Teachers' Dual Commitment to the Organization and Occupation:

A Person-centered Investigation

John P. Meyer [ab], Alexandre J.S. Morin [c], Laura J. Stanley [d], Elyse R. Maltin [e]

[a] Department of Psychology, The University of Western Ontario
[b] Curtin Business School, Curtin University
[c] Department of Psychology, Concordia University
[d] Belk College of Business, The University of North Carolina at Charlotte
[e] JMW Consultants

Corresponding Author:
John P. Meyer
Department of Psychology
The University of Western Ontario,
London, Ontario, Canada N6A 5C2
Email: meyer@uwo.ca

Author Notes:
J.P Meyer and A.J.S. Morin contributed equally to this article and both should be considered first authors.

Abstract

This study extends previous commitment research by applying person-centered analytic techniques to identify and compare profiles of affective, normative, and continuance commitment to the organization and occupation. Latent profile analyses applied to data from 336 Canadian teachers revealed five profiles with unique combinations of the three commitment mindsets across the two targets. Differences observed across profiles in teachers' turnover intention and physical and psychological well-being are used to illustrate the benefits of taking a more holistic approach to the investigation of commitment compared to analyses involving individual targets and/or mindsets. Implications for commitment theory, future research, and practice are discussed.
Key Words. Three-component model; organizational commitment; occupational commitment; latent profile analyses; well-being; turnover

There is a substantial body of research linking teachers' commitment to retention, performance, personal well-being, and student achievement (e.g., Akar, 2018; Day, 2008; Dee, Henkin, & Singleton, 2006; Park, 2005; Somech & Bogler, 2002). However, in this research, commitment is typically viewed as a "generalized identification with either the school or the teaching profession, and not as a multidimensional construct" (McInerney, Ganotice, King, Morin, & Marsh, 2015b, p. 926). Consequently, the field of education has not benefited from the large body of research demonstrating that commitments can be experienced in different ways and with different consequences. It is only recently that researchers have begun to apply the three-component model of commitment (TCM: Allen & Meyer, 1990; Meyer & Allen, 1991, 1997) to the study of teachers' organizational and occupational commitment (Joolidey & Yeshodhara, 2009; McInerney et al., 2015b; McInerney, Ganotice, King, Marsh, & Morin, 2015a; Morin, Meyer, McInerney, Marsh, & Ganotice, 2015). According to the TCM, commitment can reflect an emotional attachment (affective commitment), sense obligation (normative commitment), and/or perceived costs (continuance commitment). These 'commitment mindsets' have been found to relate differently to employee turnover, job performance, organizational citizenship behaviors, and employee well-being (Hakim-Cooper & Viswesvaran, 2005; Meyer & Maltin, 2010; Meyer, Stanley, Herscovitch, & Topolnytsky 2002).

Until recently, the dominant approach used to test the TCM, including studies of teacher commitment, has been 'variable-centered,' with emphasis on relations between individual commitment mindsets and various antecedents and outcomes. Although informative, the variable-centered approach is not well suited to testing some aspects of the TCM. For example, Meyer & Allen (1991) proposed that employees could experience each of the basic commitment mindsets to varying degrees, and that this would be reflected in a 'commitment profile.' Building on this notion, Meyer and Herscovitch (2001) identified eight potential profiles with varying high and low scores on affective, normative, and continuance commitment, and developed a set of propositions regarding how these profiles would develop, be experienced, and influence behavior. These propositions are best tested using person-centered analytic techniques such as latent profile analysis (Meyer, Stanley & Vandenberg, 2013; Morin, 2016). Consequently, there has been a recent increase in person-centered research to identify and compare commitment mindset profiles (see Kabins, Xu, Bergman, Berry, & Willson, 2016, and Meyer & Morin, 2016 for reviews).

The person-centered approach has also been applied, albeit less frequently, to identify profiles of commitment to different targets, such as the organization, occupation, supervisor and team (Becker & Billings, 1993; Morin, Morizot, Boudrias, & Madore, 2011; Somers & Birnbaum, 2000; Swailes, 2004). Again, this person-centered approach is better suited than a variable-centered approach to testing propositions regarding the ways that commitments to different targets combine to influence behavior and well-being (Gouldner, 1957; Johnson, Groff & Taing, 2009; Meyer & Allen, 1997; Morrow, 1993). However, most person-centered studies have treated commitment as a unidimensional construct. We are aware of only three studies that considered both commitment mindsets and targets (Meyer et al., 2015; Morin et al., 2015; Tsoumbris & Xenikou, 2010). Only two of these studies considered dual commitment to the organization and occupation, and only one was conducted with teachers (Morin et al., 2015). Consequently, our understanding of how teachers' commitment to their organization and occupation combine and relate to school- and teacher-relevant outcomes is limited.

Our study extends the earlier investigation of teachers' dual commitment conducted by Morin et al. (2015) in three important ways. First, the Morin et al. study was conducted with Hong Kong teachers, whereas ours focuses on Canadian teachers. This is important because Morin et al. argued that some of their findings might have been culture specific, but there was no existing basis for comparison. Second, we measured two facets of continuance commitment to the organization – one reflecting the sacrifices teachers would have to make by leaving their school, and the other based on the lack of alternative employment opportunities. The importance of this distinction has been illustrated in variable-centered research (Chris, Maltin & Meyer, 2016; Meyer et al., 2002), and in person-centered studies of single (Meyer, Morin & Wasti, 2018; Stanley, Vandenberghe, Vandenberg & Bentein, 2013) and dual (Meyer et al., 2015) targets of commitment. Finally, our study included a wider range of well-being outcomes than did Morin et al.

In sum, our study should provide a richer understanding of the ways teachers experience commitment to their school and to the teaching profession, as well as the implications of these commitment configurations for retention and well-being. Although our focus is on teachers, as one of

only a few person-centered studies to include multiple targets and mindsets of commitment, it also contributes to the broader commitment literature.

Multiple Commitment Mindsets

In developing the TCM, Meyer & Allen (1991) proposed that commitment to any entity or course of action can be characterized by three distinct mindsets. *Affective commitment* (AC), reflects a desire to maintain a relationship and/or pursue a course of action, whereas *normative commitment* (NC) reflects a sense of obligation to do so. In contrast, *continuance commitment* (CC) involves an awareness of the costs of discontinuing a relationship or course of action. Regardless of the mindset, commitment relates positively with maintenance of a relationship or persistence in a course of action. Mindset differences are reflected in the strength of these relations and, most importantly, in the likelihood of engaging in discretionary behaviors that fall outside the 'terms' of the commitment (Brown, 1996; Meyer & Herscovitch, 2001). For example, individuals with a strong desire (AC) to remain with an organization are more likely to perform beyond minimum requirements than those who stay only because they lack alternatives (CC) (Meyer et al., 2002). Individuals with strong AC also tend to report greater well-being than those with strong CC (Maltin & Meyer, 2010).

Meyer and Allen (1991) proposed that employees can experience all three commitment mindsets to varying degrees, but most early investigations focused on the individual mindsets using variable-centered techniques. It was not until Meyer and Herscovitch (2001) offered a set of propositions regarding how the mindsets combine to influence behavior that researchers began to adopt a person-centered approach (Gellatly et al., 2006; Wasti, 2005). Since those early studies, there has been a steady increase in person-centered studies conducted to identify commitment mindset profiles (Kabins et al., 2016; Meyer & Morin, 2016). Although studies differ in the number and nature of the profiles reported, several profiles emerge consistently, including fully-committed (high scores on all mindsets), AC/NC-dominant, AC-dominant, CC-dominant, and weakly committed (low scores on all mindsets) (Meyer & Morin, 2016). Moreover, the profile structure tends to be comparable for samples drawn from similar populations (Meyer, Kam, Goldenberg & Bremner, 2013; Meyer, Morin et al., 2015; Meyer et al., 2018; Morin, Meyer, Creusier, & Biétry, 2016), and for the same sample over time (Kam et al., 2016; Xu & Payne, 2018). This consistency, combined with the fact that the profiles generally relate as expected to theoretical antecedents and outcomes, indicates that they reflect meaningful rather than spurious configurations (Marsh, Lüdtke, Trautwein, & Morin, 2009).

The advantage of adopting a person-centered approach to the study of commitment becomes evident when comparing findings with those obtained in variable-centered studies. An underlying assumption in variable-centered research is that the sample is drawn from a homogeneous population and that any parameters (e.g., correlations) observed among variables apply to the population at large. The person-centered approach relaxes this assumption and tests for the presence of subpopulations characterized by differing variable relations. For example, the correlation between NC and organizational citizenship behaviors (OCB) is generally positive, albeit modest, in variable-centered studies (Meyer et al., 2002). However, taking a person-centered approach, Gellatly et al. (2006) found that NC was associated with much higher levels of OCB when combined with strong AC than with strong CC and weak AC. Similarly, variable-centered studies generally find that CC relates negatively with OCB and psychological well-being (Meyer et al., 2002; Meyer & Maltin, 2010). However, taking a person-centered approach, Meyer et al. (2012) found that CC was only associated with weak OCB and well-being when it dominated the profile. When strong CC combined with strong AC and NC in a 'fully-committed' profile, it was associated with high levels of OCB and well-being. In both cases, the investigators argued that the specific commitment (NC or CC) was experienced differently depending on the relative strength of AC and NC. Thus, point estimates of the correlations obtained in variable-centered studies can be misleading.

Multiple Commitment Targets

Although there is some theory pertaining to how commitments to multiple targets combine and influence behavior (Gouldner, 1957; Johnson et al., 2009; Meyer & Allen, 1997; Morrow, 1993), it is somewhat limited and has not been subjected to systematic investigation. In an early theory, Gouldner (1957) proposed that some professionals commit more strongly to their organization than to their profession (locals), whereas for others the reverse is true (cosmopolitans). Using cluster analysis, Becker and Billings (1993) supported this proposition, but also identified individuals with strong or weak commitment to both targets. More recently, Morin, Morizot et al. (2011) measured commitment

to the organization and occupation, along with five other targets, and found that these two commitments tended to vary similarly across five profiles. The latter finding is consistent with the moderate positive correlation between organizational and occupational commitment observed in variable-centered studies (Cooper-Hakim & Viswesvaran, 2005; Lee, Carswell, & Allen, 2000). However, both Becker and Billings (1993) and Morin, Morizot et al. (2011) measured only AC, ignoring the potential implications of NC and CC.

Meyer and Allen (1997) noted that, when targets of commitment are nested, the nature of the commitment to one target can have implications for the commitment to the other. For example, employees with strong AC to the occupation might develop a strong AC to an organization with compatible goals and values. However, if the goals and values of the organization are inconsistent with those of the occupation, the employees face a dilemma. If job opportunities within a profession are limited, continuing employment in the organization might be the only option. In this case, the primary tie to the organization might be CC, with the perceived cost being the lost opportunity to continue working in the occupation. Meyer and Allen did not elaborate on the full set of possibilities that can arise by considering multiple mindsets pertaining to nested commitments, but the possibility of dependencies suggests that studies focusing only on AC to dual targets can be limited.

Multiple Targets and Mindsets

Only two studies to date have addressed the nature and consequences of mindset profiles pertaining to organizational and occupational commitments (Morin et al., 2015; Tsoumbris & Xenikou, 2010). Using cluster analysis, Tsoumbris and Xenikou identified four profiles in a Greek sample: non-committed, CC-dominant, AC/NC-dominant, and highly committed. Although the mindset patterns differed across profiles, they were similar for both targets within each profile. Morin et al. (2015) identified seven profiles using latent profile analyses (LPA) with data from Hong Kong teachers. In contrast to Tsoumbris and Xenikou, they found both similarities and differences in mindset configurations across targets.

Not surprisingly, given the similarity of commitments to the two targets across profiles, Tsoumbris and Xenikou (2010) found that the implications for intentions to remain in the organization and occupation were also similar. Both were greatest among the highly committed and weakest among the non-committed. Morin et al. (2015) reported more nuanced findings, particularly for profiles where the mindset pattern differed across targets. For example, intention to stay in the occupation was stronger than intention to stay in the organization when commitment to the organization was AC-dominant and commitment to the occupation was AC/NC-dominant. They also found differences across profiles in well-being. Teachers who were weakly committed or had a CC-dominant profile had the lowest scores. However, strong CC was only associated with low well-being when it dominated the profile; some of the highest well-being scores were for teachers who were fully-committed (including strong CC) to the teaching profession.

The Present Study

The structure of dual commitment profiles. Despite the recent increase in person-centered commitment research, and the insights it has provided, applications to the study of multiple mindsets and targets is limited. Moreover, the two studies conducted with the organization and occupation as targets were conducted outside of North America. Their findings could therefore have been influenced by cultural factors. For example, Morin et al. (2015) identified a profile in which full commitment to the teaching profession was accompanied by strong NC to the school. According to Meyer and Allen (1997), strong AC to the occupation can be expected to contribute to strong CC to the organization by increasing the costs of leaving. Morin et al. suggested that the elevation in NC that they observed might have been due to the relatively strong collectivist values in Hong Kong (Hofstede, 2001). That is, rather than considering the personal costs of leaving, teachers may have focused on their social obligations to the organization that provided them with the opportunity to teach. Because our study was conducted with teachers in a more individualist culture, a comparison of our findings with those obtained by Morin et al. can aid in evaluating this explanation.

Another way our study extends those of Tsoumbris and Xenikou (2010) and Morin et al. (2015) is that we measured two facets of CC to the organization identified in previous research (McGee & Ford, 1987; Meyer, Allen, & Gellatly, 1990). The first facet reflects the *high sacrifices* one would have to make by leaving the organization (CC:HS), and the second a perceived *lack of alternative* employment opportunities (CC:LA). Meta-analyses of variable-centered studies reveal that these two facets of CC

relate differently to the other commitment mindsets and some of the outcomes included in the present study (Chris et al., 2016; Meyer et al., 2002). They have also been shown to combine differently across profiles in previous person-centered research (Meyer et al., 2015; Meyer et al., 2018; Stanley et al., 2013). There are no corresponding measures of CC:LA and CC:HS to the occupation, and it is arguable that considering alternative occupational opportunities among well-trained professionals is far less common than considering alternative employers. We thus measured only global CC to the teaching profession.

Given that our study of teachers' dual commitment profiles corresponds most closely to that of Morin et al. (2015), we expected to find a similar number of profiles. We also expected that the mindset configurations within targets would reflect those reported most frequently in previous research (Kabins et al., 2016; Meyer & Morin, 2016). As noted earlier, theory pertaining to how commitments to nested targets might combine is less developed, with conflict (Gouldner, 1957), compatibility (Lee et al., 2000), and dependency (Meyer & Allen, 1997) raised as possibilities. Moreover, the two previous person-centered studies of dual organizational and occupational commitment were conducted in different cultures and produced different results. Therefore, we tested the following hypothesis concerning within-target mindsets, but left the nature of the combinations across targets open as a research question.

Hypothesis 1: The mindset patterns identified for each target within the dual commitment profiles will include: weakly committed, CC-dominant, AC-dominant, AC/NC-dominant, and fully committed.

Research Question: To what extent will commitment profiles reflect conflict, compatibility, or dependency across targets?

Implications of dual commitment profiles. Like Morin et al. (2015), we also measured turnover intentions and well-being for purposes of profile comparisons. However, we expanded the investigation by considering a broader range of well-being measures, including physical well-being and several positive (positive affect, job satisfaction, work engagement, vitality, and positive expressivity) and negative (negative affect, emotional exhaustion, and cynicism) indicators of psychological well-being. These indicators were selected to capture the distinction between hedonic (happiness) and eudaimonic (meaning and purpose) well-being made by Ryan, Huta and Deci (2008) within the spirit of positive psychology (cf. Seligman & Csikszentmihalyi, 2014; Waterman, 2013).

Based on previous variable-centered research (Cooper-Hakim & Viswesvaran, 2005; Meyer et al., 2002), we expected that intentions to stay with the organization and occupation would be most sensitive to differences in the mindset profiles for the corresponding target. However, given the dependencies that can form when the targets of commitment are nested (Meyer & Allen, 1997), commitment to one target may influence the commitment to, and intention to remain with, the other target. Such cross-over relations have been demonstrated in variable-centered research involving AC (Lee et al., 2000; Morin, Vandenberghe et al., 2011), but the potentially more nuanced dependencies that can form when all three commitment mindsets are considered have only begun to be explored (Meyer et al., 2015; Morin et al., 2015). In the present study, we tested the following hypotheses.

Hypothesis 2: Intention to stay in the organization will be greatest for teachers who are fully committed to the organization or have an AC/NC-dominant or AC-dominant profile of commitment to the organization, followed by those with a CC-dominant profile, and weakest for those who are uncommitted to the organization.

Hypothesis 3: Intention to stay in the teaching profession will be greatest for teachers who are fully committed to the occupation or have an AC/NC-dominant or AC-dominant profile of commitment to the occupation, followed by those with a CC-dominant profile, and weakest for those who are uncommitted to the occupation.

We also expected that teachers' physical and psychological well-being would differ across profiles. Based on previous variable-centered research, we expected that AC would relate positively to well-being, whereas CC would relate negatively (Maltin & Meyer, 2010). However, these prior variable-centered findings must be qualified based on recent person-centered results. For example, CC has been linked to greater well-being when it combines with strong AC than when it dominates the profile. The negative association between CC and well-being was observed only when CC dominated the profile. One of the key differences between these two conditions might be that fully-committed individuals feel more autonomous than those with a CC-dominant profile; the latter might feel trapped. This would be consistent with the evidence from self-determination theory (SDT: Deci & Ryan, 1985, 2000) linking

autonomous motivation to greater needs satisfaction and well-being (Baard, Deci, & Ryan, 2004; Richer, Blanchard, & Vallerand, 2002). Note that, although we measured two facets of CC to the organization (CC:LA and CC:HS), we had no strong basis for making a priori predictions regarding their differential effects on well-being. With this caveat in mind, we tested the following hypothesis:

Hypothesis 4: *Teachers with fully-committed, AC/NC-dominant, or AC-dominant profiles to both targets will report higher levels of physical health and psychological well-being than those with a weakly-committed or CC-dominant profile for one or both targets.*

Method

Participants and Procedure

Participants were recruited to complete an on-line survey through two large school boards located in the Province of Ontario, Canada. In one school board, an administrator sent an email containing a link to the survey to all teachers. In the other board, the elementary and secondary school district union president sent emails containing the survey link to union representatives at each school asking them to forward the email to all teachers in their school.

We obtained usable data from 336 teachers (77.5% female) with an average age of 42.5 years (range = 25 to 60). Of those who provided demographic data, the majority were elementary teachers, with 91 working at the primary level, 40 working at the junior level, and 30 working at the intermediate level. The remainder (112) were secondary school teachers, and teachers in other positions (40), including teacher librarians, resource teachers, core French language teachers, music teachers, etc. Average tenure was 14.9 years in the teaching profession (range= 1 to 37) and 8.2 years in the current school (range 0 to 35).

Measures

Organizational and occupational commitment. We measured AC, NC, CC:HS and CC:LA to the school using three items each from the scales developed by Meyer, Allen, and Smith (1993). Items were selected based on factor loadings from the original study, with content breadth as an additional consideration. Sample items and reliabilities are: "This school has a great deal of personal meaning for me" (AC; $\alpha = .86$); "I would feel guilty if I left my school now" (NC: $\alpha = .74$); "I would not leave this school because of what I would stand to lose" (CC:HS: $\alpha = .72$); and "I feel that I have too few options to consider leaving this school" (CC:LA: $\alpha = .74$). We measured AC, NC, and CC to the teaching profession using three items each from Meyer et al.'s (1993) occupational commitment scales. Sample items and reliabilities are: "I am enthusiastic about teaching" (AC: $\alpha = .71$); "I feel a responsibility to continue teaching" (NC: $\alpha = .76$); and "It would be costly for me to change my occupation now" (CC: $a = .80$). Participants responded on 7-point Likert-type scales ranging from strongly disagree to strongly agree.

Intentions to Stay. Participants were asked how long they anticipated staying with their current school, and in the teaching profession, by selecting one of five response options: less than a year, 1 to 3 years, 4 to 6 years, 7 to 9 years, and 10 or more years. The response options were scored 1 to 5, respectively.

Physical well-being. The Physical Health Questionnaire (Schat et al., 2005) was used to measure physical health complaints related to digestion (4 items; $\alpha = .86$), headaches (3 items; $\alpha = .90$), sleep disturbances (4 items; $\alpha = .84$), and cold or respiratory infections (i.e., colds, flus; 3 items; $\alpha = .64$). The time-frame identified was the past academic term, and responses were made on 7-point scales ranging from never to very often. We also asked respondents to indicate the number of sick days they took in the current academic year with response options ranging from zero to 10 or more.

Hedonic well-being. Positive and negative affect were measured using a short form of the International Positive and Negative Affect Schedule (Thompson, 2007), based on the Positive and Negative Affect Schedule (Watson, Clark & Tellegen, 1988). Each scale included five adjectives (e.g., "inspired" for positive affect, $\alpha = .86$; "upset" for negative affect, $\alpha = .80$), rated on 7-point scales ranging from very little or not at all to very much. Job satisfaction was measured with a single item ("How satisfied are you with your job?") rated on a 7-point scale ranging from very dissatisfied to very satisfied. Burnout was measured using the 5-item emotional exhaustion ($\alpha = .88$; e.g., "I feel emotionally drained from my work") and cynicism ($\alpha = .84$; e.g., I have become less interested in my work since I started this job") subscales from the Maslach Burnout Inventory (Maslach et al., 1996). Responses were made on 7-point frequency scales (never to very often).

Eudaimonic well-being. Engagement was measured using a total of six items ($\alpha = .91$) taken from

the vigor (e.g., "At my work, I feel bursting with energy") and dedication (e.g., "I find the work that I do full of meaning and purpose") subscales from the Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006). Reponses were made on 7-point frequency scales ranging from "never" to "very often". Vitality, was measured using Ryan and Frederick's (1997) six-item scale ($\alpha = .68$; e.g., "I have energy and spirit"). Responses were made on 7-point Likert-type scales ranging from "not at all true" to "very true." Personal expressiveness, was measured using Waterman's (1993) six-item scale ($\alpha = .86$; e.g., "My job gives me my greatest feeling of really being alive"). Responses were made on 7-point frequency scales ranging from never to very often.

Analyses

Mplus 7.2 (Muthén & Muthén, 2014) and a robust maximum likelihood estimator (MLR) were used to conduct the analyses. LPA (Muthén, 2002) to identify commitment profiles were conducted using factor scores for the organizational and occupational commitment mindsets from preliminary analyses reported in the online supplements. Importantly, these preliminary results confirmed that all constructs used in this study present fully acceptable levels of composite reliability (with ω values varying from .71 to .96; see online supplements). LPA with 1 to 8 profiles were first estimated with the variances and means of the indicators freely estimated across profiles (Morin, Maïano, et al., 2011; Peugh & Fan, 2013). Models were estimated using 5000 sets of random start values (Hipp & Bauer, 2006) 200 iterations, and 200 solutions retained for final optimization.

To select the final number of profiles, we considered the theoretical meaning of the profiles (Marsh et al., 2009) and the statistical acceptability of the solution (e.g., out-of-bound estimates, nonconvergence; Bauer & Curran, 2004). Several statistical indicators were also consulted: The Bayesian information criterion (BIC), the Akaike Information Criterion (AIC), the sample-adjusted BIC (SABIC), the Consistent AIC (CAIC), the Integrated Classification Likelihood BIC (ICL-BIC: A BIC corrected for the classification accuracy of the model), the adjusted Lo Mendell and Rubin (2001; LMR) likelihood-ratio test and the bootstrapped likelihood-ratio test (BLRT). Lower values on the BIC, AIC, SABIC, CAIC, and ICL-BIC suggests a more adequate model. Both the BLRT and LMR contrast a k-profile solution with a k-1-profile solution, and non-statistically significant values support the k-1 profile solution. Statistical studies demonstrated that the CAIC, BIC, SABIC and BLRT seemed are particularly accurate (e.g., Nylund, Asparouhov, & Muthén, 2007; Peugh & Fan, 2013; Tein, Coxe, & Cham, 2013; Tofighi & Enders, 2008). In addition, these studies showed that when these indicators erroneously identify the wrong model, the ABIC, AIC, and BLRT present an overestimation tendency, whereas the CAIC and BIC present an underestimation tendency. However, these indicators sometimes fail to reach a minimum (e.g., Marsh et al., 2009), in which case it can be useful to rely on a graphical representation (i.e., an "elbow plot": Morin, 2016; Morin, Maïano, et al., 2011). In elbow plots, the point following a flattening of the slope is indicative of the optimal solution. Finally, we also report the entropy, which provides a useful summary of classification accuracy, with larger values (closer to 1) signifying greater accuracy.

Associations between the profiles, demographics (age, gender, tenure in the teaching occupation, tenure in the school, and school level) and outcomes (intentions to stay, well-being indicators) were assessed using Lanza, Tan and Bray's (2013) model-based approach, using the Mplus DCON function for continuous variables and the DCAT function for categorical variables. This procedure has been shown to perform well in recovering true population parameters regarding associations between latent profiles and continuous outcomes, and to be more stable when multiple outcomes are considered relative to alternative procedures (Asparouhov & Muthén, 2014; Lanza et al., 2013).

Results

Class Enumeration

The fit indices for the LPA models based on the individual mindsets of teachers' commitment to their organization and occupation are reported in Table 1. These results show that the indices are not helpful in the selection of the optimal number of profiles in the data: most continue to decrease of with the addition of latent profiles, and those that reach a minimum do not converge on the same solution. For instance, the LMR supports a 4-profile solution, the CAIC supports a 5-profile solution, the BIC and ICL-BIC support a 7-profile solution, and the AIC, ABIC, and BLRT continue to decrease with the addition of latent profiles. However, the elbow plots showed that the improvement in fit appeared to reach a plateau around four profiles for the CAIC and BIC (two indices with a tendency for under-estimation), and around five profiles for the remaining indicators (see Figure S1 in the online

supplements). Thus, statistically, the available evidence appears to support a 5-profile solution. Examination of the adjacent 4- and 6- profile solutions also confirms the superiority of the 5-profile solution in terms of theoretical conformity and statistical adequacy (i.e., converging on fully proper solutions), whereas adding additional profiles failed to enrich the interpretation of the results. The 5-profile solution was thus retained as the final model. This model yields a high level of classification accuracy, with an entropy value of .844. Average posterior probabilities of membership in the dominant profile are high, varying from .867 to .984, while cross-probabilities remain low, varying from 0 to 0.069 (see Tables S4 in the online supplements).

Characteristics of the Latent Profiles

The retained 5-profile solution is presented in Figure 1. The exact values for the commitment mindsets in each profile are presented in Table S5 in the online supplements. To facilitate comparison across studies, we adopted the labeling convention proposed by Meyer and Morin (2016). Profile 1 includes the 18% of teachers with low levels of AC and NC to both the organization and occupation, slightly below average levels of CC:HS, but strong CC:LA to the organization, and slightly above average levels of CC to the occupation. Teachers with this profile appear to see few opportunities for employment elsewhere and recognize that it would be costly to change occupation. We labeled this profile *CC:LA-dominant (organization); weak CC-dominant (occupation)*. Profile 2 also comprises 18% of the sample and includes teachers with slightly above average scores on AC to the organization, average AC to the occupation, and below average scores on all remaining mindsets pertaining to both targets. Thus, these teachers have a mild desire to continue teaching at their current school and have few other ties to the school or occupation. Therefore, we labeled this profile *weak AC-dominant (both targets)*.

Profile 3 includes a relatively large proportion of teachers (41%) with all mindsets for both targets hovering around the average. We therefore labeled this profile *moderately committed (both targets)*. Profile 4 comprises 13% of the sample and includes teachers with strong AC and NC to both the organization and the occupation. For organizational commitment, CC:HS is also well above average (albeit lower than AC and NC), and CC:LA is below average. Thus, these teachers appear to recognize that other employment opportunities exist, but that they would have to sacrifice some of the benefits they are experiencing at their current school if they were to leave. CC to the occupation is also above average, albeit weaker than AC and NC, suggesting that teachers recognize that, although it is not the primary basis of their commitment, they would nevertheless incur costs by leaving. Therefore, we labelled this profile *fully committed (both targets)*. Finally, Profile 5 includes the smallest subgroup of teachers (9%) and is characterized by strong AC, NC, and CC to the occupation, but only moderate levels of commitment to the organization. We labeled this profile *moderately committed (organization); fully committed (occupation)*.

In sum, the mindset profiles for each target within profiles were generally consistent with what we predicted in Hypothesis 1, although we did not find evidence for a weakly committed profile (i.e., all mindsets markedly below average). Moreover, in answer to our Research Question, it appears that, while the mindset patterns for organizational and occupational commitment are largely similar, there are also some differences as discussed below. Details concerning the demographic comparisons of the profiles are reported in Table S6 of the online supplements. There were no differences across profiles in age, gender, tenure in the teaching occupation, and school level. The only differences observed were related to school tenure, which was greatest in Profile 4, followed by Profiles 1, 2 and 3, and then by Profile 5 (which differed significantly from Profiles 1 and 4, but not 2 and 3).

Outcomes of the Commitment Profiles

The results of the profile comparisons on turnover intention and physical and psychological well-being are presented graphically in Figure 2. To be consistent with the holistic perspective provided by the person-centered approach, we summarize the findings by profile. Variable-by-variable comparisons across profiles with a summary of tests of significance are provided in Table 2 (also see Table S7 of the online supplements).

Teachers corresponding to Profile 1 (*CC:LA-dominant (organization); weak CC-dominant (occupation)*) reported slightly above average intentions to remain in the profession and average intentions to remain in their current school. Their job satisfaction, positive affect, engagement, vitality, and expressivity are well below average, and lowest of those observed across all profiles. Negative affect, burnout, and physical health complaints are well above average and higher than in most other

profiles. Thus, this profile appears to reflect a feeling of being trapped in both the school and occupation, and is accompanied by negative physical and psychological well-being.

Teachers corresponding to Profile 2 (*weak AC-dominant – both targets*) are tied to the organization and occupation more by desire than by obligation or perceived cost, but even the desire to remain is modest. These teachers have above average levels of job satisfaction, positive affect, engagement, vitality, and expressiveness, as well as below average levels of negative affect, burnout and physical health complaints. It is surprising, therefore, that they have below average intentions to remain in their schools and occupation. Indeed, their intention to remain in the teaching occupation is significantly weaker than that observed in all other profiles. This might reflect the fact that, beyond a moderate desire to remain, they have no others ties (costs or obligations) to the school or profession. Thus, although not unhappy, they may feel free to pursue other opportunities should they arise. Indeed, they may currently be searching for, or considering, such opportunities.

Like Profile 2, teachers corresponding to Profile 3 (*moderate commitment - both targets)* have near average levels of commitment to both targets. This moderate commitment translates into an above-average intention to remain in the teaching profession and an average intention to remain in the organization. The difference across targets might reflect the relative difficulty of changing occupations compared to organizations. The pattern of scores on the physical, hedonic, and eudaimonic well-being measures is like that for Profile 2, but somewhat muted.

Teachers corresponding to Profile 4 (*fully-committed - both targets*) have above average intentions to remain in the occupation, and the strongest intentions to remain at their current school (although this difference is significant only when compared to Profiles 2 and 3). They also report among the highest levels of positive affect, job satisfaction, engagement, vitality, and expressiveness, and the lowest levels of negative affect and burnout observed across all profiles. Although they also report below average levels of physical health complaints, these are not significantly different from those observed in Profiles 2 and 3.

Finally, teachers corresponding to Profile 5 (*moderately committed to the organization; fully committed to the occupation*) report the most complex pattern of outcomes. These teachers are much more committed to the teaching profession than they are to their schools, so it is not surprising that they have stronger intentions to remain with the occupation (well above average) than with the school (slightly below average). They also report above average levels of positive affect, engagement, vitality, and expressiveness, and below average burnout, albeit not to the levels reported by those with Profile 4. Interestingly, however, except for respiratory symptoms, they report above average levels of physical health complaints. Although not as strong as those reported by teachers with Profile 1, these physical health complaints are significantly greater than in Profiles 2, 3 or 4.

In sum, our findings partially confirmed Hypotheses 2 – 4. Intentions to remain in the school and occupation were indeed strongest when teachers were fully committed to both. However, beyond this, there was little variation in intentions to remain, perhaps because all profiles reflected at least a moderate level on at least one of the commitment mindsets. In contrast, we observed considerably more variability in the well-being measures. Again, the strongest evidence of well-being was observed among teachers who were fully committed to the organization and occupation. The lowest levels were observed among teachers for whom CC to both targets was dominant. Other, more nuanced differences, were also observed and are discussed in more detail below.

Discussion

Our study is one of few to examine mindset profiles pertaining to teachers' commitment to their organization and occupation, and the first conducted in North America. It is also one of only a few such studies conducted with any occupational group. Consequently, it contributes to our general understanding of how commitment mindsets combine across targets and relate to important outcomes (i.e., turnover intention and well-being). Moreover, it allowed us to evaluate the generalizability of findings obtained in previous studies conducted outside of North America (Morin et al., 2015; Tsoumbris & Xenikou, 2010). Importantly, our study advances earlier investigations by measuring two facets of CC to the organization (CC:LA and CC:HS), and by including a wider range of well-being measures. Distinguishing among the CC facets has been shown to provide greater clarity regarding the nature and implications of CC in previous single- (Meyer et al., 2018; Stanley et al., 2013) and dual-commitment (Meyer et al., 2015) profile studies, but has yet to be considered in research with the organization and occupation as targets. The inclusion of a broader spectrum of well-being measures is

useful for profile validation purposes (Marsh et al., 2009; Meyer & Morin, 2016; Morin, Morizot et al., 2011), and has important practical implications.

Contributions to Commitment Profile Theory

As noted previously, there have been several studies investigating commitment mindset profiles, particularly with the organization as the target. Our findings regarding the individual target profiles (organization and occupation) are very consistent with this earlier research, reinforcing the notion that the basic mindsets can combine in different ways. There have been relatively few studies examining target profiles (Becker & Billings, 1993; Morin, Morizot et al., 2011; Somers & Birnbaum, 2000; Swailes, 2004), and fewer still involving the combination of targets and mindsets (Meyer et al., 2015; Morin et al., 2015; Tsoumbris & Xenikou, 2010). Consequently, our findings contribute most to advancing our understanding in this domain, particularly the combination of mindsets pertaining to organizational and occupational commitment.

We found that mindset patterns for organization and occupation commitment were generally similar. However, the profiles showing 'parallel' mindsets across targets reflect different combinations of AC, NC and CC – something that was missed in earlier studies treating commitment as unidimensional (Becker & Billings, 1993; Morin et al., 2011). Moreover, we identified a few profiles where mindset patterns differed. The most obvious case is Profile 5 where teachers were fully committed to their occupation, but had only moderate commitment to the organization.

These findings, along with those reported in previous research (Meyer et al., 2015; Morin et al., 2015; Tsoumbris & Xenikou, 2010), illustrates the importance of considering multiple mindsets when investigating commitment to multiple targets. Unfortunately, theory pertaining to target mindsets combinations is limited. Therefore, it is important to examine our findings along with those of previous research, and to consider whether they can be explained by current theory and/or suggest the need for more theory development. Because previous studies were conducted outside North America, cultural differences are also important to consider.

Comparison with Previous Research

Of the two studies investigating organizational and occupational commitment mindsets (Morin et al., 2015; Tsoumbris &Xenikou, 2010) our study is most similar to that of Morin et al., both in its analytic approach and in its focus on teachers. Morin et al. identified more profiles (seven) than we did, perhaps due to their larger sample size (N = 1096 vs 336). Indeed, in some cases it appears that profiles identified in our study split into similar, albeit distinguishable, profiles in Morin et al.'s study. For example, whereas we identified a profile where CC to both targets was dominant (CC:LA in the case of the organization), Morin et al. found both strong and weak versions of CC-dominance. It is possible that with a larger sample, we might also have identified a more nuanced set of profiles.

Perhaps one of the more interesting comparisons between the two studies involves the profiles reflecting full commitment to the teaching occupation. Morin et al. (2015) found a profile in which full commitment to the teaching occupation was combined with an NC-dominant organizational profile. Morin et al. suggested that this combination might reflect a dependency among nested profiles as suggested by Meyer and Allen (1997). However, the fact that NC was elevated rather than CC as initially proposed was explained as a possible reflection of the strong collectivist culture in Hong Kong. That is, teachers who were fully committed to their occupation may have felt a strong social obligation (NC) to remain with their school rather than an economic cost (CC). In our study, we found a profile in which teachers were fully committed to the occupation, and moderately committed to the organization. Although, for labeling purposes, we were reluctant to declare any of the organizational commitment mindsets as dominant, only NC was above average. Thus, it might be that our Canadian teachers also felt a mild obligation to remain in a school where they could pursue their passion for teaching, but the effect did not appear to be as strong as it was in Hong Kong. This might well reflect cultural differences, but verification of this hypothesis will require replication.

Finally, like Morin et al. (2015), we found no evidence of a profile reflecting strong commitment to one target and weak commitment to the other as proposed by Gouldner (1957) and observed by Becker and Billings (1993). However, the mindset pattern in Profile 5 described above could be interpreted as reflecting a form of conflict. Indeed, had we measured only AC to the organization and occupation, we might have interpreted Profile 5 as reflecting a 'cosmopolitan' orientation as described by Gouldner (i.e., AC to the occupation was well above average whereas AC to the organization was below average). Rather, our findings demonstrate that, in the absence of AC, it might be a combination

of obligation and potential costs that ties teachers to their schools. This again demonstrates the importance of measuring multiple mindsets in dual commitment research.

Operationalization of CC

As in previous profiles studies (Meyer et al., 2015, 2017; Stanley et al., 2013), we found that distinguishing between CC:LA and CC:HS had clear implications for the interpretation of the profiles and their relations with other variables. For example, we found the levels of these facets to be quite different in at least two profiles: CC:LA was much stronger in Profile 1, whereas CC:HS was much stronger in Profile 4. Meyer et al. (2015) obtained similar findings in their person-centered study of employee commitment to the organization and supervisor. Interestingly, in the present study, it was when CC:LA was particularly strong that levels of well-being were lowest (Profile 1), and when CC:HS was strong that levels of well-being were greatest (Profile 4). Thus, the 'two faces' of CC reflected in the findings reported by Morin et al. (2015) and Meyer et al. (2012) might be attributable, at least in part, to differences in the basis for the 'costs' associated with CC – a lack of alternatives or the perceived sacrifices associated with leaving. The latter might include investments made in the past by the individual and/or organization (e.g., training), possibly for their mutual benefit.

Some critics (Jaros, 2009; Powell & Meyer, 2004) have questioned whether a perceived lack of alternatives should be considered a form of commitment. Although this is not a debate that we want to address here, our findings suggest that it is important to distinguish between perceptions of (a) employment alternatives *and* (b) the sacrifices one would have to make by leaving one's job. Failure to do so can be potentially misleading.

Outcomes of Profile Membership

We found few differences across profiles in the strength of intentions to remain with the organization or occupation. However, unlike earlier studies (Morin et al., 2015; Tsoumbris and Xenikou, 2010), we did not identify a weak commitment profile to serve as a baseline for comparison. Thus, for all profiles, at least one mindset for each target was at or above average. We did find evidence that intention to stay in the organization was greater in Profile 4 (fully committed to both targets) than in Profiles 2 and 3, where commitment was at a moderate level. However, the differences were not significant in comparisons with Profile 1 (CC:LA-dominant to the organization; CC-dominant to the occupation), and Profile 5 (moderately committed to the organization; fully committed to the occupation). The first comparison reflects the power that lack of alternatives can have in tying individuals to their organizations; the second might reflect a compensatory effect, where strong commitment to the occupation can tie individuals to their organization even when the desire to remain is relatively weak (Johnson et al., 2009). The importance of these findings becomes more apparent as we consider their implications for well-being below.

The only significant differences across profiles regarding intention to remain in the occupation involved comparisons with Profile 2, where intention to remain was lower than for all other profiles. Although this profile was labeled weak AC-dominant to both targets to reflect the relative strength of the mindsets, all three occupational commitment mindsets were below average, with AC being the strongest of the three. Only AC to the organization was above average in this profile and this was apparently insufficient to curb intentions to leave the profession. Intentions to remain in the occupation did not differ significantly across the remaining profiles, suggesting that all three mindsets contribute to intentions to remain, and that it is only when all are relatively weak that intentions to leave increase. As an aside, it is also noteworthy that intentions to remain in the teaching profession were generally stronger than intentions to remain in the school. All things considered, it is arguably more disruptive to change one's occupation than to change schools.

Given that there can be different reasons (mindsets) underpinning teachers' intentions to remain in the profession and/or school, it is important to consider how their well-being compares across profiles. Like Morin et al. (2015), we found relatively low levels of well-being (physical, hedonic, eudaimonic) among individuals whose ties to the organization were based primarily on CC (Profile 1). However, by measuring CC:LA and CC:HS separately, we can surmise that the lack of alternatives was driving this effect. Although well-being was low in Profile 1 where CC:LA was dominant, it was high in Profile 4 where strong CC:HS was accompanied by strong AC and NC to the organization.

Morin et al. (2015) also found low levels of well-being among teachers with weak commitment. Although we did not find a weak commitment profile per se, we did find two profiles where the commitment mindsets were all close to, or below, average (Profiles 2 and 3). Well-being in these

profiles was lower than in profiles with strong commitment to at least one target (Profiles 4 and 5). Interestingly, well-being was lower in the moderate commitment (both targets) profile (Profile 3) than in the weak AC-dominant profile (Profile 2). Although AC levels were not markedly different in these two profiles, NC and CC were considerably lower in Profile 2 than in Profile 3. This is consistent with the notion that CC and NC reflects a degree of external control that can be a source of stress (Meyer & Maltin, 2010). Finally, we found among the highest levels of well-being in Profile 4 where teachers were fully-committed to both the organization and the teaching profession.

Perhaps one of the more unique and intriguing findings of our study was that, although psychological well-being was relatively high in Profile 5 (NC-dominant to the organization; fully committed to the occupation), the number of sick days and several physical complaints (e.g., sleep, headaches, digestion) were quite high in this profile – higher even than in Profiles 2 and 3. One possible explanation for this pattern is that, for teachers who are fully committed to their profession, teaching itself is satisfying and engaging. However, teaching in a school to which they have a relatively weak organizational AC might contribute to stress that manifests itself in terms of physical symptoms. This finding requires replication, but demonstrates the potential importance of continuing to include a wide range of well-being indicators in future research.

Limitations and Future Directions

Before considering the implications of our findings, it is important to acknowledge limitations. First, our study was conducted exclusively with Canadian teachers. Although there was considerable similarity between our findings and those reported by Morin et al. (2015) for Hong Kong teachers, there were also differences. Although the differences might be due to culture as Morin et al. proposed, both our findings and theirs require replication, ideally in a true cross-cultural study and/or with the inclusion of individual-level measure of cultural values.

Our study was also cross-sectional and included only a subset of the many outcomes of commitment profiles that might be of interest to educators. Our objective at this point was to contribute to the small body of person-centered research involving dual targets and multiple mindsets. We provided further evidence that commitment mindsets and commitments to different targets related differently to other variables depending on how they combine within profiles. This raises questions about the generalizability of relations involving individual commitment mindsets and targets obtained in variable-centered studies, and sets the stage for additional person-centered research. Although there may be benefits to additional cross-sectional studies to replicate and extend the current findings, our understanding of the development and consequences of commitment profiles can be enhanced through the application of more sophisticated person-centered analytical techniques (e.g., latent transition analyses; growth mixture modeling) applied to multi-wave longitudinal data (see Meyer & Morin, 2016; Morin, 2016; Vandenberg & Stanley, 2009). Research involving teachers might also benefit from more attention to the factors involved in the development of commitment profiles and comparisons of teachers at different career stages and working in different contexts.

Looking more broadly at the implications for the commitment literature in general, it is unclear how well our findings will generalize to other occupational groups until additional research is conducted. Our focus on only two targets might be a limitation without an immediate solution, at least if one is interested in also measuring multiple mindsets. Morin, Morizot et al. (2011) identified profiles involving seven distinct targets, but they measured only AC to each. Including more than two targets with multiple mindsets, although possible, would require particularly large samples, and may result in profiles that would be hard to interpret. It might be more reasonable, at least in the short term, for researchers to investigate combinations of two or three targets that are of particular interest in a given context. For example, future studies with teachers might consider commitment to the school principal, to the students, or the local community along with commitment to the school or school board.

Implications and Conclusions

Our findings have important implications for theory, research and practice. As noted previously, the person-centered approach is well-suited to addressing some of the complex interactions reflected in the TCM (Meyer & Herscovitch, 2001) and various theories pertaining to the interactions among commitment targets (Gouldner, 1957; Johnson et al., 2009; Meyer & Allen, 1997). Therefore, as one of the first to investigate mindset profiles pertaining to dual targets, our study showcases the methodology while shedding new light on the complex interplay among workplace commitments. To illustrate the benefits of this approach from a methodological standpoint, consider that our study included seven

commitment measures, and thus had the potential to yield seven-way interactions. Even three-way interactions can be difficult to interpret (see Gellatly et al., 2006, for an example), especially if nonlinear components are incorporated. However, failure to acknowledge these interactions by focusing only on individual mindsets or commitment targets can be misleading. Using a person-centered approach, these complex interactions can be represented in a set of profiles that are easier to interpret. Zyphur (2009) noted that people have a natural inclination to categorize others into types, so the interpretation of profiles can be quite intuitive. While it is true that no classification will be perfect, it is also true that any interpretation of findings from variable-centered research will also require qualifications, often by conditions that are unknown or unknowable. Providing a strong empirical basis for the categorization of workplace commitments will require extensive investigation. Our study contributes to a growing body of person-centered research aiming to achieve that objective.

From a practice perspective, our findings demonstrate that teachers can intend to stay with their schools and/or occupations for various reasons, ranging from a lack of alternatives to full commitment to the school, the occupation, or both. Importantly, the reasons for staying can have quite different implications for teachers' well-being and, although not assessed in this study, their performance (Meyer et al., 2002). The most negative outcomes are likely to be experienced when teachers feel trapped in the organization and occupation (Profile 1). In the case of the organization, it appears that it is the lack of alternatives that is most stressful. The most positive health outcomes were observed in Profile 4 where teachers were fully committed to both the organization and the occupation. The fact that CC:HS to the organization and CC to the occupation were also high in this profile suggests that the perceived costs of leaving for these teachers would be the loss of positive experiences (e.g., engaging work; close relationships). Intermediate levels of well-being were observed in Profiles 2 and 3, although they were generally weaker in the latter, perhaps due to the stronger levels of CC and NC combined with below-average AC. In these cases, the costs reflected in CC are more likely to be economic (e.g., loss of income; wasted occupational investments).

Interestingly, teachers who were highly committed to teaching but had a relatively weak AC to the organization (Profile 5) also experienced some ill-effects (i.e., increased physical symptoms). In this case, it may have been teachers' above average NC combined with average CC:HA and CC:LA that kept them in their current school. Thus, while pursuing a career that they enjoyed may have been responsible for their positive psychological well-being, the sense of being trapped in their current school could have created stress that contributed to physical health complaints. Of course, this is only speculation at this point, but the pattern of findings suggests that, at a minimum, educational administrators might want to monitor the organizational and occupational commitment of their teachers, and be aware that, although strong occupational commitment might compensate for weak organizational commitment from a turnover perspective, there might be a price to pay in terms of teacher well-being. A lack of alternative employment opportunities can also contribute to reduced turnover, but can have the same negative consequences for well-being.

Although administrators may have little control over many of the costs of leaving the organization or the teaching occupation (e.g., availability of alternatives; career-related investments), there are several factors within their control that have been shown to contribute positively to the development of AC and NC. Among the strongest predictors of AC to the organization are perceived support from the organization (Kurtessis, Eisenberger, Ford, Buffardi, Stewart, & Adis, 2017), fair treatment (Meyer et al., 2002), trust in management (Colquitt, Scott, & LePine, 2007) and transformational leadership (Jackson, Meyer, & Wang, 2013). These can be monitored along with commitment in regular teacher surveys and, where found to be lacking, can be targeted for remedial action. Our study suggests that the payoff will be increased retention and teacher well-being, but the full implications might be even more profound. In the only unit-level study we are aware of to be conducted in an educational context, Ostroff (1982) found that teachers' organizational commitment, aggregated to a school level, was associated not only with greater retention but also with superior administrative performance and student retention, satisfaction and academic achievement. There is a need for more research of this kind, ideally expanded to include commitment profiles. However, in the meantime, it appears that there is potentially much to be gained by ensuring that teachers have the right kind of commitment to both the teaching profession and to their school.

References

Akar, H. (2018). The relationships between quality of work life, school alienation, burnout, affective

commitment and organizational citizenship: A study on teachers. *European Journal of Educational Research*, *7*, 169-180.

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, 63: 1-18.

Asparouhouv, T. & Muthén, B. (2007). *Wald test of mean equality for potential latent class predictors in mixture modeling*. Technical Report. Los Angeles CA: Muthén & Muthén.

Asparouhov, T., & Muthén, B.O. (2014). Auxiliary variables in mixture modeling: Three-step approaches using Mplus. *Structural Equation Modeling*, *21*, 1-13.

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology,* 34, 2045-2068.

Bauer, D. J., & Curran, P. J. (2004). The integration of continuous and discrete latent variable models: Potential problems and promising opportunities. *Psychological Methods*, *9*, 3-29.

Becker, T. E. (1992). Foci and bases of commitment: Are they distinctions worth making? *Academy of Management Journal, 35*, 232–244.

Becker, T. E., & Billings, R. S. (1993). Profiles of commitment: An empirical test summary. *Journal of Organizational Behavior*, 14: 177-190.

Brown, R.B. (1996). Organizational commitment: Clarifying the concept and simplifying the existing construct typology. *Journal of Vocational Behavior*, *49*, 230-251.

Chris, A. C., Maltin, E. R., & Meyer, J. P. (2016). Employee commitment and well-being. In J.P. Meyer (Ed.). *Handbook of Employee Commitment* (pp. 235-247). Cheltenham, UK: Edward Elgar Publishing.

Cohen, A. (2003). *Multiple commitments in the workplace: An integrative approach*. Mahwah, NJ: Lawrence Erlbaum Associates.

Colquitt, J.A., Scott, B.A., & LePine, J.A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk-taking and job performance. *Journal of Applied Psychology*, *92(4)*, 909-927.

Cooper-Hakim, A., & Viswesvaran, C. (2005). The construct of work commitment: Testing an integrative framework. *Psychological Bulletin*, 131: 241-259.

Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness. *Journal of Educational Change*, 9, 243–260.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* New York, NY: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227-268.

Dee, J. R., Henkin, A. B., & Singleton, C. A. (2006). Organizational commitment of teachers in urban schools: Examining the effects of team structures. *Urban Education*, *41*, 603–627.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–75.

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, S., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, *97*, 143-156.

Gagné, M., Chemolli, E., Forest, J., & Koestner, R. (2008). A temporal analysis of the relation between organizational commitment and work motivation. *Psychological Belgica*, *48*, 219-241.

Gellatly, I. R., Meyer, J. P., & Luchak, A. A. (2006). Combined effects of the three commitment components on focal and discretionary behaviors. *Journal of Vocational Behavior*, 69: 331-345.

Gouldner, A. W. (1957). Cosmopolitans and locals: Toward an analysis of latent social roles. *Administrative Science Quarterly*, 2: 281-306.

Hipp, J.R., & Bauer, D.J. (2006). Local solutions in the estimation of growth mixture models. *Psychological Methods*, *11*, 36-53.

Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations (2nd Ed.). London: Sage Publications.

Jackson, T.A., Meyer, J.P., & Wang, X.H. (2013). Leadership, commitment, and culture: A meta-analysis. *Journal of Leadership and Organizational Studies, 20*, 84-106.

Jaros, S. (2009). Measurement of commitment. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.).

Commitment in organizations: Accumulated wisdom and new directions (pp. 347-381). Florence, KY: Routledge.

Johnson, R. E., Groff, K. W., & Taing, M. U. (2009). Nature of the interactions among commitments: Complementary, competitive, or synergistic? *British Journal of Management*, 20: 431-447.

Kabins, A., Xu, X, Bergman, M., Berry, C., & Willson, V. (2016). A profile of profiles: A meta-analysis of the nomological net of commitment profiles. *Journal of Applied Psychology*, *101*, 881-904.

Kam, C., Morin, A.J.S., Meyer, J.P., & Topolnytsky, L. (2016). Are commitment profiles stable and predictable? A latent transition analysis. *Journal of Management*, *42*, 1462-1490.

Kurtessis, J., Eisenberger, R. Ford, M. T., Buffardi, L. C., Stewart, K. A., & Adis, C. S. (2017). Perceived organizational support: A meta-analytic evaluation of organizational support theory. *Journal of Management*, *43(6)*, 1854-1184

Lanza S. T., Tan X., & Bray B. C. (2013). Latent class analysis with distal outcomes: A flexible model-based approach. *Structural Equation Modeling*, *20*, 1-26.

Lee, K., Carswell, J. J., & Allen, N. J. (2000). A meta-analytic review of occupational commitment: Relations with person- and work-related variables. *Journal of Applied Psychology*, 85: 799-811.

Lo, Y., Mendell, N., & Rubin, D. (2001). Testing the number of components in a normal mixture. *Biometrika, 88*, 767-778.

Marsh, H.W., Lüdtke, O., Trautwein, U., & Morin, A.J.S. (2009). Latent Profile Analysis of Academic Self-concept Dimensions: Synergy of Person- and Variable-centered Approaches to the Internal/External Frame of Reference Model. *Structural Equation Modeling*, *16*, 1-35.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). MBI Manual (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

McGee, G. W., & Ford, R. C. (1987). Two (or more?) dimensions of organizational commitment: Reexamination of the Affective and Continuance Commitment Scales. *Journal of Applied Psychology, 72*, 638–642.

McInerney, D. M., Ganotice, F. A., Kin, R. B., Marsh, H. W., & Morin, A. J. S. (2015a). Exploring commitment and turnover intentions among teachers: What we can learn from Hong Kong teachers. *Teaching and Teacher Education*, *52*, 11-23.

McInerney, D. M., Ganotice, F. A., Kin, R. B., Morin, A. J. S., & Marsh, H. W. (2015b). Teachers' commitment and psychological well-being: Implications of self-beliefs for teaching in Hong Kong. *Educational Psychology*, *35*, 926-945.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1: 61-89.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Thousand Oaks: Sage.

Meyer, J. P., Allen, N. J., & Gellatly, I. R. (1990). Affective and continuance commitment to the organization: Evaluation of measures and analysis of concurrent and time-lagged relations. *Journal of Applied Psychology, 75,* 710-720.Meyer, J. P., Allen, N. J., & Smith, C. A. 1993. Commitment to organisations and occupations: Extension and test of a three-component model. *Journal of Applied Psychology*, 78: 538-551.

Meyer, J.P., Allen, N.J., & Smith, C.A. (1993). Commitment to organizations and occupations: Extension and test of a three-component model. *Journal of Applied Psychology*, *78*, 538-551.

Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, 11: 299-326.

Meyer, J. P., Kam, C., Goldenberg, I., & Bremmer, N. L. (2013). Organizational commitment in the military: Application of a profile approach. *Military Psychology*, 25: 381-401.

Meyer, J. P., & Maltin, E. R. (2010). Employee commitment and wellbeing: A critical review, theoretical framework, and research agenda. *Journal of Vocational Behavior*, 77: 323-337.

Meyer, J.P., & Morin, A.J.S. (2016). A person-centered approach to commitment research: Theory, research, and methodology. *Journal of Organizational Behavior*, *37*, 584-612.

Meyer, J.P., Morin, A.J.S., & Vandenberghe, C. (2015). Dual commitment to organization and supervisor: A person-centered approach. *Journal of Vocational Behavior, 88,* 56-72.

Meyer, J.P., Morin, A.J.S., & Wasti, A. (2018). Employee commitment before and after an economic crisis: A stringent test of profile similarity. *Human Relations*, *71(9)*, 1204-1233.

Meyer, J. P., & Parfyonova, N. M. (2010). Normative commitment in the workplace: A theoretical

analysis and re-conceptualization. *Human Resource Management Review*, 20: 283-294

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61: 20-52.

Meyer, J. P., Stanley, L. J., & Parfyonova, N. M. (2012). Employee commitment in context: The nature and implication of commitment profiles. *Journal of Vocational Behavior*, 80: 1-16.

Meyer, J.P., Stanley, L.J., & Vandenberg, R.M. (2013). A person-centered approach to the study of commitment. *Human Resource Management Review*, *23*, 190-202.

Morin, A.J.S. (2016). Person-centered research strategies in commitment research. In J.P. Meyer (Ed.), The Handbook of Employee Commitment (p. 490-508). Cheltenham, UK: Edward Elgar.

Morin, A.J.S., Maïano, C., Nagengast, B., Marsh, H.W., Morizot, J., & Janosz, M. (2011). Growth mixture modeling of adolescents trajectories of anxiety: The impact of untested invariance assumptions on substantive interpretations. *Structural Equation Modeling, 18,* 613-648.

Morin, A.J.S., Meyer, J.P., Creusier, J., & Biétry, F. (2016). Multiple-group analysis of similarity in latent profile solutions. *Organizational Research Methods*, *19*, 231-254.

Morin, A.J.S., Meyer, J.P., McInerney, D. M., Marsh, H.W., & Ganotice, F. (2015). Profiles of dual commitment to the occupation and organization: Relations to wellbeing and turnover intentions. *Asia Pacific Journal of Management*, *32*, 717-744.

Morin, A.J.S., Morizot, J., Boudrias, J.-S., & Madore, I., (2011). A multifoci person-centered perspective on workplace affective commitment: A latent profile/factor mixture Analysis. *Organizational Research Methods, 14*, 58-90.

Morin, A.J.S., Vandenberghe, C., Boudrias, J.-S., Madore, I., Morizot, J., & Tremblay, M. (2011). Affective commitment and citizenship behaviors across multiple foci. *Journal of Managerial Psychology*, *26*, 716-738.

Morrow, P.C. (1993). *The theory and measurement of work commitment*. Greenwich, CT: JAI.

Muthén, B. O. (2002). Beyond SEM: General latent variable modeling. *Behaviormetrika*, *29*, 81-117.

Muthén, L. K., & Muthén, B. O. (1998-2014). *Mplus user's guide.* Los Angeles: Muthén & Muthén.

Nylund, K.L., Asparouhov, T., & Muthén, B. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling*, *14*, 535–569.

Ostroff, C. (1992). The relationship between satisfaction, attitudes, and performance: An organizational level analysis. *Journal of Applied Psychology, 77*, 963-974.

Park, I. (2005). Teacher commitment and its effects on student achievement in American high schools. *Educational Research and Evaluation*, *11*, 461–485.

Peugh, J. & Fan, X. (2013). Modeling unobserved heterogeneity using latent profile analysis: A Monte Carlo simulation. *Structural Equation Modeling*, *20*, 616-639.

Powell, D. M., & Meyer, J. P. (2004). Side-bet theory and the three-component model of organizational commitment. *Journal of Vocational Behavior, 65,* 157-177.

Reichers, A.E. (1985). A review and reconceptualization of organizational commitment. *Academy of Management Review*, *10*, 465-476.

Richer, S.F., Blanchard, C., & Vallerand, R.J. (2002). A motivational model of work turnover. *Journal of Applied Social Psychology*, *32*, 2089-2113.

Ryan, R.M., Huta, V., & Deci, E.L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, *9*, 139-170.

Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: subjective vitality as a dynamic reflection of well-being. *Journal of Personality, 65,* 529-565.

Schat, A. C. H., Kelloway, E. K., & Desmarais, S. (2005). The Physical Health Questionnaire (PHQ): Construct validation of a self-report scale of somatic symptoms. *Journal of Occupational Health Psychology, 10,* 363-381.

Schaufeli, W., Bakker, A.B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. *Educational & Psychological Measurement*, *66*, 701-716.

Seligman, M. E. P., & Csikszentmihalyi, M. (2014). *Positive psychology: An introduction*. In M. Csikszentmihalyi *(Ed.), Flow and the foundations of positive psychology* (pp. 279-298). New York, NY: Springer.

Somech, A., & Bogler, R. (2002). Antecedents and consequences of teacher organizational and

professional commitment. Educational Administration Quarterly, 38, 555–577.

Somers, M., & Birnbaum, D. (2000). Exploring the relationship between commitment profiles and work attitudes, employee withdrawal, and job performance. *Public Personnel Management*, *29*, 353-365.

Stanley, L., Vandenberghe, C., Vandenberg, R., & Bentein, K. (2013). Commitment profiles and employee turnover. *Journal of Vocational Behavior*, 82: 176-187.

Swailes, S. (2004). Commitment to change: Profiles of commitment and in-role performance. *Personnel Review*, *33*, 187-204.

Tein, J.-Y., Coxe, S., & Cham, H. (2013). Statistical power to detect the correct number of classes in latent profile analysis. *Structural Equation Modeling*, *20*, 640-657.

Thompson, E. R. (2007). Development and validation of an internationally reliable short-form of the Positive and Negative Affect Schedule. *Journal of Cross-Cultural Psychology, 38,* 227-242.

Tofighi, D., & Enders, C. (2008). Identifying the correct number of classes in growth mixture models. In G.R. Hancock & K.M. Samuelsen (Eds.), *Advances in latent variable mixture models* (pp. 317-341). Charlotte, NC: Information Age.

Tsoumbris, P., & Xenikou, A. (2010). Commitment profiles: The configural effects of the forms and foci of commitment on work outcomes. *Journal of Vocational Behavior*, 77: 401-411.

Vandenberg, R. J., & Stanley, L. J. (2009). Statistical and methodological challenges for commitment researchers: Issues of invariance, change across time, and profile differences. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.). *Commitment in organizations: Accumulated wisdom and new directions* (pp. 383-416). Florence, KY: Routledge.

Wasti, S. A. (2005). Commitment profiles: Combinations of organizational commitment forms and job outcomes. *Journal of Vocational Behavior*, 67: 290-308.

Waterman, A. S. (1993). Two conceptions of happiness: contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology, 64,* 678-691.

Waterman, A. S. (Ed.) (2013). *The best within us: Positive psychology perspectives on eudaimonia*. Washington, DC: American Psychological Association.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54,* 1063-1070.

Xu, X., & Payne, S. C. (2018, in press). Predicting retention duration from organizational commitment profile transitions. *Journal of Management*. doi: 10.1177/0149206316643166.

Zyphur, M. J. (2009). When mindsets collide: Switching analytical mindsets to advance organizational science. *Academy of Management Review*, *34*, 677–688.
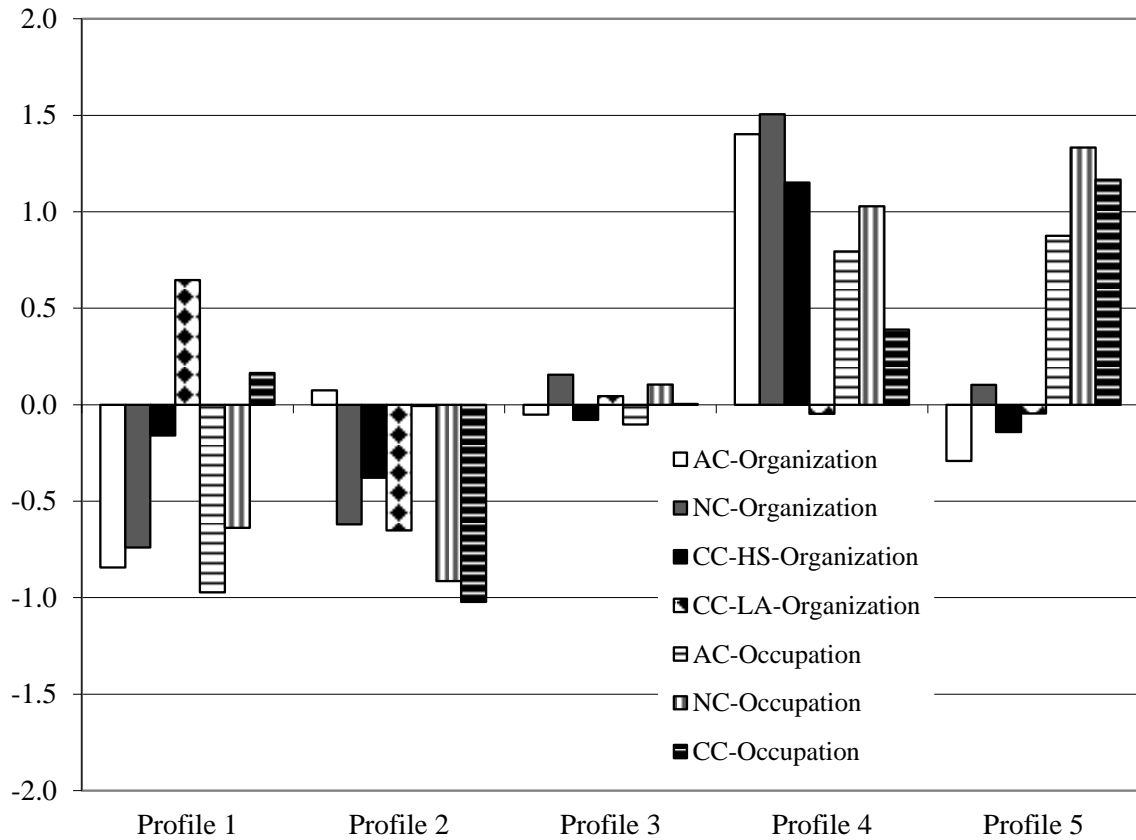
Figure 1. Characteristics of the Latent Profiles.

Note. AC: Affective Commitment; NC: Normative Commitment; CC: Continuance Commitment; HS: High Sacrifice; LA: Low Alternatives; Profile 1: CC:LA dominant (organization); CC-dominant (occupation); Profile 2: AC-dominant (both targets); Profile 3: Moderate commitment (both targets); Profile 4: fully-committed (both targets); Profile 5: Moderate commitment (organization); Fully committed (occupation).
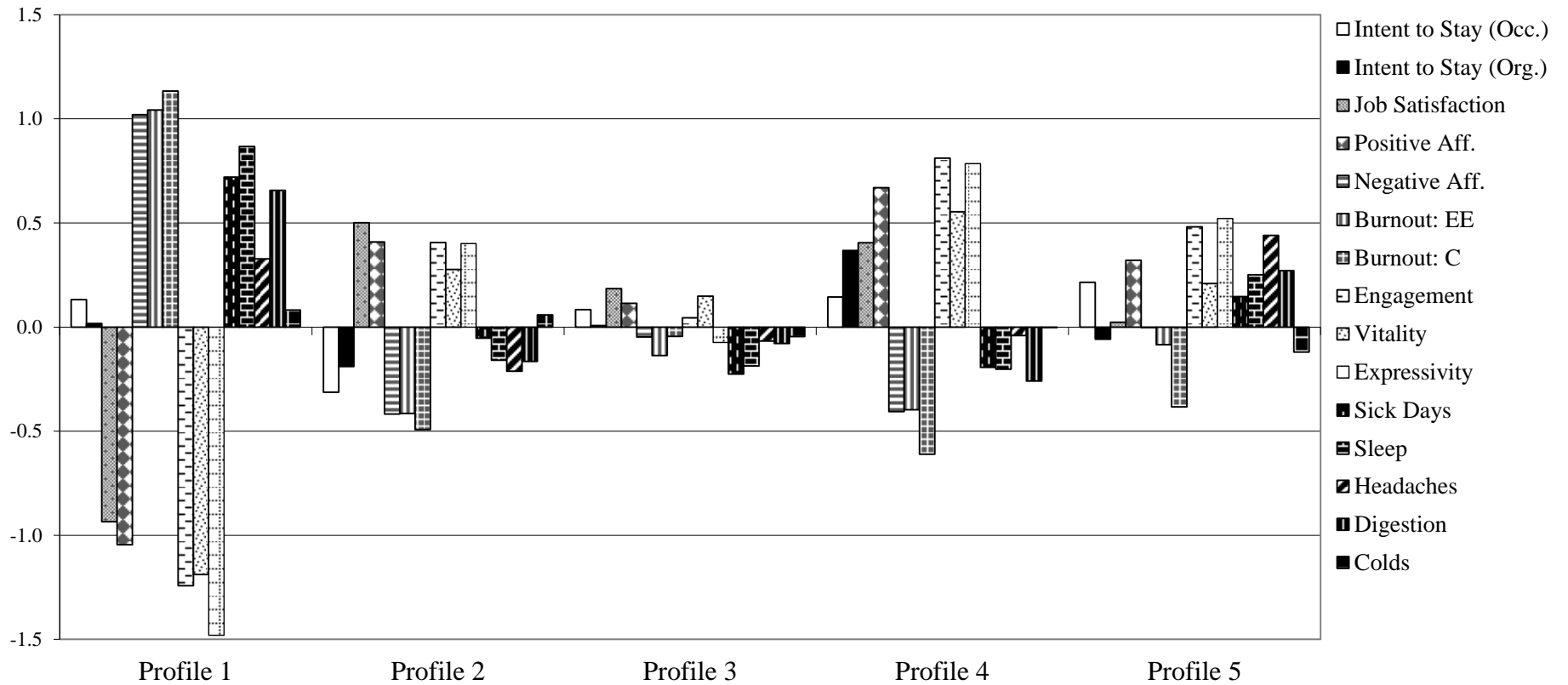
Figure 2. Characteristics of the Latent Profiles on the Outcomes.

Note. EE: Emotional Exhaustion; C: Cynicism; Aff: Affectivity; Occ: Occupation; Org: Organization; Profile 1: CC:LA dominant (organization); CC-dominant (occupation); Profile 2: AC-dominant (both targets); Profile 3: Moderate commitment (both targets); Profile 4: fully-committed (both targets); Profile 5: Moderate commitment (organization); Fully committed

Table 1.

Class Enumeration Results for the Latent Profile Analyses.

Model	LL	#fp	Scaling	AIC	CAIC	BIC	ABIC	ICL-BIC	Entropy	LMR	BLRT
1 Profile	-3075	14	0.996	6179	6247	6233	6189	Na	Na	Na	Na
2 Profiles	-2877	29	1.308	5812	5951	5922	5830	5868	0.884	0.022	≤ 0.001
3 Profiles	-2777	44	1.141	5642	5854	5810	5671	5784	0.965	0.025	≤ 0.001
4 Profiles	-2668	59	1.139	5455	5739	5680	5493	5553	0.864	0.012	≤ 0.001
5 Profiles	-2611	74	1.329	5370	5726	5652	5418	5484	0.844	0.655	≤ 0.001
6 Profiles	-2566	89	1.203	5310	5739	5650	5367	5480	0.859	0.230	≤ 0.001
7 Profiles	-2520	104	1.105	5248	5749	5645	5315	5479	0.873	0.068	≤ 0.001
8 Profiles	-2482	119	1.065	5201	5774	5655	5278	5505	0.892	0.198	≤ 0.001

LL: Model LogLikelihood; #fp: Number of free parameters; Scaling = scaling factor associated with MLR loglikelihood estimates; AIC: Akaïke Information Criteria; CAIC: Constant AIC; BIC: Bayesian Information Criteria; ABIC: Sample-Size adjusted BIC; ICL-BIC: entropy-adjusted BIC; LMR: Adjusted Lo-Mendel-Rubin likelihood ratio test BLRT: Bootstrap Likelihood ratio test.

Table 2.

Characteristics of the Profiles of Dual Commitment on the Outcomes.

	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Summary of significance tests
Intentions to stay (Occ.)*	4.333	3.805	4.277	4.349	4.432	2 < 1 = 3= 4 = 5
Intentions to stay(Org.)*	3.587	3.315	3.574	4.048	3.488	2 = 3 < 4; 1 = 2 = 3 = 5; 1 = 4 = 5
Hedonic Wellbeing						
• Job Satisfaction*	3.984	6.569	5.999	6.396	5.709	1 < 3 = 5 < 2 = 4
• Positive Affectivity	-0.956	0.369	0.100	0.606	0.288	1 < 2 = 4 = 5; 3 = 5; 1 < 3 < 2; 3 < 4
• Negative Affectivity	0.898	-0.304	0.005	-0.294	0.043	2 = 4 < 3 < 1; 2 < 3 = 5 < 1; 4 = 5
• Burnout: Emotional Exhaustion	0.988	-0.376	-0.116	-0.360	-0.067	2 = 4 = 5 < 1; 3 = 4 = 5 < 1; 2 < 3
• Burnout: Cynicism	1.066	-0.430	-0.018	-0.539	-0.330	2 = 4 = 5 < 3 < 1
Eudaimonic Wellbeing						
• Work Engagement	-1.185	0.371	0.030	0.754	0.442	1 < 3 < 2 = 5; 1 < 3 < 4 = 5; 2 < 4
• Vitality	-1.128	0.264	0.142	0.527	0.200	1 < 2 = 3 = 5; 1 < 3 < 4; 4 = 2 = 5
• Personal Expressivity	-1.408	0.357	-0.080	0.711	0.468	1 < 3 < 2 = 5; 1 < 3 < 4 = 5; 2 < 4
Physical Health						
• Number of Sick Days*	6.094	3.856	3.357	3.451	4.434	2 = 3= 4 = 5 < 1
• Physical Health Complaints: Sleep	0.773	-0.135	-0.159	-0.173	0.228	2 = 3= 4 < 5 < 1
• Physical Health Complaints: Headaches	0.303	-0.193	-0.060	-0.035	0.407	2 = 3 < 1; 2 = 3 = 4 < 5; 1 = 4; 1 = 5
• Physical Health Complaints: Digestion	0.602	-0.124	-0.048	-0.207	0.261	2 = 4 < 5; 2 = 3 = 4 < 1; 1 = 5; 3 = 5
• Physical Health Complaints: Respiratory	0.083	0.063	-0.023	0.013	-0.084	1 = 2 = 3 = 4 = 5

Note. Single Item measures are marked by * and have been standardized for comparison purposes. All other measures are based on standardized factors scores with a mean of 0 and a SD of 1; Profile 1: CC:LA dominant (organization); CC-dominant (occupation); Profile 2: AC-dominant (both targets); Profile 3: Moderate commitment (both targets); Profile 4: fully-committed (both targets); Profile 5: Moderate commitment (organization); Fully committed (occupation).

Online Supplemental Materials for:

Dual Commitment to their Organization and Occupation: A Person-centered Investigation

Preliminary Analyses and Factor Scores

Commitment.

We first verified the adequacy of a priori measurement models underlying the commitment constructs. The measurement model included a total of 7 factors reflecting affective, normative, continuance (high sacrifice) and continuance (low alternatives) commitment to the organization, and affective, normative and continuance commitment to the occupation. These models were estimated with Mplus 7.2 (Muthén, & Muthén, 2014), using Exploratory Structural Equation Models (ESEM, e.g., Asparouhov & Muthén, 2009; Marsh, Morin, Parker & Kaur, 2014; Morin, Marsh, & Nagengast, 2013), specified in a confirmatory manner using target rotation (e.g., Guay, Morin, Litalien, Valois, & Vallerand, 2015; Marsh et al., 2014) and taking into account the ordered-categorical nature of the Likert rating scales through robust Weighted Least Square Estimation procedures (WLSMV; e.g., Finney & DiStephano, 2006, 2013; Guay et al., 2015). The a priori measurement model included two distinct sets of factors representing commitment to the organization (4 factors) and to the occupation (3 factors), with all a priori factor loadings of the items on their main factors freely estimated, all cross-loadings within a set of factors were estimated but targeted to be as close to zero as possible, and all cross-loadings between sets of factors were constrained to be exactly zero. Although the scales used in this study included no negatively-worded items, they included three items with parallel wording across the organizational and occupational commitment measures (see items in italic in Table S1). In order to take into account the methodological artefact due to the wording of these items, the measurement models included a priori correlated uniquenesses among these matching indicators (e.g., Marsh, Abduljabbar et al., 2013; Morin, Arens, & Marsh, 2014) – however, we note that including or excluding these a priori correlated uniquenesses only had a minimal impact on fit, and no impact on interpretations. This model provides a satisfactory level of fit to the data according to typical guidelines: χ^2= 196; degrees of freedom = 129; $p \le 0.01$; CFI = .989; TLI = .982; RMSEA = .039. Parameters estimates from this model are reported in Supplementary Table S2 and were fully proper and in line with a priori expectations. Model-based scale score reliability were computed from these parameter estimates based on McDonald (1970) omega coefficient [$\omega = (\Sigma|\lambda i|)^2 / ([\Sigma|\lambda i|]^2 + \Sigma\delta ii)$, where λi are the factor loadings and the δii item's uniquenesses]. In comparison to more traditional estimates of scale score reliability such as alpha, this method has the advantage of taking into account the strength of associations between items and constructs as well as item-specific measurement errors in the estimation of scale score reliability (Sijtsma, 2009). These estimates support the adequacy of these measurement models. The standardized factor scores (M = 0; SD = 1) from these models were used as input for the estimation of the latent profile analyses.

Outcomes.

We followed a similar procedure to assess the adequacy of a priori measurement models underlying the outcomes constructs in both samples. We estimated a Confirmatory Factor Analytic (CFA) model including 11 a priori correlated factors reflecting Emotional Exhaustion, Cynicism, Work Engagement, Vitality, Personal Expressiveness, Positive Affectivity, Negative affectivity, and Physical symptoms related to Sleep, Headaches, Digestion, and Colds. No cross-loading was estimated, and one a priori correlated uniqueness was included to control for the parallel wording of the same two cynicism items. This model provided a satisfactory level of fit to the data according to typical guidelines: χ^2= 2202; degrees of freedom = 1218; $p \le 0.01$; CFI = .960; TLI = .956; RMSEA = .050. Parameters estimates from these models are reported in Supplementary Table S3 and were fully proper and in line with a priori expectations. Model-based scale score reliability estimated from these parameters also supports the adequacy of these measurement models. The standardized factor scores (M = 0; SD = 1) from these models were used as outcomes of the profiles.

References used in this supplement but not in the main manuscript

Asparouhov, T. & Muthén, B. (2009). Exploratory structural equation modeling. *Structural Equation Modeling, 16,* 397-438.

Finney S. J., & DiStefano, C. (2006). Non-normal and categorical data in structural equation modeling. In G. R. Hancock, & R. O. Mueller (Eds.), *Structural Equation Modeling: A Second Course* (pp. 269-314). Greenwich, CO: IAP.

Finney S. J., & DiStefano, C. (2013). Non-normal and categorical data in structural equation modeling. In G. R. Hancock, & R. O. Mueller (Eds.), *Structural Equation Modeling: A Second Course*, *second edition* (pp. 439-492). Greenwich, CO: IAP.

Guay, F., Morin, A.J.S, Litalien, D., Valois, P., & Vallerand, R.J. (2015). Application of exploratory structural equation modeling to evaluate the academic motivation scale. *The Journal of Experimental Education*, *83*, 51-82.

Marsh, H. W., Abduljabbar, A. S., Abu-Hilal, M., Morin, A. J. S., Abdelfattah, F., Leung, K. C., Xu, M. K., Nagengast, B., & Parker, P. (2013). Factor structure, discriminant and convergent validity of TIMSS math and science motivation measures: A comparison of USA and Saudi Arabia. *Journal of Educational Psychology, 105*, 108-128.

Marsh, H.W., Morin, A.J.S., Parker, P., & Kaur, G. (2014). Exploratory Structural Equation Modeling: An Integration of the best Features of Exploratory and Confirmatory Factor Analysis. *Annual Review of Clinical Psychology*, *10*, 85-110.

McDonald, R.P. (1970). Theoretical foundations of principal factor analysis, canonical factor analysis, and alpha factor analysis. *British Journal of Mathematical & Statistical Psychology*, *23*, 1–21.

Morin, A.J.S., Arens, A.K., & Marsh, H.W. (2014, in press). A Bifactor Exploratory Structural Equation Modeling Framework for the Identification of Distinct Sources of Construct-Relevant Psychometric Multidimensionality. *Structural Equation Modeling*.

Morin, A.J.S., Marsh, H.W., & Nagengast, B. (2013). Exploratory Structural Equation Modeling. In G.R. Hancock & R.O. Mueller (Eds.), *Structural Equation Modeling: A Second Course, 2nd Edition* (pp. 395-436)*.* Greewich, Connecticut : IAP.

Muthén, L. K., & Muthén, B. O. (1998-2014). *Mplus user's guide.* Los Angeles: Muthén & Muthén.

Sijtsma, K. (2009). On the use, misuse, and the very limited usefulness of Cronbach's alpha [Introduction to a special issue]. *Psychometrika*, *74*, 107–120.

Table S1.
Items Used to Assess Commitment.

Affective Commitment to the Organization
1. I feel a strong sense of belonging to my school
2. I feel emotionally attached to this school
3. This school has a great deal of personal meaning for me

Normative Commitment to the Organization
1. *Even if it were to my advantage, I do not feel it would be right to leave my school now*
2. *I would feel guilty if I left my school now*
3. I would not leave my school right now because I have a sense of obligation to the people in it

Continuance Commitment to the Organization (High Sacrifice)
1. For me personally, the costs of leaving this school would be far greater than the benefits
2. I would not leave this school right now because of what I would stand to lose
3. *If I decided to leave this school, too much of my life would be disrupted*

Continuance Commitment to the Organization (Low Alternative 2011 only)
1. I feel that I have too few options to consider leaving this school.
2. One of the few negative consequences of leaving my school would be the scarcity of available alternatives.
3. What keeps me working at this school is the lack of opportunities elsewhere

Affective Commitment to the Occupation
1. I am proud to be a teacher
2. I enjoy being a teacher
3. Being a teacher is an important part of my identity

Normative Commitment to the Occupation
1. I feel a responsibility to continue in this occupation
2. *Even if it were to my advantage, I do not feel it would be right to leave my occupation now*
3. *I would feel guilty if I left this occupation*

Continuance Commitment to the Occupation
1. *Too much of my life would be disrupted if I were to change my occupation now*
2. It would be costly for me to change my occupation now
3. Changing professions now would require considerable personal sacrifice

Table S2.

Standardized Factor Target Factor Loadings, Uniquenesses, Latent Correlations, and Scale Score Reliability for the Commitment Scales

Indicators	1- Affective-Org		2- Normative- Org		3a- Continuance- Org High Sacrifice		3b- Continuance- Org Low Alternatives	
	Loading (λ)	Uniqueness (δ)	λ	δ	λ	δ	λ	δ
Indicator 1	0.626	0.371	0.466	0.412	0.652	0.433	0.699	0.410
Indicator 2	0.943	0.151	0.821	0.368	0.602	0.378	0.717	0.453
Indicator 3	0.874	0.184	0.907	0.195	0.510	0.465	0.716	0.381
	4 - Affective-Occ.		5 - Normative- Occ.		6 - Continuance- Occ.			
	λ	δ	λ	δ	λ	δ		
Indicator 1	0.857	0.393	0.675	0.403	0.740	0.338		
Indicator 2	0.897	0.166	0.613	0.436	0.851	0.311		
Indicator 3	0.625	0.381	0.870	0.371	0.858	0.268		

Correlations								*Reliability*
	1	2	3a	3b	4	5	6	ω
1-Aff.-Org								0.894
2-Nor.-Org	0.569**							0.832
3a-Cont.-Org-HS	0.462**	0.433**						0.709
3b-Cont.-Org-LA	-0.254**	0.067	0.087*					0.785
4-Aff.-Occ.	0.386**	0.296**	0.104	-0.234**				0.858
5-Nor.- Occ.	0.226**	0.602**	0.231**	0.062	0.493**			0.794
6- Cont.-Occ.	-0.002	0.179**	0.337**	0.273**	0.027	0.543**		0.867

All loadings and uniquenesses significant at $p \leq .01$; For the correlations: *$p \leq .05$; **$p \leq .01$.

Table S3

Standardized Target Factor Loadings, Uniquenesses, Latent Correlations, and Scale Score Reliability for the Outcomes

Indicators	1- Exhaustion		2- Cynicism		3- Engagement		4- Vitality	
	Loading (λ)	Uniqueness (δ)	λ	δ	λ	δ	λ	δ
Indicator 1	0.790	0.375	0.825	0.319	0.775	0.399	0.914	0.165
Indicator 2	0.710	0.496	0.866	0.250	0.814	0.337	0.748	0.440
Indicator 3	0.851	0.275	0.538	0.711	0.875	0.235	0.901	0.187
Indicator 4	0.763	0.418	0.791	0.374	0.835	0.302	0.922	0.150
Indicator 5	0.920	0.154	0.792	0.373	0.695	0.517	0.886	0.215
Indicator 6					0.912	0.168	0.942	0.112

	5 - Expressiveness		6 - Positive Affect		7 - Negative Affect		8 - Sleep	
	λ	δ	λ	δ	λ	δ	λ	δ
Indicator 1	0.741	0.451	0.759	0.425	0.770	0.408	0.934	0.367
Indicator 2	0.749	0.440	0.796	0.367	0.705	0.503	0.829	0.422
Indicator 3	0.434	0.812	0.844	0.288	0.870	0.244	0.811	0.288
Indicator 4	0.809	0.345	0.891	0.206	0.793	0.372	0.778	0.317
Indicator 5	0.800	0.361	0.751	0.436	0.750	0.437		
Indicator 6	0.864	0.254						

	9 - Headaches		10 - Digestion		11 - Colds			
	λ	δ	λ	δ	λ	δ		
Indicator 1	0.853	0.272	0.934	0.127	0.830	0.311		
Indicator 2	0.943	0.111	0.829	0.312	0.713	0.492		
Indicator 3	0.925	0.144	0.811	0.342	0.653	0.573		
Indicator 4			0.778	0.394				

Correlations												*Reliability*
	1	2	3	4	5	6	7	8	9	10	11	ω
1- Exhaustion												0.905
2- Cynicism	0.804**											0.878
3- Engagement	-0.605**	-0.786**										0.925
4- Vitality	-0.688**	-0.667**	0.757**									0.957
5 - Expressiveness	-0.265**	-0.603**	0.866**	0.492**								0.879
6 - Positive Aff.	-0.526**	-0.665**	0.816**	0.745**	0.629**							0.905
7 - Negative Aff.	0.609**	0.571**	-0.505**	-0.564**	-0.314**	-0.433**						0.885
8 - Sleep	0.506**	0.357**	-0.325**	-0.506**	-0.189**	-0.312**	0.481**					0.890
9 - Headaches	0.392**	0.230**	-0.261**	-0.393**	-0.077	-0.299**	0.360**	0.421**				0.934
10 - Digestion	0.438**	0.241**	-0.240**	-0.408**	-0.048	-0.225**	0.418**	0.504**	0.573**			0.905
11 - Colds	0.191**	0.189**	-0.121*	-0.280**	-0.022	-0.133*	0.266**	0.207**	0.209**	0.393**		0.778

All loadings and uniquenesses significant at $p \leq .01$; For the correlations: *$p \leq .05$; **$p \leq .01$.
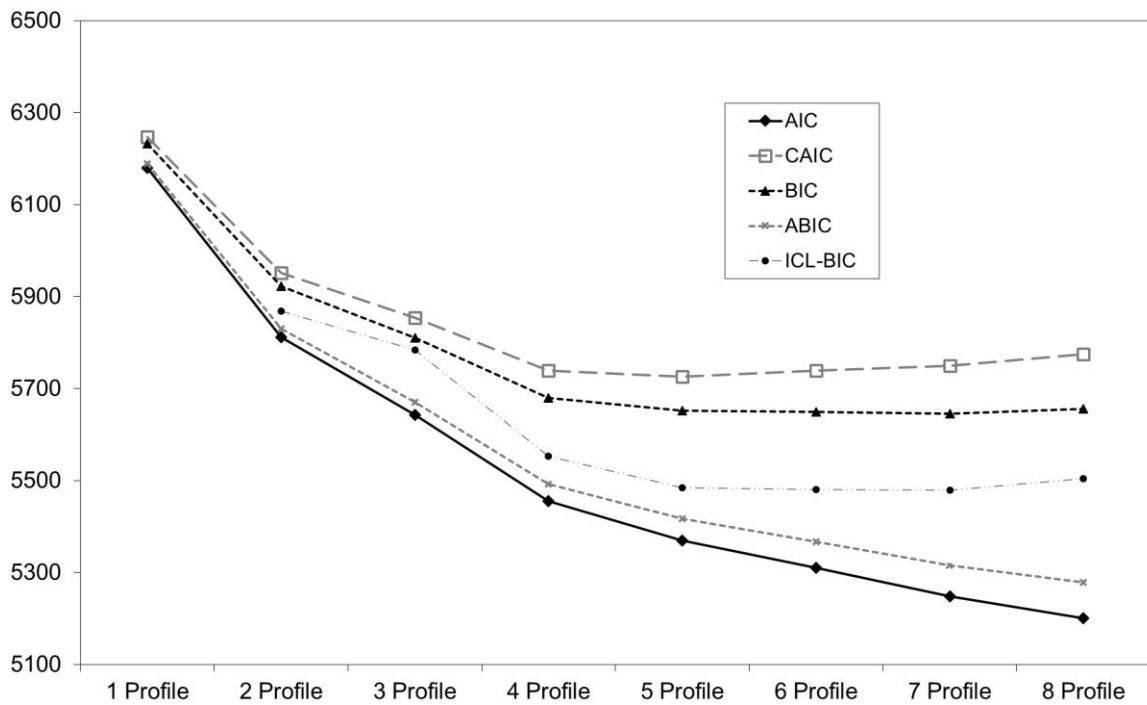
Figure S1. Elbow Plot of the Information Criteria

Table S4.

Posterior Classification Probabilities for Most Likely Latent Profile Membership (Row) by Latent Profile (Column) for the Final Dual Commitment Profiles

Profiles	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5
1	0.867	0.060	0.069	0.004	0.000
2	0.056	0.890	0.053	0.002	0.000
3	0.058	0.049	0.889	0.002	0.002
4	0.000	0.001	0.035	0.958	0.006
5	0.002	0.000	0.013	0.001	0.984

Note. Profile 1: CC:LA dominant (organization); CC-dominant (occupation); Profile 2: AC-dominant (both targets); Profile 3: Moderate commitment (both targets); Profile 4: fully-committed (both targets); Profile 5: Moderate commitment (organization); Fully committed (occupation).

Table S5.
Mean Levels of Commitment in the Retained Latent Profile Models.

	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Summary of significance tests
Affective-Organization	-0.844	0.074	-0.052	1.402	-0.292	1 < 2 = 3= 5 < 4
Normative-Organization	-0.740	-0.620	0.156	1.506	0.103	1 = 2 < 3 = 5 < 4
Continuance-Organization (High Sac.)	-0.160	-0.378	-0.078	1.151	-0.142	1 = 3 = 5 < 4; 1 = 2= 5 < 4; 2 < 3
Continuance-Organization (Low Alt.)	0.646	-0.651	0.045	-0.047	-0.046	2 = 5 < 1; 1 = 3 = 4; 2 = 5 = 3 = 4
Affective-Occupation	-0.972	-0.007	-0.102	0.795	0.876	1< 2 = 3 < 4 = 5
Normative-Occupation	-0.638	-0.914	0.104	1.028	1.333	1 = 2 < 3 < 4 = 5
Continuance-Occupation	0.165	-1.021	0.004	0.390	1.167	2 < 1 = 3 = 4 < 5

Note. Latent Profiles Models were all estimated from the commitment standardized factors, estimated with a mean of 0 and a SD of 1; Profile 1: CC:LA dominant (organization); CC-dominant (occupation); Profile 2: AC-dominant (both targets); Profile 3: Moderate commitment (both targets); Profile 4: fully-committed (both targets); Profile 5: Moderate commitment (organization); Fully committed (occupation).

Table S6.
Characteristics of the Profiles of Dual Commitment on the Correlates

	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Summary of significance tests
Gender (% Males)	24.3%	24.7%	21.0%	25.9%	13.9%	1 = 2 = 3 = 4 = 5
Age	42.473	43.275	41.853	43.617	41.288	1 = 2 = 3 = 4 = 5
Tenure (Organization)	8.294	7.803	7.841	11.335	5.740	4 > 1 = 2 = 3; 4 > 1 > 5; 2 = 3 = 5
Tenure (Occupation)	14.960	15.491	14.546	15.795	13.264	1 = 2 = 3 = 4 = 5
School Level						1 = 2 = 3 = 4 = 5*
Other	9.6%	13.6%	14.2%	9.1%	13.7%	
Elementary Primary	32.1%	29.7%	30.5%	19.5%	30.4%	
Elementary Junior	17.9%	10.0%	13.9%	4.3%	20.4%	
Elementary Intermediate	3.8%	10.3%	12.3%	4.0%	11.5%	
Secondary	36.7%	36.4%	29.0%	63.0%	24.1%	

* Global Chi-Square(df) for nominal outcome = 22.603 (16), *p* = .125

Table S7.

Results from the Wald Chi-Square (χ^2) Tests of Mean Equality of the Auxiliary Analyses of Outcomes [AUXILIARY (DCON)].

	Global	1 vs 2	1 vs 3	1 vs 4	1 vs 5	2 vs 3	2 vs 4	2 vs 5	3 vs 4	3 vs 5	4 vs 5	Summary
Intentions to stay (Occ.)	10.787*	5.345*	0.076	0.004	0.145	7.054**	6.089*	6.849**	0.137	0.512	0.107	2 < 1 = 3= 4 = 5
Intentions to stay(Org.)	9.651*	1.296	0.003	3.014	0.102	1.830	9.494**	0.368	4.475*	0.098	3.301	2 = 3 < 4; 1 = 2 = 3 = 5; 1 = 4 = 5
Hedonic Wellbeing												
• Job Satisfaction	95.379**	87.317**	47.506**	65.840**	18.186**	13.032**	1.071	7.187**	4.291*	0.753	4.117*	1 < 3 = 5 < 2 = 4
• Positive Affectivity	190.982**	124.451**	97.508**	120.704**	59.975**	5.744*	2.640	0.240	13.705**	1.457	3.055	1 < 2 = 4 = 5; 3 = 5; 1 < 3 < 2; 3 < 4
• Negative Affectivity	87.193**	76.361**	47.279**	61.333**	23.085**	8.817**	0.006	4.698*	5.938*	0.061	3.806	2 = 4 < 3 = 1; 2 < 3 = 5 < 1; 4 = 5
• Burnout: Emot. Exh.	129.732**	106.473**	77.602**	75.565**	35.242**	4.948*	0.012	3.245	2.933	0.089	2.381	2 = 4 = 5 < 1; 3 = 4 = 5 < 1; 2 < 3
• Burnout: Cynicism	199.260**	152.199**	89.586**	136.013**	75.491**	15.126**	0.685	0.422	17.526**	4.356*	1.545	2 = 4 = 5 < 3 < 1
Eudaimonic Wellbeing												
• Work Engagement	294.717**	191.804**	135.742**	201.280**	109.474**	11.164**	8.028**	0.211	31.796**	7.727**	3.263	1 < 3 < 2 = 5; 1 < 3 < 4 = 5; 2 < 4
• Vitality	181.167**	121.764**	114.331**	111.851**	56.692**	1.130	2.919	0.136	6.791**	0.118	2.750	1 < 2 = 3 = 5; 1 < 3 < 4; 4 = 2 = 5
• Personal Expressivity	346.225**	217.362**	174.924**	230.300**	139.134**	17.831**	6.206*	0.473	39.378**	13.853**	1.894	1 < 3 < 2 = 5; 1 < 3 < 4 = 5; 2 < 4
Physical Health												
• Number of Sick Days	29.353**	15.745**	27.226**	18.472**	5.107*	1.638	0.641	0.802	0.042	3.106	2.026	2 = 3= 4 = 5 < 1
• Sleep	44.801**	33.233**	37.059**	27.163**	7.017**	0.045	0.065	4.155*	0.009*	4.937*	4.038*	2 = 3= 4 < 5 < 1
• Headaches	15.474**	8.848**	5.349*	3.092	0.238	1.084	0.871	9.588**	0.024	6.344*	4.187*	2 = 3 < 1; 2 = 3 = 4 < 5; 1 = 4; 1 = 5
• Digestion	26.510**	19.434**	16.904**	18.878**	2.545	0.416	0.293	4.244*	1.181	2.909	5.158*	2 = 4 < 5; 2 = 3 = 4 < 1; 1 = 5; 3 = 5
• Respiratory	1.296	0.018	0.615	0.171	0.780	0.497	0.099	0.668	0.059	0.130	0.240	1 = 2 = 3 = 4 = 5

Note. The global tests of mean equality are interpreted as a chi-square test with 4 degrees of freedom, whereas the pairwise comparison tests are interpreted as a chi-square with 1 degree of freedom. *$p \leq .05$; **$p \leq .01$; Profile 1: CC:LA dominant (organization); CC-dominant (occupation); Profile 2: AC-dominant (both targets); Profile 3: Moderate commitment (both targets); Profile 4: fully-committed (both targets); Profile 5: Moderate commitment (organization); Fully committed (occupation).