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'Fit' inside the work–family black box: An ecology of the life course, cycles of control reframing

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Scholars have not fully theorized the multifaceted, interdependent dimensions within the work–family 'black box'. Taking an ecology of the life course approach, we theorize common work–family and adequacy constructs as capturing different components of *employees' cognitive appraisals of fit* between their demands and resources at the interface between home and work. Employees' appraisals of their work–family linkages and of their relative resource adequacy are not made independently but, rather, co-occur as identifiable constellations of fit. The life course approach hypothesizes that shifts in objective demands/resources at work and at home over the life course result in employees experiencing *cycles of control*, that is, corresponding shifts in their cognitive assessments of fit. We further theorize patterned appraisals of fit are key mediators between objective work–family conditions and employees' health, well-being and strategic adaptations. As a case example, we examine whether employees' assessments on 10 dimensions cluster together as patterned fit constellations, using data from a middle-class sample of 753 employees working at Best Buy's corporate headquarters. We find no single linear construct of fit that captures the complexity within the work–family black box. Instead, respondents experience six distinctive constellations of fit: one optimal; two poor; and three moderate fit constellations.

Work-time and other labour market policies and practices were institutionalized in the 1940s and 1950s based on a middle-class, mid-20th century breadwinner workforce, creating a disjuncture between job demands/resources and home demands/resources for employees with family responsibilities. Scholars of both families and labour markets from a variety of disciplines began investigating this mismatch between the temporalities, demands, resources, expectations, and goals of paid work and family life in the 1960s and 1970s (e.g. Hall, 1975; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Kanter, 1977; Pleck, 1977). Such scholarship has grown exponentially in tandem with the increasing proportion of the workforce that is female, related human resource policy initiatives addressing work–family concerns, and mounting media

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attention to work–family incompatibilities. The result? Considerable empirical and theoretical advances, along with greater public visibility of the strains employees experience, as well as of work–family (or work–life) issues more generally.

Despite adoption of some limited flexibility benefits (Kelly & Moen, 2007), much of the contemporary structure and culture of human resource policies and practices in organizations are vestiges of the 1950s. And yet most 21st century workers – men as well as women – live and work without the back-up of a full-time homemaker. Obsolete work-time rules and regulations, together with advanced information and communication technologies, stagnant wages, a global economy, and households where all adults are in the labour market, have escalated rather than reduced employees' job and home demands, time pressures, and insecurities (Moen, 2003; Moen & Roehling, 2005). These converging social forces place the relationship between work and family front and centre for scientific understanding of either labour market or family issues, as well as the psychosocial, behavioural, and health impacts of both.

Theorizing work–family connections

Most theories of the work–family interface are grounded in role strain and stress paradigms (e.g. Goode, 1960; Lazarus & Folkman, 1984; Pearlin, 1989). The work–family (or work–life) connection has been variously framed as 'conflict', 'strain', 'role pressure', 'incompatibility', 'overload', and 'spillover' (see important overviews by Kossek & Lambert, 2005; MacDermid & Harvey, 2006; Pitt-Catsouphes, Kossek, & Sweet, 2006). Work–family has been seen as a special form of inter-role conflict, with pressures from one role incompatible with pressures from another, making participation in both difficult (see Frone, Russell, & Cooper, 1992; Greenhaus, 1998; Greenhaus, Parasuraman, Granrose, Rabinowitz, & Beutell, 1989; Higgins, Duxbury, & Irving, 1992; Kahn *et al.*, 1964; Kopelman, Greenhaus, & Connolly, 1983; Kossek & Ozeki, 1998). Incompatibilities can be based on *time*, *strains*, or *behaviour*, and may be exacerbated by the salience of both work and family roles (see reviews by Greenhaus & Beutell, 1985; Greenhaus & Parasuraman, 1999; Perry-Jenkins, Repetti, & Crouter, 2000).

Both role theory and theories of psychological distress underscore the deleterious health effects of pressures and overloads, as well as gaps between resources and demands (e.g. Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Goode, 1960; Lazarus, 1966, 1976; Pearlin, 1999; Pearlin & Schooler, 1978). Accordingly, much of the extant work–family research has focused on *conflict* or *negative spillover* from work to family life.

If conflict reflects the mismatch between work and family, what is the obverse? There has been important theory development and research on *facilitation* or *enhancement* (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006; Wayne, Grzywacz, Carlson, & Kacmar, 2007) emphasizing beneficial payoffs from each role for the other. Scholars (Barnett, Gareis, & Brennan, 1999; Carlson *et al.*, 2006; Demerouti, Bakker, & Schaufeli, 2005; Frone, 2003a; Frone, Russell, & Cooper, 1997; Frone *et al.*, 1992; Greenhaus & Powell, 2006, Greenhaus, Bedeian, & Mossholder, 1987; Grzywacz, 2000; Grzywacz & Bass, 2003; Grzywacz & Butler, 2005; Neal & Hammer, 2006; Wayne *et al.*, 2007) have termed this variously – as positive spillover (from/to job and family), or else as job (to family) or family (to job) 'enhancement', 'facilitation', and 'fit'. Scholars theorize these as related, but not necessarily the same or opposite, dimensions; hence our depiction of the mix of concepts and measures as constituting a *black box*.

Most researchers examine only one or two work–family measures, and when they include several different measures in their analyses, they commonly use multivariate techniques to model the effect of each 'net' of the others, making it difficult to understand the overall *constellation* of appraisals by employees of the multiple interlocks between these two fundamental roles in their lives – what we term 'fit'. We contribute to the work–family literature from an ecology of the life-course, cycles of control perspective. First, we theorize a multidimensional latent construct capturing perceived work–family (or life-course) *fit*. We define 'fit' as *employees' cognitive appraisals* (along a range of different dimensions) of having sufficient resources to function effectively in both their work and family roles. A second contribution of this approach is in moving from a variable-centred to a person-centred model. We theorize employees as clustered into identifiable *constellations of fit*, based on their cognitive appraisals along various dimensions. We propose that it is the overall patterning of fit that matters for well-being. A third contribution of our ecology of the life course focus is theorizing appraisals of fit as dynamic processes. Throughout their adult life courses, employees assess and reassess fit, experiencing shifting (subjective) *cycles of control* as their (objective) resources relative to needs shift. For example, changing jobs, getting a new supervisor, surviving corporate restructuring, becoming a parent, getting a divorce, caring for an older parent – all can lessen or increase employees' assessments of fit at different ages and stages, thereby producing and reproducing cycles of control over the life course.

We develop the concept of *fit* as an umbrella for a range of cognitive assessments by employees of the quality of their work and family/personal lives. Work–family variables capture employees' cognitive assessments of fit in terms of the work–family interface, while other variables, such as schedule fit, time adequacy, and income adequacy capture cognitive assessments of fit between their time, income and schedule needs/demands and their available time, income, and schedule arrangements. Arguably another measure of fit is job security, since it represents employees' cognitive appraisals of future misfit (see the Appendix for definitions/measures used in our empirical example). We contend that analysing each construct within this black box separately – currently common practice – is like blind men assessing the nature of an elephant. Black box components are related both empirically and conceptually, leading us to theorize that when various aspects of the work–family interface are considered together they form identifiable patterns or constellations of fit.

We theorize that it is the patterned congruence or incongruence in employees' appraisals of conflicts, spillovers, and other dimensions that matters for their behaviour, health and well-being. This raises a number of questions. Is there a normative configuration of fit characterizing a large proportion of employees? Do assessments of fit along various dimensions differ for employees in particular organizations, industries, and/or occupations? Does fit vary for employees in particular family and personal circumstances, work teams, and/or life course stages? As we address in a case example, are most middle-class employees living and working with 'poor' or 'good' fit, or with what is essentially 'moderate' fit, characterized by neither high conflict nor high facilitation?

An ecology of the life course, cycles of control (re)framing

Undergirding our approach is an ecology of the life course, cycles of control framing (Bronfenbrenner, 1995; Elder, 1974; Elder, Kirkpatrick Johnson, & Crosnoe, 2003; Elder & Shanahan, 2006; Moen & Chesley, 2008; Moen, Elder, & Lüscher, 1995).

This approach (see Figure 1) posits that various facets within the work–family black box are interconnected in patterned ways. This is because employees are differentially distributed across (or choose) particular job and family ecologies shaping their cognitively appraisals. We theorize a duality in work and family roles, in terms of both objective conditions (demands and resources in A and B, Figure 1) and employees' subjective appraisals of their work–family situation (C, Figure 1).

Theories of fit began with Lewin's (1938) model of behaviour as a function of person and the environment: $B = f$ (P, E), further fleshed out in Bronfenbrenner's (1979) *Ecology of Human Development*. Our model also builds on stress process theory (e.g. Cooper, 1996; Cooper, Sloan, & Williams, 1988; Lazarus, 1976; Pearlin, 1999), where stress is defined as the appraisal by individuals of misfit between environmental pressures and their abilities to respond to them. In other words, stress occurs when there is an absence of perceived fit between demands and the resources with which to meet them. A positive approach to stress, called eustress, emphasizes fit in terms of a positive response to demands (see Quick, Quick, Nelson, & Hurrell, 1997). In the case of work and family, the latent construct of fit reflects employees' cognitive assessments of sufficient resources (to meet needs/demands) of the work and family interface.

Note that what is in the black box are not actual resources, but employees' cognitive *appraisals* (C1) of whether they are experiencing conflict between work and family, for

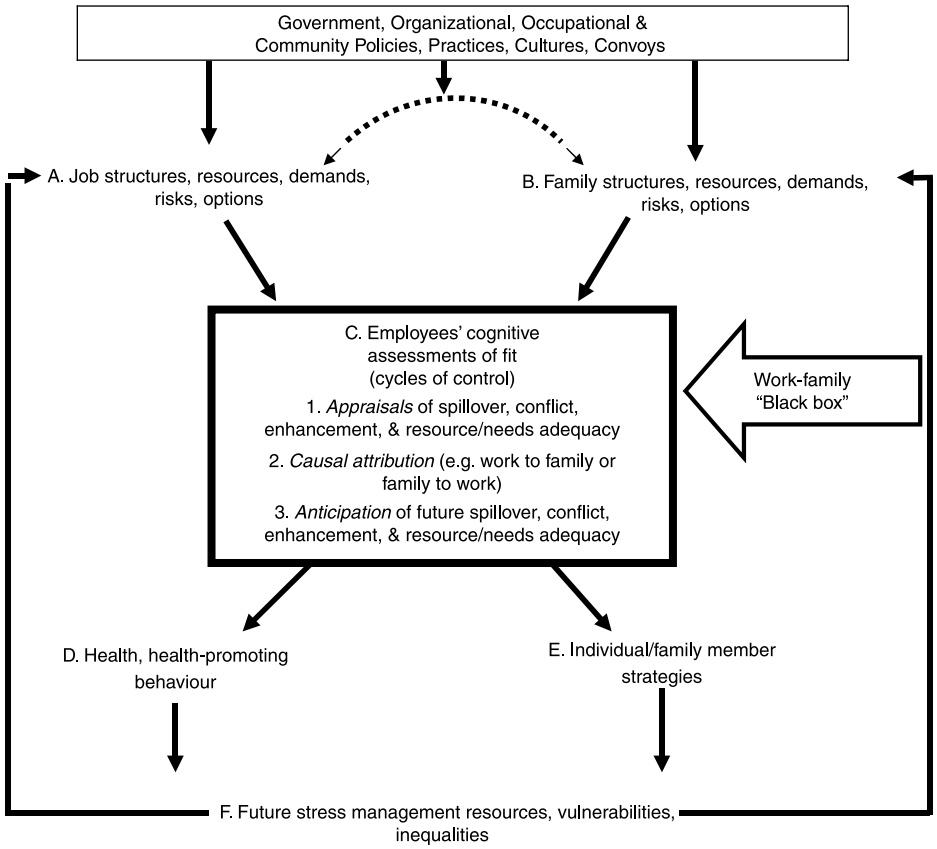

Figure 1. The ecology of fit: a cycles of control model.

example. Such appraisals also involve a *causal attribution* (C2); is the conflict, spillover or enhancement operating from work to the family or the other way around?

Employees can also *anticipate* future conflict, for example, with the birth of child or other role shift. Anticipation captures the strain of employees worrying about whether they can even keep their jobs, or whether their income or time resources will be adequate to their families' needs next week, next month, or next year (C3). For example, Orrange (2007) and Moen and Orrange (2002) find that students in professional schools anticipate difficulties in resolving work and family roles over the coming years, anticipating that future job demands may prevent them from achieving their marital and family goals. Conversely, employees experiencing considerable overload may nevertheless assess their work–family connections more positively than negatively, anticipating that will be the case once a particular deadline has been met.

Note that appraisals (C) are distinct from but related to the actual ecologies (A and B, Figure 1) in which employees live and work. Both objective resources – time, money, schedules, degree of time control, and security – and individuals' subjective assessments of them matter, but we argue that it is the subjective appraisal of degree of overall fit that is especially key to family and individual health and functioning (see e.g. Demerouti, Bakker, Nachreiner *et al.*, 2001; Demerouti, Bakker, de Jonge *et al.*, 2001; Ferrie, Shipley, Newman, Stansfeld, & Marmot, 2005; Ferrie, Shipley, Stansfeld, Smith, & Marmot, 2003; Strazdins, D'Souza, Lim, Broom, & Rodgers, 2004).

We also argue for the value of an integrated holistic approach. Cognitive assessments by employees of their work–family interface incorporate different levels of perceived gains and losses, producing different constellations of fit. This approach is congruent with and builds on recent theorizing in the work–family literature emphasizing the junctures between demands and resources. Barnett (1998) and Frone (2000, 2003a) characterize 'fit' as some combination of conflict and facilitation. The ecology of the life course framework leads us to theorize fit as dynamic, shifting over time and in context, creating *control cycles*: employees feel in control of their lives when they perceive a greater degree of fit.

The theory of person–job fit (Edwards, 1996) points to the importance of considering job conditions in tandem with characteristics (values, needs) of workers. The work–family interface is fundamentally about *family–job fit* (i.e. assessments of resource adequacy given demands in both roles) as assessed by the individual employee. The term 'life-course fit' captures the fact that both demands and resources on the job and at home vary over biographical time, at different career and family stages (see also Swisher, Sweet, & Moen, 2004). Life-course fit can be considered an umbrella term for employees' changing cognitive assessments of control and demands; expectations and goals in their adult roles at different ages and stages. When there is a gap between the two, employees strategically adapt, seeking to either increase resources or reduce demands, expectations, and/or goals (see E, Figure 1). The stress that ensues when such adaptations are impossible or ineffective renders employees (and their families) vulnerable to deleterious health and well-being outcomes (see D, Figure 1). Adaptive strategies and changes in health, in turn, affect future stress management resources, vulnerabilities, and inequalities (see F, Figure 1). For example, when couples 'resolve' their work–family overloads by having the wife scale back to a part-time job it may reduce time pressures but exacerbate economic pressures, reduce any enhancements the wife obtained from her previous job, and alter the gender divisions of the couples' unpaid household as well as paid labour. In this way, adaptive strategies and their repercussions (E, D, and F, Figure 1) can result in shifts in objective demands and resources (arrows from F back to A and B, Figure 1).

We theorize the work–family 'black box' as containing a variety of dimensions reflecting employees' assessments of the 'fit' between their resources and their demands (see also Demerouti, Bakker, Nachreiner *et al.*, 2001; Grzywacz & Marks, 2000; Voydanoff, 2004). In doing so, we theorize fit broadly, incorporating, in addition to more conventional work–family and family–work concepts, other role-transcending (see Voydanoff, 2004) resources (in the form of employees' appraisals of their degree of job security, income adequacy, schedule fit, and time adequacy). Mapping the patterning of these different cognitive assessments enables scholars to capture an overall climate of fit. Actual components of what is included under the concept of fit may vary, based on availability of measures as well as the focus of a particular study. However, we theorize that employees experience a limited number of identifiable fit constellations, the patterning of which depends on objective conditions (ecologies) at work and at home (A and B, Figure 1).

We argue for theory development and research on *overall fit* (rather than separately on each dimension of the work–family interface) as adding value by (1) promoting understanding of the distribution of work–family quality within a particular sample and (2) mapping the distribution of that quality (fit) over different workforces (in different organizations, occupations, educational backgrounds, age groups, or family types, for example). Our ecology of the life course theoretical rationale for considering patterns of fit is that various fit constellations enable employees to feel more or less in control of the course of their lives, what Elder (1974, 1985) terms *cycles of control*. Moreover, we hypothesize that employees' assessments of fit mediate the health impacts of the objective ecologies in which they live and work.

To capture the degree of fit we therefore draw on a holistic, person-oriented (e.g. Magnusson, 1995) perspective, focusing on *individuals* (or couples, or other family- or work-units), not *variables*. To do so requires locating employees within particular *constellations of fit*, depending on their specific combination of positive and negative appraisals. Doing so suggests a rich research agenda to examine different types of assessments in various populations of employees and whether appraisals along different dimensions are weakly or tightly coupled. For example, do employees who appraise high levels of work–family conflict also report correspondingly low levels of positive work–family spillover? What about assessments of conflict and spillover from family to work? Do assessments of sufficient economic resources (income adequacy) come at the expense of other resource assessments (time adequacy or positive work–family spillover)? Are there identifiable configurations of dis/advantage in fit? In other words, do some employees uniformly score high on positive dimensions and low on negative dimensions of the work–family interface, while others experience some combination of the two?

We believe that it may be more scientifically and pragmatically valuable to understand the proportion of employees who rate themselves as experiencing poor fit than simply modelling each of these variables separately and/or net of the others. This 'profile' versus 'variable' approach also has the methodological merit of avoiding multi-collinearity when highly correlated independent variables are used in a regression. Multi-collinearity usually inflates the variances of the parameter estimates, which may lead to lack of statistical significance of individual independent variables even though the overall model is significant. Considering the overall patterning of fit, by contrast, enables scholars to locate subgroups of workers who share particular cognitive appraisals, (C, Figure 1), whether fit mediates the links between home and work ecologies (A and B) and health (D) and/or adaptive strategies (E). It also permits analysis of how employees' cognitive appraisals of fit shift over their life courses.

In sum, our theoretical approach proposes: (1) employees' cognitive appraisals of different dimensions of the work–family interface are patterned in ways that may be tightly or loosely coupled; (2) there are a limited number of identifiable constellations of fit, suggesting that they are socially patterned by the objective ecologies of home and work; and (3) differences and shifts in job and home ecologies over the life course produce corresponding differences and shifts in constellations of fit.

Fit within the work–family black box: sample; concepts; and measures

For an illustrative case example we draw on survey data from a white-collar sample employed at the headquarters of Best Buy. The computer-based survey included a number of scales and measures of the work–family interface, along with measures of employees' sense of time and income adequacy, the degree their schedules fit their needs, and their perceived job security. The goal of this empirical example is simply to demonstrate a way to gauge, within a particular sample of employees, whether and how employees' cognitive assessments of their work–family circumstances cluster together in patterned ways, signifying a limited number of diverse but identifiable constellations of fit.

The flexible work and well-being study sample

In 2006, the *Flexible Work and Well-Being Study* surveyed a random sample of 921 employees (with a response rate of 74%) from Best Buy, Inc. headquarters. Best Buy is a large Fortune 500 organization electronics retailer headquartered in the Twin Cities of Minnesota. We confine the analyses to only those who answered 100% of the 38 survey items used in this analysis, resulting in an effective sample size of 753.

Table 1 provides a summary descriptive analysis of all respondents in this middle-class, white-collar sample. Note that although this is a young workforce (with a mean age of 33.3 years), it provides a nice mix of respondents in different life-course stages. About 3 in 10 (29%) respondents are neither married/partnered nor parents, a third (33.2%) are married or partnered but do not have children at home, and 36.9% are married or partnered and are raising children. The sample is almost equally divided between men (52.8%) and women (47.2%).

We are not claiming this to be a 'representative' sample of the US workforce, or even of those most at risk of poor (or good) fit. Rather, we theorize that different populations of workers (by industry, organization, occupation, family stage) will have different fit profiles and that including different dimensions of the work–family interface may make sense in various subgroups. Our goal in this case example is simply to assess whether there are indeed a limited number of fit constellations that, when considered together with respondents' characteristics, make intuitive 'sense'. For example, previous research suggests that working parents will occupy the poorest fit constellations. However, it is important, we believe, to examine the patterning of fit reported by employees at all ages and stages, including young people without families of their own, to better identify constellations of fit among different workforces.

Concepts and measures

The *Flexible Work and Well-Being Study* incorporated a number of concepts and measures to better capture the work–family 'black box' (see Appendix). Each measure is

Table 1. Descriptive statistics of sample

Variable	Percent/mean/(std. deviation)
Gender	
Men	52.8%
Women	47.2%
Exempt status	
Salaried	92.5%
Hourly	7.5%
Supervisory status	
Supervisors	24.7%
Non-supervisors	75.3%
Family status	
Not partnered, no children	29%
Partnered, no children	33.2%
Partnered with children	36.9%
Race	
White	84.4%
African-American	2.1%
American Indian	0.7%
Asian	3.9%
Other race	0.2%
Job level	
Individual contributors	63.2%
Managers	19.9%
Senior manager	7.1%
Director or above	9.8%
Education	
High school or less	1.8%
Some college	15.1%
Bachelor's degree	63.2%
Professional or grad degree	19.9%
Age	
Mean	33
Std. deviation	(7.839)
Organizational tenure in months	
Mean	55.4
Std. deviation	(40.351)
Number of children	
Mean	0.67
Std. deviation	(0.986)
Hours worked per week	
Mean	47.6
Std. deviation	(6.736)
Income	
Mean	$75–99,999
Std. deviation	(1.527)

calculated as the mean on related survey items so that its value can be easily interpreted based on the original scales of those items. We coded all variables and scales in the same way, such that a larger value indicates a higher assessment of the condition indicated by the name of the variable.

We included typically used measures of employees' appraisal of spillover and conflict as well as measures that capture employees' assessments of the adequacy of their resources relative to the needs of daily living and the demands of both work and home. Specifically, we include measures of cognitive assessments of time adequacy, income adequacy, work-schedule fit, and job security. Note that the first three reflect both work and family conditions. The fourth, job security, may be another important (but sometimes overlooked) ingredient in the work–family black box. It is, strictly speaking, a job characteristic, but theorized as one that is crucial to family and individual well-being and, hence, to a sense of control or fit. There may well be cognitive assessments of other employment conditions that could be considered, or others that could be left out (e.g. there is little need to include both conflict and negative spillover since they capture roughly the same latent construct, but doing so does not change the resulting patterns of fit).

Income is critical to making a living, but is often statistically 'controlled' for rather than incorporated into work–family interface models. Following our framing of fit as constellations of employees' cognitive appraisals of the match between resources and needs, we theorize that employees' assessments of the degree of their income *adequacy* is yet another component of fit, one that may be more fruitful in predicting health and adaptive outcomes than their actual income level.

We also included a scale capturing employees' assessments of time adequacy (having adequate time to do a variety of activities) and a scale of perceived work schedule fit. Refer to Table 2 to see how these constructs correlate with one another and the Appendix for a complete listing of all survey items/scales (and alphas) used in the analysis.

Findings

Recall that our ecology of the life course approach theorizes identifiable patterns in the ways employees assess the multiple layers of fit between their work and their family or personal lives. The latent construct of fit could be a single linear continuum, ranging from high to low fit. However, confirmatory factor analysis (not shown) of items in the 10 dimensions we incorporate suggests there is no single linear construct of fit that can capture the complexity within the work–family black box. Accordingly, we analysed whether, and in what ways, respondents 'cluster' on the measures available. To do so, we classify 753 respondents by their ratings on the six conventional measures of the work–family interface available in the survey: negative F–W spillover; positive F–W spillover; negative W–F spillover; positive W–F spillover; Netemeyer's W–F conflict scale; Netemeyer's F–W conflict scale – as well as the four measures of subjective assessments of resources: work-schedule fit; time adequacy; income adequacy; and job security. Note that work-schedule fit (based on Barnett *et al.* (1999) scale) is a direct measure of one type of fit, whereas we are interested in the overall constellation of fit. Since all 10 scales are continuous, we fit a *latent profile model* that seeks (categorical) classes/clusters of employees based on continuous variables. The Mplus program fit the data to latent profile models using 1–8 clusters. Based on Bayesian Information Criteria (BIC) and Akaike Information Criteria (AIC), we chose the six-cluster solution, given that it produced the lowest BIC and AIC values. Thus we identify six distinctive constellations of fit among employees in this young white-collar sample (see Figure 2).

The normative profile, that is, the constellation characteristic of the largest percentage of respondents (35.1%), is one consisting of 'average' scores on all the W–F measures, with the exception of 'above average' scores on the negative W–F spillover

Table 2. Pairwise Pearson correlation coefficients among dimensions of fit

Total sample ($N = 753$)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Positive F–W spillover		−.101**	.353**	−.015	.002	−.079*	.066	.072*	.142**	.095**
(2) Negative F–W spillover			.115**	.372**	.244**	.499**	−.114**	−.143**	−.187**	−.311**
(3) Positive W–F spillover				.025	−.034	.037	.126**	.090*	.039	.056
(4) Negative W–F spillover					.628**	.212**	−.394**	−.195**	−.108**	−.534**
(5) Netemeyer W–F conflict						.276**	−.563**	−.142**	−.038	−.623**
(6) Netemeyer F–W conflict							−.094**	−.144**	−.134**	−.251**
(7) Work schedule fit scale								.076*	.079*	.471**
(8) Job security assessment scale									.154**	.172**
(9) Income adequacy										.207**
(10) Time adequacy scale										

Note. $*p < .05$; $**p < .01$, two-tailed tests.

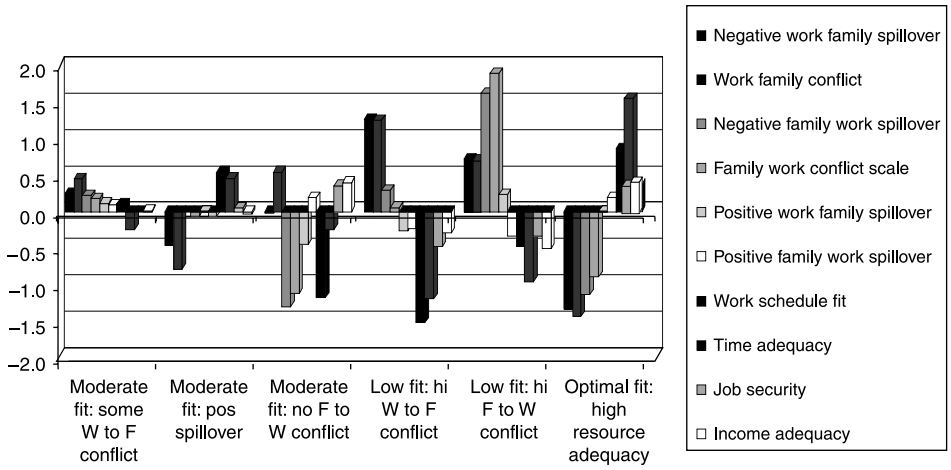

Figure 2. Six 'fit' constellations.

and Netemeyer's W–F conflict scales, as well as above average negative F–W spillover and F–W conflict scores. Over a third of the employees experience this constellation of fit, reporting average levels of time adequacy, income adequacy, and schedule fit, but somewhat higher levels of conflict and negative spillover from their jobs to their family and personal lives and vice versa. We term this employee profile '*moderate fit' with some W–F conflict.* Another normative constellation characterizing almost 3 in 10 (29.3%) respondents we label '*moderate fit' with positive W–F spillover*. Less common (6.8%) is a '*moderate fit' with no F–W conflict* constellation. Members of this constellation do not appraise their family environment as enhancing their work lives (in the form of positive F–W spillover, for example), but rather, are similar in their *absence* of F–W conflict.

About the same proportion (11.6%) of employees constitute a '*low fit' high W–F conflict* profile. This group of employees may be most at risk of poor health outcomes, reporting high levels of negative W–F conflict and negative W–F spillover. A smaller proportion (6.4%) of employees who may also be vulnerable fall into the '*low fit' high F–W conflict* constellation, experiencing negative F–W conflict and negative F–W spillover.

From a cycles of control theoretical vantage point, employees with an optimal fit would assess themselves as high on positive and low on negative dimensions. There is just such an '*optimal fit' high resource adequacy* constellation. These respondents report high time adequacy, high income adequacy, high positive spillover, and good work-schedule fit while simultaneously scoring low on W–F conflict and negative W–F spillover. Only about 1 in 10 (10.8%) respondents characterize themselves as having such an optimal fit profile.

Table 3 summarizes the types of employees experiencing different constellations of fit. The distribution across fit constellations does not differ by gender; men and women are equally likely to be found within all six fit constellations. Where there is considerable difference is by parental status: most of those in the '*optimal fit*' profile do *not* have children, while most of those in '*low fit' high F–W conflict* constellation do. Note also that almost one in four (23%) of those in the low fit constellation are adult care providers, compared to only 5.8% of those in the '*optimal fit*' profile (a statistical trend difference by whether or not they are caring for an ageing or infirm relative). Two in five

Table 3. Cross-tabulations between fit constellations and employee characteristics

	Moderate (%)			Vulnerable (%)		Optimal (%)	
Variables/constellation	Moderate fit: some W–F conflict $N = 263$ (35.1%)	Moderate fit: pos W–F spillover $N = 220$ (29.3%)	Moderate fit: no F–W conflict $N = 51$ (6.8%)	Low fit: hi W–F conflict $N = 87$ (11.6%)	Low fit: hi F–W conflict $N = 48$ (6.4%)	Optimal fit: hi resource adequacy $N = 81$ (10.8%)	Total $N = 750$ (100%)
Family status, $p = .000$							
Not married, no child	22.8	32.3	37.3	17.2	6.3	35.8	26.2
Married, no child	33.5	30.5	23.5	41.1	41.7	50.6	35.5
Married with child	43.7	37.3	39.2	41.4	52.1	13.6	38.4
Age group, $p = .026$							
20–29	39.9	47.3	49.0	34.5	27.1	53.1	42.5
30–39	38.0	39.5	33.3	41.4	52.1	27.2	38.2
40–60	22.1	13.2	17.6	24.1	20.8	19.8	19.3
Job category, $p = .000$							
Manager or executive	39.8	24.3	38.0	40.7	33.3	16.5	32.1
Professional	41.8	50.9	50.0	53.5	45.8	50.6	46.9
Tech, Clerical, or Facilities	18.4	24.8	12.0	5.8	20.8	32.9	19.9
Supervisory status, $p = .000$							
No	68.8	88.2	70.6	59.8	72.9	92.6	76.2
Yes	31.2	11.8	29.4	40.2	27.1	7.4	23.8
Work more or less than 45 hours a week, $p = .000$							
Less than 45	40.3	67.1	24.0	22.4	40.4	65.4	46.7
More than or equal to 45	59.7	32.9	76.0	77.6	59.6	34.6	51.4
Life stage, $p = .005$							
No child, respondent <40	47.9	59.6	56.9	49.4	42.6	71.6	54.1
Child aged 0–6	29.5	23.9	25.5	29.9	40.4	7.4	25.6
Child aged 7–12	9.2	6.4	7.8	9.2	8.5	2.5	7.4
Child aged 13–18	4.2	5.0	2.0	1.1	0.0	2.5	3.5
Child 19+	0.4	1.4	3.9	1.1	2.1	1.2	1.2
No child, respondent >40	6.9	2.8	3.9	8.0	4.3	11.1	6.0
Empty nest	1.9	0.9	0.0	1.1	2.1	3.7	1.6

Table 3. (*Continued*)

Variables/constellation	Moderate (%)			Vulnerable (%)		Optimal (%)	
	Moderate fit: some W–F conflict $N = 263$ (35.1%)	Moderate fit: pos W–F spillover $N = 220$ (29.3%)	Moderate fit: no F–W conflict $N = 51$ (6.8%)	Low fit: hi W–F conflict $N = 87$ (11.6%)	Low fit: hi F–W conflict $N = 48$ (6.4%)	Optimal fit: hi resource adequacy $N = 81$ (10.8%)	Total $N = 750$ (100%)
Life stage, $p = .001$							
No child, respondent <40	47.9	59.6	56.9	49.4	42.6	71.6	54.1
Child aged 0–6	29.5	23.9	25.5	29.9	40.4	7.4	25.6
Child aged 7–18	13.4	11.5	9.8	10.3	8.5	4.9	10.9
Child aged 19+, no child respondent >40, empty nest	9.1	5.0	7.8	10.3	8.5	16.0	8.8
Parental status, $p = .000$							
Non-parent	56.3	62.7	60.8	58.6	47.9	86.4	61.6
Parent	43.7	37.3	39.2	41.4	52.1	13.6	38.4

Note. Only statistically significant variables ($p \leq .05$) are included in table. Non-significant variables listed below. Numbers in the table are column percentages for each constellation.
Categories of employees who do not differ significantly by fit constellations: Gender $p = .467$; Exempt status $p = .082$; Internal/external client status $p = .219$; Caregiver status $p = .094$.

employees in the '*low fit*' *high W–F conflict* group are supervisors, and over three in four put in an average of more than 45 hours a week at work. By contrast, employees in the '*moderate fit*' *some positive spillover* constellation are the least likely to work long hours; only a third work 45 or more hours a week.

These bivariate relationships make intuitive sense, and point to the value of considering typologies of employees based on the identifiable constellations of fit. In subsequent analyses we plan to link fit constellations (C, Figure 1) to both their ecological antecedents (A and B) and their impacts (D, E, and F), as well as to model continuity and change in employees' assessments of fit over time.

Discussion and conclusions

We have developed an ecology of the life-course, cycles of control approach to the work–family black box, proposing that there is a latent construct of *fit* based on employees' appraisals of their situations. This perspective theorizes that subjective assessments of fit differ by employees' life stage and change over the life course, given that objective occupational and family circumstances differ by and change with age, job tenure, and family stage. The holistic patterning of fit consists of an integrated system of cognitive assessments that cluster together empirically in identifiable patterns. Table 3 shows that particular types of employees are more apt to share similar assessments of fit, with some constellations more typical than others.

We have also pointed to the potential value of incorporating measures not typically considered in the work–family toolbox, concepts we see as important dimensions of fit that may mediate between (objective) work and home ecologies on the one hand, and employees' health, well-being and adaptive strategies, on the other. *Time adequacy* and *income adequacy*, in particular, are cognitive assessments made by employees of the degree of congruence between their time (income) needs and their available time (income). Our empirical example demonstrates that both are distributed in patterned ways together with more conventional work–family measures, as are assessments of job security.

Different samples of employees in different occupations, working at different organizations, and at different ages and life stages will experience different demands and resources at work and at home and therefore have different cognitive assessments of fit. For example, as family responsibilities increase with the arrival of children, the likelihood of perceived conflict between work and family domains also increases. Higher status occupations produce higher resources, but may be especially demanding as well, as managers and professionals strive to move up occupational and/or company ladders (Althauser & Kalleberg, 1990), possibly leading to lower assessments of fit. Resources with which to cope with the demands of home and the demands at work also vary over the life course (with both actual income and cognitive appraisals of income adequacy typically increasing with age, and actual time demands and cognitive assessments of time inadequacy more acute when there are preschoolers in the home). All these factors may influence how individuals assess different dimensions as well as their entire constellation of fit.

We undertook an empirical case example to illustrate the value of locating employees within identifiable and distinctive constellations of fit, rather than considering individual measures 'net' of one another. The Best Buy sample is distinctive by race and ethnicity (mostly white), their youthful age, their high educational level and

occupational status, the region in which they live (the Upper Midwest), and industry (retail). Still, despite their homogeneity we found six identifiable profiles of fit that were differentially distributed by family circumstances and stage as well as by occupational characteristics and age in ways that made intuitive sense. This points to the need for subsequent investigations of fit in other employee populations.

Our ecology of the life-course, cycles of control framing raises a series of research questions that could not be fully addressed here. We conclude with five suggestions for future research.

First, the rising numbers of single as well as married but childfree employees challenge the very notion of the 'work–family' interface for those without partners or without children. Studies of young people and single adults (e.g. Gerson, 2002; Moen & Orrange, 2002; Orrange, 2007) suggest (but do not name) something we call *anticipatory life course (mis)fit,* as younger people envision their future life courses. This is important because such anticipations often shape choices related to educational training, occupations, and seeking out jobs working for particular employers, as well as whether and when to marry and/or have children.

Second, scholars examining work–family connections would also do well to consider issues of *selection*. People may be in certain jobs or even out of the workforce precisely because of issues of fit or misfit. Or else employees in demanding home and/or job situations may be envisioning how to strategically adapt to best to achieve and maintain resources and reduce strains. Such anticipations operate at all ages or stages, as when new mothers decide not to return to a demanding job, or plan on returning to a more demanding schedule when their child enters kindergarten. Another example is when midcareer couples opt not to have a second or third child because of job demands and strains, or employees choose to remain childfree because they cannot see how a child could possibly 'fit' into their already hectic lives. Anticipations of work–family or life-course fit also matter when employees and their families consider whether or not to move for a job promotion, for example, or to switch jobs or employers, or else to exit the workforce altogether. Similarly, older employees can envision job shifts, exits, or retirement as either increasing or decreasing their sense of fit; their assessments can shape the timing of their turnover or exit from the career job.

Third, life-course and family scholars often focus on contagion and cross-over across family members – such as when conflict and strain from a parents' job also impacts their children and their spouses (e.g. Almeida, McGonagle, Cate, Kessler, & Wethington, 2003; Crouter & Bumpus, 2001; Crouter, Bumpus, Head, & McHale, 2001; Crouter, Bumpus, Maguire, & McHale, 1999; Crouter & McHale, 2005; Gareis, Barnett, & Brennan, 2003; Larson & Almeida, 1999; McDonald & Almeida, 2004). However, most scholarship (relying on surveys of individuals) remains at the individual level of analysis. We have theorized fit as an employee phenomenon, but do so as a necessary first step to the larger objective of capturing a more holistic understanding of the combined effects of contagion and cross-over within families, the mix of work–family factors that may operate singly or in combination, positively and negatively, to shape fit in ways that impact both employee and family health and effectiveness.

Fourth, an ecology of the life course approach to the work–family-health connection underscores the importance of *time*. Time matters in the form of different objective needs, demands, and resources at home and on the job, and different cognitive appraisals by employees at different ages and stages. Do working men and women of similar or different ages diverge in their assessments of various dimensions of fit, and why? Clearly gender, occupational level, and age (life stage) are potentially important

ecological contexts shaping everyday experiences leading to interpretations of 'fit' or 'misfit' (Bourdieu, 1990).

Finally, fit constellations also reflect how employees view the more objective psychosocial environments of their lives. Are there ecological niches of conditions that are more conducive to fit than others? Are adverse conditions producing poor fit potentially modifiable? And empirically, do fit constellations better predict outcomes of interest than isolated variables?

Creating constellations of fit can provide important insights, bringing employees back in as the cognitive appraisers of their unique confluence of home and job ecologies. As a first contribution our empirical example serves to identify the range and distribution of employees in different fit constellations in one sample. What the ecology of the life course perspective calls for next is understanding what conditions of work and home produce particular constellations of fit, and observing how both (conditions and cognitive appraisals) changeover time. Finally is the need for better modelling of the links between constellations of fit and outcomes (such as health, adaptive strategies, and effectiveness). Do fit constellations serve as mediators between objective ecological niches and outcomes? Do some constellations of fit predict some subsequent adaptations, such as changes in work and family situations, and not others? Theorizing fit as a latent and dynamic construct, consisting of identifiable patterned assessments by employees of multiple work–family dimensions offers a fruitful and, we believe, useful research agenda.

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Appendix

Work–family spillover is defined as both negative and positive experiences in the domains of work and home that affect experiences in the other. Below are the measures we used to capture spillover.

Positive family spillover scale ($\alpha = .549$)
(Scale 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, 5 = All of the time)

- Has my home life helped me relax and feel ready for the next day's work?
- Has the love and respect I get at home made me feel confident about myself at work?
- Has talking with someone at home helped me deal with problems at work?

Negative family spillover scale ($\alpha = .763$)
(Scale 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, 5 = All of the time)

- Have responsibilities at home reduced the effort I can devote to my job?
- Have personal or family worries and problems distracted me when I was at work?
- Have activities and chores at home prevented me from getting the amount of sleep I needed to do my job well?
- Has stress at home made me irritable at work?

Positive work spillover scale ($\alpha = .691$)
(Scale 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, 5 = All of the time)

- Have the skills you use on your job been useful for things you have to do at home?
- Have the things you do at work help you deal with personal and practical issues at home?
- Have the things you do at work make you a more interesting person at home?
- Has having a good day on your job made you a better companion when you get home?

Negative work spillover scale ($\alpha = .823$)
(Scale 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, 5 = All of the time)

- Has your job reduced the effort you can give to activities at home?
- Has stress at work made you irritable at home?
- Has your job made you feel too tired to do the things that need attention at home?
- Have job worries or problems distracted you when you are at home?

Source: Modified from MIDUS.

Work–family conflict is defined as pressures from one role being incompatible with pressures from another, making participation in both difficult. Conversely, work–family facilitation can be defined as the extent to which participation at work (or home) is made easier by virtue of the experiences, skills, and opportunities gained or developed at home (or work) (Frone, 2003b) and *work–family enrichment/enhancement* can be defined as the extent to which work experiences improve the quality of life in the family domain and vice versa. Below are our measures of work to family and family to work conflict.

Work–family conflict scale, Netemeyer ($\alpha = .926$)
(Scale 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree)

- The demands of my work interfere with my home and family life.
- Things I want to do at home do not get done because of the demands my job puts on me.
- My job produces strain that makes it difficult to fulfil family/personal duties.
- Due to my work-related duties, I have to make changes to my plans for family/personal activities.

Family–work conflict scale, Netemeyer ($\alpha = .899$)
(Scale 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, 5 = Strongly agree)

- The demands of my family or personal relationships interfere with work-related activities.
- I have to put off doing things at work because of demands on my time at home.
- Things I want to do at work don't get done because of the demands my family or personal life.
- My home life interferes with my responsibilities at work, such as getting to work on time, accompanying daily tasks, and working overtime.
- Family related strain interferes with my ability to perform job-related duties.

Source: see Netemeyer, Boles, and McMurrian (1996) and Neal and Hammer (2006).

Work schedule fit represents the extent to which an employee feels that their work schedule and personal schedule complement or conflicts.

Work schedule fit scale ($\alpha = .860$)
(Scale 1 = Extremely poorly, 2 = Mostly poorly, 3 = Slightly poorly, 4 = Neither well nor Poorly, 5 = Slightly well, 6 = Mostly well, 7 = Extremely well)

- Taking into account your current work hours and schedule, how well is your work arrangement working for you?
- Taking into account your current work hours and schedule, how well is your work arrangement working for your family or personal life?

Source: Modified from Harvard work schedule fit, see Barnett and Brennan (1997).

Time adequacy refers to the extent to which an employee feels that they have enough or too little time to complete various activities in their life.

Time adequacy scale ($\alpha = .892$)
(Scale 0 = Not at all adequate, 10 = almost always adequate)

- To what extent is there enough time for you to get enough sleep/rest?
- To what extent is there enough time for you to be by yourself?
- To what extent is there enough time for you to socialize?
- To what extent is there enough time for you to keep in shape?
- To what extent is there enough time for you to prepare or eat healthy meals?
- To what extent is there enough time for you to participate in or to be active in your community?
- To what extent is there enough time for you to nurture your spiritual and/or creative side?
- To what extent is there enough time for you to complete housework and chores?

- To what extent is there enough time for you to be with the children you live with?
- To what extent is there enough time for you to be with your spouse/partner?
- To what extent is there enough time for your family to be together?
- To what extent is there enough time for you to form and sustain serious relationships?

Source: Modified from Van Horn, Bellis, and Snyder (2001).

Job security is the extent to which an employee perceives they will lose their job.

Job security ($\alpha = .750$)
(1 = Strongly agree, 2 = Agree, 3 = Disagree, 4 = Strongly disagree)

- I have experienced or I expect to experience an undesirable change in my work situation.

(1 = Very likely, 2 = Somewhat likely, 3 = Not very likely, 4 = Not likely at all)

- What are the chances you will lose your job in the next year?

Source: See Siegrist *et al.* (2004).

Income adequacy is defined as an employees' cognitive appraisal of how sufficient their income is to meet their or their family's needs.

Income adequacy
(0–10, where 0 is very inadequate, 5 = Sometime adequate and 10 is more than adequate).
How well does your current household income meet your financial needs?
Source: see national study of the changing workforce (2005).