1996); and community relocation (Kling, Ryff, & Essex, 1997; Ryff & Essex, 1992a; Smider, Essex, & Ryff, 1996). Across these investigations we also assess "interpretive mechanisms" which probe how people construe and give meaning to their life experiences. People make sense of their life experiences, for example, by comparing themselves to others (social comparison processes); by considering feedback from significant others (reflected appraisals); by identifying the causes of their experiences (attributional processes); by observing their own actions (behavioral self-perceptions); and by the importance they attach to particular experiences (psychological centrality) (see Ryff & Essex, 1992b, for conceptual summary).

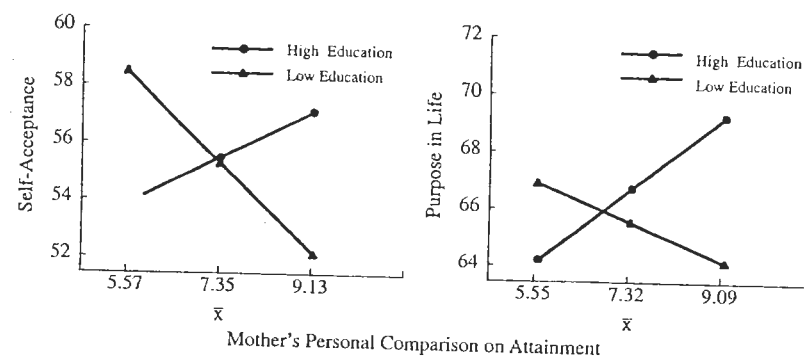
Collectively, our studies show that considerable variance in well-being is associated not only with such life experiences/transitions but with how they are interpreted. Such assessments have included longitudinal investigations tracking change in well-being following life transitions (e.g., Kling et al., 1997; Smider et al., 1996). Social structural influences have been largely peripheral in such investigations—sociodemographic variables have typically been employed as "controls" in regression analyses predicting well-being as a function of the more proximal experiential and

interpretive variables. Nonetheless, there have been hints that social structural influences are, in fact, a part of the story. We provide two examples.

Our initial investigation of the parental experience (Ryff et al., 1994) asked whether the psychological well-being of midlife adults is tied to perceptions of how adult children have “turned out.” A sample ( $N = 215$ ) of parents was asked detailed questions about the accomplishments (educational and occupational) and adjustment (psychological and social) of each of their grown (aged 21+) children. We found, not surprisingly, that multiple aspects of parents’ well-being (e.g., environmental mastery, self-acceptance, purpose in life) were strongly predicted by these assessments of grown children. Consistent with our interest in “interpretive mechanisms,” we asked how parents felt their adult children compared with themselves in these realms of achievement and adjustment. Again, parental well-being was predicted by these comparative assessments, net of the above effects of how well children had turned out. However, contrary to our expectation, (i.e., that parents’ well-being would be enhanced by perceiving that children had done better than themselves), the direction of the social comparison effects was negative. That is, parents who perceived their children had done better than themselves had lower levels of psychological well-being.

The one exception to this pattern pertained to mothers with higher levels of education (i.e., one standard deviation above the mean) compared to mothers with lower levels of education (i.e., one standard deviation below the mean). Specifically, mothers with higher levels of education reported ever higher levels of self-acceptance and purpose in life, as they perceived their children had attained more educationally and occupationally than themselves (see Figure 9.3). Mothers with lower levels of education, however, reported lower levels of acceptance and purpose as they perceived their children had out-achieved themselves. Thus, position in the educational hierarchy appeared meaningfully linked with mothers’ well-being via the perception of how they compared with children. Presumably, mothers with more education were better able to “bask in the reflected glory” of their children’s achievements, whereas less educated mothers may have felt more troubled by their own lack of accomplishment and life purpose vis-à-vis marked achievement of their children. Fathers, however, showed no such interactions—those who perceived their children had done better than themselves had lower well-being, regardless of educational level.

A second example of possible social-structural influences again pertains to educational standing and its role in the experience of community relocation (Ryff, 1995b). Our prior findings (Kling et al., 1997; Ryff & Essex,



**Figure 9.3** Significant interactions between mother’s level of education and personal comparisons on attainment in predicting two aspects of well-being. Higher comparison scores indicate children were perceived as attaining more, educationally and occupationally, than self.

From “My Children and Me—Mid-Life Evaluations of Grown Children and of Self,” by C. D. Ryff, Y. H. Lee, M. J. Essex, and P. S. Schmultz, 1994, *Psychology and Aging*, 9, p. 201. Copyright 1994 by APA. Reprinted with permission.

1992a) document the impact of interpretive mechanisms (e.g., social comparisons, reflected appraisals, psychological centrality) on post-move well-being. Education in these analyses was, however, treated as a control (noise) factor. Alternatively, when viewed as an indicator of socioeconomic standing, education may be meaningfully linked with how individuals negotiate their life transitions. Our general hypothesis was that education would exert generally salutary effects—those with more education were expected to withstand better the stresses of this transition (presumably via their access to relevant knowledge and resources).

Based on a longitudinal sample of 312 women interviewed both before and after their relocation, we found that there were significant changes in psychological well-being after the move, with respondents on average showing gains in multiple aspects of well-being. Going into the move, women with higher levels of education showed higher starting profiles of well-being, particularly self-acceptance, purpose in life, and personal growth (Ryff, 1995b). The longitudinal data also showed dynamics in interpretive mechanisms—namely, that their social comparisons (how they saw themselves relative to others) and reflected appraisals (how they thought others viewed them) also changed over time.

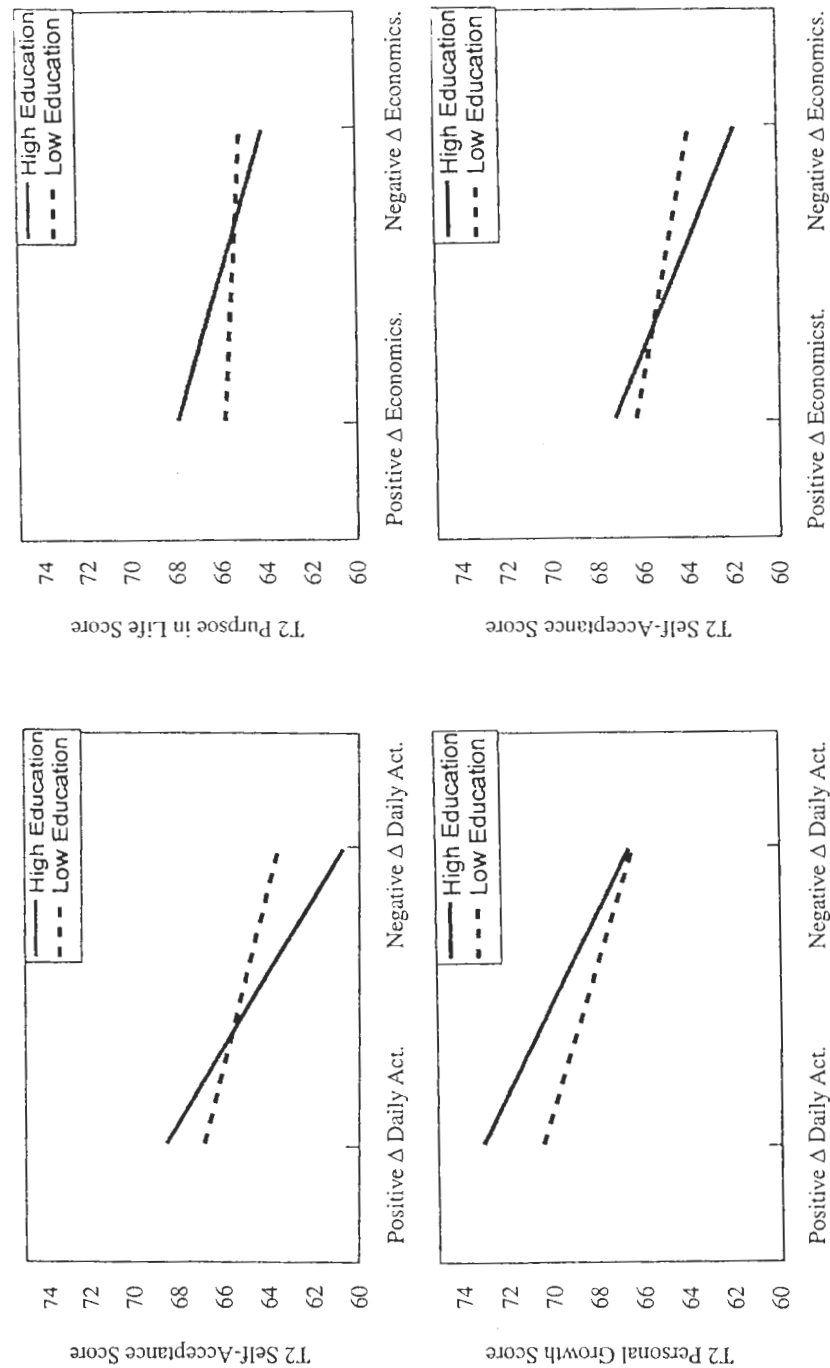
Regression analyses were conducted to investigate the influence of these dynamic interpretive mechanisms on respondents’ changes in well-

being following relocation. The findings showed that when social comparisons and reflected appraisals became more positive after the move, higher postmove levels of well-being were reported. That is, women who perceived that they compared more favorably with others (across domains of health, finances, friends, etc.) and who felt they were more positively perceived by others (across multiple domains) showed gains in psychological well-being following the move.

The targeted social-structural prediction was the following: among those women who reported negative post-move changes (i.e., less favorable social comparisons and reflected appraisals across multiple life domains after the move), we predicted higher well-being only for those with higher levels of education. That is, education was expected to cushion the effects of negative self-evaluative stresses associated with the move. This question was investigated by assessment of significant interactions between educational level and change (positive or negative) in social comparisons and reflected appraisals predicting post-move well-being.

Multiple significant interactions were found, although they were restricted to two life domains: daily activities and economics. Figure 9.4 (left side) illustrates such effects for the daily activities domain and outcomes of self-acceptance and personal growth (similar significant patterns were also obtained for purpose in life and environmental mastery). The graph represents predicted values consistent with procedures described by Aiken and West (1991). Women with higher levels of education reveal a sharper slope of the regression of psychological outcomes on positive versus negative changes in daily activities. That is, how one compared with and was perceived by others in the daily activities domain was more strongly linked to well-being among women with more education. If the move was going well (i.e., social comparisons and reflected appraisals improved following relocation), women with higher education had higher well-being. However, if the move was not going well (i.e., negative changes in comparisons and appraisals about daily activities), women with more education had lower well-being. For women with less education, there was generally a weaker relationship between social evaluations of daily activities and overall well-being.

Similar findings were evident for multiple outcomes in the economics domain (Figure 9.4, right side) graphically summarizes the patterns for purpose in life and self-acceptance). Taken together, these findings offered little support that negative post-move difficulties would be better handled by those with higher levels of education. Rather, the findings suggested that higher standing in the educational hierarchy is not uniformly an



**Figure 9.4 Significant interactions between education and perceived changes (positive, negative) in daily activities and economics in predicting changes (Time 2) in well-being.**

From *What I Know and How I Change: Is Education a Help or Hindrance During Life Transition?* by C. D. Ryff, 1999, 5b. Paper presented at the Gerontological Society of America Meetings, Los Angeles, CA.

advantage. Education may be a plus when life changes are going well, but not when things are going poorly (negative post-move comparisons and reflected appraisals). While these effects were specific to two of five life domains investigated, they suggest that during life transitions, higher educational levels may, paradoxically, magnify the effects of negative life changes on well-being. Higher educational standing may create expectations that one should be in control and able to prevent negative experiences. Mirowsky (1995) documents the close association between education and sense of control. Thus, violation of the general expectation that life should go well because one is knowledgeable, informed, and in charge may render the effects of negative experiences even worse in terms of impact on well-being.

In general, the preceding investigations kept social structure in the background. Its presence, nonetheless, crept in, with occasional evidence that the impact of life experiences and interpretive mechanisms were different for those with higher versus lower levels of education. Moreover, these illustrative examples revealed both benefits and costs linked with higher education. The following section addresses how the well-being agenda has recently been expanded in the direction of social structural influence by intersection with the literature on class and health.

## WELL-BEING IN THE CLASS AND HEALTH AGENDA

Prior research on subjective well-being has probed a broad array of sociodemographic correlates (class, age, marital status, race, religion, geographic location) of reported happiness and life satisfaction (Bradburn, 1969; Bryant & Veroff, 1982; Diener, 1984; Diener & Fujita, 1995; Veroff, Douvan, & Kulka, 1981). These studies have employed largely atheoretical, single-item indicators of well-being, and typically examined sociodemographic variables in a descriptive manner. Such sociodemographic variables rarely account for much variance in subjective well-being (maximally around 10%). What has been distinctly missing from this literature is a formulation of intervening mechanisms and processes that connect social structural and individual levels of analysis.

### SES and Health: Is Psychological Well-Being Relevant?

A growing body of evidence links socioeconomic standing to a diverse array of health outcomes (Adler et al., 1994; Mirowsky & Ross, 1989).

This literature provides impetus for linking well-being to a particular social-structural variable, namely, location in the socioeconomic hierarchy. At first glance, queries about the relationship between class and health agenda seem to do little more than document the obvious: poverty has adverse health consequences. This perception misses a key finding—namely, that there is a “social gradient” in health across the entire socioeconomic spectrum (Marmot et al., 1991). Thus, class differences in health exist even between those in middle versus upper SES strata. Why these social inequalities in health occur is not well understood.

Most extant research involves physical rather than mental health outcomes. Moreover, when investigators have gone beyond SES-related assessments of morbidity and mortality, the focus has been primarily on negative indicators of mental functioning, such as anxiety and depression (Dohrenwend & Dohrenwend, 1974; Kessler & Cleary, 1980; McLeod & Kessler, 1990). Few investigators have asked whether the prior class and health linkages also pertain to positive aspects of mental health. Such omission likely reflects the view that optimal functioning (mental or physical) is not a pressing concern relative to more grave matters of illness, disease, or dysfunction. However, dimensions of well-being may comprise powerful protective (or vulnerability) factors involved in understanding how socioeconomic status makes its way to a wider array of health outcomes. That is, the possession of core “life goods” (e.g., positive self-regard, quality ties to others, mastery, purpose) (see Ryff & Singer, 1998a) may provide critical ingredients that enable people to withstand life challenges and adversity. Moreover, there may be important “physiological substrates of flourishing” (Ryff & Singer, 1998a, 1998b) that also influence ultimate morbidity and mortality outcomes. The connection of social-structural factors to intervening biological mechanisms is another realm ripe for study of macro-micro linkages.

### Integrative Evidence From Three Major Studies

The Whitehall Study of British civil servants documents a social gradient in mortality and morbidity (Marmot, Shipley, & Rose, 1984; Marmot et al., 1991): each grade of employment has higher levels of health problems and death rates than the one above it. A counterpart literature in the U.S. has been slower to accumulate, although similar inverse relationships between socioeconomic status and mortality have been documented here as well (Feldman, Makuc, Kleinman, & Cornoni-Huntley, 1989). Marmot, Ryff, Bumpass, Shipley and Marks (1997) brought together three major

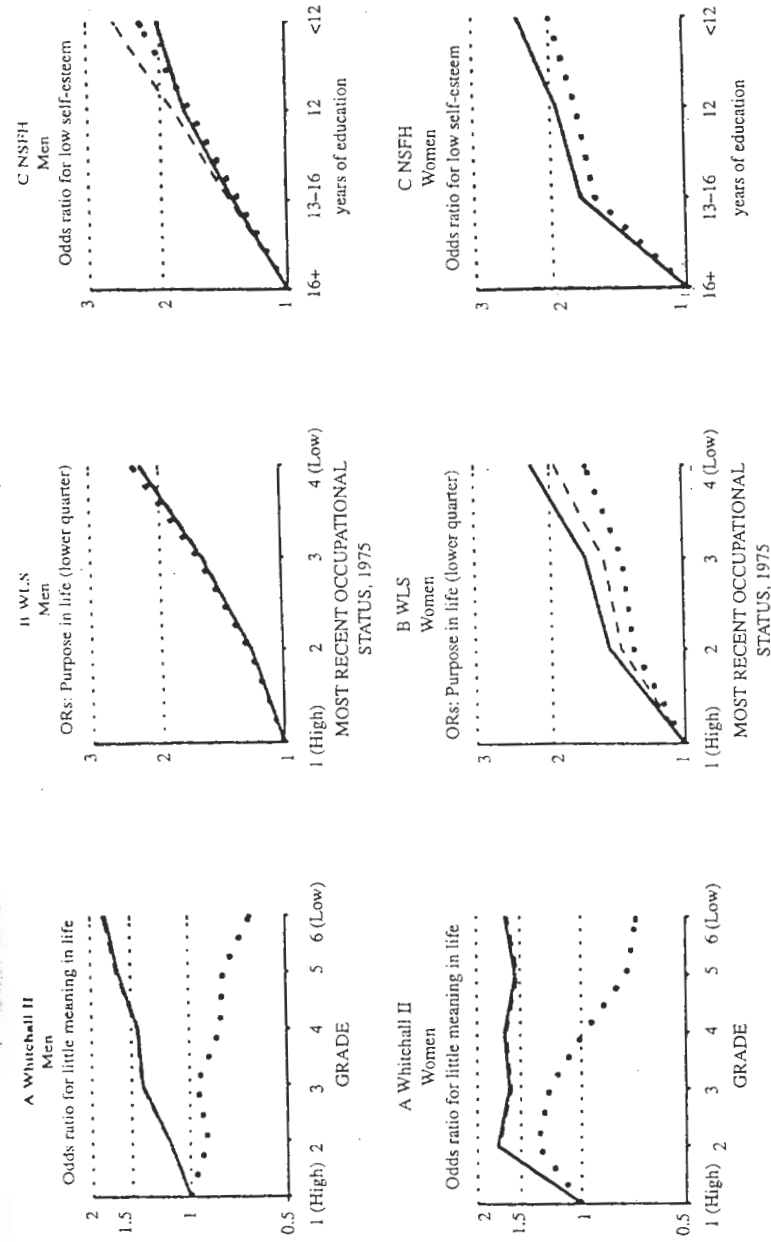


studies to explore class and health questions in the U.S. and Britain. The studies offered new tests of the generalizability, across diverse samples and different measures of SES, of the social gradient in health. The studies also extend the prior focus on mortality as the key outcome to new indicators of health, including psychological well-being.

Data were assembled from the Whitehall II Study of British civil servants (10,308 men and women), the Wisconsin Longitudinal Study (WLS) of midlife men and women who graduated from high school in 1957 (with over 70% of the known survivors of the original random sample of 10,317 participating), and the National Survey of Families and Households (NSFH), a national sample of U.S. adults (13,017 men and women). To determine whether the SES-health link is specific to particular measures of SES, each study used a different indicators: civil service employment grade (Whitehall), occupational status (WLS), and education (NSFH). Across four outcome measures (self-perceived health, depression, psychological well-being, and smoking), there were clear inverse relations with socioeconomic status (see Marmot et al., 1997).

The obtained SES gradients in psychological well-being are illustrated, separately for men and women, in Figure 9.5. Because each study employed somewhat different measures, well-being was operationalized across them with slightly different constructs. In Whitehall, it was assessed with a question about finding "little meaning in life"; in WLS, a 7-item version of the purpose in life scale (Ryff, 1989b) was used; and in NSFH, a 3-item version of Rosenberg's self-esteem scale was used. Each of these outcomes was dichotomized, such that relationship between well-being and particular measures of SES was expressed in terms of odds ratios. Thus, the figure illustrates the odds of reporting low meaning, purpose, or self-esteem.

The ratios are adjusted according to three models, each of which takes into account different variables possibly implicated in the class-health relationships. Model 1 includes only the SES indicator (for Whitehall only, age is also included). Model 2 then takes into account father's social class (Whitehall), or parents' education and whether one grew up in an intact family during childhood (WLS), or age and race (NSFH). Model 3 then adds a variety of other possibly intervening variables, such as work and environment and health behaviors (Whitehall), mental ability (IQ) (WLS), or parental education and intact childhood family (NSFH). The addition of variables across these models reflects the unique strengths of each study in pointing to different aspects of what might be part of class and health relationships.



**Figure 9.5** Odds ratios for predicting psychological well-being by measures of socioeconomic status in: (a) the Whitehall II Study; (b) the Wisconsin Longitudinal Study; and (c) the National Survey of Families and Households. Odds ratios adjusted according to three models (see text): — Model 1; — Model 2; — Model 3.

From "Social Inequalities in Health: Converging Evidence and Next Questions," by M. G. Marmot, C. D. Ryff, L. L. Bumpass, M. Shipley, and N. F. Marks, 1997, *Social Science and Medicine*, 44, p. 905. Copyright 1997 by Elsevier Science Ltd. Reprinted with permission.



Across these models, there is a clear SES gradient in well-being for both men and women in WLS and NSFH. For Whitehall, the gradient is evident for men, although Model 3 suggests that work environment, health behaviors, etc., account for a good deal of the gradient in well-being. Although Whitehall women did not show a gradient in this indicator, both males and females in the study showed a strong gradient for affect balance (not shown). Similarly, both men and women in WLS showed a strong gradient in self-acceptance (Ryff, 1989b) (not shown). Thus, across notably different samples, distinct indicators of SES, and even diverse indicators of well-being, there was clear evidence of a socioeconomic gradient in psychological well-being. Moreover, the findings provide little support for the view that these relationships could be fully accounted for by early background or other individual factors (for example, parents' education or occupational status, nonintact family of origin, mental ability). They suggest rather that well-being is related to adult position in the social structure.

Given the usual focus on negative health outcomes, these results for positive mental health are particularly informative, because they show that lower social position not only increases the likelihood of ill health, it also decreases the chances for psychological well-being. Possessing these features of positive functioning constitutes an important window on quality of life, but more importantly, their presence may provide protective mechanisms in the face of life stresses, and their absence may create vulnerability for depression (Brown, Bifulco, & Andrews, 1990; Lewinsohn, Redner, & Steeley, 1991).

What the findings call for, however, is explanation: namely, how do these relationships come about? What are the processes that account for the fact that those at progressively higher levels in the socioeconomic hierarchy have better health (mental and physical)? Beyond the deprivations associated with poverty are numerous other likely intervening factors (e.g., health behaviors, work conditions, family life, neighborhood environments). Whitehall II has shown the import of some of these for explaining the class and health gradient (Marmot et al., 1997), and a recent U.S. survey points to an array of early background, behavioral, relational, and work characteristics to explain why people of lower socioeconomic status have worse health and lower psychological well-being (Marmot et al., in press). Beyond life conditions and behavioral actions are the ways in which individuals perceive themselves in their social contexts. Such perceptions, consistent with our prior work, address how individuals interpret

themselves vis-à-vis others. These perceptions, we argue, comprise intervening mechanisms that link position in the social hierarchy to individual well-being.

### **TOWARD MACRO-MICRO INTEGRATION: EDUCATION, SOCIAL COMPARISON, AND WELL-BEING**

The class and health agenda has prompted disciplinary exchange and a framework for expanding the study of well-being in new directions. As noted earlier, scholars of subjective well-being had already provided extensive documentation of the SES links of reported happiness and life satisfaction. What that literature neglected, however, was the intervening mechanisms that connect these macro, and micro levels of analysis. In this section, we review two recent investigations, which sharpen the class and well-being nexus by incorporating such intervening processes. Before summarizing relevant findings, we elaborate the rationale for choosing education as the primary indicator of SES standing across our studies. We also elaborate the conceptual rationale for using social comparison processes as key mechanisms of linkage.

#### **Education as a Marker of Socioeconomic Standing**

Socioeconomic status is typically defined in terms of three related, but distinct, components: education, income, and occupational status. We target only one of these, education. One reason is that the other aspects of social class (income, occupational status) are, to a great extent, consequences of educational achievement, and therefore may mediate the effects of education (Hauser & Mossel, 1985; Sewell & Hauser, 1975, 1980). Sociologically speaking, education thus governs access to important future opportunities and resources. Compared to income or occupational standing, education is also a more person-specific characteristic. Wives, for example, are sometimes classified according to the income or occupational standing of their husbands, but education is a variable reflecting their own SES-related status.

Psychologically speaking, we also see education as a defining feature of the self; that is, as an aspect of identity and a domain of personal achievement. In terms of the presentation of self in daily life, educational attainment is a key dimension along which people classify and evaluate

others and themselves. Such assessments frequently have significant social consequences—those with high school education often exist in different social worlds (at work, at home, in the community) than college graduates. As a marker of personal knowledge and achievement, educational standing is also implicated in coping strategies, problem-solving abilities, and possibly even social supports. Further, when the three SES variables have been disaggregated and their independent influences on psychological distress have been examined, it is education, particularly among women (including homemakers and those in the labor force), that is the most important predictor of psychological distress (Kessler, 1982).

Turning to the question of educational effects on positive functioning, we also note that our prior findings on parenthood and relocation underscored the importance of educational influences. For the collective reasons described above, the remaining studies described below use educational attainment as the marker of standing in the SES hierarchy. We underscore that these studies do not address more richly textured aspects of social class such as linguistic and moral practices, lifestyles, world-views, and normative expectations (see Chapter 7, this volume).

### Why Social Comparison Processes?

One rationale for targeting social comparison processes as a key intervening mechanism is continuity with our prior program of studies. Such comparisons have been included in nearly all of our investigations, although the conceptualization of them has been tied to the interpretations given to proximal life experiences, not to perceived location in the social structure. Further rationale comes from the conceptual underpinnings of our formulation of “interpretive mechanisms” (see Ryff & Essex, 1992a) as well as earlier efforts to link personality and social structure (Ryff, 1987). Rosenberg and Pearlin (1978) offered significant guidance via their efforts to explain the age-related linkage between social class and self-esteem. Their query was fundamentally a challenge in how to integrate macro and micro levels of analysis.

Self-esteem, they stated, shows little connection with social class in childhood; but with age, there emerges a stronger correlation between self-esteem and social class. The reasons for this emerging linkage were tied to the changing social worlds of adolescents and young adults, i.e., transitions from the more homogeneous worlds of early childhood school and neighborhood environments to the more heterogeneous worlds of subsequent educational and occupational pursuits. What such heterogeneity cat-

alyzed was a changing perception of self, tied fundamentally to how individuals see themselves vis-à-vis others (social comparisons), how they believe they are viewed by others (reflected appraisals), what they observe in their own behaviors (self-perceptions), and what they designate as important to them (psychological centrality). These interpretive mechanisms comprised a theoretical synthesis of numerous social psychological processes that were integrated for the purpose of explaining a particular macro- micro linkage—namely, why basic self-evaluation (self-esteem) becomes linked with SES standing as individuals age.

Of the four mechanisms, we focus primarily on social comparisons and reflected appraisals (Kling et al., 1997; Ryff & Essex, 1992a), although we have also examined psychological centrality (Kling et al., 1997). The extant literature on subjective well-being has also examined comparisons (in income) as one route to explaining variations in reported happiness and satisfaction (Diener, Sandvik, Seidlitz, & Diener, 1993; Veenhoven, 1991; see Chapter 10, this volume).

Despite their conceptual appeal, the assessment of such comparisons is neither simple nor straightforward. When asked directly, individuals frequently deny that they make such comparisons, suggesting a kind of normative climate against explicit comparative judgments. However, social comparisons can be unobtrusively probed with regard to many aspects of life (see Heidrich & Ryff, 1993b) as well as in terms of numerous referent others, some of whom may be selected, while others are imposed (e.g., friends vs. siblings). The studies we describe below draw on these distinctions to offer various alternatives for probing the social comparison domain. Findings from two investigations, both involving large and diverse samples, are summarized.

### Educational Attainment and Comparison With Significant Others in Midlife

Ryff and Magee (1995) used data from the Wisconsin Longitudinal Study (WLS) to examine the linkages between educational attainment and well-being in a sample of midlife men and women. A large literature in sociology has addressed the role of education in social stratification processes; that is, how educational attainment influences subsequent occupational and economic mobility (Sewell & Hauser, 1975), or how schools serve as mechanisms for social selection and social differentiation (Karabel & Halsey, 1977). Educational systems are, depending on one's theoretical position (e.g., functionalist vs. conflict theory), viewed as structures that

offer opportunities for mobility of individuals, or as mechanisms that perpetuate social inequalities (DiMaggio, 1979; Swartz, 1977).

WLS is well known for its model of status attainment that documents the prominent role of educational attainment in subsequent occupational advancements and earnings (Hauser & Mossel, 1985; Sewell & Hauser, 1975, 1980). The question we add to the inquiry is what are the individual life consequences (e.g., quality of life, mental health) of achieving different positions in the social order? Early WLS findings showed dramatic differences in educational aspirations and achievements, among children of equally high levels of ability, between those having high versus low socioeconomic backgrounds. We consider possible consequences of these different attainment profiles for psychological well-being.

In addition, we examine the influence of social comparisons about educational attainment on respondents' reported well-being. Sample members were asked to compare their own educational attainment with that of two key significant others: namely, their same-sex parent, and a randomly selected sibling. These proximal social comparisons (those within the family) are "inescapable" aspects of self-evaluation. In addition, they provide a marker for mobility processes (upward or downward) relative to one's own parents or siblings. The hypothesis was that such comparisons exert an influence on well-being, net of actual educational attainment, with those achieving more than their significant others expected to report higher well-being.

One limitation of the WLS is that although providing longitudinal assessment of educational and occupational attainment, psychological well-being did not become a part of the study until respondents were in midlife. Thus, it is not possible to track changes in well-being as a function of gains in education. However, because information was available regarding respondents' family background and early abilities, it is possible to examine the influence of educational attainment, net of these early starting resources. Parents' income could, for example, translate to material goods that enhance well-being, and selection processes could be operative whereby the more intelligent get more education. Our focus was to assess the effects of education on well-being after these influences were controlled.

All six dimensions of psychological well-being were included in the 1992/93 WLS data collection, each of which was operationalized with a 7-item scales. Social comparisons were assessed with a single-item question in which respondents rated how much better or worse they had done than their same-sex parent (or a randomly selected sibling) in getting an education. The sample for these analyses included 3,129 men and 3,609

women from the WLS on whom data were available regarding the social comparison items and well-being.

Over half of the women in WLS did not receive further education beyond their high school diploma. Another 22.3% obtained vocational training or some college, and 24.2% completed a college degree or more. For men, 34.8% completed no post-secondary education, 29.8% had vocational training or some college, and 35.4% completed a college degree or more. When education was juxtaposed with reported levels of well-being, we found that for all six measures, women with higher levels of education reported higher well-being. All combinations (but one) of mean-level differences comparing different levels of education were significant. For men, there were also differences in well-being as a function of educational attainment, but the effects were not as strong. For example, there were no educational differences in men's reported levels of positive relations with others. For the remaining aspects of well-being, significant differences were obtained, sometimes between all groups, and others just between the highest and lowest educational attainment groups.

Tables 9.2 (women) and 9.3 (men) summarize select findings from hierarchical regression analyses that tested the predictive influence of educational attainment and social comparisons on reported well-being. These analyses controlled for respondents' high school IQ, mothers' and fathers' educational, parental income, and fathers' occupational status. Education was coded as a three-level categorical variable, and high school education was the point of comparison. Thus, these analyses indicate whether there are significant differences in the prediction of well-being between those with high school degrees and the other two educational groups. Model 1 examines educational influences on well-being outcomes, net of control variables. Models 2a and 2b then show the effects of adding social comparisons, separately for same-sex parent and the randomly selected sibling.

The findings for women (Table 9.2) show that for three aspects of well-being (autonomy, purpose in life, and personal growth), the educational differences between high school graduates and the two higher educational groups remain significant after controlling for background factors. These effects drop out for environmental mastery (not shown) when background effects have been controlled. For self-acceptance and positive relations (not shown), education remains a significant predictor following controls, but only for the contrast between high school and college respondents. Subjective comparisons with mothers significantly predicted all aspects of well-being, net of actual educational attainment, and in the direction predicted. That is, women who perceived their educational attainment was

Table 9.2 Education, Social Comparisons, and Well-Being

WOMEN	WLS Women			
	Model 1 (educ) beta	SE	Model 2a (parent comp) beta	Model 2b (sib comp) SE
Autonomy				
Voc/Some Coll	.13**	.04	.05	.13**
Degree	.13**	.05	-.04	.07
Parent Comp			.16***	.08
Sib Comp				.04
Total R <sup>2</sup>	.04		.05	.04
Purpose in Life				
Voc/Some Coll	.16***	.04	.12	.17***
Degree	.31***	.05	.22**	.07
Parent Comp			.15***	.07
Sib Comp				.04
Total R <sup>2</sup>	.04		.05	.04
Personal Growth				
Voc/Some Coll	.27***	.04	.20**	.26***
Degree	.43***	.05	.31***	.07
Parent Comp			.21***	.03
Sib Comp				.09***
Total R <sup>2</sup>	.09		.10	.10

All models control for High School IQ, Parental Education, Parental Income, and Father's Occupational Status.

Note: Educational attainment is a three-level categorical variable (high school, vocational training/some college, college degree or higher). High school is the category of contrast.

Table 9.3 Education, Social Comparisons, and Well-Being

MEN	WLS Men			
	Model 1 (educ) beta	SE	Model 2a (parent comp) beta	Model 2b (sib comp) SE
Self-Acceptance				
Voc/Some Coll	.09**	.04	.02	.09
Degree	.16**	.05	.05	.08
Parent Comp			.11**	.04
Sib Comp				.08***
Total R <sup>2</sup>	.01		.01	.01
Purpose in Life				
Voc/Some Coll	.02***	.04	-.06	.03
Degree	.28***	.05	.11	.06
Parent Comp			.13***	.07
Sib Comp				.04
Total R <sup>2</sup>	.02		.03	.03
Personal Growth				
Voc/Some Coll	.18***	.04	.13*	.19***
Degree	.35***	.05	.16*	.25***
Parent Comp			.20***	.08
Sib Comp				.04
Total R <sup>2</sup>	.04		.04	.05

All models control for High School IQ, Parental Education, Parental Income, and Father's Occupational Status.

Note: Educational attainment is a three-level categorical variable (high school, vocational training/some college, college degree or higher). High school is the category of contrast.

better than their mothers' had higher well-being. Moreover, such comparisons revealed mediation influences for all outcomes (except environmental mastery): i.e., effects of education in Model 1 were reduced (some to nonsignificance) when social comparisons were added to the model. Social comparisons with siblings were also significant predictors of well-being, but showed less mediating influences.

Similar but less pronounced effects were evident for men (Table 9.3). For self-acceptance and personal growth, educational differences between high school graduates and the two advanced educational groups remained significant after control variables were entered. For purpose in life, it was only the contrast between high school and those with college degrees that remained significant. Environmental mastery (not shown) revealed a similar pattern; no effects were evident for positive relations or autonomy. For all outcomes except personal growth, prior educational influences on well-being were fully mediated by social comparisons with fathers—men who perceived that educational attainment was better than their fathers' had higher levels of well-being. Comparisons with siblings were also significant predictors, but showed mediational influences only for self-acceptance. The range of variance accounted for across these models for men and women was small (1% to 10%).

In summary, these analyses from the Wisconsin Longitudinal Study elaborate the linkages between educational attainment and well-being for midlife men and women, even after controlling for background and early ability influences. Moreover, the data clarify that social comparisons, particularly with parents, are an additional influence on reported well-being, in many instances providing evidence that it is through these social comparisons that educational attainment has its influence (i.e., mediational processes). While our analyses were restricted to comparisons with significant others in one's family, such effects may also be evident in comparison with one's high school friends, or same-aged peers in adulthood.

In general, the findings were stronger for women than men, perhaps underscoring the historical changes occurring in these cohorts regarding educational opportunities for women. That is, the women of the WLS came of adult age in an era in which opportunities for continued education were expanding. Some were able to partake of these new possibilities, but many were not. Thus, the women who were able to move beyond their family of origin in educational standing may have experienced particular psychological benefits, perhaps because of the contrasts in opportunity structures available to their mothers (or their same-sex peers). Our final analysis addresses the import of educational attainment on diverse dimen-

sions of well-being in a national sample and with an assessment of social comparisons not specific to significant others in one's family.

### Education, Well-Being, and the Role of Perceived Inequalities

Wing and Ryff (1998) recently examined distributions of psychological well-being in a national survey of adults (aged 25–74,  $N = 3,032$ ) conducted by the MacArthur Foundation Research Network on Midlife Development. These data provided an opportunity to examine the linkages between social class (marked by educational attainment) and well-being in a more representative sample. As such, the work elaborates the social gradients in health documented by Marmot et al. (1997). That study, however, had not addressed intervening mechanisms in the class/health linkage. Following on the social comparative theme, Wing and Ryff explored an interpretive process explicitly linked with social class; namely, the notion of "perceived inequalities".

The study of perceived inequalities follows from the observation that individuals live in social worlds that are thick with conspicuous symbols of class standing (e.g., occupation, car, clothing, home, leisure activities). In addition, individuals have recurrent first-hand experience of how education and income are decisive factors determining culturally valued opportunities (e.g., for interesting work, for travel, for what one can provide to one's children). The perception that one has less of the socially desired goods than others is a more expansive comparison than those that may occur with family members. Fundamentally, "perceived inequalities" probe the extent to which individuals have an awareness of an unequal distribution of life resources.

We asked about such perceptions in three life domains: how individuals compare their *work opportunities* with others (e.g., "Most people have more rewarding jobs than I do"); their ability to *provide for their children* (e.g., "I believe I have been able to do as much for my children as most other people"); and their *living environments* (e.g., "I live in as nice a home as most people"). Perceived inequalities in work, family, and home domains were tapped by three separate, 6-item scales.

Our prediction was that individuals of lower SES standing would have higher levels of perceived inequalities in all of the above domains. We also expected that perceived inequalities would constitute a key intervening process in the linkage of class and well-being. The findings showed that for five of the six dimensions of well-being (all scales except autonomy), those with higher levels of education reported significantly higher levels

of well-being. In addition, as predicted, those with less education reported greater perceived inequalities across the domains of work, family, and home. Women also reported greater perceived inequalities in each of these domains than men.

Table 9.4 shows results of the regression analyses for two select dimensions of well-being: self-acceptance and purpose in life. Numerous background factors (gender, age, race, marital status, number of children, employment status, parents' education, economic background, and chronic health conditions) were included as control variables. Education is entered in Model 1, and Model 2 contains the perceived inequality variables (with analyses reported separately for each life domain). Sample sizes vary across these domains, depending on whether respondents were employed, or had children. These analyses show that education is a strong, significant predictor of both dimensions of well-being, and that the perception of inequalities across each of the three domains is also a significant predictor of self-acceptance and purpose. While the addition of perceived inequalities did not fully mediate the prior educational influences, tests of change in the size of the SES regression coefficient from the Model 1 to Model 2 were significant (see Wing & Ryff, 1998, for details). Similar effects (not shown) were found for personal growth and environmental mastery (although only for the home domain in the latter). There was no evidence that these effects differed by gender. Parallel analyses using income as the macro-level SES variable were also conducted, and in general, these revealed that education was a stronger predictor of well-being than income.

In summary, these results from a nationally representative sample add further evidence that position in the socioeconomic hierarchy is linked with differential levels of reported well-being and underscore the role of psychosocial construal processes in bridging these macro and micro levels of analysis. The emphasis on perceived inequalities provides a class-specific operationalization of how individuals interpret their social worlds by probing the degree to which they see inequalities in their share of valued life resources relative to others. Importantly, perceived inequalities are both predicted by SES, and predictive of well-being, thereby sharpening the conceptual and empirical understanding of their role as a linking mechanism. Underscoring the importance of a multidimensional framework for the study of well-being, these findings clarify that not all aspects of positive functioning appear class-linked. Individuals' perceptions of their own autonomy (capacity to choose for themselves) is not, for example, linked to their educational attainment. Similarly, once control variables were added to the regression model, neither education nor income was a signif-

**Table 9.4 Education, Perceived Inequalities, and Well-Being**

	Work		Family		Home	
	B(SE)	$\beta$	B(SE)	$\beta$	B(SE)	$\beta$
<b>Self-Acceptance</b>						
Model 1: Education	.23(.03)	.17**	.22(.04)	.16**	.20(.03)	.14**
Model 2: Education	.15(.03)	.10**	.15(.03)	.11**	.17(.03)	.12**
Perceived Inequalities	-.40(.02)	-.40**	-.37(.03)	-.31**	-.29(.02)	-.26**
Total R <sup>2</sup>		.25**		.19**		.18**
$\Delta\beta^a$		-.06**		-.05**		-.02*
n	1905		1685		2789	
<b>Purpose in Life</b>						
Model 1: Education	.26(.03)	.18**	.31(.04)	.21**	.31(.03)	.21**
Model 2: Education	.22(.03)	.15**	.27(.04)	.19**	.29(.03)	.19**
Perceived Inequalities	-.17(.02)	-.17**	-.22(.03)	-.18**	-.21(.02)	-.18**
Total R <sup>2</sup>		.11**		.12**		.15**
$\Delta\beta^a$		-.03**		-.03**		-.01*
n	1905		1685		2789	

\*p<.001; \*\*p<.0001

All regression equations control for gender, age, race, marital status, number of children, employment status, parents' education (average), economic background, and chronic physical health conditions.

<sup>a</sup>This is the change in the standardized regression coefficient for the SES variable from Model 2 to Model 3.

icant predictor of positive relations with others. Well-being is thus a multifaceted, micro-level domain, with some components (self-acceptance, purpose, mastery, and growth) more closely linked to macro-level class variables and intervening mechanisms than others.

## CONCLUSIONS AND FUTURE DIRECTIONS

Our objective in this chapter is to use the study of psychological well-being as an illustrative case for how a realm of scientific inquiry that began largely as a micro-level enterprise has been expanded to incorporate macro-level questions. We have shown that variations in well-being stem from multiple influences, including age, gender, and proximal life experiences (parenthood, health events, relocation) as well as from one's standing in the socioeconomic hierarchy, operationalized via educational standing. In addition, we have provided evidence that social comparison processes and perceived inequalities constitute intervening social psychological mechanisms that bridge the class and well-being realms.

The obtained findings were sometimes restricted to particular dimensions of well-being and reflected a primary focus on only one of three prominent components of socioeconomic standing. Neglected were thus the more complex lifestyle, world-view, linguistic meanings of social class. While the findings generally convey a message of the mental health advantages of higher educational standing, there was also evidence that having more education may sometimes be hazardous, perhaps when related to a priori expectations for effective management of difficult life transitions.

The social comparison results also underscored the psychological advantages of seeing one's self doing well relative to others. However, as the work on perceived inequalities made clear, individuals with lower levels of education frequently do not have access to the life opportunities or resources that enable such positive comparisons. The study of well-being could fruitfully incorporate other intervening social psychological mechanisms (e.g., goal-setting and -seeking, coping strategies, problem-solving, optimism) that may also connect social structural influences with individual mental health outcomes.

Given the explicit aging focus of the present volume, an important future question is the extent of the cumulative impact of these structural influences and intervening mechanisms on later life health and well-being.

Ross and Wu (1996), for example, have shown that disparities in physical health and physical functioning between adults of different educational backgrounds accelerate with age. Thus, whether later life is a period in the life course when disparities in well-being become more pronounced, or are increasingly "leveled" is an important future question. Our recurrent findings of lower levels of purpose in life and personal growth among older adults, we note, were obtained even among more educationally and economically advantaged samples. The structural lag phenomenon discussed earlier may defy class distinctions, or pose even greater challenges for those at the high end of the SES hierarchy, where access to resources, opportunities, and meaningful activities may have been a more sustained and gratifying experience in earlier decades of adult life.

In promoting multidisciplinary research on well-being, we have illustrated the conceptual and empirical trade-offs sometimes required to advance scientific agendas that bridge macro and micro levels of analysis. Such integrative science requires degrees of flexibility that unfortunately are not fostered in disciplinary-specific scientific training. Future strides in linking these distant levels of analysis will thus likely rest on innovations, theoretical and methodological, that occur on the boundaries between scientific disciplines, limited as they each are to capturing but a part of the human experience. This work illustrates a scientific progression reaching toward such boundaries.

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