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**Hoping for the Best While Preparing for the Worst:
Constructive Realism, Personal Projects
and the Transition to Motherhood**

AnnMarie Callahan Churchill

A thesis submitted to
The faculty of Graduate Studies and Research
in partial fulfillment of the requirements
for the degree of
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Abstract

Although it is well documented that an optimistic orientation is beneficial when coping with stressful life events, I proposed that prior to a major life transition a realistic orientation (giving thought to both positive and negative possibilities) is most adaptive. Two studies were conducted to assess the effect of a realistic orientation in the context of the transition to motherhood. In study 1, designed to establish validity and reliability of a new self-report measure of realistic orientation, 181 women, pregnant with their first child, were assessed on their orientation to motherhood (OM), optimism-pessimism (LOT-R), personality traits and depressive affect. In addition to establishing some reliability and validity for the scale, Study 1 indicated that OM significantly predicted depression scores over and above optimism. Women demonstrating a realistic orientation did not differ significantly from the more positively oriented group on depressive affect, however, they were significantly different from the more negatively oriented group, who reported the most depressive symptomatology.

Study 2 was designed to assess the benefits of a realistic orientation after women give birth and undertake the transition to motherhood. In Study 2, 69 women expecting their first child were interviewed during the third trimester of pregnancy, and again 3 months postnatal. Orientation to motherhood, personal projects, depressive affect, and psychological well-being were assessed at the prenatal interview, and all but the OM scale were assessed at the postnatal interview. Findings of this prospective study indicated that a realistic orientation during pregnancy is associated with lower levels of depressive affect, higher levels of psychological well-being (controlling for prenatal depression and well-being) and more adaptive restructuring of personal projects at postnatal than either a positive or negative orientation, particularly when the transition was accompanied by negative surprises. The data suggest that a prenatal

orientation to motherhood that includes thoughts of positive and negative possibilities facilitates a smoother transition to motherhood. More generally, the data suggest that a realistic orientation may be adaptive insofar as it fosters anticipatory coping activity.

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Introduction

When faced with sudden tragic life events, most people ask “Why Me?” (Davis, Wortman, Lehman, & Silver, 2000; Janoff-Bulman, 1999; Janoff-Bulman & Frantz, 1997; Wortman, 1983). This question emanates from fundamental illusory assumptions people hold about themselves and their world (Janoff-Bulman, 1999). Individuals commonly believe they are invulnerable to negative life events (Weinstein, 1980) and when confronted with such they struggle to make sense of the experience (Davis & Nolen-Hoeksema, 2001). However, this reaction is not universal. Consistently, researchers have found a significant minority who, in the wake of negative events, do not concern themselves with the issue of selective incidence and, unlike the majority, they do not seem shocked by the occurrence of personal tragedy (Davis et al. 2000; Silver, Boon, & Stones, 1983; Wortman, 1983). These people seem to more easily integrate negative life events, expending less time and mental resources searching for meaning (Davis & Nolen-Hoeksema, 2001).

According to Personal Construct Theory (Kelly, 1955), people’s psychological processes and behaviours are determined by the way in which they anticipate events. These anticipations are represented in constructs that form a personal perceptual system or lens through which people interpret the world. Plausibly, one’s ability to psychologically integrate an event is determined, in part, by the degree of congruence between one’s construct system and reality. For example, an individual who construes tragedy as something that happens to other people will be shocked and unprepared when such an event occurs in their own life, exacerbating the traumatic reaction. Indeed, trauma theory (Janoff-Bulman, 1992) suggests that the cognitive and emotional upheaval experienced in the wake of a traumatic event results, in part, from the shattering of core assumptions about oneself and one’s world.

Considering the range of experiences encountered in a lifetime, it seems prudent for individuals to view their world realistically, anticipating both positive and negative future events. A person's construct system or worldview can be constricted or broadened depending on their openness to diverse and sometimes threatening ideas and possibilities. The architect of Personal Construct Theory, George Kelly (1955), believed that psychological growth and well-being are fostered when people continually test their theories about life in an attempt to build an increasingly more accurate perspective on their world.

In contrast to the postulates of personal construct theory, there has been a movement over the last twenty-five years in social-cognitive psychology that suggests well-being is characterized by an illusory or unrealistic worldview (Lerner, 1980; Taylor & Brown, 1988, 1994). According to this view, optimism and positive illusions are hallmarks of effective goal pursuit and psychological well-being (Carver & Scheier, 1998, 2001; Taylor, 1989; Taylor & Brown, 1988, 1994). A realistic perspective, on the other hand, is considered to be more typical of people who are depressed (Alloy & Abramson, 1979). Consequently, the effect of a realistic orientation has not been given serious attention in the stress and coping literature.

A popular view in social-cognitive psychology is that psychologically healthy people are positively biased in how they perceive their social world. However, Colvin and Block (1994) rejected this "pervasive dismal view of the healthy human mind being untuned to reality detection" and argued that "the mind is more accurate and adaptively resourceful than the last 20 years of cognitive research would lead one to believe" (Colvin & Block, 1994, p.15). In fact, research on trauma and loss suggests that a realistic perspective on life is neither depressive nor maladaptive. For instance, Janoff-Bulman describes a reality-based adaptive life orientation among victims of misfortune:

Even years after traumatic life events, survivors' fundamental assumptions are less positive than they had been previctimization. They have been stripped of illusions and they know that tragedy can strike at any time. Yet, their new assumptive worlds, reconstructed over time, are typically not wholly negative and threatening. Instead, they are generally positive, but allow for the real possibility of misfortune (Janoff-Bulman, 1999, p.318).

Prominent researchers in the field of stress and coping have underscored the need for theory and research that explores the antecedents of coping for the development of preventative strategies (Aspinwall & Taylor, 1997; Lazarus & Folkman, 1984; Snyder, 1999). It is reasonable to postulate that giving thought to the potentiality of negative life events, in effect broadening one's construct system beyond positive expectancies, would make one more prepared and resilient when faced with adversity.

This dissertation is designed to assess the effect of preexisting mindset on adjustment to a major life transition. It will further the research beyond the usual consideration of optimism and pessimism, examining the influence of a realistic orientation on coping and adjustment. In this dissertation, it is presumed that a realistic orientation is beneficial in that it facilitates effective coping and adjustment.

Unlike much of the stress and coping research that has as its starting point the onset of a stressful event, this current investigation will assess anticipatory thinking prior to a significant life transition. Studies on goal striving have shown that mindset is not static and adapts in response to the stage-specific demands of the goal pursuit process (Gollwitzer & Kinney, 1989; Taylor & Gollwitzer, 1995). It is likely, therefore, that when a transition or adversity takes place, mindset adjusts as part of the coping process. Therefore, to understand the effect of prior

orientation on coping and adjustment, it is important to assess mindset before the onset of a challenging life event.

This dissertation investigates, prospectively, the effect of a realistic orientation on coping and adjustment by examining women's (pregnant with their first child) thoughts and anticipations about motherhood before they give birth and their subsequent postnatal adjustment. The primary hypothesis is that a realistic orientation to motherhood, one that acknowledges the possibility of difficulties and joys, before the transition will predict postnatal psychological well-being. Moreover, we expect that a realistic orientation will be associated with goal striving behavior that promotes adjustment and as such is referred to as constructive realism. For brevity and ease, particularly in the results section of this dissertation, those women possessing a realistic orientation, constructive realists, will be referred to as realists, while women who do not display a realistic orientation will be referred to as non-realists.

Overview of Dissertation

This general introduction continues with an overview of life orientation research in relation to coping, goal striving and well-being. Research on the effect of optimism, pessimism and realism will be reviewed. Following a review of the literature pertaining to life orientation, research on the motherhood transition will be reviewed to show why this is an important and appropriate population for the study of life orientation and adjustment to a stressful life event. Finally, an overview of Personal Projects Assessment (PPA) methodology and the rationale for its use in the present study will comprise the final section of the introduction.

Following the introduction, study 1 will report on an empirical investigation designed to establish reliability and validity for a new self-report measure of realistic orientation. The relationship between realistic orientation and related constructs and personality traits will be

examined. Additionally, the results of a preliminary investigation into the association between realism and depressive affect will be provided and discussed. Study 1 will be followed by the first section of study 2 (study 2a) that provides the results of a prospective investigation into the influence of a realistic orientation on subsequent adjustment. We will look specifically at coping and adjustment in the context of a more difficult than expected motherhood transition. In the second part of study 2 (study 2b) we present the results of participants' Personal Projects Analyses. In this section we attempt to illustrate the findings from study 2a by exploring the postnatal restructuring of constructive realists' and non-realists' project systems. The final section of the dissertation will comprise a general discussion, including issues related to limitations of the study, suggested directions for future research and conclusions.

Hypotheses

It is expected that to the extent a woman, who is expecting her first child and is in the later stages of pregnancy, hopes for the best and prepares for the worst (i.e., the realistic orientation), in relation to her impending transition to motherhood, she will experience a smooth adjustment relative to women who do not display a realistic orientation.

It is further hypothesized that the benefit of a realistic orientation will be most pronounced when the transition is more difficult than expected. In other words, the link between orientation and adjustment will be moderated by the difficulty of the transition. It is expected that when childbirth and/or the early months of mothering are more difficult than expected, constructive realists will cope better than people who were predominantly positive or negative in their thoughts about motherhood during pregnancy.

An additional purpose of this research is to illustrate the orientation-adjustment relationship and provide a more detailed analysis for how people work their way through major life transitions. Goal striving theory suggests that to the extent that people can restructure their

goal systems to match the demands of significant life changing events, adjustment is facilitated (Brandtstadter & Rothermund, 1994; Carver & Scheier, 1998). Therefore, it is proposed that this link between realistic orientation and adjustment will be expressed through changes in one's personal project system. Specifically, it is hypothesized that women who give thought to the positive and negative possibilities associated with their impending transition to motherhood will be more likely to restructure old projects and develop new projects to create a postnatal project system that is meaningful, manageable and congruent with the transition to motherhood.

Life Orientation in the Stress and Coping Literature

The current approach to the study of life orientation in the stress and coping literature has produced a polarized and simplistic approach to what researchers in the field are beginning to acknowledge is a complex issue (see Norem & Chang, 2001). In general, researchers have focused on the effect of an optimistic versus a pessimistic perspective, highlighting the benefits of optimism and the negative effects of pessimism (Carver & Scheier, 1998; 1999, 2001; Taylor & Brown, 1988, 1994).

However, recent research has demonstrated that the effect of positive and negative thinking is not fully represented by concluding that optimism is good and pessimism is bad (Chang, 2001). For instance, Brown and Marshall (2001) found that there is a threshold for the positive effect of optimism and several studies have shown that the positive effects often attributed to optimism are actually accrued from the absence of pessimism (Chang, 1998; Dember, 2001; Raikkonen, Matthews, Flory, Owens & Gump, 1999). Moreover, the finding that optimism and pessimism may represent distinct partially independent factors (Chang, D'Zurilla, & Maydeu-Olivares, 1994; Dember, 2001) suggests that people can hold both positive and negative expectations about the future (see Benyamini, 2005).

In the next section I will review the research on optimism and pessimism and argue that optimism and pessimism do not represent an adequate bi-directional conceptualization of life orientation. In particular, I will focus on research that has identified limitations of optimism and benefits of pessimism. I will then develop a case for the consideration of a reality-based perspective in the study of stress and coping.

The effect of optimism.

In the stress and coping literature, optimism is usually understood (conceptually and psychometrically) to reflect a general expectation that good things will happen (Chang, 2001). According to Carver and Scheier (1998), people who expect good things to happen are confident and persistent in their goal pursuits. In Carver and Scheier's expectancy model, stressful events are perceived as obstacles to goals and coping is an aspect of self-regulation that keeps people on task, assuming their coping strategies are effective. These authors contend that effective coping and favorable outcomes are positively associated with an optimistic viewpoint, while a pessimistic perspective is associated with avoidance, withdrawal of effort, and negative outcomes.

There is a voluminous literature that links optimism to good outcomes for psychological well-being, goal striving and adjustment (Andersson, 1996; Aspinwall & Taylor, 1992; Carver & Gaines, 1987; Carver et al., 1993; Chang, 1998; Taylor et al., 1992; for a review, see Scheier, Carver, & Bridges, 2001). The prevalence of findings suggesting the powerful positive effect of optimism has prompted some researchers to suggest that positive illusions are preferred to reality (Taylor & Brown, 1988, 1994).

This strong assertion for illusory optimism has met with criticism. Colvin and Block (1994) demonstrated that the evidence reviewed by Taylor and Brown (1988) was equivocal

and argued that reality distortion is maladaptive in the long run. This debate has not been settled (see Colvin & Block, 1994b) and there have been a number of other cautionary and contingency statements made concerning the promotion of unrealistic optimism and positive bias (Baumeister, 1989; Brown and Marshall, 2001; Chang, 2001; Norem and Cantor, 1986; Perloff, 1983; Tennen & Affleck, 1987; Weinstein, 1980).

For instance, Asendorpf and Ostendorf's (1998) research on self-enhancement demonstrated that neither the position put forth by Colvin and Block (1994) nor Taylor and Brown (1988) is sufficient in understanding the relationship between self-enhancement and mental health. The authors demonstrated that different approaches to defining mental health and to sample selection produce differential conclusions and that neither extreme self-enhancement nor extreme self-devaluation is healthy. These authors suggest that the relationship between positive illusions and mental health is likely a nonlinear one with extreme self-enhancement accompanied by antisocial and narcissistic personality disorders on the one end and extreme self-devaluation accompanied by avoidant and depressive personality disorders on the other end.

Contingency statements regarding the benefits of positive illusions have also been made in the context of goal striving; where research findings usually indicate that optimism is positively correlated with the successful pursuit of personal goals (for a review see Carver and Scheier, 1998). A number of researchers have discovered limits to this relationship. Brown and Marshall (2001) reported that the upward curve in the relationship between optimism and achievement levels off at the midpoint between low and high optimism. In studies assessing the impact of expectations and level of difficulty on task performance, it was found that medium and high expectations were equally effective for solving difficult problems (Brown &

Marshall, 2001). The authors concluded, “It is not necessary to think one is definitely going to succeed. More modest expectancies can also be effective” (p.250).

Other researchers have found that in the case of unsolvable tasks, the persistence considered paramount to optimists’ effective goal striving and achievement has been shown to be counterproductive. Baumeister (1989) found that optimists are more likely to engage in unproductive persistence, expending time and resources on futile tasks. Janoff-Bulman and Brickman (1982) argued that it is the ability to discriminate situations in which persistence will pay off from situations in which it will not, rather than persistence or lack of persistence, that is crucial to goal striving and psychological well-being. These authors contended that the tendency to persist in trying to solve a task that is essentially unsolvable is a more serious problem than to give up when persistence would have paid off.

Cantor and Harlow (1994) asserted that the need for modesty in goal setting is particularly acute at the transitional stages of the life course and unrealistic optimism can impede the flexibility required during difficult life events. When people overestimate their personal resources they are less likely to relinquish difficult projects or downscale goals to match reality (Brandtstadter & Rothermund, 1994; Heckhausen, 1997). Moreover, committing to unrealistic standards and goals has been found to be positively related to feelings of helplessness and depression (Bandura, 1992) and reduced life satisfaction (Little, 1989).

The effect of optimistic biases on health related behaviours has been a much-debated issue. Miller, Shoda and Hurley (1996), in their review of the role of cognition and affect in health protective behaviours, suggested that too much or too little optimism interferes with the implementation of behavioural regimens that minimize risk of illness. Others have engaged in a more polarized debate, citing either benefits or potential costs of unrealistic optimism in the

context of risk assessment and disease prevention. On one side, there is the argument that positive illusions about the future and personal vulnerability prevents people from taking the necessary precautions to avoid or lessen the effect of negative events (Perloff, 1983; Weinstein, 1980; 1984). On the other side of the debate is the assertion that optimism and positive illusions allow people to be more attentive to threatening information, increasing cautionary behaviour (Aspinwall & Brunhart, 1996). There is evidence available that supports both positions.

Field research on risk assessment and related behavior supports the cautions related to unrealistic optimism. A study of adolescent girls at risk for HIV infection showed that those high in optimism were less likely to seek out information regarding HIV testing and to follow through with the actual test than were their less optimistic counterparts (Goodman, Chesney, & Tipton, 1995). Perkins, Leserman, Murphy, and Evans, (1993) found that optimistic homosexual men reported more high risk sexual behavior than pessimistic homosexual men. And, in a study of ninth and tenth grade high school students, it was found that those who perceived that their risk of acquiring AIDS was highest reported the greatest intention to change their behavior to lessen their risk (Gladis, Michela, Walter, & Vaughan, 1992).

In contrast, other experimental and field research has produced results that suggest optimistic people pay greater attention to risk information. Aspinwall and Brunhart (1996) assessed college students' attention to threatening computer-generated information as a function of optimism. Optimistic beliefs about one's health predicted greater attention to risk information than to neutral or benefit information and greater levels of recall overall, especially when the information was self-relevant. Similar results were found in field research involving men at risk for AIDS (Taylor et al., 1992) and women diagnosed with breast cancer (Carver et

al., 1993). In these investigations, optimism was associated with enhanced cautionary health behaviors and other benefits such as less distress and avoidant coping.

These apparent contradictory findings might be accounted for by mediating variables. There is evidence that simply expecting good things to happen does not produce positive outcomes. In a study assessing the effect of optimism on psychological and behavioral outcomes (alcohol and drug use) for pregnant women, Park, Moore, Turner, and Adler (1997) found that optimism alone did not predict favorable behavioral and psychological outcomes. In this study, the presence of *constructive thinking*, defined as the ability to think and to solve problems in everyday living with a minimum cost in stress (Epstein & Katz, 1992), mediated the relationship between optimism and positive outcomes. The researchers concluded from this study that to be beneficial, optimism must be directed or channeled constructively.

These findings are in line with research on goal striving, which suggests that simply imagining or expecting positive outcomes, in the absence of planning and effortful action, is not helpful, and in some cases can be detrimental (Taylor, Pham, Rivkin, & Armor, 1998; Oettingen, 1996). Oettingen (1996) differentiated between fantasy and cognitive work in goal pursuit. Fantasizing about losing weight or having a romantic partner was not adequate for achieving either. The author suggested that positive fantasies produced negative results for goal achievement by reducing active goal striving. Taylor, Pham, Rivkin, and Armor (1998) reported similar results for students induced to mentally simulate either a positive outcome (receiving an 'A' on an exam), or the process of working toward their goal and then achieving it. Simply imagining attaining an 'A' was less effective in terms of academic performance than either the process simulation or the no simulation control condition. In a series of more recent studies on goal striving, Oettingen and Mayer (2002) found that the valence effect of future

thinking was mediated by effort. Positively toned fantasies about achieving success in a college course predicted subsequent poor performance when the actual amount of time devoted to study and course work was low.

These findings on the deleterious effect of positive outcome imaginings on goal striving are consistent with the negative effects associated with wishful thinking in the context of coping (Bolger, 1990). In studies where optimism has been found to be linked with less cautionary behavior and attention to risk information (Gladis et al., 1992; Goodman et al., 1995; Perkins et al., 1993), there may have been the absence of realistic appraisal and constructive thinking. These mediating variables were not assessed; therefore, it is impossible to explain unequivocally the contradictory findings. However, two studies indicate that cancer (Carver et al., 1993) and AIDS (Taylor et al., 1992) patients who were attentive to health warnings and displayed adaptive coping were more than simply optimistic; they demonstrated a realistic appraisal of their illness (Carver et al., 1993) and expressed high levels of worry and concern that were commensurate with the severity of their illness (Taylor et al., 1992).

Cognitive distortions that shield people from unpleasant realities can be counterproductive to psychological growth and sociability. Several researchers have reported the tendency for optimists to avoid reflective thought, in particular self-referent negative thoughts (Baumeister, Smart, & Boden, 1996) and thoughts about future outcomes (Norem & Illingworth, 1993), which are considered essential for stress prevention (Aspinwall & Taylor, 1997). The reluctance of optimists to reflect on their behavior has been implicated in the positive relationship found between optimistic biases and aggression (Baumeister et al., 1996; David & Kistner, 2000), social distancing (Pyszczynski, Greenberg, Solomon, Sideris, & Stubing, 1993) and narcissism (John & Robbins, 1994).

The maladaptiveness of positive illusions about the future may be most noticeable when unexpected adversity strikes. Although not directly tested, theory on coping with loss and tragedy (Davis et al., 2000; Janoff-Bulman, 1992) and descriptions of the psychological reactions of victims of adversity (Davis, Nolen-Hoeksema, & Larson, 1998) suggest that positive illusory assumptions about the world, when disconfirmed, exacerbate the negative effect of difficult life events. The common response from victims of tragedy is “they never thought such a thing could happen to them” (Davis & Verberg, 2000; Janoff-Bulman, 1999). In an attempt to make sense of that which is not explainable in their personal construct system, individuals often engage in self-blame (Janoff-Bulman & Frantz, 1997), victim blaming (Lerner, 1980; Lerner & Miller, 1978), counterfactual thinking (Davis, Lehman, Wortman, Silver, & Thompson, 1995) and a persistent search for meaning that can interfere with adjustment (Davis et al, 2000; Janoff-Bulman, 1999). Although these cognitive strategies are common, they are not necessarily adaptive and prolonged use of strategies such as counterfactuals has been shown to be associated with maladjustment (Davis et al, 1995). A more realistic worldview might prevent the shattering of assumptions and the commensurate distressing cognitive processes post-trauma.

In sum, it is argued that optimism should be tempered with reality-based perceptions of oneself and one’s world. Extreme optimism is no more beneficial than a moderate level and may lead to unrealistic expectations that prolong futile goal striving, dampen precautionary behavior, and promote wishful thinking. Expecting good things to happen, in the absence of reality-based planning and problem solving, is ineffective at best. Worse, this may interfere with functional goal pursuit and adjustment to difficult life events. Although an optimistic outlook may be conducive to feeling happy, optimism may block receptiveness to negative

information that is crucial to stress prevention and self-improvement. Finally, positive illusions about the world and one's vulnerability might give people a false sense of security that, in the wake of unexpected negative events, gives rise to distressing and maladaptive thoughts and processes.

The effect of pessimism.

Pessimism, the expectancy that bad things will happen, is usually associated with negative outcomes, including maladaptive coping (Chang, 1998), psychological distress (Plomin et al., 1992) and physical illness (Peterson, Seligman & Vaillant, 1988). Carver and Scheier's (1998) theory on expectancies and self-regulation asserts that pessimists experience doubt rather than confidence when they evaluate obstacles to their goals. This doubt about their ability to overcome obstacles and experience positive outcomes is believed to facilitate withdrawal of effort and abandonment of goals, which is considered detrimental to psychological well-being. Although research findings support the dominant assumption that negative thinking is maladaptive, less well known is at what level, in what situations, and for whom, are negative thoughts beneficial. Recently, a number of authors have made an argument for the "positivity of negativity" (Bohart, 2002; Held, 2002; Kowalski, 2002).

Consistent with this assertion that negative thinking can be beneficial, Norem and Cantor (1986) found that thinking about failure and negative possibilities is useful for some people when preparing for academic testing. These authors suggested that by preparing themselves for the worst, *defensive pessimists* control their anxiety and fear of failure, allowing them to perform at their best. Defensive pessimism is considered a self-protective anxiety-control strategy that involves setting low expectations prior to entering a situation so as to guard against the loss of self-esteem in the case of failure. Although defensive pessimists

imagine negative possibilities and seem to expect the worst, they are persistent and effective in their goal striving and generally experience successful outcomes. Importantly, when defensive pessimists are directed to a positive orientation their performance worsens and they report increased psychological distress (Norem & Cantor, 1986).

There have been several other lines of research demonstrating the positive effect of negative thinking, particularly when expectations are differentiated from fantasies or imaginings in the context of future thinking. Research investigating the effect of generating hypothetical scenarios on related behavior has consistently shown that negative thoughts and imaginings, in contrast to negative expectations, are associated with increased motivation and performance. Sherman, Skov, Hervitz and Stock (1981) studied the effect of imagined hypothetical scenarios on subsequent behavior by randomly assigning participants to an imagine failure, imagine success, or control condition. Subjects who imagined doing poorly on an anagram task outperformed the imagine success and control group on a subsequent word test. Examining the effect of fantasies on motivation and success with life tasks, Oettingen and Mayer (2002) found a similar pattern. Negatively toned fantasies about future goals better predicted successful outcomes in academic, professional and health domains. Imagining negative possibilities such as hindrances and hardships, rather than a smooth and pleasant process of goal pursuit, predicted increased motivation and goal attainment, whereas positively toned imaginings predicted negative outcomes.

In line with the findings on the positive effect of negative imaginings for goal pursuit, recent theorizing on proactive coping posits that thinking about and planning for potential negative events can negate or minimize the effect of potential stressors. Aspinwall and Taylor's (1997) model of proactive coping underscores the importance and necessity of attending to and

processing negative information. Awareness of potential adversity permits the accumulation of resources (personal and environmental) needed to avoid or manage a stressful event. Avoiding or repressing negative information inhibits proactive coping and leaves individuals vulnerable to life's stresses. In promoting proactive coping, Aspinwall and Taylor (1997) suggest "attention to threatening information that alerts one to the possibility of future trouble is beneficial in that to be forearmed is to be well-prepared" (p.417).

The promotion of worst-case scenario thought and planning is also evident in organizational psychology (Fearn-Banks, 1996). As part of a company's crisis management plan, thinking and planning for the worst-case scenario was shown to prepare individuals and organizations to cope with crises that may occur. Reviewing several real life examples, Fearn-Banks (1996) concluded that utilizing this strategy reduced the level of risk and uncertainty before and after a crisis, enabling the organization to emerge from crisis situations better than it would have otherwise.

A potential liability of entertaining negative imaginings is the arousal of negative affect, which may follow from thinking about future worst-case scenarios. Although defensive pessimists, who imagine the worst in any stressful situation, perform as well as optimists, they generally report more negative emotions prior to a stressful event (Norem & Cantor, 1986; Showers, 1992). In an experimental manipulation that involved evaluation of social interactions, both optimists and defensive pessimists felt worse following a negative focused activity than a positive focused activity (Showers, 1992). In a study assessing the psychological and physical benefits of bringing to mind and writing about difficult life events, Pennebaker and Beall (1986) found that attending to negative thoughts and feelings produced heightened physical and emotional arousal immediately following the exercise. However, the negative

emotional arousal resulting from a negative focus appears to be short-lived (Norem & Cantor, 1986; Pennebaker & Beall, 1986). For instance, defensive pessimists generally report levels of satisfaction and pleasure that are similar to optimists following a stressful event (Norem & Cantor, 1986).

The reluctance of people to think about potential negative events likely stems from the undesirable feelings that negative thoughts arouse. It is well documented that some people *repress* (Byrne, 1961) or *blunt* (Miller, 1992) negative information in an attempt to regulate their emotions. Psychoanalytic theory and numerous other psychological theories, such as Cognitive Dissonance Theory (Festinger, 1957), Just World Theory (Lerner, 1980), and Terror Management Theory (Greenberg et al., 1990) highlight the intense desire of people to avoid negative emotions, such as fear and anxiety.

However, psychological benefits can accrue from attending to and processing negative feelings. For example, research participants directed to think about and express their feelings regarding their vulnerability to cancer demonstrated decreased reliance on cognitive distortions, decreased anxiety and fear, and less social distancing of cancer patients relative to a control group (Pyszczynski et al., 1993). When people are directed to bring negative feelings to mind either through writing (Pennebaker & Beall, 1986) or mental simulation (Taylor et al., 1998) they report increased psychological and physical health and enhanced problem solving in the long term (respectively). Processing negative thoughts and feelings through behaviors such as complaining has also been linked to improved psychological health, as long as such expressions of dissatisfaction are in moderation (Kowalski, 2002). The finding that attention to negative emotions can give rise to positive outcomes is consistent with applied cognitive

therapies and desensitization programs that encourage people to consciously process their anxieties and worst fears with beneficial results (Meichenbaum, 1977; Miller, 1992).

This assertion that attending to negative thoughts and feelings can promote positive outcomes needs to be reconciled with research findings that suggest focusing on oneself (Ingram & Smith, 1984; Pyszczynski & Greenberg, 1987), particularly one's negative thoughts and feelings (Lyobomirsky & Nolen-Hoeksema, 1993; Nolen-Hoeksema, Parker & Larson, 1994), is positively related to psychological distress. Individual differences in information processing and threat tolerance may influence the extent to which attention to negative stimuli results in positive or negative effects (Fenigstein, Scheier, & Buss, 1975). For instance, Trapnell and Campbell's (1999) work on private self-consciousness suggests that the relationship between self-focusing and depression is mediated by type of self-focused thought. They hypothesized that focusing on oneself (one's own thoughts and actions and imagining oneself in various situations) will generate negative mood to the extent that one's thinking is more ruminative than reflective.

In examining the private self-consciousness construct, Trapnell and Campbell (1999) discovered a two dimensional structure consisting of the independent factors of rumination and reflection. Ruminative thinking was found to be associated with neuroticism and, therefore, motivated by worry and fear. In contrast, reflective thought was associated with openness to experience and motivated by curiosity and psychological mindedness. The ruminative aspects of private self-consciousness were found to be responsible for the psychological distress usually associated with self-focused thought. Therefore, self-focused thought such as imagining oneself in a variety of situations may be functional to the extent it is motivated by curiosity and a need for understanding and is more reflective than ruminative. Trapnell and

Campbell suggested that high reflection and low rumination is beneficial and represents an adaptable cognitive style for coping.

It is likely that people who effectively use negative thinking to prepare for life's eventualities have developed strategies to regulate emotional arousal (Aspinwall & Taylor, 1997). Defensive pessimists and reflective thinkers, for example, likely go beyond imagining "what if" (rumination) and move onto "then I will do..." (active coping and planning), dampening anxiety and imbuing themselves with a sense of control. In contrast, ruminators likely get stuck at the "what if" stage, worrying about negative possibilities, without moving to the problem-solving stage. People who adopt an optimistic orientation may not enter into this reflective or ruminative thought at all, enabling them to cope well day-to-day, but leaving them unprepared for negative life events.

It is also plausible that people who engage in negative thinking, to their benefit, experience less intense emotional arousal in the face of threatening or negative stimuli (Larsen & Ketelaar, 1991). Larsen and Ketelaar (1991) found differential affective reactivity to mood induction among neurotics and extroverts; neurotics responded more intensely to a negative induction and extroverts responded more intensely to a positive induction. These findings suggest a physiological basis for emotional reactivity and behaviors, in that neurotics may be influenced more by inhibitory (BIS) rather than action (BAS) systems (Gray, 1981), which may be manifested in repression and avoidance of negative information. Possibly, people who are more reflective and open to new experiences are physiologically resilient to the effects of threatening information relative to ruminators, thereby allowing them to explore negative thoughts and possibilities without debilitating or dysfunctional negative arousal.

In summary, although the negative effects of a pessimistic worldview are well documented, other investigations have uncovered benefits to negative thinking. Woolfolk (2002) asserted that the presence of negative thoughts and events is an essential component of the human experience and should not be wished away by a “positive psychology”. In considering negative possibilities, in the absence of pessimistic expectations, individuals and organizations are provided the opportunity to think through and prepare for future negative events, enhancing feelings of control and resiliency. One of the liabilities of negative thinking is that it may give rise to negative affect, producing emotions most people prefer to avoid. However, in the pursuit of happiness, the growth producing effects of negative experiences, thoughts, and feelings may be overlooked. Moreover, effective cognitive processing and emotional regulation may lessen the undesirable emotions aroused by negative thoughts. The most adaptable approach is likely one that minimizes the undesirable effects of negative thinking (rumination) and maximizes the growth producing aspects of negative thinking (reflection). There are some indications that people who adopt this approach entertain negative thoughts to their benefit.

The effect of realism.

In the current study, acknowledgement of positive and negative future possibilities is considered to be characteristic of a realistic orientation, possessed by constructive realists. Some researchers have suggested that a realistic view is one in which there is equal representation of positive and negative assertions (Taylor, 1988). However, in reality, very rarely do negative and positive events balance out in the lives of individuals. Depending on one’s social ecology, personal resources, and chance, the balance of positive and negative events is likely skewed in one direction or the other. In this dissertation, individuals are

considered more or less realistic to the extent that they *acknowledge* both positive and negative future possibilities.

Some researchers have hypothesized that reality based assumptions are associated with depression and maladaptation (Taylor & Brown, 1988). In a series of experimental investigations, Alloy and Abramson (1979) found that depressed people provide more accurate predictions on contingency tasks, compared to non-depressed people who are unrealistically optimistic about their ability to control outcomes. From these findings emerged the notion of *depressive realism*, which suggested that realistic appraisal of the world and oneself is negatively associated with mental health and psychological well-being (Alloy & Abramson, 1979).

Subsequent findings from experimental and field investigations have not substantiated the depressive realism hypothesis. For example, Dobson and Pusch (1995), replicating the original experiments, found that depressed women were not more realistic than (positively biased) non-depressed women about their ability to control the outcome of a laboratory task. In fact, clinically depressed women displayed positive bias on contingency tasks. In contrast, Pacini, Muir and Epstein (1998) reported depressives to be overly negative about themselves and their future. In studies on interpersonal perceptions, people with low self-esteem were less accurate than people with high self-esteem in estimating the impressions they conveyed to interaction partners (Campbell & Fehr, 1990). And, in field situations, it was found that depressives were less accurate in their predictions about real world events than were non-depressives (Dunning and Story, 1991). Campbell and Fehr (1990) argued that the equivocal findings on depressive realism are partly due to the context in which realism has been studied. For instance, when examining beliefs about conveyed impressions, differential results are

likely because how individuals view themselves and others is sensitive to stereotypes and context, both of which change over time. These authors suggest that more sophisticated methods of assessing accuracy, particularly in relation to personal attributes, are needed.

Although the effect of a realistic orientation has not been studied in the stress and coping research, a realistic appraisal of one's personal and environmental resources has been shown to be beneficial at certain stages of goal pursuit. In research on mindsets and goal-striving, Gollwitzer and Kinney (1989) showed that effective striving demands realistic appraisal when an individual is making decisions about potential action goals. The inception stage of goal setting is characterized by a *deliberative mindset*, which requires reduced illusory optimism and a focus on the realities of the situation. The accurate assessment of personal and situational affordances and constraints in this deliberative stage is essential for functional goal setting and achievement. However, once committed to a goal, an individual becomes *implemental* in their mindset, which, in contrast to the inception stage, requires an optimistic outlook for effective goal striving and desirable outcomes. In this model of goal striving, optimism is not perceived to be more adaptive than a realistic appraisal; rather, the two are shown to be necessary components of the goal striving process.

A similar process is suggested for proactive coping. Aspinwall and Taylor (1997) theorized that for people to cope proactively, they must think about and plan for possible negative events but at the same time feel optimistic about their ability to manage or cope with the stressors. This requires that an individual in the early stages of stress detection be realistic about potential threats, attending to and processing negative information. After the stressor is acknowledged and a plan is created, however, an optimistic mindset must be adopted. Individuals must believe they are capable of carrying out the strategies that will help them

avoid the stressor or cope with it adequately, thereby facilitating positive outcomes (Taylor & Gollwitzer, 1995). It is likely that a realistic orientation, which involves giving thought to potential difficulties or stressors, would foster effective goal striving and proactive coping.

In the context of trauma and victimization, a realistic assessment of risk and vulnerability is considered to be most adaptable. Perloff (1983) argued that a sense of *universal vulnerability* (a sense that you are as likely as a similar other to experience victimization) rather than *unique invulnerability* (less likely) or *unique vulnerability* (more likely) prepares people and promotes coping in the aftermath of a traumatic event. A sense of universal vulnerability likely facilitates adjustment by protecting people from the unsettling consequences of shattered assumptions.

Studies that have assessed life change and goal striving provide support for the assertion that a realistic outlook is adaptive in the wake of difficult life events. Adjustment studies involving life stages (Heckhausen, 1997; Heckhausen & Schulz, 1993) and debilitating injury (Schulz & Decker, 1985) in relation to goal setting suggest that realistic appraisal, even a drop in optimism, leads to goal striving behavior that promotes adjustment. In a study of middle and later adulthood goal striving, it was found that people who made adjustments to their pursuits by downscaling important and valued goals to reflect reduced personal and situational affordances experienced a greater sense of personal efficacy and well-being (Brandtstadter & Rothermund, 1994). It would be useful to know how life orientation before transition influences an individual's willingness or ability to restructure their goals during and after a major life event.

In sum, it is premature and without substantive evidence to conclude that a realistic orientation is associated with depression and poor mental health. Although the stress and

coping research is replete with research findings that point to the adaptiveness of a positive orientation, there are indications that in some circumstances a more balanced viewpoint that includes consideration of positive and negative possibilities is preferable. However, the effect of a realistic orientation prior to a major life transition has not been assessed. Further study is needed to understand how a realistic orientation to life events influences coping and adjustment.

Summary. Although currently, life orientation tends to be conceptualized as a bi-polar and unidirectional approach to life, there is increasing evidence that people approach life in more complex ways that are mutable and adaptive to the demands of their circumstances. In the context of coping with difficult life events, people are usually considered to be, dispositionally, either optimistic or pessimistic, which is believed to largely determine whether one experiences positive or negative outcomes, respectively. However, it has been found that these orientations may actually be two distinct constructs rather than opposite poles of one dimension and that depending on the situation, an optimistic outlook can be detrimental and a pessimistic perspective beneficial. Therefore, it is possible for people to be both optimistic and pessimistic and there are indications that a realistic orientation, defined as the acknowledgement of positive and negative potentialities, may be more adaptive to difficult life events. A test of this assertion requires an analysis of the relationship between a realistic orientation and adjustment to a challenging life event.

Motherhood as a Challenging Life Transition

The transition to motherhood is, for most women, a challenging life experience (Grossman, Eichler, & Winickoff, 1980; Lee, 1997; Murray, 1990; Oakley, 1980). In fact, a common finding is that when women become mothers for the first time, they often feel they have lost something, rather than simply gained a child (Oakley, 1980). In a longitudinal study

identifying themes related to the meaning of motherhood and experiences of depression, Nicolson (1999) found motherhood to be a paradoxical transition, constituting a happy and unhappy period. In general, the women were happy to be mothers to their children, but simultaneously reported being unhappy with the losses that motherhood inflicted upon their lives- losses of autonomy and time, appearance, femininity and sexuality, and occupational identity.

Many first-time mothers are unprepared psychologically for the losses of motherhood (Murray, 1990; Oakley, 1980). Nicolson (1999) suggested that social conditions and opinions create the impression that new motherhood is a happy time without recognition of the difficulties and losses encountered in the transition. Consequently, many women underestimate the personal, social and environmental adaptations required for a smooth transition. In one study of new motherhood, it was found that reports of inadequate social support, high workload, and unrealistic expectations were common and significant predictors of (non-psychotic) postpartum depression (Lee, 1997).

Idealized perceptions of motherhood are common and often unrealized (Ruble, Fleming, Hackel, & Stangor, 1988). Consistently, researchers have found that women underestimate the demands of motherhood. Specifically, pregnant women tend to make inaccurate predictions about the amount of childcare and housework that they and their husbands will perform after the birth of their first child. Two separate studies indicate that women's prenatal expectations for husbands involvement in childcare (Belsky, Ward & Rovine, 1986) and household labour (Ruble et al., 1988) typically exceed postpartum experience, leaving new mothers with greater than expected burdens which in turn significantly predicted a drop in marital satisfaction for women pre-to postpartum. Nicolson (1990) found

that women's unrealistic expectations of their male partners' behaviour in the transition to parenthood was positively related to stress levels in the early years of parenthood.

Adjustment to any major life event requires disengagement or adjustment of goals inconsistent with the new reality and the creation of goals that facilitate the transition (Carver & Scheier, 1998; Klinger, 1975). In the context of new motherhood, Kaplan (1992) found that the reorganization of lifestyle and goals and the adoption of routines and behaviours congruent with motherhood predicted adjustment. Similarly, Salmela-Aro, Nurmi, Saisto and Halmesmaki (2001) found that adjustment of personal projects to match the particular stage specific demands of the transition to motherhood predicted women's emotional well-being. Specifically, when goal type and depression were measured before and after birth, it was found those women whose family-related goals increased in number over time showed a decreasing level of depressive symptoms (Salmela-Aro et al., 2001).

It is hypothesized that a realistic orientation prior to the transition to motherhood will facilitate more flexible goal striving. Having already considered the challenges of motherhood, realists will be more prepared to downscale or make adjustments to their personal goals to accommodate the role demands and restrictions that women commonly report after the birth of a child. This will enable women to hold onto personally meaningful and identity related goals while maximizing manageability. Moreover, women who are able to adjust their goals to meet the demands of motherhood, while maintaining core life pursuits, will experience less conflict in their goal system and greater psychological well-being.

Personal Projects and the Transition to Motherhood

One way to study personal goals and goal pursuit is through Personal Projects Analysis (PPA) (Little, 1989). This methodology focuses on the “doings” of individuals’ daily lives, eliciting for analysis the content, appraisal, and impact of personal projects (Little, 1998). Personal projects are considered to be extended plans of action that provide structure and meaning for one’s life (Little, 1983). As personally salient units of analysis, projects provide insight into an individual’s current and unfolding world.

In the context of a major life transition, projects can be viewed as “carrier units of personal growth”. Theories on goal striving suggest that adjustment to a major life event is manifested in the reformulation of people’s goal systems to match the new reality (Carver & Scheier, 1998). When core life goals become unattainable because of a major life transition, people are put in the difficult position of revising or disengaging from these goals. The success with which people make these adjustments to prior project systems and their ability to develop new projects consistent with the demands of the transition is hypothesized to predict adjustment and well-being. Numerous studies have suggested that when people revise their goals to match personal and environmental constraints and affordances, while persisting and making progress on goals that are personally meaningful, they experience personal growth (Brandtstadter & Rothermund, 1994; Carver & Scheier, 1998).

Looking at personal projects over the course of time during a life transition allows the researcher to observe the evolution of new projects, the revision of old projects, and the stress of disengagement from those projects that are perceived to be no longer attainable. For new mothers, adjustment is likely facilitated when personal projects considered meaningful and important are worked into the new reality with minimal stress and conflict. The success with

which women maintain the goals and projects that have been core to their identity can be assessed through PPA.

Indeed, making progress towards new goals (e.g., Emmons, 1986; McGregor & Little, 1998; Sheldon & Elliot, 1999) and the absence of ambivalence and conflict among goals (Emmons & King, 1989; Palys & Little, 1983) has been shown to significantly predict well-being. PPA research has consistently demonstrated strong correlation between well-being and various dimensions of projects including the perceived efficacy, importance, and meaning of one's projects (McGregor & Little, 1998, Sheldon & Elliot, 1999). These and other studies within this tradition indicate that people who perceive that they are moving successfully toward their goals, and perceive their goals to be important, personally meaningful, and achievable, also report higher meaning in life, greater subjective well-being, and more positive than negative emotions in their weekly life (Little, 1989).

In an analysis of the validity of PPA, Omodei and Wearing (1990) concluded that PPA is "a useful way of representing how people structure and experience their lives"(p.768). In the current study, PPA will be used to track individuals' current activities and concerns as well as the disengagement, revision, and development of these goals over time and through a significant life transition.

Motherhood Study 1

Introduction

Study 1 was conducted to establish the reliability and validity for the new self-report measure of realistic orientation - the key construct of this dissertation – and to differentiate empirically the realistic orientation from optimism /pessimism. Realistic orientation is conceptualized as a combination of positive and negative anticipations and as such should be related to optimism/pessimism but empirically distinct, contributing uniquely to the prediction of well-being. This study assessed the factor structure of the realistic orientation construct and assessed its relation to broad personality traits (the Big 5) and well-being. To this end, women pregnant with their first child were asked how often they think about various positive and negative possibilities in relation to childbirth and new motherhood. To the extent that they report thinking often about both positive and negative thoughts they are considered to have a realistic orientation. Specifically it is hypothesized that:

1. (a) Items assessing thoughts about motherhood will load on two orthogonal factors- one containing thoughts/anticipations of positive outcomes/experiences and one containing thoughts/anticipations of negative outcomes/experiences.
 (b) The extent to which women think about positive outcomes/experiences will correlate positively with optimism and negatively with depressive affect.
 The extent to which women think about negative outcomes/experiences will correlate negatively with optimism and positively with depressive symptomatology.
2. Realistic orientation, assessed as a woman's reporting of frequent positive and negative thoughts about her impending childbirth and motherhood transition, will significantly predict depressive affect in pregnant women, while

controlling for optimism/pessimism.

3. (a) A realistic orientation to motherhood will be associated with fewer depression symptoms than an overly negative orientation. Contrary to the depressive realism theory, a realistic orientation will not be positively associated with depressive affect.
- (b) Before childbirth and the transition to motherhood, there will be no difference between the positively oriented and realists on depression symptoms. However, in line with previous research on pessimism, participants with an overly negative orientation to motherhood will report more depressive symptomatology than the other groups..

Method

Participants

Participants were 181 pregnant women recruited from pregnancy sites on the World Wide Web. Although the study was described on the Internet as the *Transition to Motherhood*, examination of answers given to an open-ended question on the survey revealed that for a small number of respondents this birth was not to be their first.¹

Procedure

Information was posted to pregnancy sites on the World Wide Web, which explained that we were conducting a study on the transition to motherhood and were at the stage of testing several questionnaires. Pregnant women were invited to participate by completing anonymous surveys online. Responses were e-mailed to us through a third-party server, which stripped the sender's e-mail address, thus making the survey responses anonymous.

Participants completed an Internet survey that included an Orientation to Motherhood questionnaire that assessed their thoughts about the upcoming childbirth and

¹ For some of the participants the child they were currently expecting may not have been their first. In the open-ended comments section of the questionnaire, a number of the women ($n = 18$) gave reference to other children in the family. These children may have been stepchildren. However, it was not clear from the comments whether these children were their biological offspring.

impending motherhood experience and an open-ended question that probed additional issues related to their transition to motherhood not covered in the questionnaire.²

To examine aspects of validity, the following reference variables were included in this pilot study: (a) the Life Orientation Test Revised (LOT-R; Scheier, Carver, & Bridges, 1994), which is used to assess dispositional optimism and pessimism; (b) depressive affect measured by the Center for Epidemiological Studies Depression Scale (CESD; Radloff, 1977); and (c) the five major personality traits assessed by the Big Five Inventory (i.e. neuroticism, Extraversion, Conscientiousness, Openness, Agreeableness) (John, Donahue, & Kentle, 1991). The complete survey is provided in Appendix A.

Description of Measures

Well-Being. A 10-item version of the Center for Epidemiological Studies Depression (CES-D) scale (Radloff, 1977) assessed depressive symptoms. The CES-D was designed to measure depressive symptomatology in non-clinical general populations. With the CESD, participants are required to indicate the frequency with which they felt or behaved in particular ways over the previous week (e.g. you were bothered by things that don't usually bother you). A four point rating scale ranging from 0 ('rarely or none of the time') to 3 ('most or all of the time') is provided. To assess for clinical depression, a single composite score is obtained for each participant by summing the items, with higher scores representing greater levels of depressive affect/symptomatology (sum composite score; $M=7.86$, $SD=5.38$; average rating;

² The majority of responses to this question on the study 1 protocol were related to concerns about finances, relationships and being a good mother. For example, "I think a lot about how we will cope financially", "I am worried that I may not be a good mother", "I have waited for this forever and I am really excited", "I hope my husband and I will still be close".

$\underline{M}=1.79$, $\underline{SD}= .54$). Previous research indicates that the internal consistency for the abbreviated 10-item version of this instrument is adequate ($\alpha = .87$ in Lehman, Wortman, & Williams, 1987) and in the current study Cronbach's alpha was .86.

Optimism-Pessimism. The Life Orientation Test-Revised (LOT-R) (Scheier, Carver, & Bridges, 1994) was used in this study to tease out the effect of optimism-pessimism relative to a realistic orientation. The LOT-R assesses people's generalized expectation about their futures and is the standard instrument in the field for assessing trait optimism. It contains 10 items of the sort, "in uncertain times, I usually expect the best" each of which is rated on a 5 point scale (strongly agree to strongly disagree) and has demonstrated validity and reliability in prior research (e.g., Scheier, Carver, & Bridges, 1994). In the present study Cronbach's alpha was .79.

Personality traits. The Big Five Inventory (John, Donahue & Kettle, 1991) is a 44-item self-report questionnaire designed to represent the standard descriptions of the Big Five personality traits (i.e., Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness). It was used in this study to help locate the realism construct on established personality dimensions. The BFI uses short phrases based on trait adjectives that are typical markers of the Big Five. Although only eight to ten items represent each trait, the scale maintains content validity and acceptable psychometric properties (alpha coefficients ranging from .75 to .90 (John & Srivastava, 1999). In the present study, Cronbach's alphas for the BFI trait dimensions subscales ranged from .80 to .86.

Realistic orientation. A context specific measure of realistic orientation for the transition to motherhood - Orientation to Motherhood (OM) scale - was created for this study. The first step in constructing the orientation to motherhood questionnaire was to generate items

that assessed positive and negative thoughts about motherhood that are relevant to pregnant women. In so doing, items were selected based on themes identified in psychological research on the transition to motherhood, and in discussions with pregnant women and new mothers (Items are provided in Table1). A factor analysis will be conducted to determine the number and the type of factors measured by the scale.

This new OM scale consists of 12 items - five positively and seven negatively toned thoughts or possibilities regarding the experience of becoming a mother - that assess positive and negative thinking about the transition to motherhood. Participants are asked to indicate (using a five point scale) how often they have thought about or imagined each of these items in the last two weeks (never, less than once a week, once a week, once a day, more than once a day). Measurement of the responses will be used to assess the degree to which expectant mothers routinely imagine both positive (and rewarding) and negative (or difficult) experiences that might occur following the birth of their first child.

To detect realistic orientation the interaction model for multifaceted personality constructs will be followed (see Carver, 1989). This approach recognizes that several components of a construct may interact with each other to produce the outcome effect of interest. For example, it is the combination of high positive and high negative thinking that comprises realistic orientation and is hypothesized to be psychologically beneficial in the wake of difficult life events. Therefore, a measure of realistic orientation is obtained by multiplying the scores on the anticipated positive and negative subscales i.e., the multiplicative interaction of the two subscales.

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Results

Factor Structure of the OM scale

OM scale homogeneity, factor structure, and convergent and discriminant associations with other scales and traits was investigated. It was anticipated that the questionnaire would yield two orthogonal latent factors corresponding to two different sets of anticipated experiences (positive and negative).

A principal components analysis was conducted on the 12 items of the OM questionnaire. A Scree plot of the eigenvalues indicated that two large components (eigenvalues > 3.0) should be retained. Orthogonal (varimax) rotation of these two components reproduced the anticipated dimensions of positive thoughts and negative thoughts. All 7 of the negative thoughts (e.g. “Lack of sleep”, “things wrong with the baby”) loaded most strongly on the first component (loadings $> .37$) and all 5 of the positive thoughts (e.g. “holding a beautiful healthy baby in your arms”) loaded most strongly on the second component (loadings $> .64$).

Based on the two- component solution, a Positive Thoughts subscale was created by averaging the five items on the positive factor and a Negative Thoughts subscale was created by averaging the seven items on the negative factor. Cronbach’s alpha for scale internal reliability was .82 for the positive subscale and .80 for the negative subscale. The two subscales were uncorrelated ($r(179) = .05$).

Table 1. Rotated Component Matrix for Orientation to Motherhood Items-Study 1

Items	Negative Possibilities	Positive Possibilities
The lack of time there will be for yourself/your interests after the baby is born.	.824	-.115
The amount of time and energy it will take to look after the baby.	.805	
The lack of sleep you will get after the baby is born.	.782	-.140
The challenges of motherhood.	.715	.225
Being isolated from friends and/or the work world after the baby is born.	.636	
A difficult childbirth.	.539	.133
Things that could be wrong with the baby.	.371	.152
All the fun activities you will do with the baby.		.807
Holding a beautiful healthy baby in your arms.		.800
The joys of motherhood.		.796
How wonderful and special it will feel to be a mother.		.768
Doing enjoyable mother- things like shopping for cute. baby clothes and toys		.638

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Items were rated on a 5 point scale where 0=never and 4=more than once a day

Loadings< .10 are not shown.

N=181

Validity of the OM Scale

A test of validity demonstrated convergent and discriminant associations with other scales and traits. For example, the positive subscale of the OM was found to be negatively correlated with depressive affect on the CESD ($r = -.20, p < .01$) and positively associated with positively valenced items on the LOT-R ($r = .19, p < .01$). In terms of The Big Five traits, positive thoughts on the OM were correlated significantly with Extraversion ($r = .20, p < .01$), Agreeableness ($r = .21, p < .01$) and Conscientiousness ($r = .16, p < .05$), but not significantly with Neuroticism or Openness to Experiences ($r_s < .13$).

Given that the OM positive thoughts subscale correlates most strongly with the two interpersonal dimensions of the Big Five Inventory (Extraversion and Agreeableness), we locate the scale on the communion or warmth axis of Wiggins' (1992) interpersonal circumplex (i.e. the axis that combines these two factors).

The negative subscale of the OM was found to be positively correlated with CESD scores ($r = .20, p < .01$) and not significantly correlated with the LOT-R ($r = -.08, p > .27$). In terms of the Big Five traits, negative thoughts on the OM were positively correlated with Neuroticism ($r = .31, p < .01$) and negatively correlated with Agreeableness ($r = -.21, p < .01$), and Conscientiousness ($r = -.19, p < .01$) but not significantly related to Extraversion or Openness to Experience ($r_s < .02$). Although no one has developed a circumflexical model of these Big Five traits (Neuroticism, low Agreeable and low Conscientious) the combination of these traits suggests an image of an isolated and anxious woman. The modest correlations between the OM subscales and the LOT-R suggest that OM positive and negative orientation are related to but not the same as the optimism/ pessimism construct.

To locate the realistic orientation (the combination of high positive and high negative thinking), we first identified participants high and low on realism by selecting those who were one standard deviation above the mean (realists) and one standard deviation below the mean (not future oriented) on the multiplicative interaction of OM positive and OM negative scales. A correlational analysis based on this subset of participants found a significant positive relation between realistic orientation and Extroversion ($r(56) = .30, p < .01$) and a marginally significant positive correlation with Neuroticism ($r(56) = .21, p = .11$). These associations reflect the positive and negative thinking underlying realism. Realistic orientation, assessed in this way, was uncorrelated with the LOT-R, the CESD and the personality traits Agreeableness, Conscientiousness and Openness to Experience.

Table2. Zero-order Correlations Between OM Subscales, Optimism, Personality Traits and Depression in Study 1

Variables	1	2	3	4	5	6	7	8	9
1.OM –negative	---								
2.OM-positive	.05	---							
3.Realism	.91**	.75**	---						
4.LOT-optimism	-.08	.12	.10	---					
5.Agreeableness	-.21**	.21**	-.07	.29**	---				
6.Conscientiousnes	-.19*	.16*	-.15	.33**	.27**	---			
7.Extraversion	.01	.20**	.30**	.24**	.10	.23**	---		
8.Neuroticism	.31**	-.13	.21	-.61**	-.42**	-.38**	-.20**	---	
9.Openness	-.00	.09	.11	.16*	.02	.08	.25**	-.08	---
10.CESD	.20**	-.20**	.03	-.45**	-.29**	-.29**	-.17*	.55**	-.00

N=181 (realism N=58)

*p<.05

**p<.01 (two-tailed).

Main Analyses

To test the hypothesis that realistic orientation uniquely predicts depressive affect in pregnant women after controlling for optimism/pessimism, a hierarchical regression analysis was conducted. In the first step of these analyses, mean CESD scores were regressed on LOT-R scores. As anticipated, optimism (high scores on the LOT-R) negatively predicted depressive symptomatology ($t(180) = -6.19, p < .001; \beta = -.40$). On the second step, residuals were simultaneously regressed on positive and negative subscales of the OM. Results indicate that both positive ($t(180) = -2.29, p < .05; \beta = -.15$) and negative thoughts ($t(180) = 3.14, p < .01, \beta = .21$) predict depressive mood over and above LOT-R optimism. On the final step, the residuals were regressed onto the multiplicative interaction of Positive thoughts and Negative thoughts (after centering the variables). This interaction allows one to test whether combinations of Positive and Negative anticipatory thinking (e.g. high on both, low on both) are associated with depressive mood. This interaction term was significantly and inversely associated with depressive symptomatology ($t(180) = -2.15, p < .05; \beta = -.14$). The interaction term is plotted in Figure 1. The data indicate that those who think negative thoughts scored high on depressive symptoms but only to the extent that they did not have positive thoughts as well. Those with a realistic orientation (i.e. those scoring high on positive and negative thoughts) did not differ on CESD scores from those positively oriented or those having few thoughts about the future.

As an alternative means of testing this interaction a median split was performed on the positive and negative subscales of the OM dividing the sample into 4 groups; low positive thoughts-low negative thoughts ($n = 37$), high positive thoughts-low negative thoughts ($n = 40$), high negative thoughts-low positive thoughts ($n = 47$), and high positive thoughts-high negative thoughts ($n = 57$). Although there are some concerns with regard to splitting the

scales on the median and dichotomizing people as high -low positive /negative thinkers, what is intended here is to identify individuals who think more than others about the various positive and negative possibilities. This dichotomization does not suggest that these people categorized, for example, as low positive thinkers or negatively oriented do not have positive thoughts about the transition. The dichotomization is an attempt to assess the effect of thinking more than the norm or most people about the possibilities related to the transition to motherhood. Simple effects analyses were performed examining the effect of positive thoughts at the two levels of negative thoughts and the effect of negative thoughts at the two levels of positive thoughts. Results indicate that the simple effect of negative thoughts when positive thoughts were frequent was not significant ($F(1,177) = .68, p > .41$). However, when negative thoughts were frequent there was a significant simple effect for positive thoughts ($F(1,177) = 4.12, p < .05$). In other words, the mean depression score for those people with a realistic orientation (high positive thoughts-high negative thoughts; $M = 7.74, SD = 4.75, n = 57$) was not significantly different from the positively oriented participants (high positive thoughts-low negative thoughts; $M = 6.85, SD = 5.38, n = 40$). However, realists' mean depression score was significantly lower than the mean score for the negatively oriented group (high negative thoughts-low positive thoughts; $M = 9.86, SD = 6.26, n = 47$).

Figure 1.

Mean Levels of Depressive Symptomatology for Groups Created by Median
Splits on Positive and Negative Thoughts Subscales of the OM Scale in Study 1.

Discussion

This study provides a basis for further examination of the realism construct in relation to coping and adjustment. An analysis of pregnant women's thoughts about the upcoming transition to motherhood revealed that some people, rather than being predominantly positive or negative in their thinking about future outcomes, tend to reflect on both positive and negative possibilities. We refer to this as a realistic orientation and to these people as constructive realists.

It was hypothesized that when items that describe thoughts concerning the transition to motherhood were factor analyzed, two orthogonal latent factors would emerge that correspond to positive and negative thoughts, which would correlate with optimism/ pessimism as measured by the Life Orientation Test-Revised (Scheier, Carver, & Bridges, 1994). As expected, two different sets of anticipations reflecting positive and negative thoughts did emerge, however, only weak to moderate correlations were found between the OM positive and negative subscales and the LOT-R. There are two factors that likely account for the low correlations.

From a conceptual standpoint, thinking positively about an upcoming event is not the same as expecting good things to happen and thinking about negative possibilities is not the same as expecting bad things to happen. The high positive-low negative group on the Orientation to Motherhood scale may be "positive thinkers" rather than "optimists" and the high negative-low positive group may be more accurately described as "negative thinkers" rather than pessimists as represented by the LOT. Similarly, optimists expect the best but don't necessarily think a lot about their future. Likewise, pessimists expect the worst, but don't necessarily think a lot about what might go wrong. The OM scale asks respondents to indicate how often they thought about specific positive and negative possibilities in relation to their

impending transition (e.g. “How often have you thought about ... a difficult childbirth ... the challenges of motherhood), while the LOT asks participants the extent to which they *agree* that good outcomes are likely expectations (e.g. “In uncertain times I usually expect the best”, and “Overall, I expect more good things to happen to me than bad”). It is likely that people respond differently when asked to agree or disagree with a general statement regarding expectations for their future compared to a question about how often they think about a specific upcoming life event.

It is important to note that although optimism/pessimism and the OM positive and negative subscales are assessing different constructs, the pattern of associations for optimism/pessimism and the OM positive and negative subscales with personality traits and depressive affect run parallel. That is, optimism and the positive thoughts subscale are negatively correlated with depressive affect and Neuroticism and both are positively associated with Extraversion, Agreeableness and Conscientiousness, while the negative subscale is positively correlated with depressive affect and Neuroticism.

A second reason for the low correlation between the LOT-R and the positive and negative subscales of the OM is that the measure of realistic orientation created for this study is context specific. People might have generalized expectancies for positive outcomes (optimism), but face specific events with a great deal of uncertainty and trepidation. Taylor and colleagues (1992) made this point with regard to their sample of people with HIV-AIDS. Taylor et al. report that many of the individuals who measured as optimists on the LOT also reported thinking and planning for negative possibilities related to their illness. Considering this explanation, research aimed at assessing influences on adjustment to life events should include “local” (Mischel, 1990) or context-specific measures.

Exploring the relationship between OM subscales and the Big Five personality traits produced results that would be expected. Thinking mostly positive about future outcomes is associated with Agreeableness, conscientiousness and extraversion while negative thinking is associated with neuroticism and disagreeableness. Correspondingly, these two different orientations are associated with depressive affect in the expected direction; positive thoughts yielded an inverse association with depression and negative thoughts yielded a positive association with depression. Those who think frequently about both positive and negative possibilities (those with a realistic orientation) tend to score high on both extraversion and neuroticism. The fact that this group has some neurotic tendencies is to be expected given that realists reported thinking often about negative possibilities. The fact that realism is not associated with negative affect, as the correlational analysis demonstrated, is likely due to the extraverted nature of the realists, which would help them cope with or buffer the deleterious effect of neurotic tendencies such as worry and anxiety. This converges with Larsen and Ketelaar's (1991) findings discussed earlier that showed neurotics were more reactive to a negative mood induction while extroverts responded more intensely to a positive mood induction. It may be that the extroverted tendencies of the constructive realists mute or cancel out the negative affect usually associated with neuroticism.

In line with life orientation research, this study found that negative thinking about future events predicts negative affect as measured by the CESD. However, as with research on defensive pessimism, the findings of this study also suggest that negative thinking is not necessarily detrimental. When accompanied by hope or coupled with an equal measure of positive thoughts, the depressive effect of negative thinking is lessened. In contrast to defensive pessimists (Norem & Cantor, 1986), however, who use negative expectancies as a

motivator, realists do not necessarily expect negative outcomes, nor do these thoughts motivate performance. Rather they seem to have a more balanced perspective on future life events as Janoff-Bulman (1999, p.318) noted about some people who have experienced loss, “their assumptive worlds are generally positive, but allow for the real possibility of misfortune”. In Personal Construct Theory terms, it appears that people who think realistically generate a more diverse and complete set of constructs related to life events that, I argue, should facilitate adjustment. Giving thought to negative possibilities, rather than being pessimistic or detrimental, may actually make people more resilient to adversity by promoting planful problem solving and effective coping. This explanation will be explored further in a second study that assesses orientation to motherhood in late pregnancy and their subsequent adjustment three months after childbirth.

In the current study, being highly realistic was not associated with low levels of depressive affect. Both positive thinkers and those who do not seem to think about future possibilities had somewhat lower depression scores. We would not, however, expect the effect of possessing a realistic orientation to be evident prior to the difficult transition. What is important is that this proactive coping or “preparing for the worst” is not associated with high levels of negative affect. As hypothesized, the realists in this study were not significantly different from the positive thinkers on depression in the later stages of pregnancy, but there was a significant difference between realists and negative thinkers: negative thinkers reported significantly more depression symptoms than the realists. As hypothesized, and contrary to the depressive realism theory, people who think realistically are not, in any meaningful way, more depressed than non-realists.

There are some limitations to dichotomizing people as high and low on positive and negative orientation. A Negative orientation – below the median on the positive thoughts subscale - does not necessarily indicate an absence of positive thoughts and the same is true for a positive orientation - it does not necessarily indicate an absence of negative thoughts. Given that a score on either subscale may be only slightly above or below the median, some individuals may be categorized as low on positive or negative thoughts and yet not very different in their thinking from realists. However, such a case would be favorable to the Null hypothesis and, as a way of identifying people who think more than others about the range of possibilities and assessing differences between groups, the utilizing of median splits is defensible.

We expect the benefits of realistic thinking in facilitating psychological resiliency to be realized in the longer term, as women go through childbirth and the challenges of caring for and parenting a newborn. To test this theory and assess the effect of realistic thinking prospectively, orientation to motherhood needs to be measured before the baby is born and adjustment assessed after childbirth, as women go through the transition to motherhood.

Motherhood Study 2a

Introduction

The main purpose of this second study is to examine in a prospective way the relationship between realistic orientation and adjustment to a challenging life transition by assessing pregnant women's thoughts about motherhood prior to childbirth and then measuring their psychological adjustment three months after the birth of their first child. It is expected that women who possess a realistic orientation to motherhood prior to childbirth, that is, they give thought to both positive and negative possibilities related to childbirth and motherhood, will adjust as well as people who focus predominantly on positive outcomes and more easily than people who focus predominantly on negative outcomes. Moreover, having given thought to negative possibilities in a balanced way, in the wake of negative surprises related to the transition, realists should cope better than either the positive or negatively oriented. Specifically, it is hypothesized that:

1. A realistic orientation to motherhood pre-birth will significantly predict subsequent postnatal psychological well-being.
2. Women who were realistic in their orientation to motherhood in the third trimester of pregnancy will adjust as well as positively oriented participants and better than negatively oriented participants in the first three months after childbirth. That is, women who possess a realistic orientation will have lower depression scores and higher psychological well-being scores than people who are negatively oriented.
3. In accordance with personal construct theory, people who have given thought to negative possibilities without being pessimistic (constructive realists) should more easily integrate and adjust to negative or undesirable outcomes. Constructive

realists, therefore, should demonstrate resilience in the wake of a more difficult than expected motherhood transition. More specifically, faced with a difficult childbirth or negative surprises related to mothering a newborn, women who demonstrated a realistic orientation to motherhood prior to childbirth will report less depressive symptomatology and greater psychological well-being, relative to people who were overly positive or negative in their thinking about motherhood during pregnancy.

Method

Participants

The sample in this study consisted of 69 pregnant women who were in their third trimester of pregnancy and expecting their first child. All participants were enrolled in a prenatal class in the Ottawa area at the time of recruitment. The mean age of the sample was 30 years (18-42), all but one participant reported being in a marriage or common-law relationship, and 90% of the sample was attending school or employed outside of the home.

This current sample (study 2a) reported significantly less depressive symptomatology prenatal (sum composite score; $M = 5.38$, $SD = 3.65$) than the study 1 sample (sum composite score; $M = 7.86$, $SD = 5.38$; $t(181) = 4.19$, $p < .001$).

Procedure

80 pregnant women volunteered for this study when a research representative visited prenatal classes in the Ottawa area and introduced the project. The prenatal instructor allotted time during the class for the study representative to describe the study. It was explained that we were interested in understanding how women make the transition to motherhood and the factors that influence postnatal adjustment. It was emphasized that participation was voluntary and completely separate from their participation in prenatal classes and that there would be a small compensation given in the form of \$10 gift certificates (one for each interview) to a popular baby/toy store. A sign-up sheet was then circulated through the class and those who were interested in volunteering for the study provided their name and contact information. Potential participants were contacted within a week at which time interview dates and times were established. Contact could not be made with 5 of the women, 3 changed their mind when

contacted by phone and 2 women had already given birth by the time of the initial phone contact.

Consequently, 70 women in their third trimester of pregnancy and expecting their first child were interviewed prenatal. One of the women lost her baby shortly after birth and so did not participate in the postnatal interview. At Time 1, in their third trimester of pregnancy, participants were assessed on demographics (including history of depression), orientation to motherhood, psychological well-being, and their personal projects.³ The majority of the participants (96%) completed the questionnaires within structured one to one interviews in their homes; a small number of participants responded by mail. The interviews ran between one and a half to two hours and combined verbal as well as pencil and paper responses.

³ Previous research has found that a prior diagnosis of depression is a significant predictor of postpartum depression (O'Hara, Rehm, & Campbell, 1982). In the current study there was no correlation found between prior experience of depression and postnatal depression symptoms as measured by the CESD ($r(67) = .01$, ns). 9 of the 69 participants reported a prior diagnosis of depression. However, several of these women were diagnosed years before pregnancy, during adolescence and /or at a very stressful time in their lives such as the death of a close family member. This suggests their depression was more situational than organic. However, this might indicate a lack of coping skills or predisposition to mood disorders; yet these women did not report more depression symptoms at postnatal than women who had not been previously diagnosed with depression. The small sample size might also have accounted for the lack of association between prior depression and postnatal depression. At the time of the prenatal interview, 2 of the 69 women were currently receiving pharmacological treatment for depression.

At Time 2, three months after childbirth, participants were visited again and they completed a similar interview protocol with the exception of the Orientation to Motherhood scale, which was only measured at prenatal, and the addition of open-ended questions regarding the nature of their childbirth experience and their experience with mothering a newborn. All of the participants from Time 1 completed the questionnaire at Time 2. The interview protocols for Time 1 and Time 2 are provided in Appendix B.

Description of Measurements

Psychological Well-being. Adjustment to motherhood was assessed using The Center for Epidemiological Studies- Depression Scale (CESD) (Radloff, 1977) and The Psychological Well-Being Scale (PWB) (Ryff, 1989).

The CESD was described earlier in study 1. In study 2a, the coefficient alpha for the scale was .72 at Time 1 and .81 at Time 2. CESD scores at Time 1 and Time 2 were moderately correlated ($r(67) = .38$)

The proportion of the current sample reporting at least moderate symptoms of depression (i.e. scores of >8) while in their third trimester of pregnancy was, as expected, somewhat higher than community samples normed rates (25% vs 19.3%; Anderson, Carter, Malmgren & Patrick, 1994). On average, summed composite CESD scores decreased from prenatal ($M=5.38$, $SD=3.65$), to postnatal ($M=4.36$, $SD=4.27$; $t(68) = -1.93$, $p < .06$). This overall decrease in depressive symptoms from pregnancy to postpartum has been found in previous research (Carver and Gaines, 1987; O'Hara et al., 1984), and suggests an increase in depressive affect associated with pregnancy.

The PWB scale is a theory based measure of psychological well-being that encompasses six dimensions of wellness including Autonomy, Environmental Mastery, Personal Growth, Positive Relations With Others, Purpose in Life and Self-Acceptance (Ryff

& Keyes, 1995). Researchers studying the transition to motherhood have commonly relied on mood and affect scales to measure adjustment. The problem with measuring adjustment to motherhood in this way is that fluctuation in emotions and mood in the first three months postpartum are considered to be a normal reaction to an extremely challenging and disruptive life experience (Lee, 1997; Lewis & Nicolson, 1998). Moreover, an affect or mood measure, even if administered at several different points in time, will not adequately capture aspects of personal growth or identity reformulation that characterize the adjustment process. Unlike conventional approaches to the measurement of well-being, the PWB scale extends the measurement of well-being beyond life satisfaction and positive affect (Ryff & Keyes, 1995). Respondents are required to reflect on and evaluate their lives cumulatively. Rather than reporting the frequency of positive and negative feelings during recent weeks, participants evaluate their own life outcomes: “Have I developed as a person over time (and do I continue to develop)?” As such, the PWB scale provides a more comprehensive measure of adjustment to motherhood.

Each well-being dimension was originally operationalized with a 20-item scale of positively and negatively phrased items, mixed to produce a single 120-item inventory. The internal consistency coefficients for the scales ranged from .86 for autonomy to .93 for self-acceptance and all items correlated significantly with their own scale (Ryff, 1989).

Ryff and Keyes (1995) demonstrated that a reduced 14-item version of the instrument retains the validity and reliability of the original 120-item scale. In the current study, four items, relevant to the target group, from each of the six scales were chosen to represent each dimension, providing a 24-item questionnaire. However, this abbreviated version did not recapture the six factors and reliability coefficients were unacceptably low for a number of the

subscales. Factor analysis and scree plot showed a single component with eigenvalue greater than five and all other values less than 2. Therefore, subscales were combined and all 24 items averaged (with negative items reversed scored) to form a single composite well-being score.

The alpha for reliability of the PWB scale at Time 1 = .81 ($\underline{M}$ = 4.15, $\underline{SD}$ = .38). At Time 2, Cronbach's alpha for reliability was .87 ($\underline{M}$ = 4.18, $\underline{SD}$ = .47). Psychological well-being, as measured by the PWB appears to be more stable than depression symptoms: the test-retest correlation for prenatal to postnatal was high (r = .73). The PWB correlated significantly with CESD scores at prenatal (r (67) = -.45, p < .001) and postnatal (r (67) = -.68, p < .001).

Realistic Orientation. The Orientation to Motherhood scale was used to assess realistic orientation and was described earlier, in study 1. In the previous study designed to test the OM scale, there was good reliability for the positive and negative subscales, with alpha coefficients at .82 and .80 respectively. In study 2a, Cronbach's alpha for reliability on the positive subscale of the OM was .83 and on the negative subscale of the OM was .75. The data for the positive subscale was somewhat positively skewed, with most women reporting positive thoughts ($\underline{M}$ =4.25, $\underline{SD}$ = .71, $\underline{N}$ = 69). The data on the negative subscale was normally distributed ($\underline{M}$ =3.37, $\underline{SD}$ = .76, $\underline{N}$ =69). The correlation of the two subscales was somewhat higher than in study 2a (r (67) = .22, p < .07).

Similar to study 1, the positive and negative subscales of the OM scale were dichotomized through a median split yielding four groups; low positive thoughts-low negative thoughts (not future oriented; $\underline{n}$ = 18), high positive thoughts-low negative thoughts (positive oriented; $\underline{n}$ = 13), low positive thoughts-high negative thoughts (negative oriented; $\underline{n}$ = 16), and high positive thoughts-high negative thoughts (realistic orientation; $\underline{n}$ = 22). The same caveat relating to median splits discussed in study 1 is applicable here. I am not suggesting by this

dichotomization that people categorized as negatively oriented do not have positive thoughts. The dichotomization implies that realists think more often about positive possibilities than the negatively oriented. Furthermore, the “not future oriented” title does not suggest that individuals below the median on the positive and negative subscales of the OM are not thinking about positive and negative possibilities. In fact, the median on the positive subscale was quite high, owing to the fact that most of the expectant mothers in the study reported thinking about positive possibilities. Therefore, although the realists thought more often about these possibilities, this does not imply a dearth of positive or negative thoughts by those below the median and classified as “not future oriented”.

Moderating Variables

Childbirth experience. At Time 2, participants were asked about their experience of childbirth. Specifically, they were asked, “Was childbirth what you expected?” Responses were coded 1) as expected 2) easier 3) harder 4) unexpected C-section. For statistical purposes, “as expected” and “easier” were combined to form the “easier or as expected childbirth” group, while “harder than expected” and “unexpected c-section” were combined to form the “harder than expected childbirth” group.

Motherhood Surprises. The second qualitative question posed to participants at three months postnatal addressed unexpected events or surprises upon arrival home with their newborn. Participants were asked, “Were there any surprises or things you had not expected since you have been home with the baby?” The majority of participants (94%) reported at least one surprise or unforeseen aspect of mothering a newborn. The 169 surprises were classified as positive, negative, or ambiguous. Responses such as, “breastfeeding was more difficult than I expected”, “looking after a baby is more time consuming than anticipated” and “How tired I

am” were coded negative. Responses such as, “how calm I am” and “how easy he (baby) is” were coded positive. The ambiguous code was given for surprises such as “how much he looks like his father” and “how quickly we have fallen into traditional roles”. An independent assessor then categorized a random sample of 40 surprises in order to evaluate the reliability of the coding system. The overall concordance rate between the rater and the principal investigator was 91 percent.

To assess coping and adjustment when motherhood was more difficult than expected, the descriptives for negative surprises were examined. The number of negative surprises reported by participants ranged from 0-5 with the mean and median number of surprises at 2. The decision was made to conduct a median split so that less than 2 surprises is considered a low negative experience of motherhood and 2 or more negative surprises is considered a high negative experience.

Results

Realistic Orientation and Adjustment

To test the effect of orientation to motherhood on adjustment to the transition, parallel analyses of covariance (ANCOVA) were conducted on CESD and Psychological Well-being. The covariate in each of these analyses was the prenatal score on the relevant adjustment scale (CESD or PWB). The ANCOVA for postnatal CESD scores indicates nonsignificant main effects of positive thinking and negative thinking ($F_s < 1.0$), but a marginally significant interaction ($F(1,64) = 3.44, p = .07$).

The crossover interaction, depicted in Figure 2, indicates that realists (high positive-high negative thoughts; adjusted $M = 1.35, SE = .08$) and those who tend not to think about the future (low positive-low negative thoughts; adjusted $M = 1.36, SE = .09$) adjusted most successfully to the transition to motherhood. Those focused predominantly on positive outcomes and those focused predominantly on negative outcomes had higher (adjusted) depression scores ($M = 1.48, SE = .11$ and $M = 1.59, SE = .10$, respectively).

The parallel ANCOVA on postnatal psychological well-being yielded no significant main effects of positive thinking ($F(1,64) = .03, p > .50$) or negative thinking ($F(1,64) = 1.98, p < .17$). The interaction of positive and negative thinking also failed to reach criterion for significance ($F(1,64) = 1.63, p < .20$), largely owing to the strong effect of the covariate ($F(1,64) = 75.43, p < .001$).

Despite the nonsignificant interaction effect we nonetheless examined the adjusted means and plot for the four groups (see Figure 3). The positive, negative and not future oriented groups tended to have lower adjusted means than the realists and so these three groups were combined to form the “non-realist group”. The combined mean for this group was then

compared to the mean psychological well-being score for the realists. The ANCOVA for postnatal psychological well-being showed the effect of group (realist versus non-realist) approached significance (realists: $\underline{M}$ = 4.28, $\underline{SE}$ = .07 versus non-realists: $\underline{M}$ = 4.12, $\underline{SE}$ = .05; $\underline{F}$ (1,66)= 2.77, $\underline{p}$ =.10), with realists reporting the highest level of well-being.

Figure 2.

Postnatal Depressive Symptomatology for Groups Created by Median Splits on the Positive and Negative Thoughts Subscales of the OM Scale- Study2.

Figure 3.

Postnatal Psychological Well-being for Groups Created by Median Splits on the
Positive and Negative Thoughts Subscales of the OM Scale - Study 2.

The Moderating Effect of Childbirth Difficulties and Negative Surprises

Hypothesis three proposed that when faced with negative unforeseen events, constructive realists, having hoped for the best and prepared for the worst, will cope better than positive or negative oriented participants. It was proposed that positively oriented people would adjust satisfactorily if their overall experience of childbirth and new motherhood was positive, with few or no negative experiences or surprises. More realistic people on the other hand would cope well regardless of the experience and would cope better than positively oriented people in the wake of difficult or negative occurrences during childbirth and/ or new motherhood.

To determine if groups differed on type of childbirth (i.e. easier or as expected versus harder or unexpected c-section) or the reporting of negative surprises, 2 (high-low positive thoughts) X 2 (high-low negative thoughts) ANOVAs on type of childbirth and number of negative surprises were conducted. There were no between group differences found on either type of childbirth or number of negative surprises reported ($F_s < 1$). In fact, although we did find group differences on coping and adjustment, the majority of women in the study reported surprises related to the transition regardless of whether they were positively, negatively or realistically oriented. For example, in most cases, the childbirth experience was not what our participants had expected. Only 14% recounted a birth experience that went according to what they had planned or imagined. Of the remaining participants, a fortunate 26% said their childbirth experience was easier than expected, 28% reported a more difficult childbirth, and 32% had unexpected C-sections.

Once at home with their babies, the majority of new mothers reported surprises or issues relating to the baby and their own adjustment that they had not expected: 86% of the women reported difficult or negative surprises. A major problem for at least 44% of the

participants was breastfeeding. Many of the women, particularly those who were committed to breast-feeding before childbirth, talked about the frustration and emotional upset they experienced when breastfeeding was wrought with unforeseen difficulties. Some of these mothers reported feeling like a “failure” or felt unfairly judged by professionals and others when they *admitted* to bottle-feeding their babies. Sleep deprivation was another often-cited negative aspect of new motherhood. Many of the women commented that they expected sleepless nights with a new baby; however, they were not prepared for the mental effects of sleep deprivation. Difficulty concentrating or retaining information was a common complaint and a large number of women referred to this as “baby brain”. A third major surprise reported by many of the new mothers in this study was how little they managed to accomplish in a day. For instance, one woman commented, “I never imagined that looking after a baby could be so time consuming. I love taking care of him and being a Mom but I accomplish so little in a day. I’m having a hard time accepting that”.

The moderating effect of type of childbirth. It was predicted that positively oriented and realistic groups would not differ in their postnatal adjustment when the transition to motherhood was easier or as expected but would differ when the transition was more difficult than expected. To test this, we assessed the effect of prenatal orientation to motherhood on residualized postnatal CESD and PWB scores separately for mothers with and without a difficult childbirth. The interest here is whether realists adjust more successfully than others under a difficult childbirth condition.

As hypothesized, when childbirth was easier than or as expected there was no difference between the groups on depression ($F(1,23) = .03, p > .86$) and no significant difference between groups on psychological well-being ($F(1,23) = 2.44, p > .13$). However, the

F ratio for psychological well-being was larger than expected. The plot for well-being revealed a somewhat lower adjusted mean for the not future oriented group ($\underline{M}$ = 4.01) compared to the positive ($\underline{M}$ = 4.32), negative ($\underline{M}$ = 4.33) and realistic ($\underline{M}$ = 4.29) groups, who had similar means (see Figure 4). The results for the condition of childbirth easier than expected should be interpreted with caution, as cell sizes are small.

Figure 4.

Postnatal Psychological Well-being for Groups Created by Median Splits on the Positive and Negative Thoughts Subscales of the OM Scale When Childbirth Was As or Easier Than Expected.

When childbirth was more difficult than expected the interaction effect for adjusted CESD scores approached significance ($F(1,36) = 3.61, p = .07$). This cross-over interaction is depicted in Figure 5. Faced with an unexpectedly difficult childbirth, women who were high on positive- low on negative thoughts (positive oriented) and low on positive- high on negative thoughts (negatively oriented) at pregnancy reported the greatest levels of depressive symptomatology postnatal (adjusting for prenatal scores; $M = 1.62, SE = .14, n = 8$ and $M = 1.63, SE = .13, n = 10$, respectively) compared to those who were high on positive –high on negative thoughts (realists) and low on positive-low on negative thoughts (adjusting for prenatal scores; $M = 1.34, SE = .12, n = 11$ and $M = 1.35, SE = .16, n = 12$, respectively).

A similar effect was found for psychological well-being. When childbirth was difficult, there was a significant interaction effect for positive and negative thoughts on adjusted PWB scores ($F(1,36) = 6.02, p = .02$). The interaction effect on PWB is depicted in Figure 6. As illustrated by the graph, overly positive thinking in pregnancy yielded the lowest well-being score three months into the transition to motherhood when childbirth turned out to be more difficult than expected (adjusting for prenatal scores; $M = 3.98, SE = .12$). A more balanced or realistic perspective during pregnancy yielded the highest well-being score in the wake of a difficult childbirth (adjusting for prenatal scores; $M = 4.35, SE = .10$).

Figure 5.

Postnatal Depressive Symptomatology for Groups Created by Median Splits on the Positive and Negative Thoughts Subscales of the OM Scale When Childbirth Was More Difficult Than Expected.

Figure 6.

Postnatal Psychological Well-being for Groups Created by Median Splits on the Positive and Negative Thoughts Subscales of the OM Scale When Childbirth was More Difficult Than Expected.

The moderating effect of negative surprises. It was predicted that positively oriented and realistically oriented groups would not differ in their postnatal adjustment when the transition to motherhood was easier or as expected but would differ when the transition was more difficult than expected. To test this, we assessed the effect of prenatal orientation to motherhood on residualized postnatal CESD and PWB scores separately for mothers who experienced few negative surprises and many negative surprises related to mothering a newborn. The interest here is whether realists adjust more successfully than others when the challenges of motherhood are great.

As expected, when mothering a newborn went mostly as planned with few or no negative surprises there was no significant difference between groups on depressive affect and psychological well-being ($F(1,17) = .01, p > .91$ and $F(1,17) = .16, p > .70$, respectively).

However, when new motherhood involved negative surprises, the interaction effect of positive and negative thinking on adjusted CESD scores approached significance ($F(1,42) = 2.88, p = .10$). Examination of adjusted CESD means shows that the negatively oriented group and the positively oriented group reported the most depressive symptomatology (adjusting for prenatal scores; $M = 1.65, SE = .17, n = 11$ and $M = 1.60, SE = .14, n = 8$ respectively), while the realists reported the least amount of depression symptoms ($M = 1.31, SE = .09, n = 18$) three months into the transition to motherhood (see Figure 7).

The F ratio for group differences on psychological well-being in the high negative surprise condition was not significant ($F(1,42) = .61, p > .40$). However, there was a marginally significant main effect for negative thoughts ($F(1,42) = 3.09, p = .08$). Examination of the plot and adjusted means of the four groups on psychological well-being revealed that three of the groups- positive, negative and not future oriented- had similar means (adjusting for prenatal

scores; positive: $\underline{M}= 4.01$, $\underline{SE}=.13$; negative: $\underline{M}= 4.09$, $\underline{SE}=.10$; not future oriented: $\underline{M}= 3.99$, $\underline{SE}=.11$), while the realistic group had a higher adjusted mean ($\underline{M}=4.29$, $\underline{SE}=.08$) (see Figure 8). Therefore, the decision was made to combine the non-realists (positive, negative and not future oriented) and compare their combined average adjusted well-being score with the realists'. Analysis of covariance (ANCOVA) was conducted comparing realists and non-realists on psychological well-being, with the prenatal well-being score as the covariate, in the high negative surprise condition. The ANCOVA for postnatal psychological well-being indicates a significant difference between the realists and the non-realists when motherhood involved negative surprises ($\underline{F} (1,44)= 5.75$, $\underline{p} = .02$).

Figure 7.

Postnatal Depressive Symptomatology for Groups Created by Median Splits on the Positive and Negative Thoughts Subscales of the OM Scale With Negative Motherhood Surprises.

Figure 8.

Postnatal Psychological Well-being for Groups Created by Median Splits on the Positive and Negative Thoughts Subscales of the OM Scale with Negative Motherhood Surprises.

Discussion

The results of study 2a support the main hypothesis that a realistic orientation towards motherhood during pregnancy is beneficial to postnatal adjustment. In study 1, which assessed pregnant women prior to their transition to motherhood, the benefits of a realistic orientation were not obvious. In that study, realists reported significantly less dysphoria than the negatively oriented group but slightly more than the positively oriented participants. We hypothesized, however, that the benefits of constructive realism would be realized as women go through the transition to motherhood. The prospective nature of study 2a provided an opportunity to assess the effect of a realistic orientation on subsequent postnatal adjustment. The results of that study indicate that the combination of positive and negative thinking in pregnancy is associated with less depressive symptomatology and higher psychological well-being postnatal than either predominantly positive or negative thinking. Women who were realistic in their orientation to motherhood during pregnancy, that is they thought often about positive and negative outcomes, were coping most successfully with the transition to motherhood. This was particularly the case when childbirth was difficult or the first three months of mothering were more difficult than expected.

Constructive realists, in contrast to the positive and negative oriented, were more balanced in their orientation to motherhood and, consequently, likely prepared themselves in some way for postnatal difficulties without becoming ruminative or overly negative. When everything went well or as planned, the constructive realists did not differ significantly from the other groups. However, when there were childbirth difficulties and/or negative surprises related to mothering, the constructive realists were most resilient, reporting significantly lower depressive affect and higher psychological well-being than the other groups.

The findings on the moderating effect of negative events for coping and adjustment to the motherhood transition suggests that a realistic orientation prepares people for or buffers them against the deleterious effect of unexpected adversity. It may be that thinking ahead to the possibility of negative events or challenges sets preparatory coping in motion. This preparatory coping likely involves mentally preparing for challenges by considering the array of possibilities and thereby creating constructs that facilitate the integration of these negative events. Therefore, when negative surprises occur constructive realists are not shocked or devastated. As personal construct theory suggests, these people have pathways or avenues available to them that incorporate these unexpected negative events, which helps keep them on track with minimal upset or disruption.

It is also likely that realistic thinking prior to a significant event facilitates playful thinking and behavior. If a woman considers, for example, the possibility of a difficult childbirth or sleep deprivation she may, in a preliminary or imaginative way, plan out what she might do in such a situation. Likewise, if a pregnant woman considers the possibility that childcare will be more time-consuming than anticipated she will be more inclined to think about how she can put her own plans on hold or begin to identify in her own mind sources of extra support should the need arise. We hypothesized in the introduction that constructive realists, when they go through the transition to motherhood, will be more flexible in their goal pursuits and will restructure their lives in a way that is constructive and meets the demands of the mother role.

To understand better the adjustment process for constructive realists and non-realists and to illustrate the findings from study 2a we conducted an exploration into the current activities and plans of the participants at prenatal and postnatal. In this next section, we will

attempt to address the issue of how constructive realists and non-realists undertake the process of restructuring their lives to meet the demands of parenthood, particularly when the transition is more difficult than expected.

Motherhood Study 2b

Introduction and Hypotheses

When faced with difficulties, women in study 2a, who gave thought during pregnancy to both the positive and negative possibilities associated with motherhood coped more effectively and experienced a smoother adjustment postnatal than women who were more positively or negatively oriented. In this section of the dissertation we will attempt to illustrate these findings by conducting an exploration into the daily lives of the study 2a participants as they made the transition from pregnancy to motherhood. In the introduction to the dissertation, it was hypothesized that constructive realists will be more flexible than non-realists in their goal pursuits, which will be reflected in the type of prenatal goals they choose to maintain, the postnatal goals they adopt and how they restructure and manage their goals. Specifically, it was hypothesized that this flexibility will enable constructive realists, as they go through the transition to motherhood, to maintain meaningful goals while minimizing stress and conflict. Personal Projects Analysis (Little, 1983) provides an approach to examining the current activities and goals of people's lives, as well as their cognitive and affective appraisal of these activities. In PPA, people evaluate their current projects (e.g. what they are doing) in terms of their importance, enjoyment, difficulty etc. Analyses of these projects provide a salient and extensive view into people's lives.

The "doings" in PPA are referred to as personal projects, and people tend to think of these projects as their daily activities, goals or plans. In this study, we were interested in how participants restructured their goals and activities (i.e. personal project systems) as they made their way through the transition to motherhood. Previous research involving personal projects and the motherhood transition (Salmelo-Aro et al, 2001) found that change in the content of individuals' personal projects, particularly the increase in transition related projects and

decrease in intrapersonal or self-focused projects, was associated with a decrease in depression symptoms. Life stage researchers have suggested that at major transition periods reflection or self-focused activities increase as people work to integrate significant life changes into their self-perceptions and daily lives (Cantor & Harlow, 1994; Zirkel & Cantor, 1990).

In this section we will examine the personal project systems of those participants from study 2a who had a more difficult than expected transition to motherhood (many negative surprises in relation to the baby and becoming a parent). Specifically, we will be exploring participants' project content, the prevalence of transition specific projects (baby projects) at Time 1 and Time 2, and the fate of Time 1 projects that are not specifically related to the transition (e.g. achievement/occupational). The flexibility that we hypothesized would be characteristic of constructively realistic women is expected to be displayed through the adoption of transition projects and the letting go or downscaling of achievement/occupation related projects. It is also expected that constructive realists, who have given thought to the possibility of childbirth and motherhood difficulties, should adapt more quickly and require less time and space in their project system for self-focused or reflection/rumination type projects than the non-realists.

Information on project dimension ratings, that is how people perceive their projects, will also provide important information on how women make the transition to motherhood. Earlier personal project research involving pregnant women found that individual's appraisal of their projects, particularly how supported they feel in their project pursuit, is associated with positive outcomes (McKeen, 1984). PPA research in general has found that projects perceived as manageable (e.g., low on stress and difficulty), meaningful (e.g. important, enjoyable and

personally relevant) and supported, tend to be associated with greater subjective well-being (Little, 1989; 1998).

In this exploration, we are interested in how the content and appraisal of personal projects change over time and through the transition to motherhood. This information will help illustrate the group differences in coping and adjustment that were found in study 2a. We propose that realists, having given thought to both positive and negative possibilities, will be more flexible in goal pursuit and will be more likely to make constructive adjustments to their prenatal project systems. We expect to see these adjustments both in the content and appraisal of their projects.

PPA data is rich in ipsative content, and provides for quantitative and qualitative analysis, both of which will be utilized in this chapter. Qualitative examination of individuals' project systems will help illustrate how women work their way through this significant life transition.

Method

Participants and Procedure

The sample of 69 participants from study 2a was split into constructive realists and non-realists based on their scores from the Orientation to Motherhood questionnaire. Those participants who scored high on the positive thoughts scale and high on the negative subscale were considered constructive realists. Participants who scored low on the positive thoughts subscale and low on the negative thoughts subscale (not future oriented), low on the positive subscale and high on the negative subscale (negative oriented), and high on the positive subscale and low on the negative subscale (positive oriented) were pooled into the non-realist group. This is not to suggest that these groups are similar in their orientation to motherhood. Rather, the combination of these three groups provides a comparison group for the realists. I am interested in investigating what realists do in comparison to others, who think less often about both positive and negative possibilities. Further, the pooling of participants who were below the median on both positive and negative subscales will serve to simplify the project data analyses. Only those participants who reported two or more negative surprises related to their newborn and the overall transition to motherhood were included in the main analysis (Constructive realists; $n = 18$ and Non-realists; $n = 29$).

Personal Projects Analysis. To explore in more detail how women make the transition to motherhood in the context of their daily lives, participants completed a Personal Projects Analysis, as part of the interview protocol from study 2a, at the third trimester of pregnancy and again three months after the birth of their first child (prenatal and postnatal PPA protocols are included in Appendix B as part of the overall prenatal and postnatal interview questionnaires). Participants completed a revised version of Little's (1983) PPA inventory.

They were asked to describe their current projects /activities and plans in response to the following instruction: “people have many kinds of things that they think about, plan for and sometimes, though not always accomplish. Consider the projects you have in your life at the moment; they may be short or long-term and related to any life domain such as work, personal life or family”. After generating a list of projects, participants were asked to pick six projects that they felt were most typical of or relevant to their current life situation.

Each project mentioned by the women at Time 1 and Time 2 was first categorized into one of eight categories on the basis of content. The categories were similar to those developed from previous PPA research (Lecci, 1991; Wilmut, 1993) with the exception of the baby category; they were as follows: 1) Achievement/Occupational (e.g. develop a career plan, finish school, wrap up office work) (2) Baby (finish nursery, enroll in baby activities) (3) Interpersonal (e.g. go to movies with husband, keep up with friends) (4) Leisure (e.g. read a book, Christmas crafts, scrap booking) (5) Financial (e.g. do taxes, save money, pay bills) (6) Body Image/Fitness (get back to regular body shape, exercise) (7) Administrative/Maintenance (e.g. renovate bathroom, mop floors, sort clothes) (8) Intrapersonal/ self-focused (get a balance in life, deal with personal issues, develop spirituality).

At prenatal, once projects were selected, participants rated each of their six projects on dimensions of Importance (i.e. how important is it for you to carry out this project?), Difficulty (i.e. how difficult is it for you to carry out this project?), Enjoyment (i.e. how enjoyable is this project?), Time- Adequacy (i.e. do you have adequate time for this project?), Self-Identity (i.e. how like you is this project?), Support (i.e. how supported are you in this project?), Stress (i.e. how stressful is this project?), and Commitment (i.e. how committed are you to this project?),

based on an 11 point rating scale from 0 (e.g. not at all important... difficult, enjoyable) to 10 (e.g. very important... difficult, enjoyable). Collapsing across participants' projects we obtained summary scores (means) of the extent to which each woman's projects were important, difficult, stressful etc.

At postnatal, participants were first asked about the fate of their Time 1 projects. If an individual was still working on a project from Time 1, that project was carried over to their postnatal project system. If a prenatal project was no longer being worked on, it was not included in the postnatal system. After participants reviewed the fate of their Time 1 projects, they proceeded to list their current projects (up to a maximum of six) and then rate their carry-over prenatal projects and current projects (combined maximum of 12 projects) on the aforementioned project dimensions.⁴

⁴ Ad hoc dimensions of "hinders mother role" and "helps mother role" were included in the postnatal project rating matrix. However, these dimensions did not yield significant correlations with outcome measures and were subsequently dropped from the analyses.

Results and Discussion

Project Content

In the introduction, it was hypothesized that as women make the transition to motherhood, constructive realists, having considered positive and negative possibilities, will be more likely to restructure their project systems to meet the demands of the mother role. Specifically they will disengage from projects that are not feasible, create new projects that are consistent with the mother role, and maintain core projects that provide personal meaning.

The 940 projects that were elicited from the sample were classified according to the aforementioned content system by the author (For the total sample's project categorization see Appendix C). The descriptives on Project content at prenatal and postnatal for constructive realists and non-realists who experienced a difficult transition are provided in Table 3. To examine how realists and non-realists managed the transition from prenatal to postnatal projects, we conducted a priori simple effect analyses on the prenatal and postnatal projects (and ratings) for realists and non-realists.

In terms of project content, both the realists and non-realists seem to have made adjustments to their project systems to accommodate the demands of motherhood. For example, there was a drop in achievement/occupation related projects (e.g. "meet with boss", "set up office", "wrap up office work") (Main effect of time $F(1,45) = 3.62, p = .06$), an increase in baby related projects (e.g. "find daycare", "enroll in baby and mom activities", "get baby to sleep") (Main effect of time $F(1,45) = 12.76, p < .001$) and an increase in body image/fitness projects (e.g. "get back into shape", "shed baby fat") (Main effect of time $F(1,45) = 14.92, p < .001$) from prenatal to postnatal.

Although both groups reported an increase in baby projects, constructive realists reported a more modest increase (prenatal $M = .89$, $SD = 1.02$ to postnatal $M = 1.28$, $SD = 1.27$; simple effect $F(1,45) = 2.38$, $p = .13$) relative to non-realists (prenatal $M = .72$, $SD = .88$ to postnatal $M = 1.48$, $SD = 1.21$; simple effect $F(1,45) = 14.56$, $p = .001$).⁵ Perhaps feeling overwhelmed or “feeling lost”, as one participant described her transition experience, prompted over-thinking about baby issues and, to a greater extent among non-realists, caused these issues to be projectified. Such projects included, “help baby sleep”, “socialize Thomas”, and “balance baby’s feeding/sleeping”. We expected an increase in baby projects during the transition to motherhood and other researchers (Salmelo-Aro et al., 2001) have found a positive relationship between the increase in transition projects such as baby and family projects and psychological well-being. However, there may be a limit to the extent to which an increase in baby projects facilitates adjustment. A moderate increase may be more beneficial than a large increase, which might indicate an imbalance in one’s project system.

In concert with the doubling of postnatal baby projects, non-realists also reported a significant increase in intrapersonal projects (prenatal $M = .41$, $SD = .73$ to postnatal $M = .72$, $SD = 1.03$; simple effect $F(1,45) = 4.63$, $p < .05$) which indicates an increased tendency toward self-focusing. This would suggest that when faced with negative surprises, non-realists, being unprepared, became preoccupied with the difficulties concerning the baby and became ruminative and self-doubting or self-focused, a tendency that has been shown to be associated with depressive affect (Nolen-Hoeksema et al., 1994). An increase in projects for non-realists such as “rest and reflect”, “get myself motivated”, “be a good mother” and “develop a

⁵ Because there were a priori hypothesis for differences expected between realists and non-realists, simple effects were conducted whether or not we found significant interaction effects.

routine” may suggest stalled adjustment or life stage quandaries. For example, one of the non-realists described how she had planned to enroll in mom and baby swimming at the local pool but was procrastinating. She went on to explain that although she knew that this activity would be good for both of them she felt reluctant and was upset and frustrated with herself for not following through on her plan. This woman seemed to be spending a lot of time wondering why she was “unmotivated” and feeling lonely. Some researchers have suggested that at transitional periods individuals become more self-focused as they try to redefine themselves and reorganize their lives (Cantor & Harlow, 1994). This self-focusing may be adaptive, or it may indicate transitional struggles. It may be that type of self-focused activity moderates adjustment. For example and similar to Trapnell and Campbell’s (1999) work on private self-consciousness, self-focused thought or activity that is reflective (what kind of mother do I wish to be?) rather than ruminative (what is wrong with me?) might be beneficial. It will be important in future research to differentiate type of intrapersonal projects.

The constructive realists, in relation to what they were doing (project content), seemed to handle the transition and negative surprises differently. Rather than becoming more self-focused (Intrapersonal projects at prenatal $\underline{M} = .72$, $\underline{SD} = .67$ to postnatal $\underline{M} = .67$, $\underline{SD} = .77$; simple effect $\underline{F}(1,45) = .09$, ns), realists appeared to move quickly into more beneficial “doings”. They increased significantly their interpersonal projects (prenatal $\underline{M} = 1.22$, $\underline{SD} = 1.17$ to postnatal $\underline{M} = 1.78$, $\underline{SD} = 1.06$; simple effect $\underline{F}(1,45) = 5.30$, $p < .05$), which tended to be such projects as “make more time with husband”, “stay in touch with friends” and “visit family”. Additionally, despite being faced with negative surprises, the realists increased significantly their leisure projects from prenatal to postnatal (prenatal $\underline{M} = .39$, $\underline{SD} = .50$ to postnatal $\underline{M} = .89$, $\underline{SD} = 1.02$; simple effect $\underline{F}(1,45) = 7.37$, $p < .01$). This would suggest that

constructive realists were able to accept or more easily integrate unexpected difficulties, preventing these difficulties from overtaking their lives. The combination of interpersonal projects and leisure activities likely provided an effective buffer from the negative affect that would be expected to accompany a difficult postpartum experience.⁶

⁶ Interpersonal or leisure projects did not change significantly from prenatal to postnatal for non-realists. (Interpersonal prenatal $\underline{M}$ = .97, $\underline{SD}$ = .98 to postnatal $\underline{M}$ = 1.07, $\underline{SD}$ = .88; simple effect $\underline{F}(1,45)$ = .30, ns; Leisure prenatal $\underline{M}$ = .72, $\underline{SD}$ = .96 to postnatal $\underline{M}$ = .69, $\underline{SD}$ = .71; simple effect $\underline{F}(1,45)$ = .06, ns).

Table 3. Mean Number of Projects Listed at Prenatal and Postnatal for Constructive Realists and Non-realists with Many Negative surprises in the Major Content Categories.

Content Category	<u>Constructive Realists (n= 18)</u>				<u>Non-Realists (n= 29)</u>			
	<u>Prenatal</u>		<u>Postnatal</u>		<u>Prenatal</u>		<u>Postnatal</u>	
	M	SD	M	SD	M	SD	M	SD
Achievement/Work-Related	.83	.79	.67	.69	.83	.76	.62	.78
Baby-related	.89	1.02	1.28	1.27	.72	.88	1.48	1.21***
Interpersonal	1.22	1.17	1.78	1.06*	.97	.98	1.07	.88
Intrapersonal/Self-focused	.72	.67	.67	.77	.41	.73	.72	1.03*
Leisure	.39	.50	.89	1.02**	.72	.96	.69	.71
Financial	.44	.62	.44	.51	.47	.31	.62	.38
Body/ Fitness	.33	.73	.78	.62**	.45	.51	.69	.54*
Maintenance/Admin	.78	1.26	1.61	1.20**	1.21	1.05	1.79	1.11**

Note. * $p < .05$

** $p < .01$.

*** $p < .001$

Significant F ratio for simple effect of time (prenatal to postnatal) for each group's mean number of projects in each category.

Project Dimension Ratings

A priori hypotheses outlined in the introduction posited that as constructive realists make their way through the transition to motherhood they would be more flexible in their project pursuit. This flexibility would be evident in their disengagement from projects that are a source of conflict and the downscaling of projects that are highly personally meaningful (core projects) and wish to be maintained. This adaptive project restructuring, it was hypothesized, would result in a postnatal project system that maintained personal relevance (self-identity, enjoyment and importance) as well as manageability (low stress and difficulty). As indicated earlier, a major finding in other PPA research that explored the personal projects of pregnant women was that support (McKeen, 1984) was the strongest predictor of subjective and physical well-being in pregnancy. Correlational analyses in this study also found support to be positively associated with psychological well-being.⁷ Therefore, we will also examine how constructive realists and non-realists rated support for their projects at prenatal and postnatal to provide further understanding of how realists and non-realists perceived and experienced their transition situation.

A complete report of the 69 participants' project dimension ratings prenatal and postnatal and the correlations between dimension ratings and well-being outcome measures are found in appendix D and E, respectively. For the current exploration, we are specifically interested in the project dimension ratings of realists and non-realists who reported many

⁷ Change in ratings of support for personal projects from Time 1 to Time 2 for the total sample yielded the strongest correlation, of all the dimensions, with residualized depression ($r(67) = -.43, p < .001$) and psychological well-being ($r(67) = .46, p < .001$) at postnatal.

negative surprises. Mean dimension rating descriptives for the realists and the non-realists at prenatal and postnatal are provided in Table 4.

Table 4. Mean Project Dimension Ratings at Prenatal and Postnatal for Constructive Realists and Non-realists With Many Negative Surprises.

<u>Dimensions</u>	<u>Realists</u>				<u>Non-realists</u>			
	<u>Prenatal</u>		<u>Postnatal</u>		<u>Prenatal</u>		<u>Postnatal</u>	
	M	SD	M	SD	M	SD	M	SD
Commitment	9.01	.84	8.58	.84***	8.70	.89	8.06	1.08***
Difficulty	4.91	2.31	5.54	1.41	5.01	1.31	5.91	1.81**
Enjoyment	7.24	1.89	7.07	1.46	7.22	1.40	6.56	1.42**
Importance	9.10	.84	8.48	.61**	8.64	.79	8.33	.97*
Self-Identity	7.99	1.34	8.12	1.45	8.28	1.13	7.89	1.18*
Stress	4.08	2.26	3.86	1.59	3.98	1.92	3.88	1.77
Support	7.63	1.62	7.45	1.73	7.95	1.61	7.21	2.50*
Time Adequacy	6.87	1.88	5.48	1.57**	6.26	1.95	5.30	2.24*

* $p < .10$

** $p < .01$

*** $p < .001$

*Significance F ratio for simple effect of time (prenatal to postnatal) for each group's project dimension ratings.

Project meaning for constructive realists and non-realists.

To assess the extent to which realists and non-realists, when faced with many negative surprises, were able to maintain personal meaning in their project system, we looked at changes in ratings of projects on dimensions of self-identity (how much is this project like you?), enjoyment (how enjoyable is this project for you?), and importance (how important is this project to you?) from pregnancy to three months postnatal.

Self-identity is a particularly relevant dimension for new mothers in relation to their current projects. When women become mothers, one of the important tasks is to redefine themselves. Most women who have gone through this transition report that they gain a mother role but they feel as though they lose something of themselves; e.g. their autonomy, appearance, time for their own interests (Nicolson, 1999). The ideal transition is one in which mother identity blends with individual identity and, as such, women are able to assume the mother role while retaining their core self.

The ability to maintain a meaningful project system through the transition to motherhood differed for realists and non-realists. Realists tended to maintain their self-identity (prenatal $M = 7.99$, $SD = 1.34$ to postnatal $M = 8.12$, $SD = 1.45$; simple effect $F(1,45) = .25$, ns) and level of enjoyment (prenatal $M = 7.24$, $SD = 1.89$ to postnatal $M = 7.07$, $SD = 1.46$; simple effect $F(1,45) = .28$, ns) with regard to their projects despite the difficult nature of the transition. Non-realists, on the other hand, seemed to have difficulty maintaining the same level of enjoyment and personal relevance in relation to their projects from prenatal to postnatal; non-realists reported a significant decrease in project enjoyment (prenatal $M = 7.22$, $SD = 1.40$ to postnatal $M = 6.56$, $SD = 1.42$; simple effect $F(1,45) = 6.81$, $p < .01$) and marginally

significant decrease in self-identity (prenatal $\underline{M}$ = 8.28, $\underline{SD}$ = 1.13 to postnatal $\underline{M}$ = 7.89, $\underline{SD}$ = 1.18; simple effect $\underline{F}$ (1,45)= 3.31, p = .08) in relation to their projects from pregnancy to three months postpartum.

Ratings on project importance decreased from prenatal to postnatal for both realists and non-realists (main effect of Time $\underline{F}$ (1,45)= 11.34, p <.01). However, the realists (prenatal $\underline{M}$ = 9.10, $\underline{SD}$ = .84 to postnatal $\underline{M}$ = 8.48, $\underline{SD}$ = .61; simple effects $\underline{F}$ (1,45)= 8.18, p <. 01) reported a somewhat larger decrease in project importance than did the non-realists (prenatal $\underline{M}$ = 8.64, $\underline{SD}$ = .79 to postnatal $\underline{M}$ = 8.33, $\underline{SD}$ = .97; simple effects $\underline{F}$ (1,45) = 3.29, p = .08). Although PPA research, in general, has found that project importance is positively related to subjective well-being (Little, 1989), this research has been mostly cross-sectional and has not assessed how old projects, in this case prenatal projects, are carried over through a life transition. This finding on the decrease in importance for realists was as expected. In the context of the interviews, we noticed that when asked about their prenatal projects, there seemed to be a trend on the part of realists to downscale the importance of core projects (those high on self-identity) that were maintained through the transition. For instance, one participant who was developing a consulting career and rated it as very much like her, carried that project over to her postnatal project system, but rated it much lower on importance at postnatal than at prenatal. Similarly, another participant rated “maintain a clean house” as extremely important to her (10 on the 0-10 rating scale) and very much like her (10 on the 0-10 rating scale) at prenatal. At postnatal, she reported that she was still working on that project, but in the context of a transition that involved many unexpected difficulties (including baby not sleeping and colic), the maintenance of a clean house, although still very much like her, was downgraded to not important at all (0 on the 0-10 rating scale). Rather than representing a loss of meaning, it is

more likely that this drop in importance is indicative of adaptive restructuring and realistic appraisal of personal and environmental affordances.

Project manageability for constructive realists and non-realists.

In the case of adaptive project restructuring one would expect that project manageability (stress, difficulty, and time adequacy) would not differ significantly from prenatal to postnatal. Examining Time 1 and Time 2 descriptives for realists and non-realists, when there were many negative surprises, it was found that both realists and non-realists maintained constant levels of project stress; in fact, stress decreased slightly for both groups (realists' prenatal $M = 4.08$, $SD = 2.26$ to postnatal $M = 3.86$, $SD = 1.59$; simple effect $F(1,45) = .28$, ns and non-realists' prenatal $M = 3.98$, $SD = 1.92$ to postnatal $M = 3.88$, $SD = 1.77$; simple effect $F(1,45) = .09$, ns). This was somewhat expected based on the interviews in which most of the participants discussed the relief they felt at being off work and thus able to focus on home life during this early postpartum period. Compared to working full-time, most women found being at home less stressful. The majority of the women in this study were full-time employed and thus entitled to one-year maternity leave.

Although project stress did not increase after the birth of their child, the amount of time that realists and non-realists had available for their projects decreased significantly from prenatal to postnatal (Main effect of time $F(1,45) = 14.70$, $p < .001$; realists' time adequacy prenatal $M = 6.87$, $SD = 1.88$ to postnatal $M = 5.48$, $SD = 1.57$; $F(1,45) = 8.33$, $p < .01$ and non-realists' time adequacy prenatal $M = 6.26$, $SD = 1.95$ and postnatal; $M = 5.30$, $SD = 2.24$; $F(1,45) = 6.41$, $p < .05$). Most of the women, regardless of whether they were realists or non-realists, discussed the frustrations involved in accomplishing much less than they planned during this postpartum period. One participant commented, "I love being a Mom, but I can't

believe how little I get done in a day". Several others said they were surprised that being a mother and taking care of a baby could be so time-consuming.

Importantly, although realists' and non-realists' stress levels did not change significantly from prenatal to postnatal, both groups reported an increase in project difficulty (Main effect of time $F(1,45) = 6.59, p < .01$). However, non-realists' project difficulty increased significantly (prenatal $M = 5.01, SD = 1.31$ to postnatal $M = 5.91, SD = 1.81$; simple effect $F(1,45) = 5.92, p < .01$) compared to realists, for whom project difficulty did not increase significantly (prenatal $M = 4.91, SD = 2.31$ to postnatal $M = 5.54, SD = 1.41$; simple effect $F(1,45) = 1.82, p = .18$). The fact that realists adopted more leisure projects suggests that they adapted their project system in a way that made it less difficult and more enjoyable during this challenging postpartum period. However, in the context of the interviews and supported by our earlier statistical analyses, both groups reported postpartum difficulties; realists reported as many negative surprises and difficulties as non-realists. In fact, realists were very forthcoming about their negative experiences and there was a sense that life at this time was as difficult for them as the other participants. What was different however, was that rather than worry about these issues, realists seemed to accept these difficulties as part of the transition and seemed to enjoy discussing them. This type of open discussion may have garnered cathartic-type relief for realists as well as actual support. It is to the issue of support that we turn next.

Project support for constructive realists and non-realists.

In the context of PPA, participants were asked how supported they felt in carrying out their projects. Realists reported no significant change in project support from prenatal to postnatal (prenatal $M = 7.63, SD = 1.62$ and postnatal $M = 7.45, SD = 1.73$; simple effect $F(1,45) = .23, ns$) whereas non-realists reported a significant decline in project support from

prenatal to postnatal (prenatal $M = 7.95$, $SD = 1.61$ and postnatal $M = 7.21$, $SD = 2.50$; simple effect $F(1,45) = 5.81$, $p = .02$). These findings on group differences in support are consistent with what was noticed in the interviews. Realists were very forthcoming about the challenges they were experiencing, seemingly accepting it as part of the overall transition. This approach to negative surprises likely enabled them to maintain pre-transition levels of support. For example, one of the realists, in reporting the surprises she encountered after bringing her baby home from the hospital, stated matter of factly; “breastfeeding was more difficult than I expected, I wasn’t sleeping, I felt overwhelmed and I needed help, so I called my mother-in-law”. In contrast, one of the non-realistic participants reported, “I am surprised at how difficult breastfeeding was and how ashamed and devastated I felt, and continue to feel, about not breastfeeding”. This participant shared the fact that she had not told her close work friends on their first get-together after the birth about her switch to bottle-feeding. She also reported that she had stopped attending her postnatal mothers’ group because all of the other mothers were breastfeeding and she felt “judged”. This approach likely resulted in less support and increased self-focus.

Summary

It was hypothesized that constructive realists, having given thought to the range of possibilities, both positive and negative, associated with their impending transition to motherhood, would be more flexible in their postnatal goal pursuits than non-realists. In particular, when the transition was more challenging than expected, realists were expected to cope well, adjusting their pursuits to match the demands of the transition in a constructive way.

The results from PPA suggest that realists reconstructed their project systems in a way that allowed them to adjust to the demands of motherhood while maintaining a project system that was meaningful and manageable. The change in realists’ project systems from prenatal to

postnatal reflected the demands of a difficult transition; they had less time available for their projects, and they downscaled (in terms of importance) meaningful projects. However, it seems that realists took these transition difficulties in stride as they continued to engage in interpersonal and leisure activities and maintained their pre-transition level of support for their projects. Moreover, the manner in which they restructured their project systems, both in terms of content and ratings, enabled them to maintain their sense of identity in relation to their projects through the transition. The combination of increased interpersonal and leisure projects, the downscaling of core projects and the maintenance of self-identity and support was adaptive for the realists and likely buffered the negative aspects of the transition, which is consistent with the smooth adjustment (as reported in study 2a) that characterized this group's transition to motherhood.

In contrast, the change in non-realists' project systems from prenatal to postnatal suggests that they were overwhelmed by the more difficult than expected transition. They increased their intrapersonal projects and doubled the number of baby projects from prenatal to postnatal. Rather than taking these difficulties in stride, non-realists became more focused on themselves and the baby, which likely made for a more isolating and difficult postnatal situation. Indeed, non-realists rated their postnatal project system overall as being less enjoyable and more difficult than at prenatal.

Thinking ahead to mostly positive outcomes, it is plausible that non-realists would have underestimated or not planned for the additional support that would be required with a difficult childbirth or childcare experience. As a result, they may not have been prepared to ask for support or having not planned ahead, support may not have been as forthcoming as they would have liked or needed. Moreover the tendency to focus on themselves and the baby may

have led non-realists to avoid or be absent from situations in which support would be readily available. In contrast to constructive realists, non-realists' project reconstruction appears less adaptive and reflects the adjustment difficulties experienced by this group and reported earlier in study 2a.

General Discussion

In this dissertation I attempted to demonstrate that a realistic orientation to life events is beneficial, particularly as people go through a challenging life transition. I described this realistic orientation as one that acknowledges positive and negative possibilities and allows one to prepare for the worst, while hoping for the best. As the literature review on life orientation presented in the introduction demonstrated, the approach over the last 25 years in cognitive psychology and coping research has been to assess the effect of an optimistic or pessimistic orientation. Although optimism has been shown to be adaptive and associated with positive outcomes and pessimism with negative outcomes, I questioned whether there is another approach that would be more beneficial and better prepare people for life's eventualities. I argued that optimism and positive illusions are beneficial to the extent that things work out well, but leave people psychologically vulnerable in the case of adversity. In fact, when adversity strikes, it is likely that an overly positive orientation contributes to shattered assumptions, which have been hypothesized to contribute to psychological distress (Janoff-Bulman, 1992).

A realistic orientation to life events, it was postulated, would prepare people for the negative realities of life by creating constructs that would facilitate psychological integration of negative life events, while maintaining hope. A realistic orientation should not foster expectations that later, in the wake of adversity, become shattered assumptions. Consequently, when difficulties happen, constructive realists should cope more effectively and experience a smoother adjustment. The primary purpose of this dissertation was to assess the effect of a

realistic orientation and I focused on the transition to motherhood as the context for the investigation.

In study 1 we reported on the development and preliminary assessment of a measure of constructive realism that assessed 181 pregnant women's thoughts about their impending transition to motherhood. Analyzing the results from the assessment of the scale, which was found to be to be reliable and valid, we demonstrated that some people orient themselves toward a future life event in a way that considers both positive and negative possibilities – our constructive realists. We also found that this realistic orientation construct is not the same as optimism/pessimism, likely owing to the fact that the latter is assessing global expectations and realistic orientation is assessing thoughts about a specific future life event that is context specific. However, it was demonstrated that realistic orientation uniquely predicts depressive affect when optimism/pessimism is statistically controlled. As was hypothesized, constructive realists are not any more depressed than people who are positively oriented and they are significantly less depressed than people who are negatively oriented, indicating that constructive realism is different from depressive realism (Alloy and Abramson, 1979).

In study 2a we presented the results of a second study that addressed the main question of this dissertation: Does giving thought to both positive and negative possibilities prior to a significant life event promote adjustment? Following 69 pregnant women (who were expecting their first child) through the transition to motherhood we found, as hypothesized, that women who reported thinking often about the positive and negative possibilities associated with childbirth and new motherhood during the later stages of pregnancy had a smoother adjustment postnatal than women who gave thought either to mostly positive possibilities or negative possibilities. This pattern was most pronounced when childbirth and/or mothering a

newborn was more difficult than expected. There was no significant difference between the groups on the reporting of childbirth or motherhood difficulties, suggesting that thinking ahead to negative possibilities did not prevent these undesirable surprises. Instead, thinking ahead appeared to make constructive realists more resilient in the wake of negative surprises; the constructive realists reported less depressive affect and greater psychological well-being than the other groups. These constructive realists seemed less affected and undeterred by the negative events.

To determine how these women were going through the transition to motherhood in terms of daily living and to illustrate the differences in coping among the constructive realists and the non-realists, we explored in study 2b the daily plans and activities of the groups. We asked participants at pregnancy what they were doing and planning to do and how meaningful and manageable they perceived these “doings” or personal projects to be. At three months postnatal we asked the same questions and assessed change in their project systems. What we found through participants’ own accounts of their daily lives was further confirmation that constructive realists were adjusting well and seemed to be able to take the difficulties of the motherhood transition in stride. In fact, they were engaged in goal striving behavior that has been shown to promote adjustment (see Brandtstadter & Rothermund, 1994). For example, when the transition was a difficult one, constructive realists downscaled the importance of personally meaningful goals and increased leisure and interpersonal projects. This downscaling likely enabled them to hold onto meaningful projects by minimizing conflict and feelings of being overwhelmed. This flexible approach to their personal projects enabled them to maintain meaning and manageability in their daily pursuits, which likely contributed to their overall adjustment.

Non-realists on the other hand, when faced with a more difficult than expected transition, instead of engaging in more leisure and interpersonal pursuits, they presented a postnatal project system that involved increased self-focused activity and a doubling of baby-related projects. Commensurate with increased baby and intrapersonal projects, non-realists also reported a decrease in enjoyment and self-identity and an increase in difficulty with regard to their projects. Moreover, when they needed it the most, support for non-realists' projects was not forthcoming, likely because they had not planned on needing much support and/or they reacted to the difficult transition in a way that isolated them from possible sources of support. Rather than taking things in stride, the postnatal project system of the non-realists suggested a worrisome, isolating and difficult postpartum period that previous research on postpartum depression has shown to be common among some first time mothers (Murray, 1990; Oakley 1980). For women who had not thought ahead to their transition in a broad manner that included positive and negative possibilities, an unexpectedly difficult transition seemed to knock them off course, making their daily lives more difficult and less enjoyable. The image that non-realists bring to mind through their personal projects is consistent with the higher depression scores and lower psychological well-being that was found for this group in study 2a, relative to the constructive realists.

The results from the prospective motherhood study suggest that a realistic orientation promotes resilience. Intuitively it makes sense that if people think ahead to negative possibilities they will be less shocked and deterred when adversity strikes and more likely to carry on with the “doings” of life rather than becoming preoccupied with the meaning of their adversity (Davis et al, 2000). Studies on loss and bereavement suggest that it is in getting on with life and actively engaging in meaningful activities (memorials, trust funds, support

groups) that adjustment is facilitated (Davis, Wohl, & Verberg, 2005). Self-focused activities such as rumination, self-blame and engaging in counterfactuals have all been associated with less successful adjustment (Davis et al., 1998). These two different approaches to loss are clearly represented in study 2b by the constructive realists and non-realists, respectively.

The favorable outcomes for constructive realists is not surprising when one considers that theories related to goal striving (Gollwitzer & Kinney, 1989) and proactive coping (Aspinwall & Taylor, 1997) posit that desirable outcomes are more likely achieved when a realistic appraisal is implemented prior to goal commitment and dealing with extant stressors. Interestingly, Aspinwall and Taylor (1997) suggest that an optimistic or positive orientation is most conducive to proactive coping and thus, subsequent adjustment. This assertion is based on research that found a positive orientation enhances attention to negative information (Aspinwall & Brunhart, 1996; Trope & Neter, 1994). However, the results of the motherhood study suggest that the people most likely to cope proactively are the realistically oriented. Women who were positive oriented and focused predominantly on favorable outcomes were less prepared for the stresses of childbirth and motherhood and did not cope as well as women who were realistic in their orientation to motherhood. However, the findings of the motherhood study do support the postulate of proactive coping theory that suggests a realistic appraisal of potential stressors can mitigate their impact, if or when they materialize. The findings of the motherhood study also suggest that a realistic orientation is most congruent with proactive coping.

What does seem to be key regarding the tendency to give thought to negative possibilities is that to the extent that negative thoughts are accompanied by positive thoughts the negative effect of negative thinking is lessened or buffered. More specifically, the current

study has shown that the effect of considering negative possibilities is more helpful than harmful when coupled with positive thoughts, in the context of an impending significant life transition. However, negative thinking alone, without positive thoughts or hope, is associated with depressive affect. Because this is the first study to assess realistic orientation in the context of an impending major life transition, the results should be interpreted with caution, pending replication with other samples and in diverse contexts.

In developing resilience, the results of this dissertation suggest that people should hope for the best and prepare for the worst. This is in contrast to the popular adage “think positive and positive things will happen”. This more positive approach begs the question, what if positive things don’t happen? The current study has shown that a preponderance of positive thoughts, prior to a significant life event, is associated with maladjustment when outcomes are more difficult than expected. Several women at their postnatal interview commented that they “felt lost” during the first three months of their transition to motherhood. Interestingly, these same words were spoken by an Olympic hopeful whose dream to achieve a medal in skiing was suddenly destroyed by a shattered knee one week before Olympic trials (J. Armstrong, personal communication, May, 2003). When questioned on how he coped with his sudden misfortune he replied, “I felt lost” and then went on to describe how he retreated and wiled away the following two years of his life. The results of the motherhood study suggest that when positive outcomes are expected but not forthcoming people are in the difficult position of coping with the disillusionment at the same time that they have to revise plans and rework goals to meet the demands of their new reality; a situation that likely impedes adjustment. In contrast, with a realistic orientation, adjustment is not as contingent on the valence of outcomes. Rather it seems that thinking ahead to positive and negative possibilities broadens

an individual's construct system, preparing them for negative outcomes and promoting proactive coping.

Limitations of Study

There are some limitations to the motherhood studies. First is the issue of sample selection. Neither sample may be representative of the population of first time expectant mothers. In study 1, the sample was selected through the World Wide Web. We posted an invitation to participate on pregnancy Internet sites. It is possible that the women who visit these sites are more preoccupied and worried about their pregnancy and impending transition to motherhood than are pregnant women in general. The sample of mothers presented in study 2 was drawn from prenatal classes, in which participation was voluntary. The participation of these women in the classes suggests they were motivated to learn about and prepare themselves for motherhood. The generalizability of the findings is further limited by the homogenous nature of the group. All of the women in study 2 were in a committed relationship with the exception of one single mother, and over 90% of the women were working or in school.

There is also the issue of sample size. In study 2, there were 69 participants and these were further divided into two groups for some of the analyses and four groups for other analyses. The study is limited by the size of the sample and findings should be considered with caution until further replication. However, the prospective nature of the study, the use of multiple outcome measures and the in-depth nature of the interviews helped to compensate for the lower than desired sample size.

Directions for Future Research

In the motherhood studies, we uncovered a group of people who are neither positive nor negatively oriented and neither are they realists: rather, they were below the median on both positive and negative thoughts about motherhood. This group may not be very different from

the realists – that is, they could have been just below the median on the positive and negative subscales of the Orientation to Motherhood questionnaire. Although no hypotheses were generated with regard to this group, future research should assess whether or not there really are a group of people who tend not to think ahead to impending future life events.

An important question that should be investigated further is how people with a realistic orientation avoid excessive anxiety and worry. Although in the motherhood studies realists did report slightly more depression symptoms than positive thinkers prior to the transition, the difference between the groups was not significant and, in contrast, those people with a realistic orientation reported significantly less depressive symptomatology than people with a negative orientation. This suggests that although realists do consider negative possibilities and do report some neurotic tendencies, overall they are able to consider negative possibilities without the debilitating negative affect.

It is likely that constructive realists engage in both emotion-focused and problem-focused coping (Lazarus & Folkman, 1984). This combination of coping strategies would enable them to regulate or control the negative emotions that accompany consideration of potential stressors, while devising solutions to potential problems. Thinking in a constructively realistic way demands that people not only think about what could go wrong but also what they would do in such a situation. This is an essential component of constructive realism that likely creates a sense of control or efficacy. In the current research, people who gave thought to negative possibilities were not questioned on whether they had imagined or planned what they would do if negative possibilities came to be. However, there is evidence in the personal projects data to suggest that constructive realists engaged in playful thinking. At three months postnatal their project systems were reconstructed in a way that facilitated adjustment and

made their daily lives more manageable and meaningful than non-realists. Future research on realistic orientation should ask people how they manage thoughts regarding negative possibilities (i.e. do they repress or avoid, do they discuss, do they worry/ruminate, do they construct preliminary plans to deal with negative events, or do they engage in a combination of these strategies?).

Considering the notion of stages of coping (Aspinwall & Taylor, 1997; Lazarus & Folkman, 1984; Snyder, 1999), future research on realistic orientation should investigate whether orientation changes as individuals begin to cope with a major life transition. For example, once they become mothers and are in the midst of coping with the transition, do constructive realists' thoughts about mothering become more positive or do they continue to think about the range of possibilities, positive and negative, in relation to parenting? Proactive coping (Aspinwall & Taylor, 1997) and goal striving (Gollwitzer & Kinny, 1989) theory discussed earlier suggest that people adapt their mindset to meet the stage specific demands of the coping or goal striving process. The current study did not assess orientation after women gave birth and undertook the motherhood transition. Future research should assess whether or not mindset changes when people move from thinking about to engaging in a major life transition. Although the findings of the current research suggest that a realistic orientation is beneficial prior to a transition, considering that cognitive resources are a finite resource (Baumeister, Faber, & Wallace, 1999), it may be that when individuals are in the midst of a transition it is more adaptive to focus on goals and think positive and efficaciously about accomplishing transition related tasks.

Although the current study demonstrated that a realistic orientation is adaptive prior to women making the transition to motherhood, it is also likely that the benefits of constructive

realism would be realized in the context of other significant life events. To the extent that realistic orientation promotes anticipatory coping, it would be expected that coping with such transitions as a new job, retirement, high school-to college, and marriage, would be facilitated by a realistic orientation. At this time, further study is needed to assess constructive realism in relation to a range of significant life events or transitions.

Although it is likely that a realistic orientation is applicable to various life transitions and events, future investigations should also explore whether people orient themselves in a more realistic way to life in general. It may be that a realistic orientation is most applicable and advantageous in the context of specific impending future life events. However, it is also plausible that as an approach to life, a realistic orientation is as beneficial as an optimistic orientation, and more adaptive in the wake of sudden loss or tragedy. To investigate this would require the development of a global measure of realistic orientation that would assess people's tendency to give thought to the possibility of positive and negative life events in general. It may be that people who have a realistic orientation to life that is constructive are more apt to plan ahead in a thoughtful or concrete manner for negative life events. For example, some people are more likely to buy insurance plans, establish power of attorney, and devise a personal will. There are even couples with dependents who travel independently to the same destination so in the event of a crash their children are not orphaned. Future research should explore whether there are people who approach life in a more realistically oriented way. Specifically, is there an identifiable group of people who think about and accept the possibility of negative life events happening to them and do these people cope better with loss and other unexpected traumatic life events?

Conclusions

I started out this dissertation reporting on a minority of people identified in loss and bereavement studies who, when faced with sudden tragic events, do not ask “why me?” and do not search for meaning in their misfortune. Rather, these people seem to adjust well and get on with life. We postulated that these people might not have been totally surprised that sudden misfortune had befallen them. Perhaps at times they had thought “why not me?” accepting that life has its misfortunes to which they are not immune, and imagined what they would do if misfortune struck.

To pursue this idea I proposed that what distinguishes these people from others is their tendency to give thought to both positive and negative possibilities, and in this sense are more prepared when misfortune occurs. In this dissertation, however, I elected to focus on an event that most people consider desirable yet challenging, rather than an event (like loss) that most would consider undesirable. The data from my motherhood study suggest that this realistic orientation prepared women for unexpected difficulties, thereby facilitating adjustment and resilience. The resilience of the constructive realists was evident in how they were able to take the difficulties of the transition in stride. Although they experienced as many negative surprises as non-realists, they continued to engage in enjoyable and personally meaningful activities that enabled them to maintain meaning and manageability in their daily lives. In comparison, non-realists were stymied by unexpected transition difficulties. Faced with such, they became more focused on themselves and their transition, resulting in decreased enjoyment, personal meaning and support with regard to their daily pursuits. Their transition to motherhood was more of a struggle that might have been eased if they were more psychologically prepared for negative events.

I do not consider this realistic orientation to be a fixed trait or broad personality characteristic. However, it is likely that there are personality traits that promote a realistic orientation. I also believe that constructive realism is more than simply a strategy: as a balanced orientation to life events it appears to be influential enough to predict depression, psychological well-being and goal pursuits up to six months later. Examining how constructive realists coped psychologically with a difficult transition and their daily pursuits during the transition creates an image of resilience, that seems to come from an acceptance or recognition that the normal course of life transitions often includes highs and lows, twists and turns.

As a personality construct, constructive realism is most likely an approach to life that is malleable and can be developed (cf. Kelly, 1955). Being hopeful that things will work out fine, but giving serious consideration to what it would be like if things do not work out so well—allows one to be prepared in the event that things do not work out as planned. One of the participants in our motherhood study exemplified this approach. She was very realistic about motherhood at her prenatal visit in that she discussed what she expected to be the joys and the difficulties of parenting. We discovered at her postnatal interview that her baby was found to have serious medical problems. Although this new mother was struggling to come to terms with her child's illness, she had already put in place early intervention programs as well as medical and social support that would benefit the child and herself. It is likely that her prenatal thinking facilitated this immediate and effective coping.

The data from the current study suggest that in a practical sense, rather than focusing exclusively on the impending joy a new baby will bring, expectant parents should also give thought to the challenges that are common to childbirth and parenting. The vast majority of women in this study recounted some unpleasant features of childbirth and early motherhood.

Therefore, we can assume that women's transition to motherhood encompasses both positive and negative aspects for which women and their partners should be prepared. Prenatal instructors and health professionals might encourage expectant women and their families to give serious consideration to the childbirth and motherhood challenges they may encounter, thus better preparing them for the transition.

More generally, constructive realism can be viewed as a life skill. Rather than just focusing on positive outcomes and hoping for the best, children and adults can be taught or encouraged to broaden their construct systems to include negative possibilities and action plans. This process would serve to normalize and create a familiarity with negative outcomes that can lessen individuals' shock and disillusionment when they meet up with such. This is likely the process that Kelly (1955) was referring to when he suggested that a broad construct system facilitates the psychological integration of life experiences. It is commonly known that what *can* go wrong sometimes *does* go wrong: Hoping for the best while preparing for the worst could mitigate the impact of unexpected negative outcomes.

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APPENDIX A

Study 1 Protocol

- A1: Informed Consent
- A2: Debriefing Form
- A3: Interview Questionnaire
 - i. OM Scale
 - ii. CESD
 - iii. LOT-R
 - iv. BFI

Transition to Motherhood Study

We are looking for **pregnant women** to help with our study.

Thank you for considering taking part in our survey. We're interested in understanding better how women prepare for and cope with becoming a mother. The purpose of this study is to gather information from pregnant women to aid in the development of a questionnaire that will be used in future studies on stress and the transition to motherhood. We are particularly interested in pregnant women's thoughts and expectations about their upcoming experience of motherhood.

Before you continue, please read the following information about the survey process. The survey questions will ask you to describe your thoughts about childbirth and new motherhood.

Following this, we'll ask you about your current feelings of well-being, your overall outlook on life, as well as personality characteristics.

Time: It will take about 10-15 minutes to complete this survey, but there is no time limit.

Your rights: You're under no obligation to complete this survey. You may leave the website at any time without submitting your responses. Even after you complete the questions, you can choose to submit or clear your answers. You may also choose to skip questions that you don't wish to answer or that don't pertain to you.

Thoughts About Motherhood Scale.

Indicate how much you have thought about or imagined each of the following in the last two weeks...

1. Holding a beautiful healthy baby in your arms.

Never Less than once a week Once a week Once a day More than once a day

2. A difficult childbirth.

Never Less than once a week Once a week Once a day More than once a day

3. The energy and time required for looking after the baby.

Never Less than once a week Once a week Once a day More than once a day

4. Doing enjoyable mother- things like shopping for cute baby clothes and toys.

Never Less than once a week Once a week Once a day More than once a day

5. How little time there will be for yourself and your interests after the baby is born.

Never Less than once a week Once a week Once a day More than once a day

6. How wonderful and special it will feel to be a mother.

Never Less than once a week Once a week Once a day More than once a day

7. Being isolated from friends and/or the work world.

Never Less than once a week Once a week Once a day More than once a day

8. Things that could be wrong with the baby.

Never Less than once a week Once a week Once a day More than once a day

9. All the fun activities you will do with the baby.

Never Less than once a week Once a week Once a day More than once a day

10. How little sleep you will get after the baby is born.

Never Less than once a week Once a week Once a day More than once a day

11. The joys of motherhood

Never Less than once a week Once a week Once a day More than once a day

12. The challenges of motherhood

Never Less than once a week Once a week Once a day More than once a day

13. Are there any other thoughts or issues that you have been considering during your pregnancy?

For each of the following statements, indicate how often you felt or behaved this way during the past 7 days, by putting an X in the appropriate box..

During the <u>past 7 days</u> :		RARELY OR NONE OF THE TIME (LESS THAN 1 DAY) (1)	SOME OR A LITTLE OF THE TIME (1-2 DAYS) (2)	OCCASIONALLY OR A MODERATE AMOUNT OF TIME (3-4 DAYS) (3)	MOST OR ALL OF THE TIME (5-7 DAYS) (4)
a.	You were bothered by things that don't usually bother you.				
b.	You felt your life had been a failure.				
c.	You felt that you could not shake off the blues even with help from your family and friends.				
d.	You had trouble keeping your mind on what you were doing.				
e.	You felt depressed.				
f.	You felt that everything you did was an effort.				
g.	You had crying spells.				
h.	You enjoyed life.				
i.	You felt hopeful about the future.				
j.	You could not "get going".				

AS you answer the following questions, try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer. In the blank space at the end of each statement, please indicate how strongly you agree or disagree from 1-5.

Strongly Disagree	Disagree a little	Neither agree or disagree	Agree	Strongly Agree
1	2	3	4	5

1. In uncertain times, I usually expect the best. _
2. It's easy for me to relax. _
3. If something can go wrong for me, it will. _
4. I'm always optimistic about my future. _
5. I enjoy my friends a lot. _
6. It's important for me to keep busy. _
7. I hardly ever expect things to go my way. _
8. I don't get upset too easily. _
9. I rarely count on good things happening to me. _
10. Overall, I expect more good things to happen to me than bad. _

Instructions: For each of the 44 characteristics listed below, rate how descriptive each characteristic is of you using a 1-5 scale as shown below.

Strongly Disagree	Disagree a little	Neither agree or disagree	Agree	Strongly Agree
1	2	3	4	5
1 Is talkative _		23 Tends to be lazy _		
2 Tends to find fault with others _		24 Is emotionally stable, not easily upset _		
3 Does a thorough job _		25 Is inventive _		
4 Is depressed, blue _		26 Has an assertive personality _		
5 Is original, comes up with new ideas _		27 Can be cold and aloof _		
6 Is reserved _		28 Perseveres until the task is finished _		
7 Is helpful and unselfish with others _		29 Can be moody _		
8 Can be somewhat careless _		30 Values artistic, aesthetic experiences _		
9 Is relaxed, handles stress well _		31 Is sometimes shy, inhibited _		
10 Is curious about many different things _		32 Is considerate and kind to almost everyone _		
11 Is full of energy _		33 Does things efficiently _		
12 Starts quarrels with others _		34 Remains calm in tense situations _		
13 Is a reliable worker _		35 Prefers work that is routine _		
14 Can be tense _		36 Is outgoing, sociable _		
15 Is ingenious, a deep thinker _		37 Is sometimes rude to others _		
16 Generates a lot of enthusiasm _		38 Makes plans and follows through with them _		
17 Has a forgiving nature _		39 Gets nervous easily _		
18 Tends to be disorganized _		40 Likes to reflect, play with ideas _		
19 Worries a lot _		41 Has few artistic interests _		
20 Has an active imagination _		42 Likes to cooperate with others _		
21 Tends to be quiet _		43 Is easily distracted _		
22 Is generally trusting _		44 Is sophisticated in art, music, or literature _		

Appendix B

Study 2 Protocol

Prenatal Interview

- B1: Informed Consent**
- B2: Debriefing**
- B3: Interview Questions**
- B4: Measures**
 - i. PWB**
 - ii. CESD**
 - iii. OM Scale**
 - iv. Personal Projects Analysis**

Postnatal Interview

- B5: Informed Consent**
- B6: Debriefing**
- B7: Interview Questions**
- B8: Measures**
 - i. PWB**
 - ii. CESD**
 - iii. Personal Projects Analysis**

Prenatal Interview Protocol

Informed Consent

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent has to provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Study Title: Transition to Motherhood

Study Personnel: AnnMarie Churchill, MSW (613-520-2600 ext 1448)
Dr. Chris Davis (613-520-2600 ext 2251)

Should you have any ethical or other concerns about this study then please contact Dr. M. Gick, (Chair, Carleton University Research Ethics Committee for Psychological Research, 613-520-2600, ext. 2664) or Dr. J. Logan (Chair, Dept. of Psychology, 613-520-2600, ext. 2648).

Purpose and Task Requirements: The purpose of this study is to assess the effect of expectations on adjustment to new motherhood. You will be asked to take part in two interviews; one during pregnancy and one about three months after you give birth, which will include written and verbal questions regarding your expectations of new motherhood, your goals and your sense of well-being. Each interview will take about one to two hours.

Anonymity/Confidentiality: The data collected in this study will be kept confidential. We take special precautions to make sure that no one else will be able to identify you and what your responses were. Should you choose to participate in the study, your responses will be coded by number and your name is not required on the questionnaire. If you consent to audio-taping the tapes will be transcribed and then destroyed. This will ensure your anonymity.

Right to Withdraw: Your participation in this study is entirely voluntary. At any point during the study you have the right to not complete certain questions or to withdraw with no penalty whatsoever.

I have read the above description of the study concerning my upcoming transition to motherhood. The data collected will be used in research publications and/or for teaching purposes. My endorsement indicates that I agree to participate in the study, and this in no way constitutes a waiver of my rights and that I have received a gift certificate for my participation. I am at least 18 years of age.

Name: _____ Participant # _____

Phone number _____

Signature: _____ Date: _____

Name of Interviewer: _____

I consent to have this interview audio-taped _____ YES _____ NO

Debriefing
Carleton University
Psychology Department
Stress, Coping and Well-being Laboratory
Study: Transition to Motherhood

Dear Participant,

Thank you for agreeing to participate in this study. By taking part, you have provided us with valuable information on how women experience pregnancy and anticipate motherhood. Our goal is to understand the influences on this sometimes difficult and challenging life experience. We wish to understand why this significant life experience is more difficult for some women than for others and what factors increase or decrease the level of stress experienced. For example, does a positive outlook buffer pregnant women from the stress of childbirth and motherhood? Or, do unrealistic expectations leave women disappointed and dissatisfied with their new mother role? It may be that more realistic expectations facilitate flexible goal setting and pursuit, resulting in a less stressful experience. The information from this study will be used to promote effective coping strategies for women experiencing the transition to motherhood.

Anonymity/Confidentiality: Please be assured that your responses will be treated anonymously and confidentially. In any public presentation of our data, either in print or in speech, we will not present any information that could identify a participant.

Once again, thanks!

Question and Comments:

For concerns or questions about becoming a new mother, please contact your community health nurse or doctor.

For questions or concerns about this research project, the following people may be contacted:

Dr. Chris Davis, Department of Psychology, Carleton University, 613-520-2600 ext 2251
AnnMarie Churchill 613-520-2600 ext 1448.

Should you have any concerns about how this study was conducted, contact Dr. M. Gick, (Chair, Carleton University Research Ethics Committee for Psychological Research, 613-520-2600, ext. 2664) or Dr. J. Logan (Chair, Dept. of Psychology, 613-520-2600, ext. 2648).

SECTION A: DEMOGRAPHICS

A1. Age

A2. Marital status

1. MARRIED

2.COMMON
LAW

3. SINGLE

A3. I'd like to ask you a few questions about yourself to get to know who you are. Could you please tell me a little bit about yourself, like where are you from; what's important to you; what are your work/leisure interests?

A4. How many months pregnant are you? _____

A5. How has your pregnancy been so far?

SECTION B: Well-Being

We now would like to ask you to complete a questionnaire about your own personal feelings. You can go through the questionnaire yourself, or I can read it to you. Which would you prefer?

1.
Do it myself

5.
Read it to
me

B1 The following questions deal with how you feel about yourself and your life. There are no “correct” or “incorrect” answers. Answer according to your feelings, rather than how you think “most people” would answer. Answer by putting an “x” in the box that most closely matches how you feel about the preceding statement.

1. I enjoy personal and mutual conversations with family members or friends.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

2. Being happy with myself is more important to me than having others approve of me.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

3. In general I feel I am in charge of the situation in which I live.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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4. I feel that I have developed a lot as a person over time.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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5. I feel good when I think about what I have accomplished in the past and hope to do in the future.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

B4i

6. In general, I feel confident and positive about myself.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

7. I often feel lonely because I have few close friends with whom I can share my concerns.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

8. I tend to worry about what other people think of me.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

9. The demands of everyday life often get me down.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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10. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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11. I have a sense of direction and purpose in life.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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12. Given the opportunity, there are many things about myself that I would change.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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13. I don't have many people who want to listen when I want to talk.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

14. I judge myself by what I think is important, not by the values of what others think is important.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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15. I often feel overwhelmed by my responsibilities.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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16. With time I have gained a lot of insight about life that has made me a stronger, more capable person.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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17. My daily activities often seem trivial and unimportant to me.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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18. I envy many people for the lives they lead.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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19. I know I can trust my friends and they know they can trust me.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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20. I am concerned about how other people would evaluate the choices I have made in my life.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

21. I am quite good at managing the many responsibilities of my daily life.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

22. When I think about it, I haven't really improved much as a person over the years.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

23. I find it stressful that I can't keep up with all of the things I have to do each day.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

24. For the most part, I am proud of who I am and the life I lead.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

Thank-you. Please tell the interviewer when you are finished.

B2. For each of the following statements, tell me how often you felt or behaved this way during the past 7 days.

During the <u>past 7 days</u> :	RARELY OR NONE OF THE TIME (LESS THAN 1 DAY) (1)	SOME OR A LITTLE OF THE TIME (1-2 DAYS) (2)	OCCASIONALLY OR A MODERATE AMOUNT OF TIME (3-4 DAYS) (3)	MOST OR ALL OF THE TIME (5-7 DAYS) (4)
a. You were bothered by things that don't usually bother you.				
b. You felt your life had been a failure.				
c. You felt that you could not shake off the blues even with help from your family and friends.				
d. You had trouble keeping your mind on what you were doing.				
e. You felt depressed.				
f. You felt that everything you did was an effort.				
g. You had crying spells.				
h. You enjoyed life.				
i. You felt hopeful about the future.				
j. You could not "get going".				

B3. Have you ever been diagnosed with depression?

_____ YES

_____ No

B4ii

C1. Now I would like to ask you some questions on your thoughts about becoming a mother. Please indicate **how much you have thought about or imagined** each of the following in the last two weeks ...

1. Holding a beautiful healthy baby in you arms.

Never less than once a week once a week once a day more than once a day

2. A Difficult childbirth.

Never less than once a week once a week once a day more than once a day

3. The amount of time and energy it will take to look after the baby.

Never less than once a week once a week once a day more than once a day

4. Doing enjoyable mother-things like shopping for cute baby clothes and toys.

Never less than once a week once a week once a day more than once a day

5. The lack of time there will be for yourself and your interests after the baby is born

Never less than once a week once a week once a day more than once a day

6. How wonderful and special it will feel to be a mother.

Never less than once a week once a week once a day more than once a day

7. Being isolated from friends and/or the work world after the baby is born.

Never less than once a week once a week once a day more than once a day

8. Things that could be wrong with the baby.

Never less than once a week once a week once a day more than once a day

9. All the fun activities you will do with the baby.

Never less than once a week once a week once a day more than once a day

10. The lack of sleep you will get after the baby is born.

Never less than once a week once a week once a day more than once a day

11. The joys of motherhood.

Never less than once a week once a week once a day more than once a day

12. The challenges of motherhood

Never less than once a week once a week once a day more than once a day

D1. For the final part of the interview, I would like to ask you about your personal plans and activities, which we will refer to as personal projects.

We are interested in studying the kinds of activities you are doing and the concerns that you have. All of us have a number of activities and concerns, or *personal projects*, at any given time that we think about, plan for, carry out and sometimes (though not always) complete.

Some projects may be focused on achievement (getting my a promotion at work), others on the process (enjoying a night out with friends); they may be things we choose to do or things we have to do; they may be things we are working towards or things we are trying to avoid. Projects may be related to any aspect of your daily life, work, home, leisure and community, among others. Please think of projects in this broad way.

Here are some examples of projects:

Groom the dog
Finish the book Sharon gave me
Pay off my credit cards
Renovate the kitchen
Save money
Clean the house
Clarify my religious beliefs
Exercise more often
Plan a vacation
Go back to school
Do my taxes
Get along better with John

For Interview purposes: I would like you to tell me about some of the projects that you are working on. After you tell me about the projects, I will ask you how you feel about these projects and activities, how important or stressful they are, and so on.

If completing this questionnaire on your own: To start, please take a few minutes to think about some of the personal projects and activities you are currently working on. Remember that these need not be formal projects or even important ones – I would prefer you give us more of the everyday kinds of activities or concerns that characterize your life at this time.

[Participant describes projects and lists them on the next page]

B4iv.

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Now select 6 projects from your list that you feel are important to you or typical of your life and I (or you, if you are completing this on your own) will list them onto the matrix on the next page.

PROJECT RATINGS

First, list your six projects down the first column. Next, you will rate each of these projects on a number of dimensions. Starting with project 1, go across the row and ask yourself, on a scale from 0-10, (for example, 10 being very important and 0 being not important at all) how important, how difficult, how enjoyable, and so on, this project #1 is for you. Put the rating number in the box. It will help if you pull out the sheet on the following page, page 13, and refer to it for an explanation of each dimension. Do this evaluation for each project.

* A definition for each of the rating dimensions is provided on the next page.

<i>Projects</i>	Importance	Difficulty	Enjoyment	Time Adequacy	Self Identity	Support	Stress	Committed
1								
2								
3								
4								
5								
6								

Project Dimensions

IMPORTANCE: How important is this project to you? Use 10 if very important and 0 if not important at all.

DIFFICULTY: How difficult is it for you to carry out this project? Use 10 for a project that is very difficult to carry out and 0 if it is not difficult at all.

ENJOYMENT: How much you enjoy working on this project? Use 10 if you enjoy it a great deal and 0 if you do not enjoy it at all.

TIME ADEQUACY: How adequate is the amount of time you spend working on or thinking about this project? Use 10 if the amount of time you give to this project is perfectly adequate and use 0 if it is not adequate at all.

Self-IDENTITY: To what extent is this project typical of you? Use 10 if it is very much you and 0 if it is not you at all.

SUPPORT: How much support do you get from others to carry out this project? Use 10 if you have a lot of support and use 0 if you get no support at all.

STRESS: How exhausting or taxing is it for you to carry out this project? Use 10 if the project is very taxing and use 0 if it is very relaxing to carry out this project.

COMMITTED: How committed to this project are you? Use 10 if it is very important for you to hold on to this project and use 0 if maintaining this project is not important at all.

Postnatal Interview Protocol

Informed Consent

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent has to provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Study Title: Transition to Motherhood

Study Personnel: AnnMarie Churchill, MSW (613-520-2600 ext 1448)
Dr. Chris Davis (613-520-2600 ext 2251)

Should you have any ethical or other concerns about this study then please contact Dr. M. Gick, (Chair, Carleton University Research Ethics Committee for Psychological Research, 613-520-2600, ext. 2664) or Dr. J. Logan (Chair, Dept. of Psychology, 613-520-2600, ext. 2648).

Purpose and Task Requirements: The purpose of this study is to assess the effect of expectations on adjustment to new motherhood. You will be asked to take part in two interviews; one during pregnancy and one about three months after you give birth, which will include written and verbal questions regarding your expectations of new motherhood, your goals and your sense of well-being. Each interview will take about one to two hours.

Anonymity/Confidentiality: The data collected in this study will be kept confidential. We take special precautions to make sure that no one else will be able to identify you and what your responses were. Should you choose to participate in the study, your responses will be coded by number and your name is not required on the questionnaire. If you consent to audio-taping the tapes will be transcribed and then destroyed. This will ensure your anonymity.

Right to Withdraw: Your participation in this study is entirely voluntary. At any point during the study you have the right to not complete certain questions or to withdraw with no penalty whatsoever.

I have read the above description of the study concerning my upcoming transition to motherhood. The data collected will be used in research publications and/or for teaching purposes. My endorsement indicates that I agree to participate in the study, and this in no way constitutes a waiver of my rights and that I have received a gift certificate for my participation. I am at least 18 years of age.

Name: _____ Participant # _____

Phone number _____

Signature: _____ Date: _____

Name of Interviewer: _____

I consent to have this interview audio-taped _____ YES _____ NO

B5

Debriefing
Carleton University
Stress, Coping and Well-being Laboratory
Psychology Department

Study: Transition to Motherhood

Dear Participant,

Thank you for agreeing to participate in this study. By taking part, you have provided us with valuable information on how women experience pregnancy and anticipate motherhood. Our goal is to understand the influences on this sometimes difficult and challenging life experience. We wish to understand why this significant life experience is more difficult for some women than for others and what factors increase or decrease the level of stress experienced. For example, does a positive outlook buffer pregnant women from the stress of childbirth and motherhood? Or, do unrealistic expectations leave women disappointed and dissatisfied with their new mother role? It may be that more realistic expectations facilitate flexible goal setting and pursuit, resulting in a less stressful experience. The information from this study will be used to promote effective coping strategies for women experiencing the transition to motherhood.

Anonymity/Confidentiality: Please be assured that your responses will be treated anonymously and confidentially. In any public presentation of our data, either in print or in speech, we will not present any information that could identify a participant.

Once again, thanks!

Question and Comments:

For concerns or questions about becoming a new mother, please contact your community health nurse or doctor.

For questions or concerns about this research project, the following people may be contacted:

Dr. Chris Davis, Department of Psychology, Carleton University, 613-520-2600 ext 2251
AnnMarie Churchill 613-520-2600 ext 1448.

Should you have any concerns about how this study was conducted, contact Dr. M. Gick, (Chair, Carleton University Research Ethics Committee for Psychological Research, 613-520-2600, ext. 2664) or Dr. J. Logan (Chair, Dept. of Psychology, 613-520-2600, ext. 2690).

A. First I would like to ask you questions about your experience of childbirth and these first few months of new motherhood.

A1. Was your experience of childbirth what you expected?

A2. Since you have been home with your baby, have there been any surprises, things you had not expected? Explain

A3. How well do you feel you are adjusting to motherhood?

SECTION B: Well-Being

We now would like to ask you to complete a questionnaire about your own personal feelings. You can go through the questionnaire yourself, or I can read it to you. Which would you prefer?

1.
Do it myself

5.
Read it to
me

B1 The following questions deal with how you feel about yourself and your life. There are no “correct” or “incorrect” answers. Answer according to your feelings, rather than how you think “most people” would answer. Answer by putting an “x” in the box that most closely matches how you feel about the preceding statement.

1. I enjoy personal and mutual conversations with family members or friends.

Strongly
Disagree
1

Moderately
Disagree
2

Neutral
3

Moderately
Agree
4

Strongly
Agree
5

2. Being happy with myself is more important to me than having others approve of me.

Strongly
Disagree
1

Moderately
Disagree
2

Neutral
3

Moderately
Agree
4

Strongly
Agree
5

3. In general I feel I am in charge of the situation in which I live.

Strongly
Disagree
1

Moderately
Disagree
2

Neutral
3

Moderately
Agree
4

Strongly
Agree
5

4. I feel that I have developed a lot as a person over time.

Strongly
Disagree
1

Moderately
Disagree
2

Neutral
3

Moderately
Agree
4

Strongly
Agree
5

5. I feel good when I think about what I have accomplished in the past and hope to do in the future.

Strongly
Disagree
1

Moderately
Disagree
2

Neutral
3

Moderately
Agree
4

Strongly
Agree
5

B8i.

6. In general, I feel confident and positive about myself.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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7. I often feel lonely because I have few close friends with whom I can share my concerns.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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8. I tend to worry about what other people think of me.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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9. The demands of everyday life often get me down.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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10. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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11. I have a sense of direction and purpose in life.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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12. Given the opportunity, there are many things about myself that I would change.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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13. I don't have many people who want to listen when I want to talk.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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14. I judge myself by what I think is important, not by the values of what others think is important.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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15. I often feel overwhelmed by my responsibilities.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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16. With time I have gained a lot of insight about life that has made me a stronger, more capable person.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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17. My daily activities often seem trivial and unimportant to me.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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18. I envy many people for the lives they lead.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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19. I know I can trust my friends and they know they can trust me.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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20. I am concerned about how other people would evaluate the choices I have made in my life.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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21. I am quite good at managing the many responsibilities of my daily life.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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22. When I think about it, I haven't really improved much as a person over the years.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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23. I find it stressful that I can't keep up with all of the things I have to do each day.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
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24. For the most part, I am proud of who I am and the life I lead.

Strongly Disagree 1	Moderately Disagree 2	Neutral 3	Moderately Agree 4	Strongly Agree 5
---------------------------	-----------------------------	--------------	--------------------------	------------------------

Thank-you. Please tell the interviewer when you are finished.

B2. For each of the following statements, tell me how often you felt or behaved this way during the past 7 days.

During the <u>past 7</u> <u>days</u> :		RARELY OR NONE OF THE TIME (LESS THAN 1 DAY) (1)	SOME OR A LITTLE OF THE TIME (1-2 DAYS) (2)	OCCASIONALLY OR A MODERATE AMOUNT OF TIME (3-4 DAYS) (3)	MOST OR ALL OF THE TIME (5-7 DAYS) (4)
a.	You were bothered by things that don't usually bother you.				
b.	You felt your life had been a failure.				
c.	You felt that you could not shake off the blues even with help from your family and friends.				
d.	You had trouble keeping your mind on what you were doing.				
e.	You felt depressed.				
f.	You felt that everything you did was an effort.				
g.	You had crying spells.				
h.	You enjoyed life.				
i.	You felt hopeful about the future.				
j.	You could not "get going".				

B8ii.

C1. At this stage of the interview, I would like to ask you about the kinds of activities you are doing and the concerns that you have, at this point in time. All of us have a number of activities and concerns, or *personal projects*, at any given time that we think about, plan for, carry out and sometimes (though not always) complete.

Some projects may be focused on achievement (getting my a promotion at work), others on the process (enjoying a night out with friends); they may be things we choose to do or things we have to do; they may be things we are working towards or things we are trying to avoid. Projects may be related to any aspect of your daily life, work, home, leisure and community, among others. Please think of projects in this broad way.

Here are some examples of projects:

Groom the dog
Finish the book Sharon gave me
Pay off my credit cards
Renovate the kitchen
Save money
Clean the house
Clarify my religious beliefs
Exercise more often
Plan a vacation
Go back to school
Do my taxes
Get along better with John

I would like you to tell me about some of the projects that you are working on. After you tell me about the projects, I will ask you how you feel about these projects and activities, how important or stressful they are, and so on.

To start, please take a few minutes to think about some of the personal projects and activities you are currently working on.

[Participant describes projects]

B8iii.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

[illegible]

Before I ask you to rate these projects, I would like to ask you about the projects you listed before you gave birth.

D. The first project you listed was _____. Are you still working on this project? (ie. thinking about it or consider it to still be in progress) (Copy six times for each participant).

YES	NO												
<p>1. I'm going to read three possible options regarding the importance of this project you are still working on. Please choose one.</p> <ul style="list-style-type: none"> a. I am still working on this project and it is as important to me now as it was before the birth. b. I am still working on this project and it is less important to me than it was before the birth. c. I am still working on this project and it is more important to me now than it was before the birth. <p>2. What is your rate of progress on this project compared to at prenatal?</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Same as pre-birth Slower than pre-birth Better than pre-birth </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>↓</p> <p>STOP</p> </div> <div style="text-align: center;"> <p>↓</p> <div style="border: 1px solid black; padding: 5px; width: 80%;"> <p>Which of the following reasons contributed to your slower rate of progress? Indicate all that apply.</p> <ul style="list-style-type: none"> a. I am less interested in this project b. My role as mother prevents me from making progress. c. I lack support from my family or friends d. other project e. Other, explain _____ </div> <div style="border: 1px solid black; padding: 5px; width: 80%; margin-top: 10px;"> <p>Is this slower rate of progress OK with you?</p> <div style="display: flex; justify-content: space-between;"> YES NO </div> </div> </div> <div style="text-align: center;"> <p>↓</p> <p>STOP</p> </div> </div>	<p>1. Please tell me all the reasons why you are no longer working on this project. Indicate all that apply.</p> <ul style="list-style-type: none"> a. I have completed this project to my satisfaction b. I am no longer interested in this project c. I am still interested in this project, but my mother role prevents me from continuing with it d. I am still interested in this project, but my support system does not want me to pursue it e. I have dropped this project for now, but plan on getting back to it later. f. Since the birth of my child, I dropped this project because it is no longer a priority g. Other. Explain _____ <p>2. How difficult was it for you to let go of this project?</p> <table style="width: 100%; text-align: center;"> <tr> <td colspan="2">Very Difficult</td> <td colspan="2"></td> <td colspan="2">Not At All Difficult</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td></td> </tr> </table> <p>3. Are you pursuing at least one new project?</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>YES</p> <p>↓</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Is this new project as important to you as the one you are no longer working on?</p> <p>↓</p> <p>YES</p> <p>↓</p> <p>STOP</p> </div> </div> <div style="width: 45%;"> <p>NO</p> <p>↓</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Are you devoting more time or energy to at least one existing project?</p> <p>↓</p> <p>NO</p> <p>↓</p> <p>STOP</p> </div> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p>STOP ←</p> <p>STOP ←</p> </div> <div style="width: 45%;"> <p>YES ←</p> <p>NO ←</p> </div> </div> <div style="width: 45%; margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px;"> <p>Is this existing project just as important to you as the one you are no longer working on?</p> </div> </div>	Very Difficult				Not At All Difficult		1	2	3	4	5	
Very Difficult				Not At All Difficult									
1	2	3	4	5									

Project Ratings

Now I will ask you to rate your *current* projects on a number of dimensions.

Definitions for each of the rating dimensions are provided on the next page

<i>Projects</i>	Importance	Difficulty	Enjoyment	Time Adequacy	Self Identity	Support	Stress	Committed	Hinders	Helps
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

Project Dimensions

IMPORTANCE: How important is this project to you? Use 10 if very important and 0 if not important at all.

ENJOYMENT: How much you enjoy working on this project? Use 10 if you enjoy it a great deal and 0 if you do not enjoy it at all.

IDENTITY: To what extent is this project typical of you? Use 10 if it is very much you and 0 if it is not you at all.

TIME ADEQUACY: How adequate is the amount of time you spend working on or thinking about this project? Use 10 if the amount of time you give to this project is perfectly adequate and use 0 if it is not adequate at all.

DIFFICULTY: How difficult is it for you to carry out this project? Use 10 for a project that is very difficult to carry out and 0 if it is not difficult at all.

SUPPORT: How much support do you get from others to carry out this project? Use 10 if you have a lot of support and use 0 if you get no support at all.

STRESS: How exhausting or taxing is it for you to carry out this project? Use 10 if the project is very taxing and use 0 if it is very relaxing to carry out this project.

COMMITTED: How committed to this project are you? Use 10 if it is very important for you to hold on to this project and use 0 if maintaining this project is not important at all.

Hinders mother role: How much does this project conflict with your role as mother. Use 10 if it is incompatible with motherhood and 0 if it fits perfectly with your new role as mother.

Helps mother role. How much does this project help you carry out your mother duties? Use 10 if this project makes mothering possible or easier and 0 if it gets in the way of being a mother.

APPENDIX C

**Percentage of Projects at Prenatal and Postnatal
for the Total Sample in the Major Categories.**

Percentage of Projects Listed by Total Sample at Prenatal and Postnatal in the Major Content Categories .

	<u>Prenatal</u>	<u>Postnatal</u>
<u>Content Category</u>		
	<u>%</u>	<u>%</u>
Occupational/Achievement	14.5	8.9
Mother Role/Baby	15.9	18.1
Interpersonal	15.5	14.8
Leisure	12.1	12.7
Financial	6.8	6.1
Body Image/ Fitness	6.8	9.5
Maintenance/Administration	17.9	22.6
Intrapersonal/Self-care	5.3	7.2
Pregnancy/Birth	5.3	---

Appendix D

Mean Project Dimension Ratings at Prenatal and Postnatal for Total Sample

Mean Project Dimension Ratings at Prenatal and Postnatal for Total Sample.

	<u>Prenatal</u>		<u>Postnatal</u>	
<u>Dimensions</u>				
	M	SD	M	SD
Commitment	8.70	.91	8.24	.09
Difficulty	5.08	1.87	5.59	1.93
Enjoyment	7.06	1.50	6.79	.79
Importance	8.78	.79	8.35	.86
Self-Identity	8.11	1.20	7.94	1.32
Stress	4.16	2.06	3.57	1.88
Support	7.84	1.63	7.59	2.08
Time Adequacy	6.44	1.83	5.54	2.00

Appendix E

Correlations for Dimension Ratings and Outcome Measures

Zero-order Correlations Between Residualized Depression and Psychological Well-Being and
Residualized Project Dimension Ratings

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1.CESD	---											
2.PWB	.64**	---										
3.Commit	-.16	.30*	---									
4.Difficult	-.28*	-.34***	-.38***	---								
5.Enjoyment	-.18	.21	.20	-.24	---							
6.Importance	-.08	.17	.51***	-.08	.33**	---						
7.Stress	.20	-.27*	-.25*	.46***	-.36**	-.00	---					
8.Support	-.43***	.46***	.24*	-.24*	.21	.21	-.25*	---				
9.Selfidentity	-.07	.14	.22	-.20	.25*	.20	-.18	.25*	---			
10.Time	-.30	.27*	.34	-.53***	.21	.26*	-.45***	.40***	.22	---		
11.Hindrance	.08	-.14	.23*	.29**	-.16	-.18	.42***	-.15	-.10	-.28*	---	
12.Help	.09	-.06	.27*	.03	.08	.31**	-.04	-.10	-.08	-.00	-.03	-
--												

N=69

*p<.05 (two-tailed)

**p<.01 (two-tailed).

***p<.001 (two-tailed)