ARTICLE

Work-Life Integration

Mike Hogan and Victoria Hogan

Dr. Mike Hogan is a lecturer in psychology at the National University of Ireland, Galway. Vicky Hogan is a lecturer and researcher in the Health Promotion Department at NUIG. Correspondence regarding this article may be addressed by email to michael.hogan@nuigalway.ie.

A blurring of boundaries between work and home life and an increasing difficulty in maintaining a balance between these two domains is now increasingly recognized.

Jones, Burke and Westman (2006)[1]

Work is an integral part of life. Human adaptation implies acquisition of the means to sustain life. But there is more to life than work: there is personal life, family life, and life within one's social network and culture too. From a systems psychology perspective, all domains of life are interrelated, naturally, but without an integrated life plan the interrelationships defining our system will gravitate toward chaos, fragmentation, and conflict. In human systems order and harmony are a byproduct of intelligence [1].

Confucius weaves an interesting systems tale:

The ancients, who wished to preserve the clear and good character of the world, first set about to regulate their national life. In order to regulate their national life, they cultivated their family life. In order to cultivate their family life, they rectified their personal life. In order to rectify their personal life, they elevated their heart. In order to elevate their heart, they made their will sincere. In order to make their will sincere, they enlightened their mind. In order to enlighten their mind, they conducted research. Their research being conducted, their mind was enlightened. Their mind enlightened, their will was made sincere. Their will being sincere, their heart was elevated. Their heart being elevated, their personal life was rectified. Their personal life being rectified, their family life was cultivated. Their family life being cultivated, their national life was regulated. Their national life being regulated, the good and clear character of the world was preserved and peace and tranquility reigned thereafter. [2].

But periods of peace and tranquility are rare in history, and Confucius omits reference to an important link in his hierarchical model of interdependencies: Work. Historically, in the post-Confucian Western world, the defining features of adulthood have been linked to the transition from dependence to independence, which implied work. People worked to support their family, and the period of dependence before independence was often very short. The reason the word *adolescence* was coined as late as 1904 by Granville Stanley Hall was because 19th century teenagers were generally out working in the adult world and were not granted their adolescence *per se*. The privileged upper class and professional class were the only members of society for whom university was an option. The majority of the population was lucky to leave school with the ability to read, write, and do basic arithmetic. Adolescent women were granted few specialized training opportunities and were generally primed for a life of work in the home.

Prior to industrialization, in medieval societies, work and family life were highly integrated. Most people worked in small self-supporting communities and usually worked close to the home and for themselves (i.e., as farmer, craftsman, etc.). The move from agricultural to industrial societies and from subsistence economies to market economies altered the world of work considerably. The Age of Enlightenment brought with it new thinking about optimizing and ordering society and work-family integration was not prioritized as a highly valued outcome.

Adam Smith (in his *Treatise on the Wealth of Nations*, 1772) called for people (and communities) to specialize and thus produce more effectively and efficiently. Instead of being self-supporting, individuals and communities would have to trade with one another and exchange specialist goods and skills. These ideas changed economic and social life forever. Small self-supporting communities were slowly replaced by large urban communities where industry-regulated employment required people to travel greater distances, work to the clock, and assume roles where they had little control over task demands. All hands were needed to foster growth and expansion in the new market economy. And with new jobs calling for new skills and with the constant redesign of new work procedures, an increasing variety of new jobs opened up to men and women. Work and family life became less integrated and increasingly secular, utilitarian norms dominated communal morality. Participation in the marketplace came to be seen as an equitable guiding principle allocating rights, resources, and responsibilities of citizenship. It was not long before education and expertise (rather than gender and family name) became the deciding factor when recruiting employees. It was not long before working mothers became the norm rather than the exception.

As work roles and tasks became increasingly specialized, more and more educational investment was needed to sustain growth and competitiveness in the new market economy. With people spending more and more time in education, the period of dependence prior to adulthood lengthened [3, 4]. Industrialization, the market economy, service sector competition, and globalization assumed a momentum of their own. Systems of education responded.

The challenge now is to prepare young men and women for a new culture of work, a culture defined by accelerating change [5] and high expectations [6]. Keeping apace with cultural evolution and global competition places intense pressure on organizations and individuals to be flexible and responsive to change. Although some developed nations attempt to buck the trend, the proportion of employees working long hours has increased over the past couple of decades [7]. People commonly report that they are working more hours than they would like. Overwork is particularly high among well-educated professionals and managers [8, 9] and this group is also most likely to experience work-family conflict. Reports of high levels of work stress and stress-related illness are commonplace and there is a perception that the workplace is becoming ever more stressful [10]. The rise of the service industry has produced a competitive drive to satisfy customers' needs and expectations. Constant availability of workers and zero fault work processes are increasingly considered necessary. Expectations are rising across every sector linked to the service industry.

Modern Western culture has also had a powerful effect on family systems. The more well-educated people have become, the more likely it is that they marry later and have fewer children [11]. With both men and women working, the wealth of family and nation has increased, but so too has the financial burden associated with childcare. The solution is to have fewer children and invest more heavily in a smaller family [12].

Working parents need to divide their time, physical energy, and psychological resources between the demands of

work and the demands of family. Even during their biological peak in their mid to late 20s, people have limited executive control ability [13-15]: an individual cannot sustain attention, divide attention, switch attention, inhibit distraction, and plan indefinitely – without sufficient variety and rest, the action system loses energy and becomes fatigued.

Technological advancements (e.g., mobile phones, e-mail) make it easier for work demands to intrude into family life, and heavy use of multiple technologies can produce negative spillover from work to home life [16]. Although these same technologies do increase flexibility in how job-related responsibilities are engaged, they can also generate a blurring of the boundaries between job and off-job roles, which can be particularly stressful if one wishes to compartmentalize these roles. Interestingly, for women, higher levels of technology use is sometimes associated with positive work-to-family spillover, perhaps because women tend to integrate work and family roles, whereas men tend to segment or compartmentalize the two domains [17].

Every couple possesses a unique set of strengths and weaknesses that act as affordances and constraints as they strive to discover the right balance between work and life [18], and working parents need to 'get along' in order to freely explore different strategies that help them to optimize the division of their time, physical energy, and psychological resources [19, 20]. Couples operate as a unit. When demands placed on one individual deplete their available resources and thus activate a stress response, this stress is not experienced by the individual alone; there is crossover of stress and strain from one individual to another [21].

Notably, the presence of dependants produces an increase in home demands that has been associated with increased levels of both work-family conflict and psychological strain [22]. Compared with employed non-mothers, employed mothers can experience higher levels of work-family conflict and negative health outcomes, including higher levels of depression, particularly when spousal support is low [23]. Similarly, employed fathers experience higher levels of psychological strain compared with employed non-fathers [24]

Working parents need to negotiate a strategy whereby the performance of work and home duties can be optimized, personal development nurtured, and love and play maintained. In this context, we must remind ourselves that *positive* crossover of motivational resources, cognitive competencies, and good moods from one individual to another is also possible - for example, vigour and dedication may be just as contagious as is stress [25]

Although culture is changing, women are still expected to identify more with the family role than are men [26] and the career advancement of men tends to be faster than that of women [27]. Some reports suggest that working women engage in household work to a much greater extent than do men [28] and invest more time in family roles [29]. When men and women sit down to negotiate a work-life strategy, they have to define the culture of their family in relation to the culture of their world. The strategy pursued by the couple must be pursued in light of the affordances and constraints of their working environments, economic situation, and culture[2]. And if Confucius is right, men and women alike need to elevate their heart, make their will sincere, and enlighten their mind by doing *research*, such that they can rectify their personal life and thus discover how best to optimize work-life integration.

Researching the problem

What set of skills are needed to prepare people for modern living? How best can we foster the psychological skill set that helps employees and employers find flexible and innovative solutions that maximize productivity while also optimizing employee well being, quality family relationships and other aspects of personal life[3]? What should we do?

First, rather than talk about 'work-life balance', which implies a 50:50 investment (or an even distribution of energies) in two separate domains, we suggest use of the term 'work-life integration'. The goal of work-life integration is: to have a satisfying, healthy, and productive life that includes work, love, and play; that integrates a range of life activities with attention to personal and interpersonal development; that fosters the psychological skills necessary for an expansion of energy associated with multiple role engagement; and that permits the construction and experience of a meaningful life defined by reference to unique wishes, interests, and values[4].

Second, we need to explore psychological science and describe some of the elements and relations that canalize our path to work-life integration. We need to describe the processes that act to disturb integration and the processes that act to facilitate integration. We need to identify solutions that when enacted will facilitate integration for self and other, and then enact those solutions, simultaneously or sequentially.

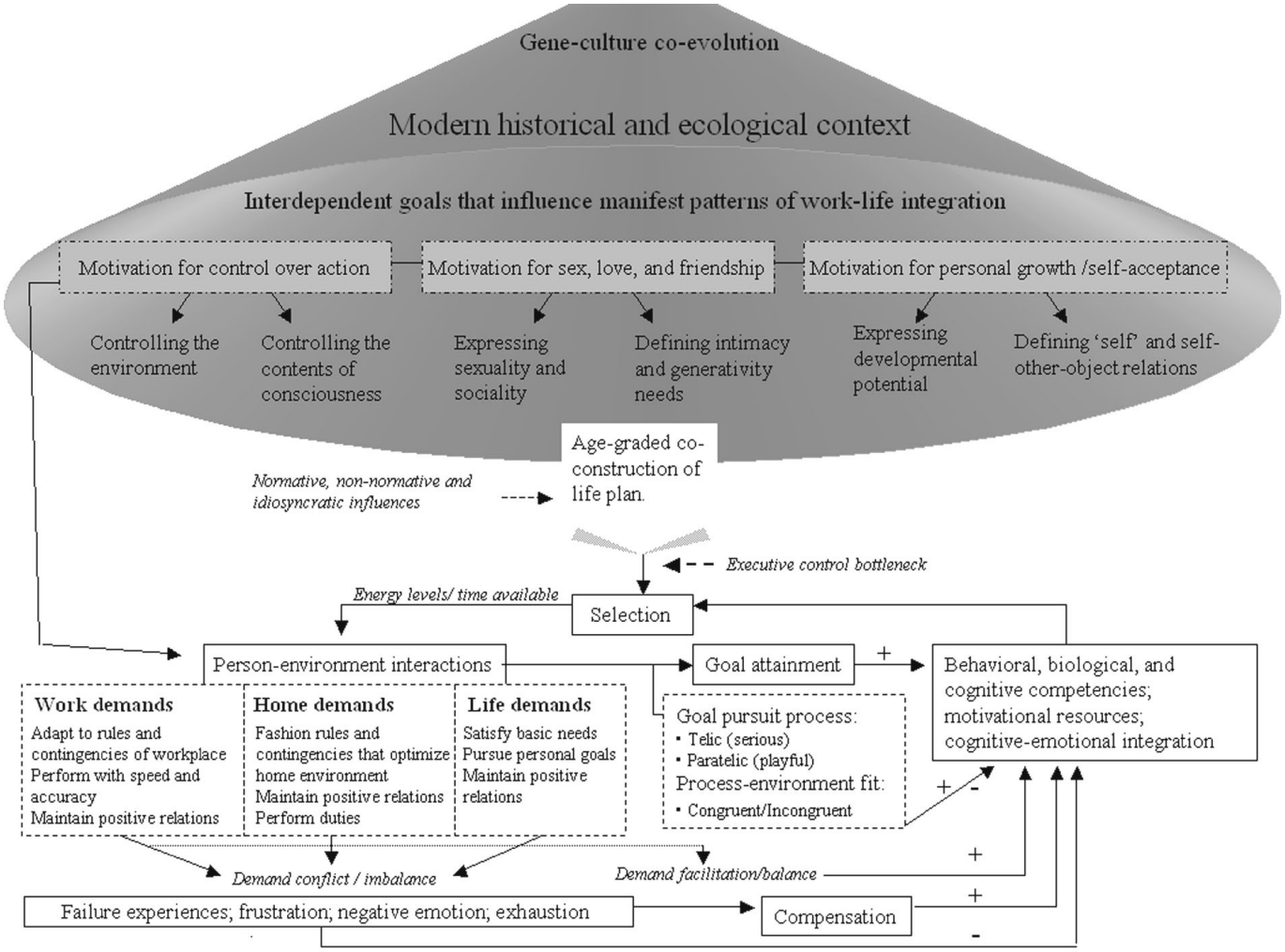
The development of work-life integration

Consider Figure 1. Contained within are elements and relations assumed to influence work-life integration in individuals[5]. We assume that having a satisfying, healthy, and productive life that includes work, play, and love is a desirable goal, the attainment of which contributes to what many people define as "successful development". We draw selectively from multiple theories of human development [31-37] in an effort to understand the relationships between goal structure, goal selection, goal pursuit, goal attainment, and successful work-life integration[6].

Drawing upon theories of niche construction [38], gene-culture co-evolution [12, 39], and evolutionary psychology [40], our scheme assumes both universal features of human action and culture-specific action patterns that influence the way individuals and groups work to optimize their adaptation to and mastery over the environment.. An offshoot of this evolutionary perspective is the assumption that human action (and human ontogenesis) is motivated and goal directed. This view is consistent with theories of successful development that emphasise, for example, the motivation for control over the environment or "primary control" [32, 33], which grounds goal striving (and the drive for environmental mastery) in biology and evolution.

By drawing specifically upon theories of gene-culture co-evolution, we assume that culture-specific action patterns are imitated and transformed from

"The challenge now is to prepare young men and women for a new culture of work, a culture defined by accelerating change and high expectations."



one generation to the next [41-43] - for example, ideas, values, and beliefs linked to the motivation for personal growth and self-acceptance manifest differently in different cultures [31, 34, 44]. The scheme also assumes *culture-specific work practices* (e.g., working in a multinational corporation as opposed to on a farm; working under a system of flexitime as opposed to a traditional 9a.m. – 5p.m. work system) that compartmentalize work, home and life demands in a variety of different ways.

While it is assumed that evolution has canalized a set of biological and cultural affordances and constraints that shape human goal structures, developmental sequences, and developmental potential, it is the modern cultural and ecological context that individuals and populations adapt to [45-47]. More specifically, human adaptation is best understood by reference to the emergent products of system dynamics that unfold in real time, over seconds, minutes, hours, days, weeks, months, and years. It is the analysis of these real time dynamics that is critical for understanding of the *ongoing* state of being and doing in human systems.

Narrowing our focus in on goal structures, Figure 1 highlights three interdependent sets of motivation clusters that act upon working adults, each of which influence the definition and pursuit of goals that may contribute to a satisfying, healthy, and productive life. In a very simple-minded way, each motivation set, from left to right (in the sphere headed *Interdependent goals that influence manifest patterns of work-life integration)* can be viewed as corresponding to the domains Work, Love, and Play, respectively.

1. Motivation for control over action (Work)

A fundamental feature of biological systems is that they must maintain a dynamic equilibrium such that energy can be won and work performed [48]. The maintenance of dynamic equilibrium necessitates some level of control over action. Control over action operates on a number of different levels, and in human systems the process of control over action is mediated by cognition [49]. Cognition becomes an observable source of motivation when it can be verbalized as a goal toward which action is directed. Broadly speaking, motivation for control over action subsumes two broad goals that manifest in adult cognition in generic and specific ways. First, the developing adult works to optimize control over the environment [12, 13]. In the context of work-life integration, the developing person must channel the energy associated with their motivation for control over the environment into environmental mastery, whereby they pursue specific goals that enhance their level of skill in different environmental contexts. At the same time, in order to regulate goal pursuit (i.e., manage the cognitive flux of goal definition and transformation that occupies consciousness), the adult must be motivated to control the contents of consciousness, such that self-regulation (along with skill development) can be optimized [49, 50]. Notably, unlike Heckhausen and Shultz we conceive of 'primary control' as *control over action*, whereby controlling the environment and controlling consciousness are interdependent parts - a process that is best analyzed as part of real time action dynamics.

2. Motivation for sex, love, and friendship (Love)

By emphasizing motivation for control over action as part of the 'work' of survival, we recognize that self-organization and self-regulation are defining features of living systems [51, 52], but we must also recognize that reproduction is a common goal of every living system. While many simple organisms can reproduce without intercourse with another member of their species, sexual

intercourse emerged as a feature of reproduction along select phylogenetic lines, and the process of gene-culture co-evolution along the human lineage added a unique set of interdependencies between patterns of sexuality, sociality, and morality [12, 53-56].

We assume that sexuality and sociality are sources of motivation. In early adulthood, the pursuits of sexuality and sociality needs usually involves the definition of intimacy needs [57], and the pursuit of intimacy-related goals. In middle adulthood, an expanded sociality is sometimes observed, whereby there is increased emphasis on generativity needs (i.e., how best to contribute to growth in the younger generation). Much like intimacy needs, generativity can be expressed in many ways, for example, as a parent, a teacher, a researcher, an artist, etc. [58, 59].

We assume that adults attach the love state to sex, friendship, and care duties to a greater or lesser extent. Furthermore, through deliberate practice, adults can meditate upon the love state and expand it to a state of non-referential compassion [60]. The love state emerges as a conglomerate higher-order state associated with varied patterns of sexuality, sociality, and morality. As a consequence, the love state can permeate other motivation systems and manifest in action in all life domains. In the context of work-life integration, we assume that love can be sourced from any life domain (work life, home life, personal life), and regardless of its source love can facilitate cognitive-emotional integration across all life domains [61].

3. Motivation for personal growth/ self-acceptance (Play)

Play is common to all mammals and it facilitates their development in many ways [62]. Play contributes to the development of humans in specific ways: it facilitates creative problem-solving, co-operative behaviour, peer group integration, communication skills, and emotional stability [63-66]. Some benefits of play are immediate - pleasure, aerobic exercise, exploration, and so on – and play behaviour is therefore a self-rewarding activity. Play can also facilitate functioning of bodily organs and systems, regular sleep patterns, and improvement of muscular and skeletal coordination [62].

Fagan (1984) argues that play foster behavioural flexibility, a generic skill that is useful whenever it is necessary to adapt to a novel or changeable environment [62]. During play, people feel free to try new skills and different roles and thus play fosters self-acceptance, self-esteem, and individuation [67, 68]. We assume that people are motivated to play because play is a rewarding activity that contributes to personal growth and self-acceptance. In the context of work-life integration, the play state impacts the nature of goal pursuit and serves a number of useful functions (see below).

From motivation to action

Below the sphere of motivation in figure 1, we note the existence of normative *age-graded* biological and socio-cultural influences [36]. The average person is confronted by a series of normative age-graded socio-cultural life tasks and contexts (e.g., school-, university-, professional- and family-related tasks and contexts) that shape their life plan, the various roles they assume and the various goals they pursue. The average person also goes through a series of age-graded biological changes (e.g., slow maturation of the frontal lobes; maturation of the reproductive system) that influence their functioning in context: the tasks they can and cannot perform successfully, the goals that dominate their consciousness, their ability to have and care for a family, and so on.

Normative *history-graded* biological influences include things like changes in nutrition and medical systems, whereas normative history-graded socio-cultural influences include things like value changes, role changes, economic depression, technological changes, and so on. History-graded influences alter the structure of life plans from one generation to the next and this can make redundant the advice given by older generations to younger generations about how best to achieve work-life integration. Each new generation must apply their own intelligence and carve their own niche.

The scheme assumes *individual-specific action selection* (e.g., choosing to have a large family while working for a multinational organization), and thus implies an infinite variety of unique life plans (and goal systems) that can be crafted[7]. At the same time, no matter how well life plans are conceptualized by culture and by individuals, there is a bottleneck that constrains the behavioural *enactment of life plans*. Specifically, the selection-action cycle is constrained by executive control skills, physical energy levels, and time constraints.

A variety of *goal pursuit processes* influence the nature of goal attainment and the subsequent development of competencies and resources. We highlight two goal pursuit processes linked to two distinct cognitive-emotional states, the telic and the paratelic state. The telic state is dominated by goal-focused cognition, levels of positive affect are relatively low, and variability (both physiological and behavioural) is avoided. The paratelic state is dominated by process-focused cognition - the quality of the action itself (rather than the goal toward which it pertains) dominates cognition; and because the paratelic state is most closely associated with play [69], levels of positive affect are relatively high and the person prefers (and often seeks out) physiological and behavioural variability.

Notably, if person-environment interactions are incongruent with the dominant state (e.g., the environment calls for a telic state but the person is paratelic dominant), then intrapersonal and interpersonal conflict and distress are more likely. Conversely, if person-environment interactions are congruent with the dominant state, then intrapersonal and interpersonal harmony and eustress are more likely[8]. However, the paratelic state can sometimes be beneficial even when it is incongruent with existing interpersonal norms, as more variable patterns of responding during initial performance on novel tasks are often associated with better learning [71]. Also, because paratelic dominance implies higher levels of positive affect along with the ability to embrace higher levels of physiological variability, it can support resilience against the negative effects of interpersonal conflict (i.e., distress), at least while the state dominates [72]. Therefore, if the state can be activated at will, it is conducive to managing distress associated with extended periods of life change (e.g., moving job, moving house, the enactment of a difficult cultural reform in an organization, and so on).

Goal attainment can be achieved through either telic or paratelic goal pursuit processes that are either congruent or incongruent with social and cultural norms. Goal attainment facilitates the development of behavioural, biological, and cognitive competencies, which in turn support the enactment of life plans. Goal attainment also gives rise to enhancement of motivational resources and facilitates the development of cognitive-emotional integration [33, 35]. Although the executive control bottleneck is never overcome, and although physical energy levels and available time always constrain the enactment of life plans, the development of behavioural, biological, and cognitive competencies facilitates the development of automatic action procedures. Automatic action procedures are less time and energy consuming than are deliberate, effortful action procedures; thus their enactment in an action sequence frees up time and energy that can be used in other ways [13, 73].

Work-life conflict

The bulk of work-life integration research has focused on work-family conflict, that is, a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect [74]. Work-family conflict is problematic for all sorts of reasons: it is positively related to absenteeism, turnover intentions, reduction in both domain-specific and general life satisfaction, increased depression levels, poor physical health, increased alcohol consumption, poor work performance, and poor family management [75-78].

Work-family conflict can occur in both directions, that is, from work-to-family and from family-to-work. However, people tend to report greater levels of work-to-family than family-to-work conflict [79, 80]. Greenhaus and Beutell describe three specific forms of conflict [74], each of which can run from work-to-family and from family-to-work, thus describing six sources of conflict in total:

• *Time-based conflict;* where a person is unable to perform a task in one role, either physically or due to cognitive preoccupation, as a result of time demands in another role. For example, family responsibilities may produce significant time demands, contributing to absenteeism from the workplace. Conversely, people may work long hours and have little time for family.

• *Strain-based conflict;* where there is a spillover of negative emotion from one domain to the other. For instance, negative emotion associated with workplace stressors can lead to expressions of irritability toward family members or withdrawal from family members in order to recuperate [81].

• *Behaviour-based conflict;* where specific behaviours in one domain are incongruous with desired behaviours within a second domain. For example, at work a person may be expected to be analytical, ambitious, task-oriented, and hard-driving. Successful job performance may depend critically upon these behaviours. However, at home the same person may need to be more loving and supportive and less analytical and hard-driving if they are to foster a happy and healthy family life. These opposing expectations may create tension.

When multiple role demands exceed an individual's psychological resources, time, and physical energy, it becomes increasingly difficult to attain all desired goals: continued efforts to do so will result in failure experiences, frustration, negative emotion, and exhaustion [80, 82, 83]. For example, because time is limited to 24 hours per day, long work hours deplete the total time resource available and predict work-family conflict [84]. Also, the salience or value of various roles (e.g., work and family) impacts the preferred distribution of time resources, and if preferences are blocked (e.g., job demands interfere with family commitments) then conflict occurs [85].

"Interventions that help people to switch seamlessly from one life domain to another (or better, from one action sequence to another in real time) may be one way to reduce work-family conflict."

More generally, life plans are a central feature of the generalized mental models we use to describe 'how things should be' in our life on a daily, weekly, and yearly basis [86], and when our mental model is incongruent with our reality we can choose one of two strategies to maintain dynamic integration between motivation, emotion, and cognition: change our reality or change our mental model of reality [87, 88].

In the context of work-life integration, we use the term *compensation* to describe the process whereby a person responds to demand conflict or imbalance by changing their mental model of reality (and their subsequent goal-pursuit behaviour) so as to reinstate dynamic integration between motivation, emotion, and cognition and thus facilitate the recovery of lost energies and the pursuit of success experiences. Compensation can reactivate a positive cycle of goal attainment and developing competencies in many different ways. For example, by relinquishing specific personal goals (e.g., I will no longer watch CSI Miami), a person experiencing work-family conflict can make available time that can be used to moderate work-family conflict. Also, by relinquishing abstract work-related goals linked to high expectations (e.g., I will be the most productive member of my work team) or foolish expectations (e.g., I will be the most well loved member of my organization), any negative emotion associated with failing to satisfy these expectations is displaced [89].

Changing one's mental model of 'how things should be' may also facilitate greater flexibility in how an integrated set of work and family goals are pursued. For example, Behson (2002) constructed a scale he called 'informal work accommodations to family', which included a list of 16 specific strategies that people used to help balance their work and family life, such as working through lunch so that one can go home early, taking care of household tasks while at work, and so on. People who used more of these accommodations reported lower levels of negative emotion in response to family-to-work interference [90]. Notably, even if the culture of one's work organization allows for these 'accommodations', good executive control skill and ample practice is still needed to master their optimal use.

Carlson and Frone (2003) divide the sources of work-family interference into two major categories: internal and external interference [91]. Internal interference is self-imposed, for example, through a preoccupation with work performance that disrupts engagement in home life, or vice versa. External interference is imposed by an outside source, for example, a home demand that prevents a person from attending to the demands of work. Carlson and Frone argue that a significant portion of family-to-work conflict arises as a result of internal interference, such that thoughts about family life while in the work domain interfered with work performance.

Interventions that help people to switch seamlessly from one life domain to another (or better, from one action sequence to another in real time) may be one way to reduce work-family conflict. (This implies the ability to 'switch off' an active mental set and inhibit what Carlson and Frone describe as 'internal interference'.) The ability to switch mental set without undue emotional or cognitive disruption is very useful if our life demands a great variety of different action sequences that fold one into the other very frequently in real time[9]. We speculate that this skill is linked to the development of complexity of self representations and, more specifically, the development of integrated complexity in personality [35].

Importantly, adults who function using more complex self representations are more resilient [92]. Having a large number of self-aspects - self as worker, athlete, avid reader, lover, parent, musician, dancer, poet, neighbour, volunteer, movie buff, comedian, and so on - facilitates the processes of reinterpretation and reorientation,

which help to offset or neutralize the self-threatening implications of negative events. Reinterpretation involves reappraisal and a shift in subjective standards of evaluation after a negative event has occurred. The same event can be reinterpreted as neutral or positive when viewed in light of other life domains or self-aspects. A reorientation after a negative event in one life domain increases the probability of discovering (or constructing) positive experiences in other life domains. In Figure 1, executive control - and in this context, the ability to switch attention away from a maladaptive orientation or interpretation - works with available representations of self and action in the selection of attainable goals that reduce work-life conflict and help to sustain an upward spiral of growth in cognitive-emotional complexity and competency. Successful goal attainment produces positive affect that acts to reinforce continued engagement. Notably, unlike other models which assume that positive affect alone produces an 'upward spiral' of growth [93], our model assumes that both the *specific content* of goals selected and the *process of goal attainment* is critical for understanding developmental outcomes. Naturally, the structure of the cognitive-emotional system depends on the content of cognition, which in turn depends on the process of expressing sources of motivation in cognition, i.e., as specific goals.

Work-life facilitation

Conflict and stress are not the only possible outcomes associated with participating in multiple roles. Sociologists Sieber [94] and Marks [95] were amongst the first thinkers to suggest that multiple role involvement can produce *enrichment*. Enrichment occurs when people amass role privileges across their various roles, achieve overall status security by allowing roles to serve as buffers or compensate for each other, receive resources from one role that improves performance in other roles, or simply expand available energy reserves and personal resources as a function of activating highly differentiated, varied action states.

Frone (2003, p. 145) talks about work-family facilitation, defined as "the extent to which participation at work (or home) is made easier by virtue of experiences, skills, and opportunities gained or developed at home (or work)"[96]. Research suggests that work-to-family facilitation and family-to-work facilitation are distinct constructs, and are independent of work-to-family conflict and family-to-work conflict [97]. Researchers have also identified individual dispositional characteristics, like agreeableness and conscientiousness, which are positively related to work-family facilitation but not work-family conflict [98]. This suggests that facilitation and conflict have different antecedents, a view consistent with the idea that positive affect and negative affect are supported by distinct neural systems [99].

Research on work-life facilitation is limited, but a few findings are worth noting here: Grzywacz and Marks found that higher levels of decision latitude on the job were associated with higher levels of work-to-family facilitation. Kirchmeyer (1992) obtained results indicating that time devoted to parenting can actually increase, rather than detract, from job satisfaction and organizational commitment [100]. Social support in the home environment might also be a key source of family-to-work facilitation, but clear evidence of this link is still needed. More generally, work-family conflict and work-family facilitation may offset each other, much like the ebb and flow of negative affect and positive affect, but we currently know very little about how this process works.

Recovery

After a period of work people need some time to rest and recover. Depending on the difficulty and/or complexity of work demands, the time devoted to work, and a person's ability to mobilize psychological and physical resources, a certain level of fatigue will be experienced at the end of each work period. If a period of rest is unavailable, if there is no recovery, or if recovery is insufficient, fatigue will accumulate and damage an individual's capacities, resources, and health [101][10].

Conservation of Resources theory [102] assumes that people want to preserve their energy in order to deal with life demands and stressful experiences. People need to rest in order to preserve and restore their energy resources. Resource loss is seen as the primary mechanism driving stress reactions. Thus, while a good holiday can relieve the effects of burnout [103], the recovery that occurs in the evenings after normal working days is probably more important for the maintenance of dynamic equilibrium. In the context of physiological stress responding, the speed of recovery may be as important in the aetiology of disease and illness as the acute reactivity in response to the stress [104, 105].

Sleep is the most important recovery mechanism available to humans, and sleep must be continuous for it to be restorative [106]. Sleep loss and sleep disturbance can lead to fatigue, performance decrements, mood changes, and even immune function impairments [107]. People who regularly work overtime have more sleep problems [108]. In the work context, sleep loss is associated with absenteeism, reduced productivity and an increased risk of fatigue-related accidents [109, 110]. The ability to 'switch off' work-related thoughts and work-related arousal at bedtime can affect sleep quality and subsequent energy levels the next day [111, 112]. Exhausted people rate their effort expenditure at work in the morning as much higher than people who do not feel exhausted, suggesting a cumulative effect of lack of recovery.

Technology developments and the ongoing rationalization and efficiency operations in organizations has resulted in work becoming more intense and intensive, with heavy information processing demands and increased need for regulatory control over rule-governed behaviour. The consequence is that more and more people are complaining about work pressure [113]. Fatigue is a common complaint, reported by 25 – 33% of the working population [114]. Notably, if information processing demands and rule-governed behaviour are perceived as 'boring' by workers, apathy can compound fatigue and cause negative spillover that manifests as apathy for family life and personal development [115]. In this situation, no domain of life provides an opportunity for recovery, energy enhancement, positive affect, and personal growth.

The goals people pursue after work influence their level of recovery and subsequent energy level. Zijlstra and Rook [116] found that the more time spent on job-related activities in the evening the higher the level of fatigue reported at bedtime. Low-effort activities (like watching TV) did not predict recovery (i.e., reduced levels of fatigue), whereas physical activities (like swimming) had a significant restorative effect. Zijlstra and Rook also found a weekly pattern of fatigue. Fatigue was higher during the working week than at the weekend. During the working week, the highest levels of fatigue were reported in the first half of the week (i.e., from Monday to Wednesday). Interestingly, performance of domestic duties in the evening did not contribute to fatigue at bedtime. The fact that people have more control over domestic duties (their pace and timing) may explain why these activities do not necessarily add to work-related fatigue. In the absence of work-family conflict, family duties can be a welcome distraction from work-related concerns. Some family duties may not be perceived as 'duties' *per se* because they are great fun, like playing with children.

Enacting the solution

Stiff and unbending is the principle of death. Gentle and yielding is the principle of life. Thus an Army without flexibility never wins a battle. A tree that is unbending is easily broken. The hard and strong will fall. The soft and weak will overcome.

Tao Te Ching

Deeply embedded in industrialized culture are the perceived benefits of a mastery-oriented approach to both working and living [117]. Kofodimos suggests that people in modern industrialized culture put more time, energy, and commitment into work than other areas of life. In striving for mastery and achievement people avoid intimacy. In our view, the attainment of work-life integration implies a cyclical pattern of goal pursuit characterized by a growth in cognitive-emotional integration, whereby mastery and intimacy are increasingly well-integrated and co-functional in the action process. Intimacy is not avoided for the sake of mastery, nor is mastery avoided for the sake of intimacy, consistent with the idea that two core motivation clusters - motivation for control over action and motivation for sex, love and friendship - are expressed in the life plan and the cycle of action from selection through person-environment interactions to goal pursuit, goal attainment and the growth of competencies and resources.

Notably, if the mastery approach emphasises goal pursuit for the sake of 'goal attainment' rather than goal pursuit for the sake of 'the process of living', then a mastery-oriented approach to both working and living will activate a telic goal pursuit process. But because the telic state directs attention toward future outcomes, the focus of attention is displaced from 'now'. As a consequence the action process itself is deemed secondary to the outcome of the action process. And when it comes to life satisfaction, this telic/mastery-oriented strategy is problematic - it inhibits one of the biggest predictors of life satisfaction: flow [50]. When in the flow state, people are completely engrossed and engaged. Flow is said to emerge during relatively challenging tasks for which a person possesses the skill to meet the challenge, and while the goal of action is available to awareness in these contexts, the majority of attentional resources are devoted to monitoring and controlling the action process itself.

As noted earlier, paratelic (playful) states are process-oriented rather than goal-oriented, but because our culture tends to equate play with leisure (i.e., do it outside of work time please), it is often assumed to be a waste of precious time. But this view fails to recognise the value of permitting paratelic states in organizational culture, not only for the purpose of increasing worker satisfaction but also worker productivity, creativity, secure (organizational) attachment, and group cohesion and cooperation [118-120]. With the paratelic state as an 'open option' in the repertoire of action states, an individual worker is freer to pursue mastery using a variety of different strategies – by adding the paratelic to the telic, their repertoire of available actions is necessarily more varied; they are more flexible. And given the intense pressure on organizations and individuals to be flexible and responsive to change, it makes sense that organizations should permit the action states necessary for flexibility rather than simply 'demand' flexibility as 'part of the job', thus compounding demand upon demand. At the same time, like any other skill, the ability to use both telic and paratelic states to one's advantage requires practice, courage (and perhaps even special training).

Ultimately, although adding play to the mastery-intimacy nexus (and thus satisfying our motivation for personal growth and self-acceptance) implies a delicate balance, because play foster behavioural flexibility and because people feel free to try new skills and different roles when playing, we assume that play is an art form that pulls life plans into sharp focus, drawing attention directly into the process of living, and undergirding the mastery-intimacy nexus with flexible movement and positive affect. This suggests another way for us to intervene (when acting as lay or professional psychotherapist): consider facilitating other people's play behaviour in a non-judgemental way.

"Psychotherapy has to do with two people playing together. The corollary of this is that where playing is not possible then the work done by the therapist is directed towards bringing the patient from a state of not being able to play into a state of being able to play." (Winnicott, 1971, p. 38: [68]).

In conclusion

Living is the purpose of life, and although human adaptation implies acquisition of the means to sustain life, there is more to life than work devoid of love and play. Love and play while at work may allow us to be more productive than we can possibly imagine, because we cannot possibly imagine the benefits of the merger until we happen upon it. As life plans are constructed, actions selected and goals attained, we do well to remember that gentle and yielding is the principle of life.

Footnotes

1. *Work-Life Balance: A Psychological Perspective.* Psychology Press.

2. Because research on work-life integration is rarely longitudinal, we know little about how working parents learn different strategies of work-life integration. Learning 'what works' may occur through trial and error, imitation, contingency feedback, or the deliberate construction and testing of rule systems designed to optimize order, peace of mind, productivity, and well being. In the later case, we accept that violation of rule systems during play is likely deemed acceptable by those who successfully integrate work, love, and play; in this way, order, peace of mind, productivity, and well being do not get linked to static/inflexible rule systems. A system that cannot change stagnates, and one of the primary functions of play is to facilitate growth by permitting sufficient variation (see text).

3. Naturally, outside of work life and family life, people may wish to pursue other personal goals: sport- and hobby-related goals; intellectual and aesthetic pursuits; meditative and spiritual activities; and so on.

4. Not wishing to add to the cultural evolution of rising expectations, we accept that this sentence presents a lofty ideal. We hereby modify the ideal by noting that personal expectations along any one of these defining features of integration can be as low as is deems acceptable, and perhaps one of the high arts of living successfully in modern culture is the art of embracing lower expectations. However, as with all things psych*ological*, the relationship between expectations and life satisfaction is complex. [30].

5. Note: consideration of additional processes associated with the interdependent action of couples, colleagues, organizational cultures, and social systems requires additional elements and relations not represented here. As we work to develop work-life integration interventions, we recognize the importance of investigating these higher order elements and relations, and will present a summary of our investigation at a later date.

6. We are acutely aware of the problems associated with defining "successful development", and do not attempt to resolve the conflict between objective and subjective criteria of success or between hedonic and eudiamonic traditions of well-being. We discuss these problems elsewhere. Having said that, when compared to the abstract nature of theory and debate in the literature on successful development, we believe that work-life integration research provides a more concrete context within which to appreciate the meaning of successful development.

7. Notably, by reference to the idea that manifest action is grounded in gene-culture co-evolution, and given that a life plan is canalized by culture but also 'motivated' and 'selected' by individuals, the perspective shaping our scheme is heavily influenced by a constructivist view on individual development (i.e., developmental outcomes are 'built of' or 'co-constructed from' dynamic interdependencies between genes, culture, and self-directed action unfolding over time in a population context and a

physical environment.

8. Eustress is experienced when skills match demands and demands are perceived as challenging and rewarding, a combination critical for the experience of 'flow'. [70].

9. A related way to tackle work-family conflict is to implement an intervention that fosters time management skills. Application of time management techniques (e.g., general organization activities, setting goals and priorities) may foster a sense of control over demands that helps to lower levels of work-family conflict (Adams and Jex, 1999).

10. Because work in western societies is now dominated by mental rather than physical demands (Zijlstra et al., 1996), the assumption in most models of work stress is that work demand implies cognitive rather than physical demands. Notably, the demands of 'non-physical' cognitive work can have negative physical, mental, and emotional consequences, some of which are linked with the very nature of sitting itself (Cranz, 2000).

References

1. Werner, H., *Comparative psychology of mental development*. 1940, New York: International Universities Press.
2. Siu, R.G.H., *The Tao of science: an essay on Western knowledge and Eastern wisdom*. 1957, Cambridge, Mass.: M.I.T. Press. xii, 180.
3. Arnett, J.J., *Emerging adulthood - A theory of development from the late teens through the twenties*. American Psychologist, 2000. 55(5): p. 469-480.
4. Roberts, B.W., M. O'Donnell, and R.W. Robins, *Goal and personality trait development in emerging adulthood*. Journal of Personality and Social Psychology, 2004. 87(4): p. 541-550.
5. Pettersson, M., *Complexity and evolution*. 1996, New York: Cambridge University Press. xiii, 143 p.
6. Vickers, G., *Human systems are different*. 1983, London; New York: Harper & Row. xxviii, 188 p.
7. Kodz, J., S. Davis, and D. Lain, et al., *Working long hours: a review of the evidence*, in *Employment Relations Research Series*. 2003 (reterived 24 January 2007 from http://www.dti.gov.uk/files/file11543.pdf).
8. Clarkberg, M. and S. Merola, *Competing clocks: work and leisure*, in *Its about time: Couples and careers*, P. Moen, Editor. 2003, ILR Press: NY. p. 35-48.
9. Jacobs, J.A. and K. Gerson, *Who are the overworked Americans?* Review of Social Economy, 1998. 56: p. 442-459.
10. Jones, F. and J. Bright, *Stress: Myth, theory and research*. 2001, London: Prentice Hall.
11. Kinsella, K. and V.A. Velkoff, *An Aging World: 2001*, in *Series P95/01-1*. 2001, US Government Printing Office, U.S. Census Bureau: Washington DC.
12. Richerson, P.J. and R. Boyd, *Not by genes alone: how culture transformed human evolution*. 2005, Chicago; London: University of Chicago Press. ix, 332.
13. Hogan, M.J., *The cerebellum in thought and action: A fronto-cerebellar aging hypothesis*. New Ideas in Psychology, 2004. 22(2): p. 97-125.
14. Hogan, M.J., C.A.M. Kelly, and F.I.M. Craik, *The effects of attention switching on encoding and retrieval of words in younger and older adults*. Experimental Aging Research, 2006. 32(2): p. 153-183.
15. Fuster, J.M., *Executive frontal functions*. Experimental Brain Research, 2000. 133(1): p. 66-70.
16. Bond, J.T., et al., *Highlights of the national study of the changing workforce*. 2002, New York: Families and Work Institute.
17. Andrews, A. and L. Bailyn, *Segmentation and synergy: two models linking work and family.*, in *Men, work and family*, J.C.e. Hood, Editor. 1993, Sage: Newbury Park, CA. p. 262 - 275.
18. Peterson, C., *A primer in positive psychology*. 2006, Oxford: Oxford University Press.
19. Jones, E. and B. Fletcher, *An empirical study of occupational stress transmission in working couples*. Human Relations, 1993(46): p. 881-902.
20. Jones, E. and B. Fletcher, *Taking work home: a study of daily fluctuations in work stressors, effects on mood and impact on marital partners*. Journal of Occupational and Organizational Psychology, 1996. 69: p. 89-106.
21. Westman, M., *Stress and strain crossover*. Human Relations, 2001. 54: p. 557.-591.
22. Tausig, M. and R. Fenwik, *Unbinding time: alternate work schedules and work-life balance*. Journal of Family and Economic Issues, 2001. 22: p. 101-119.
23. Beatty, C.A., *The stress of managerial and professional women: is the price too high?* Journal of Organizational Behaviour, 1996. 17: p. 233-251.
24. Nordenmark, M., *Multiple social roles- a resource or a burden: is it possible for men and women to combine paid work with family life in a satisfactory way?* Gender, Work and Organization, 2002. 9: p. 125-145.
25. Bakker, A.B., E. Demerouti, and W.B. Schaufeli, *The crossover of burnout and work engagement among working couples*. Human Relations, 2005. 58: p. 661-689.
26. Aryee, S. and V. Luk, *Balancing two major parts of adult life experience: work and family identity among dual-earner couples*. Human Relations, 1996. 49: p. 465-487.
27. Stroh, L.K., J.M. Brett, and A.H. Reilly, *All the right stuff: a comparison of female and male managers' career progression*. Journal of Applied Psychology, 1992. 77: p. 251-260.
28. South, S.J. and G. Spitze, *Housework in marital and nonmarital households*. American Sociological Review, 1994. 59: p. 327-347.
29. Rothbard, N.P. and J.R. Edwards, *Investment in work and family roles: a test of identity and utilitarian motives*. Personnel Psychology, 2003. 56: p. 699-730.
30. Sheldon, K.M., *Optimal human being: an integrated multi-level perspective*. 2004, Mahwah, N.J.: Lawrence Erlbaum Associates. x, 239.
31. Ryff, C.D. and C.L. Keyes, *The structure of psychological well-being revisited*. J Pers Soc Psychol, 1995. 69(4): p. 719-27.
32. Heckhausen, J., *Evolutionary perspectives on human motivation*. American Behavioral Scientist, 2000. 43(6): p. 1015-1029.
33. Heckhausen, J. and R. Schulz, *A Life-Span Theory of Control*. Psychological Review, 1995. 102(2): p. 284-304.
34. Keyes, C.L., D. Shmotkin, and C.D. Ryff, *Optimizing well-being: the empirical encounter of two traditions*. J Pers Soc Psychol, 2002. 82(6): p. 1007-22.
35. Labouvie-Vief, G. and M. Márquez González, *Dynamic Integration: Affect Optimization and Differentiation in Development*, in *Motivation, emotion, and cognition: Integrative perspectives on intellectual functioning and development.*, D.Y. Dai and R.J. Sternberg, Editors. 2004, Lawrence Erlbaum.: Mahwah, N.J. p. 1 - 36.
36. Baltes, P.B., U. Lindenbeger, and U.M. Staudinger, *Life-span theory in developmental psychology*, in *Handbook of child psychology, Vol I: Theoretical models of human development*, R.M. Lerner, Editor. 1998, Wiley: New York. p. 1029 - 143.
37. Fischer, K.W. and T.R. Bidell, *Dynamic development of action, thought, and emotion*, in *Theoretical models of human development. Handbook of child psychology*, W. Damon and R.M. Lerner, Editors. 2006, Wiley: New York. p. 313 - 399.
38. Odling-Smee, F.J., K.N. Laland, and M.W. Feldman, *Niche construction: the neglected process in evolution*. Monographs in population biology; 37. 2003, Princeton, N.J.; Oxford: Princeton University Press. xii, 472.
39. Hogan, M.J., *Grappling with gene-culture co-evolution*. The Irish Psychologist, 2006. 31(11): p. 290 - 297.
40. Pinker, S., *The blank slate: the modern denial of human nature*. 2002, London: Allen Lane. xvi, 509.
41. Henrich, J. and R. Boyd, *The evolution of conformist transmission and the emergence of between-group differences*. Evolution and Human Behavior, 1998. 19(4): p. 215-241.
42. Tomasello, M., A.C. Kruger, and H.H. Ratner, *Cultural Learning*. Behavioral and Brain Sciences, 1993. 16(3): p. 495-511.
43. Boyd, R. and P.J. Richerson, *The origin and evolution of cultures*. Evolution and cognition. 2005, New York; Oxford: Oxford University Press. viii, 456.
44. Siu, R.G.H., *The Tao of science; an essay on Western knowledge and Eastern wisdom*. 1957, [Cambridge]: Technology Press. 180 p.
45. Rothbart, M.K., *Temperament and the pursuit of an integrated developmental psychology*. Merrill-Palmer Quarterly-Journal of Developmental Psychology, 2004. 50(4): p. 492-505.
46. Pinker, S., *So how Does the mind work?* Mind & Language, 2005. 20(1): p. 1-24.
47. Thelen, E. and L.B. Smith, *A Dynamic Systems Approach to the Development of Cognition and Action*. 1994, Cambridge, MA, USA: Mit Press.
48. Bertalanffy, L.v., *General system theory: foundations, development, applications*. 1968, New York: Braziller. xv, 289.
49. Carver, C.S. and M. Scheier, *On the self-regulation of behavior*. 1998, Cambridge, UK; New York, NY, USA: Cambridge University Press. xx, 439.
50. Csikszentmihalyi, M., *Flow: the psychology of optimal experience*. 1st ed. 1990, New York: Harper & Row. xii, 303.
51. Miller, J.G., *Living systems*. 1978, New York: McGraw-Hill. xli, 1102 p.
52. Kauffman, S.A., *The origins of order: self-organization and selection in evolution*. 1993, New York; Oxford: Oxford University Press. xviii, 709.
53. Cacioppo, J.T., et al., *Sociality, spirituality, and meaning making: Chicago health, aging, and social relations study*. Review of General Psychology, 2005. 9(2): p. 143-155.
54. Boyd, R., et al., *The evolution of altruistic punishment*. Proceedings of the National Academy of Sciences of the United States of America, 2003. 100(6): p. 3531-3535.
55. Boyd, R. and P.J. Richerson, *The Evolution of Indirect Reciprocity*. Social Networks, 1989. 11(3): p. 213-236.
56. De Duve, C., *Life evolving: molecules, mind, and meaning*. 2002, Oxford: Oxford University Press. xv, 341.
57. Erikson, E.H., *Adulthood: essays*. 1st ed. 1978, New York: Norton. xii, 276.
58. Erikson, E.H. and J.M. Erikson, *The life cycle completed*. Extended version / ed. 1997, New York: W.W. Norton. 134.
59. Mcadams, D.P. and E. Destaubin, *A Theory of Generativity and Its Assessment through Self-Report, Behavioral Acts, and Narrative Themes in Autobiography*. Journal of Personality and Social Psychology, 1992. 62(6): p. 1003-1015.
60. Lutz, A., et al., *Long-term meditators self-induce high-amplitude gamma synchrony during mental practice*. Proceedings of the National Academy of Sciences of the United States of America, 2004. 101(46): p. 16369-73.
61. Labouvie-Vief, G., *Self-with-other representations and the organization of the self*. Journal of Research in Personality, 2005. 39(1): p. 185-205.
62. Smith, P.K., *Play in animals and humans*. 1984, Oxford: Blackwell. xi, 334.
63. Fein, G.G., *Pretend Play in Childhood - an Integrative Review*. Child Development, 1981. 52(4): p. 1095-1118.
64. Bruner, J., *Play, Thought, and Language*. Peabody Journal of Education, 1983. 60(3): p. 60-69.
65. Fink, R.S., *Role of Imaginative Play in Cognitive-Development*. Psychological

Reports, 1976. 39(3): p. 895-906.
66.Golomb, C. and C.B. Cornelius, *Symbolic Play and Its Cognitive Significance*. Developmental Psychology, 1977. 13(3): p. 246-252.
67.Garvey, C., *Play*. 2nd ed ed. Developing child (London, England). 1991, London: Fontana. xi, 184.
68.Winnicott, D.W., *Playing and reality*. 1971, New York: Basic Books. xiii, 169.
69.Apter, M.J., *Reversal theory: motivation, emotion and personality*. 1989, London: Routledge. viii, 208.
70.Csikszentmihalyi, M., *Finding flow: the psychology of engagement with everyday life*. 1st ed. MasterMinds. 1997, New York: BasicBooks. ix, 181.
71.Siegler, R.S., *Cognitive variability: A key to understanding cognitive development*. Current Directions in Psychological Science, 1994. 3(1): p. 1-5.
72.Fredrickson, B.L., et al., *The undoing effect of positive emotions*. Motivation and Emotion, 2000. 24(4): p. 237-258.
73.Sternberg, R.J., *The triarchic mind: a new theory of human intelligence*. 1988, New York, N.Y., U.S.A.: Viking. xiii, 354.
74.Greenhaus, J.H. and N.J. Beutell, *Sources of conflict between work and family roles*. Academy of Management Review, 1985. 10: p. 76-88.
75.Allen, T., et al., *Consequences associated with work to family conflict: a review and agenda for future research*. Journal of Occupational Health Psychology, 2000. 5: p. 278-308.
76.Frone, M.R., M. Russell, and G.M. Barnes, *Work-family conflict to substance use among employed mothers: the role of negative affect*. Journal of Marriage and Family, 1996. 56: p. 1019-1030.
77.Greenhaus, J.H. and G.N. Powell, *When work and family collide: Deciding between competing role demands*. Organizational Behavior and Human Decision Processes, 2003. 90(2): p. 291-303.
78.Macewen, K.E. and J. Barling, *Daily Consequences of Work Interference with Family and Family Interference with Work*. Work and Stress, 1994. 8(3): p. 244-254.
79.Aryee, S., et al., *Role stressors, interrole conflict, and well-being: The moderating influence of spousal support and coping behaviors among employed parents in Hong Kong*. Journal of Vocational Behavior, 1999. 54(2): p. 259-278.
80.Netemeyer, R.G., J.S. Boles, and R. McMurrian, *Development and validation of work-family conflict and family-work conflict scales*. Journal of Applied Psychology, 1996. 81(4): p. 400-410.
81.O'Driscoll, M.P., *The interface between job and off-job roles: enhancement and conflict*, in *International review of industrial and organizational psychology*, C.L. Cooper and I.T. Robertson, Editors. 1996, Wiley: Chichester. p. 279 - 306.
82.Frone, M.R., M. Russell, and M.L. Cooper, *Antecedents and Outcomes of Work Family Conflict - Testing a Model of the Work Family Interface*. Journal of Applied Psychology, 1992. 77(1): p. 65-78.
83.Frone, M.R., M. Russell, and M.L. Cooper, *Relation of work-family conflict to health outcomes: A four-year longitudinal study of employed parents*. Journal of Occupational and Organizational Psychology, 1997. 70: p. 325-335.
84.Major, V.S., K.J. Klein, and M.G. Ehrhart, *Work time, work interference with family, and psychological distress*. Journal of Applied Psychology, 2002. 87(3): p. 427-436.
85.Carlson, D.S. and K.M. Kacmar, *Work-family conflict in the organization: Do life role values make a difference?* Journal of Management, 2000. 26(5): p. 1031-1054.
86.Brandtstèadter, J. and R.M. Lerner, *Action & self-development: theory and research through the life span*. 1999, Thousand Oaks: Sage Publications. xx, 540.
87.Piaget, J., *Adaptation and intelligence: organic selection and phenocopy*. 1980, Chicago: University of Chicago Press. 124 p.
88.Heckhausen, J. and R. Schulz, *Optimization by Selection and Compensation - Balancing Primary and Secondary Control in Life-Span Development*. International Journal of Behavioral Development, 1993. 16(2): p. 287-303.
89.Brandtstadter, J. and K. Rothermund, *Self-percepts of control in middle and later adulthood: buffering losses by rescaling goals*. Psychol Aging, 1994. 9(2): p. 265-73.
90.Behson, S.J., *Coping with family-to-work conflict: the role of informal work accommodations to family*. J Occup Health Psychol, 2002. 7(4): p. 324-41.
91.Carlson, D.S. and M.R. Frone, *Relation of behavioral and psychological involvement to a new four-factor conceptualization of work-family interference*. Journal of Business and Psychology, 2003. 17(4): p. 515-535.
92.Rothermund, K. and C. Meiniger, *Stress-buffering effects of self-complexity: Reduced affective spillover or self-regulatory processes?* Self & Identity, 2005. 3(3): p. 263-281.
93.Fredrickson, B.L. and T. Joiner, *Positive emotions trigger upward spirals toward emotional well-being*. Psychological Science, 2002. 13(2): p. 172-175.
94.Sieber, S., *Toward a theory of role accumulation*. American Sociological Review, 1974. 39: p. 567 - 578.
95.Marks, S., *Multiple roles and role strain: some notes on human energy, time and commitment*. American Sociological Review, 1977. 42: p. 921 - 936.
96.Frone, M.R., *Work-family balance*, in *Handbook of occupational psychology*, J.C. Quick and L.E. Tetrick, Editors. 2003, American Psychological Association: Washington. p. 143 - 162.
97.Grzywacz, J.G. and N.F. Marks, *Reconceptualizing the work-family interface: an ecological perspective on the correlates of positive and negative spillover between work and family*. J Occup Health Psychol, 2000. 5(1): p. 111-26.
98.Wayne, J.H., N. Musisca, and W. Fleeson, *Considering the role of personality in the work-family experience: Relationships of the big five to work-family conflict and facilitation*. Journal of Vocational Behavior, 2004. 64(1): p. 108-130.
99.Zautra, A., *Emotions, stress, and health*. 2003, Oxford: Oxford University Press. xvi, 310.
100.Kirchmeyer, C., *Perceptions of Nonwork-to-Work Spillover - Challenging the Common View of Conflict-Ridden Domain Relationships*. Basic and Applied Social Psychology, 1992. 13(2): p. 231-249.
101.Meijman, T.F. and D. Mulder, *Psychological aspects of workload*, in *Handbook of work and organizational psychology*, P.J.D. Drenth, H. Thierry, and C.J. deWolff, Editors. 1998, Psychology Press: Hove. p. 5 - 33.
102.Hobfoll, S.E., *Stress, culture, and community: the psychology and philosophy of stress*. 1998, New York: Plenum Press. xvi, 296.
103.Westman, M. and D. Eden, *Effects of a respite from work on burnout: Vacation relief and fade-out*. Journal of Applied Psychology, 1997. 82(4): p. 516-527.
104.Linden, W., et al., *Physiological stress reactivity and recovery: Conceptual siblings separated at birth?* Journal of Psychosomatic Research, 1997. 42(2): p. 117-135.
105.McEwen, B.S., *Allostasis, allostatic load, and the aging nervous system: Role of excitatory amino acids and excitotoxicity*. Neurochemical Research, 2000. 25(9-10): p. 1219-1231.
106.Walsh, J.K. and S.S. Lindblom, *Psycholophysiology of sleep deprivation and disruption*, in *Understanding sleep, the evaluation and treatment of sleep disorders*, M.R. Pressman and W.C. Orr, Editors. 2000, APA: Washington. p. 73 - 110.
107.Harrison, Y. and J.A. Horne, *One night of sleep loss impairs innovative thinking and flexible decision making*. Organizational Behavior and Human Decision Processes, 1999. 78(2): p. 128-145.
108.Rau, R. and A. Triemer, *Overtime in relation to blood pressure and mood during work, leisure, and night time*. Social Indicators Research, 2004. 67(1-2): p. 51-73.
109.Stoller, M.K., *Economic effects of insomnia*. Clin Ther, 1994. 16(5): p. 873-97; discussion 854.
110.Akerstedt, T., et al., *Sleep disturbances, work stress and work hours: a cross-sectional study*. J Psychosom Res, 2002. 53(3): p. 741-8.
111.Harvey, A.G., *Pre-sleep cognitive activity: a comparison of sleep-onset insomniacs and good sleepers*. Br J Clin Psychol, 2000. 39 (Pt 3): p. 275-86.
112.Groeger, J.A., F.R. Zijlstra, and D.J. Dijk, *Sleep quantity, sleep difficulties and their perceived consequences in a representative sample of some 2000 British adults*. J Sleep Res, 2004. 13(4): p. 359-71.
113.Paoli, P. and D. Merllie, *Third European survey on working conditions 2000*, in *European Foundation for the Improvement of working and living conditions. Retrieved from http://eurofound.europa.eu/publications/htmlfiles/ef0121.htm*. 2001: Dublin.
114.Bultmann, U., et al., *Lifestyle factors as risk factors for fatigue and psychological distress in the working population: prospective results from the Maastricht Cohort Study*. J Occup Environ Med, 2002. 44(2): p. 116-24.
115.Piotrkowski, C.S., *Work and the family system: a naturalistic study of working-class and lower-middle-class families*. 1979, New York: Free Press. xiii, 337.
116.Zijlstra, F.R. and J. Rook. *The contribution of various types of activities to recovery*. in *11th European conference on work and organizational psychology*. 2003. Lisbon.
117.Kofodimos, J., *Balancing act*. 1993, San Francisco: Jossey-Bass.
118.Fredrickson, B.L., *The broaden-and-build theory of positive emotions*. Philosophical Transactions of the Royal Society of London Series B-Biological Sciences, 2004. 359(1449): p. 1367-1377.
119.Fredrickson, B.L. and C. Branigan, *Positive emotions broaden the scope of attention and thought-action repertoires*. Cognition & Emotion, 2005. 19(3): p. 313-332.
120.Fredrickson, B.L. and M.F. Losada, *Positive affect and the complex dynamics of human flourishing*. American Psychologist, 2005. 60(7): p. 678-686.