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# Underemployment, job attitudes, and turnover intentions

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**Summary** We surveyed three distinct samples of employees (*N*s of 238, 102, and 981) in order to examine relations among various types of underemployment, job satisfaction, organizational commitment, and turnover intentions. Each dimension of underemployment is explored as a case of poor person-job fit, and the fit literature is used to produce hypotheses about these relations. We also developed and validated the 9-item Scale of Perceived Overqualification (SPOQ) to tap employee perceptions of surplus education, experience, and KSAs (knowledge, skills, and abilities). In general, perceptions of underemployment were associated with poor job satisfaction, particularly for facets with a direct causal relationship with the specific dimension of underemployment, such as overqualification and satisfaction with work. Perceived overqualification was also related to lower affective commitment, and higher intentions to turnover. For part-time work, negative attitudes were only found when employees expressed a preference for full-time work; a similar trend was not found for temporary workers, however. Implications for theory, research, and practice are delineated. Copyright © 2006 John Wiley & Sons, Ltd.

## Introduction

In the past two decades, much attention has been paid to the negative psychological effects of unemployment (e.g., Flynn, 1993; Kasl, Rodriguez, & Lasch, 1998). By comparison, we know relatively little about the effects of being *underemployed*—that is, holding a job that is in some way inferior or of lower quality, relative to some standard (Feldman, 1996). Estimates vary, but it appears that, in the United States and the UK, at least one in five workers experience underemployment in one form or another (Athey & Hautaluoma, 1994; Feldman & Turnley, 1995; Nabi, 2003; Polivka, 1996c), and the experience may be becoming more common. It is widely recognized that organizations are increasingly turning to non-standard work arrangements such as part-time or contingent work as a way to maximize staffing flexibility while lowering personnel costs (Barker, 1995; Barling & Gallagher, 1996; Beard & Edwards, 1995; Gallagher, 2002). This trend, combined with the current reality of continuous layoffs, may force more and more individuals to take positions that are

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non-standard and/or do not utilize their skills, due to a lack of work that fits one's capabilities and desires (Feldman & Leana, 2000; Polivka, 1996c).

Researchers in this field (e.g., Burris, 1983b; Feldman, 1990, 1996; Johnson & Johnson, 1996, 2000a) have consistently hypothesized that underemployment is associated with a variety of negative individual outcomes, including poor job attitudes (e.g., job satisfaction, organizational commitment), poor physical and psychological health, lower job performance and organizational citizenship, and withdrawal behavior (e.g., absenteeism, turnover). Given that a sizable minority of the workforce may be underemployed in some way, investigations of these expected relationships would clearly be valuable. Further, because researchers have begun to identify links between individual attitudes and behaviors and organizational-level outcomes (e.g., Currall, Towler, Judge, & Kohn, 2005), it stands to reason that underemployment may ultimately hinder organizational effectiveness. Unfortunately, because of the paucity of research on underemployment, our current understanding of this construct and its relations is still inadequate.

In the current investigation, we aim to explore relations between several types of underemployment on the one hand, and job attitudes and intentions on the other. This research represents a contribution to the existing underemployment literature in several ways. First, we describe the person-environment fit literature (e.g., Edwards, 1991) as a valuable conceptual model for understanding underemployment and producing testable hypotheses about its relations. The unifying message of this framework is that a mismatch between the employee and his or her work situation should result in a host of negative outcomes. Second, we develop and evaluate a content-valid measure of perceived overqualification, one of the key dimensions of underemployment. Finally, we simultaneously examine multiple types of underemployment, allowing us to explore the relative importance of each type to various outcomes. We begin with an overview of the person-environment fit literature, and then place the underemployment construct and its components within that framework.

## Person-Job Fit

The person-environment fit (or P-E fit) literature subsumes several other, more specific literatures, most notably those of person-job fit (P-J fit; Edwards, 1991) and person-organization fit (P-O fit; Kristof, 1996). The overarching hypothesis in these and related models (e.g., Chatman, 1989; Muchinsky & Monahan, 1987; Werbel & Gilliland, 1999) is that the greater the congruence between the person and his or her environment (e.g., job, work team, organization), the more positive the individual and organizational outcomes. Similarly, vocational psychologists stress the importance of career choices that are consistent with one's work values and preferences (e.g., Holland, 1985). On the whole, empirical evidence supports this common hypothesis of fit models, and, as a result, researchers and practitioners alike view P-E fit as the one of the hallmarks of a healthy employee–employer relationship (Kristof, 1996; Kristof-Brown, 2000). Because underemployment refers primarily to the quality of one's job, from this point forward we limit our discussion to person-job fit.

Edwards (1991) distinguished between two types of fit originally identified by French and colleagues (French, Caplan, & Harrison, 1982; French, Rodgers, & Cobb, 1974): job demands-worker abilities fit, and worker needs-job supplies fit. *Job demands-worker abilities fit* refers to the match between the requirements of the job and the knowledge, skills, and abilities (KSAs) of the employee. A second type of P-J fit is *worker needs-job supplies fit*, or the extent to which the goals, values, or desires of the employee are satisfied by the qualities of the job. One complication in this research area is the diversity of operational definitions and approaches used, including direct perceptions of fit and more "objective" comparisons of the separate P and J components. Importantly, the meaning of fit and the interpretation

 

of study results will depend in part upon the choice of measurement strategy (see Edwards, 1994, for full treatment of this issue). We will return to this matter later when discussing approaches to the operationalization of underemployment in particular.

Empirical evidence has generally supported the theoretical proposition that fit will be associated with desirable individual and organizational outcomes, such as psychological and physical health, positive job attitudes, better job performance, and less employee withdrawal. For example, Caplan (1987) presented research indicating that low P-J fit in terms of job complexity (either too simple or too complex, depending upon the needs of the employee) was associated with higher levels of depression. Bretz and Judge (1994) found that job satisfaction, tenure, and career success were associated with a composite measure of fit that included both demand-ability and need-supply fit. Wilk and Sackett (1996) found that individuals experiencing mismatch between their abilities and job complexity were more likely to leave their job for another one with better fit. Finally, in a sample of re-employed executives, Feldman, Leana, and Bolino (2002) found that participants held poorer job attitudes primarily when there was a discrepancy between individual desires and job attributes. It should be noted, however, that some fit-outcome links have been more definitively established (e.g., job satisfaction) than others (e.g., job performance; Edwards, 1991; Kristof-Brown, Zimmerman, & Johnson, 2005). We now turn to the construct of underemployment and its components.

## Conceptualization and Measurement of Underemployment

As mentioned, past research in underemployment is relatively sparse, coming from various fields (e.g., sociology, labor economics, industrial, and organizational psychology) and varying widely in how underemployment is conceived and operationalized (Standing, 1981). However, the recent publication of a book (Dooley & Prause, 2004) and a special issue in the *American Journal of Community Psychology* on underemployment (Dooley & Catalano, 2003) suggest that interest in the topic may be growing. Feldman (1996) argued that underemployment can be broken down into five dimensions: (a) more education than required by the job, (b) more skills or experience than required by the job, (c) involuntary employment in a field outside of area of education, (d) involuntary employment in part-time, temporary, or intermittent work, and (e) low pay, relative to either a previous job or to others with similar educational backgrounds (sometimes referred to as *underpayment*; Sheets, Nord, & Phelps, 1987). Others (e.g., Dooley & Prause, 2004) have more broadly defined underemployment as any type of insufficient employment situation, including unemployment.

As with the assessment of fit, each type of underemployment can be measured directly via the reported perceptions of employees, or more objectively by comparing person (e.g., job applications, personnel files) and job information (e.g., job analysis records, DOT or O*NET data). This distinction is important, as individuals who do not appear to be underemployed on paper may nevertheless perceive themselves as overqualified, underpaid, or otherwise underemployed (and vice versa). In either case, underemployment is seen as a troublesome condition, with most researchers hypothesizing that underemployed individuals experience negative outcomes, as noted above (e.g., Burris, 1983b; Feldman, 1996). We briefly describe each of the dimensions below.

### *Overqualification and employment outside one's educational background*

Feldman's (1996) first two dimensions—surplus education and surplus skill and/or experience—are often collectively referred to as *overqualification* (e.g., Khan & Morrow, 1991; O'Brien, 1986). The

 

third dimension—employment outside one's educational background—may co-occur with overqualification, or might instead suggest that an employee is "differently qualified" relative to his job (Maynard, 1998). Even compared to other types of underemployment, there is very little research on either construct (Feldman et al., 2002; Jensen & Slack, 2003).

Although overqualification can be measured objectively via the match between one's education or experience level and the requirements of the held position, in practice, the few researchers studying overqualification have typically measured an employee's perception of mismatch. Johnson and Johnson (1996, 1997, 1999, 2000a,b) have adapted the perceived overqualification measures of Khan and Morrow (1991) to explore relations with health (both physical and psychological) and job attitudes. This adapted measure contains two subscales: mismatch and no-grow. The mismatch subscale taps perceptions of surplus education, experience, and talent, whereas the no-grow subscale assesses the employee's perception of opportunities for learning, growth, and change in her job.

Although both sets of perceptions tapped by Johnson and Johnson's (1996) scale are potentially valuable for predicting job attitudes and other outcomes, we argue that only the mismatch subscale represents overqualification as it is currently understood. *Webster's Ninth New Collegiate Dictionary* (1988) defines overqualification as "having more education, training, or experience than a job calls for." Similarly, in a qualitative study of overqualification in the hiring process, Maynard (1998) found that hiring managers, applicants, and employees tend to define overqualification as surplus education, experience, and/or knowledge, skills, and abilities (KSAs); a lack of growth or learning opportunities was not mentioned as being indicative of overqualification. Furthermore, a recent set of factor analyses of the Johnson and Johnson scale (Johnson, Morrow, & Johnson, 2002) indicated that the subscales were empirically distinct, and the authors acknowledged that it is unclear whether both constitute overqualification. Unfortunately, the internal consistency of the mismatch scale is only marginally acceptable ($\alpha = 0.70$ and 0.73 at two time points, Johnson & Johnson, 2000b), probably due to its small size (four items). As a result, one goal of the current research is to develop a conceptually clean and reliable measure of perceived overqualification.

### *Involuntary part-time, temporary, and intermittent work*

At least one-quarter of the North American and European workforces are comprised of part-time, temporary, and intermittent workers (Tilly, 1991; U.S. Department of Labor, 2006). These numbers are likely to increase as the majority of newly created jobs are part-time and/or temporary in nature (Barling & Gallagher, 1996; Gallagher, 2002). These types of employment relationships are related to the concept of *contingent work* (Barker & Christensen, 1998), but there are some important distinctions (Polivka, 1996a). Polivka and Nardone's (1989) oft-cited definition labels as contingent any work "in which an individual does not have an explicit or implicit contract for long-term employment or one in which the minimum hours worked can vary in a non-systematic manner" (p. 11). Thus, part-time work is not inherently contingent (Gallagher, 2002), although contingent work may be more common for part-time than full-time jobs (Polivka, 1996b).

Likewise, not all employees engaged in part-time, temporary, and intermittent work are by definition underemployed. Several researchers (Dooley & Prause, 2004; Feldman, 1996) have considered such types of work to represent underemployment only when the employee would prefer to have full-time, permanent, and continuous employment, respectively. Thus, the labeling of a work arrangement as underemployment requires attention to the match between the actual and preferred work status of the employee. An individual who experiences mismatch between his actual and preferred work status is considered to be *involuntarily employed* (Feldman, 1996; Feldman & Turnley, 1995; Porket, 1989), and is expected to have stronger reactions to the work arrangement than one who is similarly employed by

 

choice (Edwards, 1991; Moorman & Harland, 2002). Unfortunately, many part-time and temporary workers are so employed out of necessity rather than choice (Barling & Gallagher, 1996; Beard & Edwards, 1995; Polivka, 1996c), and most new jobs being created are part-time jobs being filled by individuals who would prefer full-time work (Barker, 1995).

### *Underpayment*

The final dimension of underemployment described by Feldman (1996) is underpayment, which has been operationalized as a salary that is at least 20 per cent less than either one's previous salary or the salary of those with equal education (Feldman & Turnley, 1995; Zvonkovic, 1988). Alternatively, underpayment can be measured by asking an employee to subjectively compare his or her salary to one of these standards on a Likert scale (e.g., *much less* to *much more*). A common cause of underpayment, not surprisingly, seems to be job loss. For example, Feldman and Leana (2000) found that 43 per cent of laid-off executives in their sample earned less in their subsequent job than their original job.

## Past Research on Underemployment and Worker Attitudes and Intentions

As mentioned, investigators have hypothesized a host of negative consequences of underemployment (Feldman, 1996). Because of the lack of existing research, none of these relationships are particularly well understood, but clearly the favorite class of outcome variables has been job attitudes and intentions, particularly job satisfaction. Before linking the underemployment and P-J fit literatures, we review past research on these dependent variables.

### *Job satisfaction*

Employees with inadequate employment may feel disillusioned with the job, frustrated with the lack of career opportunities, and unfulfilled due to underutilization of their skills (Borgen, Amundson, & Harder, 1988; Burris, 1983a). Studies have found a negative relationship between job satisfaction and (a) perceptions of underemployment (Solmon, Kent, Ochsner, & Hurwicz, 1981), (b) perceptions of skill under-utilization (Feldman et al., 2002; Feldman & Turnley, 1995; Khan & Morrow, 1991; O'Brien, 1986), (c) perceived or actual mismatch between education level and the position's requirements ( e.g., Burris, 1983a,b; Kalleberg & Sørenson, 1973; Saks & Ashforth, 1997), (d) employment outside one's field (Feldman & Turnley, 1995), (e) holding a temporary or part-time position, rather than permanent or full-time work (De Witte & Lagrou, 1990; Feldman & Turnley, 1995), and (f) the degree of pay difference between previous and current job (Feldman et al., 2002). However, not all studies have reported negative relationships between job satisfaction and underemployment (e.g., King & Hautaluoma, 1987; Klein, 1988; Prause & Dooley, 1997).

### *Organizational commitment*

Organizational commitment is typically conceptualized as being comprised of three parts: *affective* (one's emotional attachment to the organization), *continuance* (the costs associated with leaving the

 

organization), and *normative* (a sense of duty or obligation to remain with the organization; Meyer & Allen, 1997). An employee who perceives him- or herself to be underpaid, overqualified, or otherwise underemployed may feel less emotionally attached to the organization (Borgen et al., 1988). However, actual research on this relationship is scarce, and a consistent pattern of findings has yet to emerge. Feldman and colleagues (Feldman et al., 2002; Feldman & Turnley, 1995) found consistent negative relationships between various dimensions of underemployment (overqualification, employment in an unrelated field, and part-time work) and affective commitment. Johnson et al. (2002) found a negative relation between mismatch (i.e., overqualification) and affective commitment, but no relation with continuance or normative commitment. In his meta-analysis, Thorsteinson (2003) found no link between work status (part-time vs. full-time) and organizational commitment, though this comparison did not incorporate employee desires for part-time or full-time work.

### *Turnover intentions*

Overqualified individuals tend to report greater intentions to leave their jobs and engage in job search behavior, relative to non-underemployed individuals (Burris, 1983b; Feldman & Turnley, 1995). In his meta-analysis, Thorsteinson (2003) found no difference in turnover intentions between part-time and full-time employees; too few studies examined employee preferences for part- or full-time work to examine its potential moderating effect. Surprisingly, no research links underemployment or overqualification to actual turnover behavior. Therefore, there is little evidence for an association between many dimensions of underemployment and turnover intentions and behavior, though these relations have often been hypothesized (Feldman, 1996).

## Incorporating Underemployment Into the P-J Fit Framework

One of the limitations of the body of underemployment research is the lack of an organizing theoretical framework with which to develop research hypotheses and design (Feldman, 1996). The P-J fit model seems particularly well suited to this purpose. Kristof-Brown et al. (2005), in a recent meta-analysis, alluded to the relatedness of P-J fit and the constructs of underemployment and overqualification. The utility of the fit and related frameworks (e.g., relative deprivation theory; Feldman et al., 2002; Johnson & Johnson, 2000b) for underemployment research has been mentioned occasionally (Feldman, 1996; Johnson & Johnson, 2000a; Nabi, 2003; Thorsteinson, 2003), but rarely put into practice.

Each dimension of underemployment can be considered an example of poor P-J fit. Indeed, Feldman (1996) noted that each dimension represented a form of discrepancy relative to a standard. Typically, poor demand-ability fit has been conceptualized as a lack of worker ability, relative to job demands (O'Brien, 1986). However, employees who have *more* education, experience or KSAs than required—in other words, those who are overqualified—also suffer from a lack of demand-ability fit. Other types of underemployment—low-paying, temporary, or part-time jobs held by those who prefer higher pay, job permanence, or full-time work—represent examples of need-supply mismatch, where the employee's job does not satisfy a financial or psychological need. From a P-J fit perspective, dimensions of underemployment such as part-time or temporary work should only be associated with lower job satisfaction and other negative outcomes when the individual desires full-time or permanent employment. There is no need-supply discrepancy for those voluntarily employed in part-time work, for example. This notion underscores the importance of considering the desires of each individual

 

employee rather than assuming that all employees prefer a particular employment situation (Beard & Edwards, 1995). In the case of the relevance of a job to one's area of education, a mismatch may represent a lack of both need-supply and ability-demand fit. First, low need-supply fit would be present when an individual desires to be employed in an area more closely tied to her education than is presently the case. Second, individuals employed outside of their area may hold unnecessary educational degrees or possess experience or KSAs not being utilized by the job, resulting in an ability-demand discrepancy.

## The Current Studies

The current research comprises three studies designed to evaluate these hypotheses as well as the psychometric qualities of our new measure of perceived overqualification. Here, we make general propositions, upon which we will base testable hypotheses specific to the goals and methods of each specific study.

### *Employee preferences for work situations*

As a special instance of poor P-J fit, underemployment must be considered in light of the individual's work preferences. Null findings in past research may have resulted from the operationalization of underemployment purely as a job characteristic (e.g., hours per week, pay level). For example, Barling and Gallagher (1996) noted that most research on part-time workers has examined simple work status differences in job satisfaction without considering worker preferences. In a meta-analysis of work status-job attitude relationships, Thorsteinson (2003) did not find job satisfaction or organizational commitment differences between part-time and full-time workers. When the congruence between actual and preferred work status was measured, however, voluntary part-time workers reported higher job satisfaction than involuntary part-time workers. Results from a recent meta-analysis (Kristof-Brown et al., 2005) suggest that needs-supplies fit predicts employee attitudes and intentions better than the absolute work situation.

> *Proposition 1*: Among part-time workers, temporary workers, and workers outside of their area of education, those workers whose preferences conflict with their work situation will report more negative job attitudes and intentions than those workers who experience a match between preferences and work situation.

### *Strong versus weak underemployment-satisfaction relationships*

We argue that the degree of interrelationship between a given dimension of underemployment and a given facet of job satisfaction will depend in part upon the strength of the causal link between the two. For example, overqualified individuals should be most dissatisfied with the nature of their work tasks (Brkich, Jeffs, & Carless, 2002). Similarly, a temporary worker who would prefer to be permanently employed is likely to be most dissatisfied with characteristics lacking in many temporary positions (e.g., job security, compensation; Beard & Edwards, 1995). On the other hand, facets involving one's interpersonal work relationships—such as satisfaction with one's supervisor or co-workers—should

 

be relatively independent of underemployment perceptions, as underemployment is more closely tied to the nature and extrinsic benefits of work. In essence, we suggest that underemployment-satisfaction relations will be *domain-specific*. Beard and Edwards (1995) and Barling and Gallagher (1996) have made similar hypotheses regarding facet satisfaction of part-time versus full-time workers. Up to this point, however, underemployment research has utilized global measures of job attitudes (e.g., Bolino & Feldman, 2000; Johnson & Johnson, 2000a), which might have obscured more specific underemployment-attitude relationships. In the current study, we use facet satisfaction measures in order to clarify the underlying nature and magnitude of relations between a specific type of employment fit and a specific domain of satisfaction (Bretz & Judge, 1994).

*Proposition 2*: Underemployment dimensions will be differentially related to job satisfaction facets, reflecting the strength and proximity of the underlying causal link between the two.

### *Development of a perceived overqualification measure*

As mentioned above, one of the primary goals of the current research, in addition to testing the two propositions above, was to develop and evaluate a new measure of perceived overqualification. The three studies presented below will allow us to evaluate the reliability (both internal consistency and test-retest reliability) and construct validity (in terms of content validity, convergent and discriminant validity, and factor structure) of this measure.

*Proposition 3*: Our measure of perceived overqualification will display positive psychometric properties.

## Study 1

### *Goals and hypotheses*

Study 1 was designed primarily to evaluate the initial set of items developed for our measure of perceived overqualification, and examine relations between each dimension of underemployment (involuntary part-time work, involuntary temporary work, underpayment, and employment outside one's area of education) and facets of job satisfaction. In general, underemployment should be negatively related to job satisfaction (Feldman, 1996). However, we hypothesize that the strongest relationships will be between variables with a conceptual link. For example, overqualified employees and those in positions unrelated to their educational background are not able to fully utilize their education, work experience, or skill; as a result, they should be most dissatisfied with the work itself. For part-time and temporary workers, we consider only those employed involuntarily to be underemployed. Voluntary part-time and temporary workers should be more similar in satisfaction level to their full-time and permanent worker counterparts, respectively, insofar as there is a match between their actual and preferred work status (e.g., Marler, Barringer, & Milkovich, 2002). By contrast, involuntary part-time and temporary workers should experience lower satisfaction with pay, promotion, and benefits.

*Hypothesis 1a*: Overqualification will be negatively related to satisfaction with the nature of work.
*Hypothesis 1b*: Involuntary job-degree mismatch will be negatively related to satisfaction with the nature of work.

 

*Hypothesis 1c*: Underpayment, measured both as pay level relative to one's peers and one's previous job, will be negatively related to pay satisfaction.
*Hypothesis 1d*: Involuntary part-time workers will report lower job satisfaction with pay, promotion, and benefits than either voluntary part-time or full-time workers.
*Hypothesis 1e*: Involuntary temporary workers will report lower job satisfaction with pay, promotion, and benefits than either voluntary temporary or permanent workers.

## Organizational Context

**Study 1**
Participants completed the survey in early 2000. At that time, they indicated that they were currently employed, not attending college, and at least 18 years of age. Participants were occupied by a wide variety of organizations, but nearly all worked in the New York City, Long Island, or Hudson Valley regions of New York state in the United States. Each of these regions were experiencing above average job growth and historically low unemployment at the time (the latter ranging from 3.1 to 5.4 per cent). Participants were employed across all occupational categories, with the most common being professional (26 per cent), executive (17 per cent), administrative support (14 per cent), and sales (12 per cent).

**Study 2**
Data for this study were collected in late 2004 and early 2005. Both alumni and student participants were employed in a variety of organizations (6.7 per cent were self-employed). Student participants were employed principally in the Hudson Valley region of New York state, and worked mainly in retail and food service (36 per cent), clerical (17 per cent), professional (14 per cent), and sales positions (12 per cent). This region at the time was experiencing average job growth and an unemployment rate of about 4.5 per cent. Most alumni were employed in professional (58 per cent), executive (13 per cent), and clerical (13 per cent) positions. Because data were collected via the Internet, no information is available regarding geographical location, though the majority of alumni from this institution tend to live and work in the northeastern United States.

**Study 3**
Data for this study were collected from the non-faculty employees of the college in early 2004 and from the college alumni in summer 2004. The non-faculty were employed entirely in the Hudson Valley region of New York state, primarily in clerical (51 per cent), administrative (21 per cent), and professional (16 per cent) positions. The alumni were employed all over the United States, but mostly in New York state (57 per cent), or otherwise in the northern (20 per cent) or southern East Coast (9 per cent). Alumni held primarily managerial/executive (42 per cent) and professional (40 per cent) positions. Both New York and the U.S. in general were experiencing a slow recovery from the recent recession during this period, with unemployment hovering around 5.5 to 6.0 per cent.

## *Method*

### Participants

Sample 1 consisted of 238 non-students holding at least one full- or part-time job at the time the survey was completed. Participants had a mean age of 34.3 years (SD = 11.76) and 58 per cent were female. Participants varied widely with respect to their highest educational degree; nearly half (48 per cent) held a high-school degree (with half of those having taken at least some college courses), 35 per cent held either an associate's or a bachelor's degree, and most of the remaining participants had a graduate degree or had completed some graduate work. Participants worked an average of 41.8 hours per week (SD = 12.9), and about four-fifths (78 per cent) were employed permanently.

### Development of the scale of perceived overqualification (SPOQ)

A review of the literature revealed the need for a reliable and content valid measure of perceived overqualification. Measures of overqualification (like any fit measure) may be either subjective (i.e., perceived) or objective, and the choice is non-trivial. Some research suggests that subjective assessments reasonably approximate objective fit (Caplan, 1987), whereas other studies found a relatively weak association between the two (Kristof-Brown et al., 2005). However, like other researchers (Johnson et al., 2002; Khan & Morrow, 1991), we chose to develop a subjective measure of overqualification rather than relying on objective comparisons, for two reasons. First, a subjective measure completed by the employee is the most efficient measure of overqualification and may be the only practical option in a given research setting, depending on access to organizational data. Second, and more importantly, measuring subjective perceptions may be the most fruitful approach for predicting outcomes such as job attitudes and performance (Kristof, 1996; Lauver & Kristof-Brown, 2001). This is because an employee is likely to feel and act based on his or her perceptions of the employment situation, regardless of the accuracy of those perceptions (Zalesny & Ford, 1990).

*Item development*: We first examined the small overqualification literature to identify the scope and content of the construct. To ensure that the measure was also consistent with how overqualification is understood in the workplace, we reviewed manager and employee conceptualizations of overqualification provided in a previous qualitative study (Maynard, 1998). From these reviews, we defined perceived overqualification as the extent to which an employee feels that he or she has surplus education, experience, and/or KSAs, relative to the requirements of his or her position. Using this definition, we developed an initial measure containing 22 Likert-type statements (e.g., "My previous training is not being fully utilized on this job."). Participants indicated their agreement with each item using a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

*Principal-components analysis*: Because of the limitations of the available research, it is not clear whether the overqualification construct is unidimensional or multi-dimensional. For example, Feldman (1996) considered surplus education and surplus skills and experience to be distinct dimensions of underemployment, but wondered if it might be possible to scale them together. Furthermore, both researchers (e.g., Feldman, 1996; Johnson & Johnson, 1996) and employers (Maynard, 1998) have tended to make global hypotheses about the outcomes of overqualification, suggesting that overqualification may be best thought of as a unitary construct.

To explore the structure of perceived overqualification as measured by our initial set of 22 items, we performed a principal-components analysis. Principal-components analysis (PCA) is a data-reduction method aimed at capturing the greatest proportion of total variance in a set of data with the fewest number of common factors or components (Bryant & Yarnold, 1995). Results from the PCA suggest that a single component best represented the variance in the data. Although three components had eigenvalues greater than one, the scree plot indicated a sharp drop in eigenvalues from the first

 

component (11.16) to the second component (1.47), followed by a leveling off in the remaining eigenvalues. The first component accounted for a majority of the variance in the data (50.7 per cent); the next component accounted for only 6.7 per cent of the variance.

We then reduced the length of the scale in order to simultaneously ensure content validity, minimize item redundancy, and maximize item clarity, while maximizing internal consistency (Stanton, Sinar, Balzer, & Smith, 2002). The resulting 9-item Scale of Perceived Overqualification (SPOQ) contains three items each tapping perceptions of surplus education, experience, and KSAs. A second PCA performed on the reduced scale also resulted in a single-component solution (only one component with an eigenvalue greater than one, accounting for 57.7 per cent of variance). This scale displayed strong internal consistency for the current sample ($\alpha = 0.89$). The SPOQ, along with factor loadings is presented in the Appendix.

### Additional measures

*Other facets of underemployment*: We measured *part-time versus full-time employment* by asking participants to report the average number of hours worked per week. Those working fewer than 40 hours were categorized as part-time. Although the dividing line between full-time and part-time work varies across and within countries, 40 hours is perhaps the most common cut-off in the United States, and is consistent with past organizational research (e.g., Krausz, Sagie, & Bidermann, 2000; McGinnis & Morrow, 1990). Furthermore, in this sample, many more individuals stated that they worked 40 hours per week (28.8 per cent) than any other reported hours per week figure (the next highest being 50 hours per week, at 9.9 per cent), suggesting that this cut-off is appropriate for the sample. To determine the employee's preference for part-time or full-time work, we compared 40 hours to the number of hours the participant would ideally like to work. For *temporary versus permanent employment*, we asked participants whether they were employed permanently or temporarily, and, if temporarily, whether they would prefer to be employed permanently.

For *job-degree mismatch*, we asked participants the degree of match between their job and their education, on a scale ranging from 1 (*directly related*) to 4 (*not related*). Participants indicating that their job was not at least somewhat related to their education then were directed in a follow-up question to indicate whether or not they would prefer to be employed in a job that was more closely related to their education. Finally, two items were created to measure *underpayment*. First, participants who had held more than one job were asked how much they were being paid in their current job, as compared to their previous job. Second, all participants were asked how much they felt they were being paid, relative to others with a similar degree or educational background. Both pay items were measured on a Likert scale with response options ranging from 1 (*much less*) to 7 (*much more*). For clarity, responses on these two items have been reverse scored so that higher scores reflect greater perceived underpayment.

*Job satisfaction facets*: We measured various facets of job satisfaction with the Job Satisfaction Survey (JSS; Spector, 1997), a 36-item measure consisting of nine 4-item facets, utilizing a 6-point Likert scale ranging from 1 (*disagree very much*) to 6 (*agree very much*). For the current study, one of the facets—operating procedures—which measures satisfaction with the organization's rules and procedures, demonstrated much lower consistency than reported elsewhere ($\alpha = 0.33$). Inspection of the data did not reveal an obvious reason for the low reliability of this facet. As satisfaction with operating procedures did not figure prominently in our hypotheses, we dropped this facet from further analyses. The remaining facets demonstrated acceptable levels of internal consistency reliability (coefficient alphas ranged from 0.73 to 0.86).

*Demographic measures*: In addition, participants reported their education level, years since obtaining highest educational degree, age, and gender. For education level, respondents checked the

 

most appropriate degree type or category from a list of options. The categories were then coded from 0 (*some high school*) to 7 (*doctoral degree*).

### Procedure

Participants were recruited by students in an undergraduate course in psychometrics in exchange for course credit during the Spring 2000 semester. The first author trained interested students, in small groups, on recruitment strategy, survey administration, and ethics, and provided them with written instructions and a script to follow. Research assistants were unfamiliar with the study goals and hypotheses. Each research assistant recruited between five and ten individuals through their households or places of work. The percentage of approached individuals who agreed to participate is not known, but because potential participants were recruited directly, this percentage is likely to be quite high.

After obtaining informed consent, research assistants gave participants the six-page questionnaire in person. Assistants instructed participants to complete the questionnaire with their primary job in mind (i.e., the job at which the participant worked the most hours). Completion of the questionnaire took between 10 and 15 minutes. Once the participant was finished, the assistant asked him or her to seal the questionnaire in an envelope. The assistant then collected the questionnaire and debriefed the participant.

## *Results*

### Overqualification and employment outside one's area of education

Zero-order correlations and descriptive statistics for study variables are presented in Table 1. As can be seen, perceptions of overqualification were negatively related to each of the eight satisfaction facets; the relation between overqualification and satisfaction with the nature of work was the strongest of the eight ($r = -0.46, p < 0.001$). A hierarchical regression analysis was performed with the nature of work facet of satisfaction as the criterion variable, the set of demographic variables (education level, years since degree completion, age, and gender) entered in Step 1, and perceived overqualification entered in Step 2. Consistent with Hypothesis 1a, perceived overqualification significantly predicted satisfaction with work ($\beta = -0.41$) after controlling for the demographic variables ($\Delta R^2 = 0.148$, $F[1, 208] = 41.89, p < 0.001$).

### Involuntary job-degree mismatch

We also predicted that individuals involuntarily employed in jobs that did not match the content of their education would be less satisfied with the nature of their work. Table 1 indicates that job-degree mismatch (scored yes or no, independent of preference) was negatively related to most facets of satisfaction, but the strongest relation was with the nature of one's work. We compared the mean work satisfaction of participants employed in jobs (a) directly related to their education, (b) voluntarily employed in jobs not directly related to their education, and (c) involuntarily employed in jobs not directly related to their education. These means were adjusted using an analysis of covariance (ANCOVA) with age, gender, education level, and years since attainment of highest degree as covariates. As predicted, the effect of mismatch upon satisfaction with work was significant, $F[2, 151] = 13.20, p < 0.001, \eta^2 = 0.15$. Individuals who were involuntarily employed outside of their field were significantly less satisfied with the nature of their work (adj M = 4.62) than both those voluntarily employed outside their field (adj M = 5.71) and those employed in their field (adj M = 5.64).

 

Table 1. Descriptive statistics and zero-order correlations for sample 1

| Variable | *N* | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Underemployment | | | | | | | | | | | | | | | | | |
| 1. Overqualification | 216 | 4.15 | 1.44 | (89) | | | | | | | | | | | | | |
| 2. Job-degree mismatch | 231 | 1.43 | 1.21 | **38** | — | | | | | | | | | | | | |
| 3. Involuntary part time (0 = no; 1 = yes) | 233 | — | — | 07 | **17** | — | | | | | | | | | | | |
| 4. Involuntary temporary (0 = no; 1 = yes) | 229 | — | — | 13 | **17** | 07 | — | | | | | | | | | | |
| 5. Pay versus previous Job | 187 | 3.09 | 1.91 | **30** | **21** | **20** | **24** | — | | | | | | | | | |
| 6. Pay versus peers | 225 | 4.34 | 1.59 | **20** | 02 | 07 | 10 | **37** | — | | | | | | | | |
| Job satisfaction facets | | | | | | | | | | | | | | | | | |
| 7. Benefits | 237 | 4.13 | 1.43 | **−26** | **−21** | **−21** | **−26** | **−27** | **−20** | (84) | | | | | | | |
| 8. Communication | 237 | 4.74 | 1.27 | **−31** | **−16** | **−15** | −05 | **−21** | **−20** | **27** | (75) | | | | | | |
| 9. Co-workers | 237 | 4.90 | 1.23 | **−18** | **−18** | **−15** | −06 | −08 | −10 | **26** | **42** | (73) | | | | | |
| 10. Nature of Work | 237 | 5.19 | 1.29 | **−46** | **−37** | **−17** | **−26** | **−21** | **−18** | **27** | **44** | **41** | (83) | | | | |
| 11. Pay | 237 | 3.84 | 1.56 | **−36** | **−13** | **−14** | **−17** | **−31** | **−59** | **41** | **35** | **25** | **37** | (85) | | | |
| 12. Promotion | 236 | 3.86 | 1.36 | **−31** | −10 | **−16** | −08 | **−29** | **−35** | **43** | **45** | **31** | **39** | **61** | (79) | | |
| 13. Rewards | 237 | 4.21 | 1.52 | **−37** | **−19** | **−14** | −10 | **−23** | **−28** | **41** | **61** | **55** | **53** | **64** | **60** | (86) | |
| 14. Supervisor | 237 | 5.12 | 1.32 | **−21** | **−14** | −06 | −13 | −14 | −08 | **22** | **43** | **46** | **44** | **30** | **43** | **58** | (84) |

Decimals have been left off for ease of reading; coefficients in bold are significant at $p < 0.05$. Coefficient alpha values are presented on the diagonal for multi-item measures.

Table 2. Hierarchical regression analysis of satisfaction with nature of work[a]

| Predictor | $\beta$[b] | | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|
| | At step | Final | | |
| Step 1—Demographic variables | | | 0.09* | — |
| Gender | −0.06 | −0.07 | | |
| Age | −0.27* | −0.14 | | |
| Education Level | −0.12 | −0.12 | | |
| Years since highest degree | −0.02 | −0.04 | | |
| Step 2—Perceived overqualification | | | 0.17** | 0.08** |
| SPOQ | −0.31** | −0.22** | | |
| Step 3—Involuntary job-degree mismatch | | | 0.25** | 0.08** |
| Involuntary job-degree mismatch | −0.29** | −0.29** | | |

[a]Results are similar when Step 2 and Step 3 are entered in the opposite order.
[b]Standardized regression weight.
*$p < 0.05$; **$p < 0.01$.

A hierarchical regression analysis, presented in Table 2 suggests that both mismatch in terms of *amount* of education, experience and/or KSAs (i.e., perceived overqualification) and mismatch in terms of *type* of education contribute significantly to the prediction of satisfaction with work. Therefore, Hypothesis 1b was supported.

**Underpayment**

As can be seen in Table 1, both types of underpayment—relative pay compared to one's previous job and relative pay compared to one's educational peers—are negatively related to all facets of job satisfaction except satisfaction with coworkers and supervisor. As expected, the strongest underpayment relationships were with pay satisfaction. Two hierarchical regression analyses were performed, where the four demographic variables were added at Step 1, and one of the underpayment measures was added at Step 2. Both pay relative to one's peers and pay relative to one's previous job significantly predicted pay satisfaction after controlling for the demographic variables ($\Delta R^2 = 0.334$ and 0.072, respectively, both $p < 0.001$). Thus, Hypothesis 1c was supported.

**Part-time employment**

We categorized participants as either full-time (i.e., working 40 hours or more per week), part-time voluntary (i.e., working less than 40 hours and desiring less than 40 hours per week), or part-time involuntary (i.e., working less than 40 hours and desiring 40 hours or more per week). We then conducted analyses of variance (ANOVAs) to compare the three groups with respect to the satisfaction facets of pay, promotion, and benefits. For *post hoc* analyses, we utilized Tukey's HSD test, a familywise procedure which adjusts alpha levels for all pairwise comparisons.

Table 3 shows that involuntary part-time employees were less satisfied with pay and promotion than full-time employees, and less satisfied with benefits than both part-time voluntary or full-time employees. No significant differences were found between facet satisfaction levels of full-time and part-time voluntary employees. When age, gender, education level, and years since highest degree are entered into comparable ANCOVAs as covariates, significant differences were still found for satisfaction with benefits ($F[2, 222] = 4.54$, $p < 0.05$, $\eta^2 = 0.04$), but not for pay or promotion. These results provide partial support for Hypothesis 1d.

Table 3. Mean job satisfaction scores for full-time, voluntarily part-time, and involuntarily part-time employees

| Job satisfaction facet | Employment status | | | $F$ | $\eta^2$ |
|---|---|---|---|---|---|
| | Full-time | Part-time (voluntary) | Part-time (involuntary) | | |
| Pay | 4.02[a] | 3.63 | 3.20[a] | 3.52* | 0.03 |
| Promotion | 4.03[a] | 3.65 | 3.24[a] | 4.35* | 0.04 |
| Benefits | 4.27[a] | 4.12[b] | 3.23[a,b] | 5.44** | 0.05 |

Full-time $N = 161$; part-time voluntary $N = 48$; part-time involuntary $N = 23$. For each satisfaction facet, pairs with common superscripts differed significantly from each other.
*$p < 0.05$; **$p < 0.01$.

Table 4. Mean job satisfaction scores for permanent, voluntarily temporary, and involuntarily temporary employees

| Job satisfaction facet | Employment status | | | $F$ | $\eta^2$ |
|---|---|---|---|---|---|
| | Permanent | Temporary (voluntary) | Temporary (involuntary) | | |
| Pay | 3.96[a] | 3.74 | 3.11[a] | 3.37* | 0.03 |
| Promotion | 3.97 | 3.49 | 3.56 | 2.15* | — |
| Benefits | 4.34[a,b] | 3.70[a] | 3.06[b] | 10.54** | 0.09 |

Permanent $N = 178$; temporary voluntary $N = 24$; temporary involuntary $N = 25$. For each satisfaction facet, pairs with common superscripts differed significantly from each other.
*$p < 0.05$; **$p < 0.01$.

**Temporary employment**

Finally, we compared the job satisfaction scores of permanent, voluntary temporary, and involuntary temporary employees. As shown in Table 4, both voluntary and involuntary temporary employees were less satisfied with benefits than permanent employees. Further, involuntary temporary employees were less satisfied with pay than permanent employees. Contrary to expectations, there were no employment status differences for satisfaction with promotion. When the group of demographic variables were entered as covariates in a comparable ANCOVA, significant differences were still found for satisfaction with benefits [$F[2, 218] = 7.15$, $p < 0.001$, $\eta^2 = 0.06$], but not for pay. Thus, Hypothesis 1e was partially supported; being involuntarily employed in a temporary position is associated with negative job satisfaction for some but not all relevant facets.

# Study 2

## *Goals*

Study 2 was designed to further evaluate the psychometric properties of the SPOQ. First, we compare the internal consistency of this new measure to that of the Johnson and Johnson (1996) scale, which taps

 

employee-job mismatch and lack of opportunities for challenge and growth. Second, as mentioned before, the Johnson and Johnson's mismatch subscale is closer to accepted definitions of overqualification than is the no grow subscale. Therefore, a significantly greater correlation between SPOQ and mismatch than between SPOQ and no grow would constitute both convergent and discriminant validity evidence. Third, we evaluate the test-retest reliability of the SPOQ by administering the scale to respondents twice, spaced roughly two weeks apart. Finally, we examine the possibility that scores are associated with respondents' levels of stable (trait) positive and/or negative affect. Demonstrated independence of SPOQ scores from positive and negative affect would represent evidence of discriminant validity.

## *Method*

### Participants

Alumni ($n = 53$) and current students ($n = 49$) of a medium-sized public college in the northeastern United States served as participants. A majority of participants in both the alumni and student samples were female (60.4 and 77.6 per cent, respectively). The median age was 37 years for the alumni sample and 20 years for the student sample. Alumni most often held a bachelor's (45.3 per cent) or master's degree (37.7 per cent) as their highest educational degree attained. The majority of alumni worked full-time (83.0 per cent), and had worked in their job for at least a year (77.1 per cent). Students, on the other hand, were primarily part-time (79.6 per cent) and slightly less than half of student participants had been in their job for a year or more (46.8 per cent).

### Time 1 measures

Perceived overqualification was measured with two scales. The first was our SPOQ, the 9-item measure described above. Participants also completed Johnson and Johnson's (1996) 10-item perceived overqualification measure, which includes four items tapping *mismatch* (e.g., "Frankly, I am overqualified for the job I hold.") and six items tapping *no grow* (e.g., "I have mastered nearly every aspect of my job."). We used the same 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*) utilized by the original authors.

### Time 2 measures

Participants completed the SPOQ again at Time 2. They also completed the Watson, Clark & Tellegen (1988) Positive and Negative Affect Schedule (PANAS), which taps positive affect (PA) and negative affect (NA) with ten single-item words (e.g., "interested," "upset"). Participants were asked to identify the extent to which the word accurately reflects how they generally feel, using a 5-point Likert scale (1 = *very slightly or not at all*; 5 = *extremely*). Coefficient alpha values for the PA and NA subscales were 0.85 and 0.88, respectively.

### Procedure

Alumni were recruited via the college's alumni e-mail list, whereas students in undergraduate psychology courses at the college signed up to participate in the study through the department's online subject pool in exchange for course credit. For both samples, two surveys were administered on the Internet using an online web survey service, spaced two weeks apart. In the event that participants held multiple jobs, they were instructed to choose a single job to focus on when responding to the survey items. Participants completed the first survey, and 2 weeks later a research assistant e-mailed the participant, informing him or her that it was time to complete the second survey. Seventy-four of the 102 participants who completed the Time 1 survey also completed the Time 2 survey. Forty-five per cent of alumni who were contacted

 

responded to the first survey, and 27 per cent responded to both surveys. Because students were recruited via a subject pool, response rates for this sample are unavailable.

### *Results*

The SPOQ measure of perceived overqualification demonstrated greater internal consistency ($\alpha = 0.92$ at both Time 1 and Time 2) than either the mismatch ($\alpha = 0.78$) or no grow ($\alpha = 0.64$) subscales of the Johnson and Johnson (1996) measure. As expected, scores on the SPOQ measure at Time 2 were also more strongly associated with the mismatch subscale, $r(71) = 0.70$, than the no grow subscale, $r(71) = 0.48$. A Fisher's $r$-to-$z$ transformation revealed that the difference between these two correlations was significant, $z = 2.01$, $p < 0.05$. A similar difference, also significant, was found when using the SPOQ scores at Time 1.

Test-retest reliability of the SPOQ was evaluated by computing the correlation coefficient between scores on the SPOQ at Time 1 and Time 2 (for those participants who completed both, $n = 71$). The resulting reliability coefficient ($r = 0.89$) suggests that test scores remain stable over time in the face of transient personal conditions, such as state affect or day-to-day work experiences. As for trait affect, neither PA nor NA were significantly associated with SPOQ scores at Time 1 ($rs = -0.23$ and 0.00, respectively) or Time 2 ($rs = -0.23$ and 0.09, respectively).

## Study 3

### *Goals and hypotheses*

Study 3 was designed to expand our investigation of underemployment to include two additional dependent variables—organizational commitment and turnover intentions, as well as provide additional information about the internal consistency and factor structure of the SPOQ scale. First, we re-examine several of the underemployment-job satisfaction relations with a new sample and satisfaction measure:

*Hypothesis 3a*: Overqualification will be negatively related to satisfaction with the nature of work.
*Hypothesis 3b*: Involuntary part-time workers will report lower job satisfaction with pay and promotion than either voluntary part-time or full-time workers.
*Hypothesis 3c*: Involuntary temporary workers will report lower job satisfaction with pay and promotion than either voluntary temporary or permanent workers.

Few studies have examined the relationship between underemployment and affective commitment, though some recent findings suggest the expected negative association (e.g., Brkich et al., 2002; Feldman et al., 2002). Consistent with the P-J fit framework and these recent research findings, we expect that underemployment will be negatively associated with one's emotional attachment to his or her organization.

*Hypothesis 3d*: Overqualification, involuntary part-time work, and involuntary temporary work will be negatively associated with affective commitment.

Researchers of both P-J fit and underemployment have targeted turnover intentions as a likely outcome, though far more empirical studies exist for fit. The Kristof-Brown et al. (2005) meta-analysis

 

revealed an average correlation between P-J fit and turnover intentions of −0.40. It is reasonable to hypothesize that individuals in employment situations which they perceive to be insufficient may have plans to leave this situation. What little research there is on underemployment and turnover intentions has indeed found a link between the two (Burris, 1983b; Feldman & Turnley, 1995), although both studies focused primarily on surplus education. For the current study, no hypothesis is made with respect to temporary workers, as their temporary status makes interpretation of quit intentions difficult.

*Hypothesis 3e*: Perceived overqualification and involuntary part-time work will be positively associated with turnover intentions.

## *Method*

### Participants

Non-faculty employees and alumni (*n*s = 186 and 795, respectively; $N = 981$) from a medium-sized 4-year college in the northeastern United States served as participants in a larger survey research project (Maynard, Thorsteinson, & Parfyonova, 2006). Both males and females were adequately represented in the sample (59.7 per cent female). Participants had a median age of 38 years (SD = 11.9 years). Most participants held at least a bachelor's degree (89.6 per cent), had been employed in their current position for at least a year (83.0 per cent), and were employed on a full-time (89.3 per cent), permanent basis (89.9 per cent).

### Measures

*Underemployment measures*: We assessed three types of underemployment. *Perceived overqualification* was measured with the 9-item SPOQ scale as described in Study 1. For *permanent/temporary status*, we asked participants whether they were employed permanently or temporarily, and, if temporarily, whether they would prefer to be employed permanently. Of those that could be classified, 867 were employed on a permanent basis, 53 were voluntarily employed on a temporary basis, and 40 were involuntarily employed on a temporary basis. The measure for *full-time/part-time status* was somewhat different than in Study 1. Participants were asked to report whether their job was part-time or full-time (rather than report the average number of hours worked). The question was worded this way to allow participants to identify their position themselves as part-time or full-time. They were then asked to report their preference for that job, ranging from a strong preference for part-time work to a strong preference for full-time work. Participants who indicated that they worked part-time yet at least somewhat preferred full-time work were classified as involuntary part-time workers ($n = 41$). Among remaining participants, 833 were full-time, and 59 were voluntary part-time.

*Job satisfaction*: We measured job satisfaction with the 1997 revised version of the Job Descriptive Index (JDI; Balzer et al., 1997), perhaps the most carefully constructed and well-respected measure of facet job satisfaction (Spector, 1997). The Job Descriptive Index measures five facets of job satisfaction: work, pay, promotion, supervision, and co-workers. A sixth measure, Job in General, assessed overall job satisfaction. Each facet is measured with 18 items, except pay and promotion, which are measured with 9 items. Items in these scales are adjectives, and participants indicate whether or not that adjective describes their job situation by responding either *Yes*, *No*, or *?* (not sure). The recommended scoring procedure was used, whereby positive, unsure, and negative responses were given 3, 1, and 0 points, respectively; items were then summed to produce a facet score. Facet scores range from 0 to 54 (the summed scores for the pay and promotion facets are multiplied by two to achieve the same possible range of scores).

*Affective commitment and turnover intentions*: The full Meyer and Allen commitment scale consists of 18 items, with 6 items each tapping affective, continuance, and normative commitment (Meyer, Allen, & Smith, 1993). We utilized only the affective commitment subscale. Turnover intentions were assessed with a 3-item measure by Adams and Beehr (1998; e.g., "I am planning to leave my job for another in the near future."). For both scales, participants responded using a 7-point Likert scale, from 1 (*strongly disagree*) to 7 (*strongly agree*).

### Procedure

Non-faculty employees received a paper-and-pencil version of the survey via campus mail. Those who completed the survey returned it via campus mail in a provided return envelope (a 29 per cent response rate). Alumni with an e-mail address on file with the college's alumni office received an e-mail solicitation to participate in the study; a web link was provided which directed them to an online version of the survey. Excluding undeliverable messages due to invalid e-mail addresses, 40 per cent of alumni contacted completed the survey. The entire survey, which was four pages in length for the paper-and-pencil version, took approximately 15 minutes to complete.

## *Results*

### Factor structure of the SPOQ

To further examine the construct validity of the SPOQ as a distinct dimension of underemployment, we conducted two confirmatory factor analyses (CFA) using LISREL VIII (Jöreskog & Sörbom, 1992). In the first, the nine SPOQ items and the two single-item measures of permanent/temporary status and full-time/part-time status were tested together as a unidimensional measure of underemployment. In the second, a three-factor model was tested, with the nine SPOQ items comprising the overqualification factor, and the remaining two items each constituting their own underemployment factor. Generalized least squares were used as the method of estimation, which is appropriate for large samples and does not assume multivariate normality (Kelloway, 1998).

The one-factor model did not fit the data well ($\chi^2$ [44] = 704.88, $p > 0.05$, standardized RMR = 0.26, AGFI = 0.76). Absolute fit indices for the three-factor model were still below traditional levels for good fit ($\chi^2$ [41] = 493.12, $p > 0.05$, standardized RMR = 0.07, AGFI = 0.82). However, the Chi-square test of difference was significant ($\chi^2_{\text{difference}}$ (3) = 210.76, $p < 0.001$), indicating that the three-factor model was superior to the one-factor model. Because of the marginal fit of the three-factor model, a final principal components analysis was conducted to identify whether the unidimensional nature of the SPOQ scale identified in Study 1 was appropriate for the current samples. Only one eigenvalue exceeded a value of 1.0 (i.e., 5.62), and this component accounted for 64.2 per cent of the variance. Based upon these results, and the strong coefficient alpha in this sample ($\alpha = 0.92$), we scored the SPOQ scale as in Studies 1 and 2.

### Tests of hypotheses

*Job satisfaction*: Means, standard deviations, and correlation coefficients of continuous and dichotomous variables are presented in Table 5. Perceived overqualification was negatively related to satisfaction with work ($r = -0.55$, $p < 0.001$). A hierarchical regression analysis similar to the one performed in Study 1 revealed that perceived overqualification significantly predicted satisfaction with work ($\beta = -0.53$) after controlling for the demographic variables ($\Delta R^2 = 0.253$, $F$[1, 877] = 332.99, $p < 0.001$). Therefore, Hypothesis 3a was supported.

 

Table 5. Descriptive statistics and zero-order correlations for sample 3

| Variable | *N* | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender (0 = male; 1 = female) | 905 | — | — | — | | | | | | | | | | | |
| 2. Age | 896 | 40.47 | 11.25 | **−18** | — | | | | | | | | | | |
| Underemployment | | | | | | | | | | | | | | | |
| 3. Overqualification | 907 | 3.80 | 1.63 | 05 | **−15** | (92) | | | | | | | | | |
| 4. Temporary status (0 = vol.; 1 = invol.) | 95 | — | — | −10 | **−36** | **−31** | — | | | | | | | | |
| 5. Part-time status (0 = vol.; 1 = invol.) | 100 | — | — | 18 | 08 | **26** | −13 | — | | | | | | | |
| Org. Commitment | | | | | | | | | | | | | | | |
| 6. Affective comm. | 904 | 3.29 | 0.90 | −02 | 13 | **−39** | **35** | **−30** | (83) | | | | | | |
| Job satisfaction | | | | | | | | | | | | | | | |
| 7. Pay | 965 | 29.96 | 16.82 | **−16** | **19** | **−25** | 15 | −17 | **32** | (86) | | | | | |
| 8. Promotion | 960 | 22.26 | 16.25 | **−12** | **−16** | **−22** | 16 | −21 | **34** | **34** | (88) | | | | |
| 9. People at work | 906 | 39.69 | 12.71 | −02 | **17** | **−26** | 13 | **−28** | **41** | **27** | **24** | (89) | | | |
| 10. Supervision | 954 | 38.80 | 14.22 | 01 | −01 | **−16** | 22 | −09 | **37** | **24** | **37** | **40** | (91) | | |
| 11. Work on present job | 960 | 41.95 | 12.18 | **−10** | **19** | **−55** | **37** | **40** | **53** | **30** | **31** | **39** | **33** | (89) | |
| Intentions | | | | | | | | | | | | | | | |
| 12. Intent to quit | 906 | 3.38 | 1.98 | 08 | **−28** | **39** | **−34** | **31** | **−61** | **−36** | **−31** | **−31** | **−30** | **−49** | (93) |

Decimals have been left off for ease of reading; coefficients in bold are significant at $p < 0.01$. Coefficient alpha values are presented on the diagonal for multi-item measures.

Hypotheses 3b posited that involuntary part-time workers would report significantly lower levels of pay satisfaction and promotion satisfaction, relative to full-time and voluntary part-time workers. A separate ANOVA for each facet of satisfaction was conducted, using Tukey's HSD tests for *post hoc* analyses. Involuntary part-time workers exhibited the lowest levels of pay and promotion satisfaction of the three groups, but the only significant difference found was for pay satisfaction ($F[2, 925] = 9.11$, $p < 0.001$, partial $\eta^2 = 0.02$) with involuntary part-time workers being more dissatisfied ($M = 20.58$, $SD = 16.91$) than full-time workers ($M = 30.83$, $SD = 16.81$, $p < 0.001$). Voluntary part-time workers did not differ from either group.

A similar approach was taken to test Hypothesis 3c relative to involuntary temporary workers. Both voluntary ($M = 18.83$, $SD = 12.99$) and involuntary ($M = 23.38$, $SD = 18.03$) temporary workers were significantly less satisfied with pay than permanent workers ($M = 30.96$, $SD = 16.69$; $F[2, 957] = 16.68$, $p < 0.001$, partial $\eta^2 = 0.03$), but did not differ from each other. No differences in promotion satisfaction were found. Thus, Hypothesis 3b received only partial support, whereas Hypothesis 3c was not supported.

*Affective commitment*: According to Hypothesis 3d, each dimension of underemployment should be negatively associated with affective commitment. A hierarchical regression analysis revealed that perceived overqualification significantly predicted affective commitment ($\beta = -0.36$) after controlling for demographic variables ($\Delta R^2 = 0.116$, $F[1, 880] = 121.24$, $p < 0.001$). Involuntary part-time workers reported significantly weaker commitment to the organization ($M = 3.03$, $SD = 0.81$) than voluntary part-time workers ($M = 3.55$, $SD = 0.83$; $F[2, 864] = 4.03$, $p < 0.05$, partial $\eta^2 = 0.01$); neither differed significantly from full-time workers ($M = 3.29$, $SD = 0.90$). Contrary to expectations, voluntary temporary workers exhibited significantly less affective commitment ($M = 2.86$, $SD = 0.88$) than either permanent ($M = 3.31$, $SD = 0.90$) or involuntary temporary workers ($M = 3.49$, $SD = 0.75$; $F[2, 894] = 6.76$, $p < 0.01$, partial $\eta^2 = 0.02$). Therefore, Hypothesis 3d was partially supported.

*Turnover intentions*: Finally, we posited in Hypothesis 3e that perceived overqualification would be associated with greater intentions to leave the organization, and that involuntary part-time workers would exhibit these intentions more so than full-time or voluntary part-time workers. A hierarchical regression analysis revealed that perceived overqualification significantly predicted turnover intentions ($\beta = 0.36$) after controlling for demographic variables ($\Delta R^2 = 0.118$, $F[1, 885] = 130.81$, $p < 0.001$). As for work status, involuntary part-time workers reported higher intentions ($M = 4.3$) than full-time ($M = 3.3$) or voluntary part-time workers ($M = 3.0$; $F[2, 867] = 5.21$, $p < 0.01$, partial $\eta^2 = 0.01$). Therefore, Hypothesis 3e was supported.

## Summary of Findings

We developed a 9-item content-valid measure of perceived overqualification, the SPOQ. Principal components analyses both before and after item selection revealed a unidimensional factor structure. Results from Study 2 provide additional psychometric support in the form of high internal consistency relative to the Johnson and Johnson (1996) measures, strong test-retest reliability, and evidence of convergent validity (i.e., strong correlation with an existing job mismatch scale) and discriminant validity (weak correlations with positive and negative affect). A confirmatory factor analysis in Study 3 suggested that the scale is distinct from other measures of underemployment, though model fit for SPOQ as a unidimensional scale was not particularly strong (though internal consistency and PCA results again suggested a one-factor model).

Study 1 demonstrated a negative link between underemployment and job satisfaction in general, but results suggest that satisfaction with different facets of satisfaction are affected by different dimensions of underemployment. Likewise, in Study 3, tests of hypotheses yielded different patterns of results for the different dimensions of underemployment. Perceived overqualification was negatively associated with work satisfaction and affective commitment, and positively associated with turnover intentions. Involuntary part-time workers generally exhibited more negative attitudes and intentions than voluntary part-time or full-time workers, although effects were somewhat less consistent and strong than was the case with perceived overqualification. No support was found with respect to involuntary temporary work.

## Discussion

Although the underemployment literature in the organization sciences is still quite limited, researchers have consistently predicted negative personal and organizational outcomes for those workers whose employment situation is sub-standard (e.g., Burris, 1983a,b; Feldman, 1996; Khan & Morrow, 1991). We utilized the person-job fit framework (Edwards, 1991) to provide a theoretical base for making hypotheses about the consequences of underemployment.

Findings from this study are generally consistent with the growing evidence that underemployment is, by and large, related to poorer job attitudes (e.g., Feldman et al., 2002; Feldman & Turnley, 1995; Johnson & Johnson, 2000b; Khan & Morrow, 1991; O'Brien, 1986), and several dimensions, most notably perceived overqualification, are also associated with intentions to quit one's job. However, the results also suggest that (a) relations are not equally strong for all underemployment dimension-attitude facet combinations, and (b) non-standard (e.g., temporary work) or "insufficient" employment (e.g., job-degree mismatch) does not always constitute underemployment. First, in both Study 1 and Study 3, the strongest relations between underemployment and job satisfaction tended to be those in which the dimension of underemployment has a clear causal link with the particular facet of satisfaction (e.g., underpayment with pay satisfaction, perceived overqualification with work satisfaction). Most underemployment researchers have posited globally negative relations with job satisfaction (e.g., Feldman, 1996; Johnson & Johnson, 2000a). The findings here suggest that relations between underemployment and satisfaction are domain-specific, thus underscoring the importance of assessing job satisfaction at the facet level rather than in a global fashion.

Second, results from Studies 1 and 3 suggest that part-time work should not be labeled underemployment unless the worker prefers a different employment arrangement. In other words, predicting job attitudes and intentions from one's work status requires a consideration of the match between that status and the employee's desires (Krausz et al., 2000). Involuntary part-time workers experienced relatively negative attitudes and intentions, compared to voluntary part-time employees, who expressed attitudes and intentions similar to those of their full-time employee counterparts. These findings are consistent with our conceptualization of underemployment as a case of poor person-job fit, in which negative outcomes are only predicted when there is a mismatch between the needs of the employee and the characteristics of the position (Kristof-Brown et al., 2005). However, results from Study 3 with respect to temporary workers did not fit this pattern; more positive attitudes and intentions were not more likely for employees whose preferences matched their work situation, and, for affective commitment, the reverse was true. Relatively little research in this area exists, though Ellingson, Gruys, and Sackett (1998) also found no consistent attitudinal differences between temporary workers who prefer permanent work and those who do not. Given the continuing shift from full-time, permanent

 

work to contingent work, further investigation into these surprising findings with respect to temporary workers is needed.

## *Limitations and future directions*

The total sample sizes in Studies 1 and 3 were comparable or larger than those of previous underemployment studies; however, the base rates of some types of underemployment (e.g., involuntary temporary employment) resulted in small sub-samples. Future research utilizing samples with larger numbers of contingent workers (e.g., temp agencies) would provide greater opportunities for hypothesis testing with regard to part-time and temporary workers. Also, participants generally consisted of employees working at a variety of organizations rather than at a single one. Although sampling across organizations may provide valuable insight into underemployment relations generically, the present findings may not generalize to particular types of organizations (e.g., size, industry). Although we expect that the experience of being involuntarily employed in a non-standard work arrangement will promote negative attitudes and intentions in any given organization, the strength of this association may vary with such factors as the availability or attractiveness of these types of arrangements in that organization.

Second, all variables were measured via self-report questionnaire completed by the employee at a single point in time. Common method bias might be an alternate explanation for some of the findings, although the fact that underemployment-satisfaction relations differed in strength largely as expected argues against such an explanation. Additionally, a recent meta-analysis did not reveal consistent evidence for common method bias in fit-attitude relations (Kristof-Brown et al., 2005). Nevertheless, future studies that tap underemployment with different methods or sources (e.g., personnel files, supervisor ratings) would improve our ability to draw general conclusions about underemployment outcomes. In addition, longitudinal research, especially in the early part of the employees' tenure, may allow us to make stronger statements about the causal direction of these relations.

Studying underemployment with both objective and subjective measures would be advantageous for another reason. Managers and organizations are likely to spot underemployed workers via more objective measures, such as comparisons between job requirements and employee qualifications. If subjective feelings of underemployment do not map well onto more objective indicators, employers may have difficulty in identifying individuals who feel underemployed and thus are at risk for negative attitudes. Future research should thus investigate the overlap between objective and subjective measures of underemployment dimensions.

Results from Study 3 reveal that underemployment, and perceived overqualification in particular, is predictive of turnover intentions. However, intentions do not always translate into actual behavior, and although research has generally found that turnover intentions and behavior are positively associated, some research suggests that the relationship may not be particularly strong (e.g., Peters, Jackofsky, & Salter, 1981; Somers & Birnbaum, 1999). The lack of research examining turnover behavior as a function of underemployment is troubling, given that researchers and managers alike presume such a relationship (Feldman, 1996; Maynard, 1998). Filling this empirical gap is one of the most pressing needs for the underemployment literature.

## *Practical implications*

Part-time and contingent work represent a significant proportion of the workforce. Whether such jobs constitute underemployment depends upon the nature of the position and the desires of the individual. The trick is to staff these positions with individuals who find these work arrangements attractive. Professionals in reduced workloads by choice, for example, exhibit high levels of performance and

 

satisfaction (Lee, Hourquet, & MacDermid, 2002). Unfortunately, a significant proportion of part-time and temporary employees appear to be involuntarily employed. Although increased flexibility and lower staffing costs may explain the increasing proportion of part-time and temporary jobs, organizations should consider the possibility that there may be hidden costs associated with such jobs, as many contingent workers may prefer more standard work arrangements, and experience negative job attitudes as a result.

Both employees and employers are likely to benefit from finding ways in which person-environment fit can be maximized. Recruitment and selection are important contexts in which both applicants and organizations engage in information gathering to determine the fit between the two (Wilk & Sackett, 1996). The quality of information gathered may affect the proportion of hired applicants within the organization who consider themselves underemployed. Tied to this idea, one avenue of future research concerns the impact of both interviewer and applicant training upon this joint decision-making process (Palmer, Campion, & Green, 1999). Kristof-Brown (2000) demonstrated that interviewers with limited training tend to use idiosyncratic criteria in estimating applicant fit. From the applicant perspective, it is possible that job search books and courses may prevent underemployment, via careful applicant assessment of the anticipated work environment in light of one's qualities and goals (Singh & Greenhaus, 2004). On the other hand, given that these programs teach impression management techniques which can influence interviewers' perceptions of fit (Kristof-Brown, Barrick, & Franke, 2002), applicants might gain employment in positions for which they are ill-suited in one direction or the other. Other strategies in hiring may be utilized to foster improved person-job fit, such as finding a different position (or even creating a new position) within the company for an overqualified applicant so as to take advantage of the applicant's talents—strategies that have been mentioned by managers as ways to handle overqualification in the hiring process (Maynard, 1998).

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# Appendix

Table 6. The scale of perceived overqualification (SPOQ)

| Item | Study 1 factor loading[a] | Study 3 factor loading[b] |
|---|---|---|
| 1. My job requires less education than I have | 0.741 | 0.794 |
| 2. The work experience that I have is not necessary to be successful on this job | 0.721 | 0.719 |
| 3. I have job skills that are not required for this job | 0.725 | 0.754 |
| 4. Someone with less education than myself could perform well on my job | 0.773 | 0.826 |
| 5. My previous training is not being fully utilized on this job | 0.738 | 0.806 |
| 6. I have a lot of knowledge that I do not need in order to do my job | 0.793 | 0.831 |
| 7. My education level is above the education level required by my job | 0.779 | 0.819 |
| 8. Someone with less work experience than myself could do my job just as well | 0.753 | 0.750 |
| 9. I have more abilities than I need in order to do my job | 0.807 | 0.804 |

A Spanish version of this scale is available upon request.
[a]Based on $N = 216$.
[b]Based on $N = 884$.

 