Family Boundary Ambiguity: A 30-Year Review of Theory, Research, and Measurement

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Abstract: Since its introduction 30 years ago, family boundary ambiguity (BA) has been a widely used construct in family stress research and clinical intervention. In this article, we present a comprehensive and interdisciplinary review of published research studies that have used BA as a primary variable. Our review identified 37 studies investigating BA in 11 topical domains of research (e.g., missing-in-action families, death, divorce, stepfamilies, illness and caregiving, clergy families). We identify theoretical advancements pertaining to the construct and the methods used to measure BA in these studies. Drawing from this review, we discuss the current state of BA scholarship and identify steps that need to be taken to advance BA research in the future.

Key Words: ambiguous loss, boundary ambiguity, family stress, measurement, theory development.

This year marks 30 years since the construct of family boundary ambiguity (BA) was first introduced in a published article (Boss, 1977) to the interdisciplinary field of family stress. Since that time, the concept of family BA has been widely used by scholars, clinicians, and educators to study and intervene with families experiencing a wide range of stressor situations. However, despite the widespread use of the construct, little has been done to systematically document the research literature pertaining to family BA. This article presents such a review.

We approached the task of reviewing the family BA literature with two intertwined purposes. First, we bring together a comprehensive, interdisciplinary review of published research studies using the concept of BA. We address three primary questions: (a) what is the current state of *BA theory* and how has it evolved over the past 30 years?, (b) what are the *domains of study* in which the concept of BA has been applied?, and (c) how is BA being *operationalized and measured* in this research? Our findings to these questions are presented in a descriptive fashion and comprise the main sections of this article (i.e., theory, research, measurement). In addition to

cataloging the broad scholarly literature addressing BA, a second purpose of this project was to evaluate the current state of BA research and to identify future directions for a second generation of scholarship in this area. In the final section of the paper, we discuss several implications from our review for carrying BA research forward for another 30 years.

Theoretical Perspectives of BA

In general terms, the concept of family boundaries derives from family systems theory (Bertalanffy, 1968) and refers to system and subsystem processes (e.g., rules, rituals, and roles) regarding participating members—in other words—who, when, and how, members participate in family life (Minuchin, 1974). From this perspective, families are viewed as an open system, made up of subsystems, each of which is surrounded by a semipermeable boundary, which is actually a set of processes influencing who is included within that subsystem and how they interact with those outside of it (Nichols & Schwartz, 1995). Accordingly, unclear boundaries can create

dysfunction in family processes and interactions. Broadly defined, *family boundary ambiguity* is "a state in which family members are uncertain in their perception about who is in or out of the family and who is performing what roles and tasks within the family system" (Boss & Greenberg, 1984, p. 536). Boss (1977, 1980b) has suggested that boundaries include both physical and psychological phenomena that serve to foster a sense of group and individual identity that differentiates the members of a family from one another and from other groups.

Theoretical Origins

The first theoretical and research papers on BA were presented by Pauline Boss (1975, 1976, 1977, 1980a), who identified the work of Buckley (1967), Hill (1949), and Goffman (1974) as the early foundation from which she developed the concept. Boss' early writings established the construct's roots in an integrative perspective of symbolic interactionism, systems theory, role theory, and theory from family therapy. From the beginning, Boss has pointed out that the construct of BA stands in contrast to structural functionalist or demographic definitions of boundaries in that its emphasis is based primarily on a symbolic interaction perspective that holds that "perceptions, even more than structure, determine family boundaries" (Boss, Greenberg, & Pearce-McCall, 1990, p. 3). Boss (2002) proposed that although short-term and moderate BA may be a common part of everyday life, families with prolonged high BA will experience higher levels of stress and increased individual and family dysfunction. In the early articulations of the theory (Boss & Greenberg, 1984), two primary types of high BA were proposed: Type I, physical absence with psychological presence (i.e., a family member is physically absent or missing but perceived as psychologically present), and Type II, physical presence with psychologically absence (i.e., the family is physically intact, but one member is emotionally or psychologically unavailable to the family system).

Relating family BA to the ABC-X model of family stress (Hill, 1958), Boss and Greenberg (1984) noted that ambiguity can be introduced into the family system as either the stressor event (A-factor) or the perception of the event (C-factor). Boss (2002, p. 77) later explained,

family boundary ambiguity can result from two different situations: (a) one in which the facts surrounding the event are unclear or (b) one in which the facts surrounding the event are clear, but for some reason, the family ignores or denies them. In the latter case, the family's perception of the event is different from that of an objective outside observer.

The theory went on to suggest that the family's perception of the event and the meaning they give to it (C-factor) is the critical variable in determining the existence and degree of BA. In her later work, Boss (1991, 1999, 2004, 2006) used social construction theory (Gergen, 1991) to further define ambiguity related to unclear stressor events (A-factor). She labeled this type of situation involving the loss of a family member as "ambiguous loss," a related, but distinct concept from BA (which Boss defines as a C-factor). Although the construct of BA was inductively developed out of clinical observation with families experiencing traumatic loss, Boss (1980b) also highlighted the potential utility of the construct in studying normative boundary changes across the family life cycle (e.g., births, marriages, adolescents leaving home).

Domains of Study of Family BA

Since its inception, family BA has become widely used in family stress research to describe and explain the effects of family membership change on individual and family functioning. Much of the appeal of the construct has been its applicability to a wide range of family situations and experiences. In order to evaluate the breadth of its use, we conducted a comprehensive review of published research studies using BA as a primary variable. Because of the interdisciplinary appeal of the construct, we conducted an extensive periodical search using the PsychInfo, Medline, Family and Society Studies Worldwide, and Cumulative Index to Nursing and Allied Health Literature databases. We used a keyword search strategy using the terms "family boundary ambiguity" and "boundary ambiguity." Identified articles were then searched for additional references. Our search identified 58 published articles or chapters using BA as a primary conceptual variable. Thirty-seven of these were research studies and the remaining 21 were solely theoretical in content. Ten of these theory-building articles addressed the midlevel development of family BA theory and are addressed in the final section of this paper. The remaining 11 theory-building articles were specific to a particular domain of study and are therefore reviewed in this section (although they are not included in our summary table of published research studies). In line with our stated purpose to document the areas of research in which the construct of BA has been applied, our review of the identified 37 research studies is primarily descriptive, rather than evaluative in nature. This review is organized according to topics of investigation, with studies reviewed therein in chronological order (see Table 1).

We want to also mention that although we limited our review to published articles, our search protocol revealed that BA has been widely used in graduate student thesis and dissertation studies (18 theses/dissertations). A review of the titles and abstracts of these unpublished studies indicated that the topics of investigation included the following (listed chronologically): widowhood (Friday, 1986), postdivorce/remarried families (Pearce-McCall, 1989), mental illness (Beley, 1991), family support and Alzheimer's disease (Chiverton, 1992), transition to parenthood (Fasse, 1993), caregiver spouses and parents (Rider, 1994), codependency (Atkinson, 1995), children in foster care (Flynn, 1995), head injury (Kaplan, 1995), adoptive parents (Fravel, 1996), infertility (Mintle, 1996), private languages of families (Polisar, 1997), Alzheimer's caregiving (Bias, 1998), general illness (Fong, 1998), pediatric intensive care and maternal stress (Harbaugh, 1999), preterm birth (Wrbsky, 2000), work-family role strain (Desrochers, 2002), and occupational stress (Yazvac, 2003). Although many of these dissertations are linked to ongoing areas of investigation using BA, others represent unique areas of research using the construct.

Missing-in-Action Families

The concept of BA was originally described and validated with a study of families with a husband/father who was missing in action (MIA) in Vietnam (Boss, 1975, 1976, 1977). In this study, BA was operationalized with an indicator of psychological presence of the father despite his physical absence (labeled "psychological father presence"). This study established the construct validation of the Psychological Presence Scale (later titled the Boundary Ambiguity Scale—BAS) and revealed a significant negative

correlation between family functioning and psychological father presence. Findings of a 5-year follow-up study with this sample (Boss, 1980a) further indicated that low psychological presence was the strongest predictor of wife and family functioning in these families. Furthermore, although psychological presence was only measured by the wife's perception of the loss, it was found to be a significant factor in blocking the reorganizational processes of the entire family. From this study, researchers began to build a base of empirical support for BA and the construct was applied to a wider range of stressor situations.

Death of a Family Member

Two studies have been published investigating BA when family membership changes because of the "clear" loss of death. Blackburn, Greenberg, and Boss (1987) used an adapted version of the BAS to investigate psychological husband presence in widows whose spouses had died within the proceeding 6-12 months. As hypothesized, there was a decrease in levels of BA at 6 versus 12 months after being widowed. At 12 months after widowhood, the majority of women in this study had progressed through the grief process. No significant relationship remained between psychological presence and selfesteem or psychosomatic complaints. These results stand in sharp contrast to those found in MIA wives who showed symptoms even 3 - 5 years after the unclear loss of their husbands. This appears consistent with the nature of the situation where the loss of a family member who is clearly dead allowed for the grief and restructuring processes to proceed, whereas the ambiguous loss of MIA men was more apt to generate perceptions of BA and subsequently block regenerative processes.

Brabant, Forsyth, and McFarlain (1994) conducted 14 interviews with bereaved parents to examine the definition of family boundaries following the death of a child. Although deceased children frequently continued to be defined as members of the family to the parents, the degree to which this definition of the family was presented to outsiders varied. Applying a BA lens, the authors used Goffman's (1974) terms "backstage families" and "frontstage families" to describe how families may have two different family definitions. The backstage family definition includes the deceased child and the frontstage family definition does not. The level of acquaintance

Table 1. Domains of Study Using Family Boundary Ambiguity

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Design/Study	Sample Characteristics	Framework	Measurement	Primary Findings
MIA families				
Boss (1977)	47 military families with a husband/father who was an MIA	Family systems theory	BAS, ^a WSRI (PFP subset)	BA was related to family well-being in that low degrees of psychological father presence were related to a higher degree of functioning for MIA wives.
Boss (1980a)	37 military families with a husband/father who was an MIA	Family systems theory	BAS, ^a WSRI (PFP subset)	A 5-year follow-up study of Boss' (1977) initial MIA sample yielded results that supported her earlier hypothesis. High levels of psychological presence were significantly related to wife and family dysfunction. Although other variables were tested, psychological presence was the only significant variable in the explanation and predication of wife and family functioning.
Death				
Blackburn et al. (1987)	30 recent widows living in a rural community	Symbolic interaction theory	BAS ^b	A decrease in BA was identified from 6 to 12 months. After 12 months, the majority of widows had progressed through the grieving process and no significant relationship remained between psychological husband presence and self-esteem or psychosomatic complaints.
Brabant et al. (1994)	14 families who experienced the death of a child	Family systems theory	Interviews	Although the deceased child continued to be defined as a member of the family by parents, the degree to which this definition of the family system was presented to outsiders varied.
Divorce				ny system was presented to substacts various
Serovich, Price, et al. (1992)	117 divorced individuals	Attachment theory	KAS	BA in divorced families was hypothesized to contribute to low parental involvement and levels of conflict in coparental communication.
Iafrante (1996)	107 single-parent families	Family stress theory	BAS, ^c BAS ^d	High levels of BA were associated with increased levels of parental conflict, decreased levels of parental bond, and decreased levels of positive self-identity in adolescence.

Table 1. Continued

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Design/Study	Sample Characteristics			Primary Findings
Madden-Derdich and Arditti (1999)	219 divorced mothers with primary custody of their children	Attachment theory	KAS	A positive relationship between coparental support and attachment was identified, supporting the contention that attachment may be a natural outcome of shared parenting. Therefore, after a divorce, parents need to develop clear boundaries between spousal and parental roles to ensure positive emotional attachment for the children as they adjust to the new physical boundaries.
Madden-Derdich et al. (1999)	247 divorced couples who had at least one minor child	Family systems theory	BAS ^c	Factors associated with BA included intensity of feelings for one's former spouse, dissatisfaction with parenting, coparental conflict, financial strain, and custody satisfaction.
Buehler and Pasley (2000)	262 children living with biological parents; 87 children living with their single mothers	Family composition theory	PPFCS	Results did not support the hypothesis that an incongruence of children's perceptions of fathers' psychological and physical presence would be associated with greater adjustment problems in preadolescents and early adolescents.
Rosenberg and Guttmann (2001)	189 children (95 intact/94 divorced) and their mothers (60 married/58 divorced)	Family systems theory	BAS, ^c BAS ^d	Results showed that 70% of the children from divorced families still included their father in their family system; 43% of their mothers also included their ex-husbands in the family.
Peterson and Christensen (2002)	159 divorced individuals (at least 2 years after divorce)	Family stress theory	BAS ^c	Predictors of BA included stressful life events, amount of child support exchanged, sense of confidence, and support from former spouse. Only 4% of the sample reported high BA, 38% reported a moderate level of BA.

Table 1. Continued

		Theoretical		
Design/Study	Sample Characteristics	Framework	Measurement	Primary Findings
Remarriage/stepfamilies Pasley (1987)	272 remarried couples	Family systems theory	SHR	39% of the couples were classified as having ambiguous boundaries. Ambiguity was more likely when children existed from a previous marriage.
Hobart (1988)	Spouses from 232 remarriages and 102 first marriages	Balance theory	Interviews	Families were significantly influenced by entering a remarriage network (especially if there are children from a prior marriage). New network ties may create boundary confusion.
Pasley and Ihinger-Tallman (1989)	216 spouses in remarriages	Family systems theory	SHR	The highest degrees of BA existed in stepfamilies with a nonresidential stepmother. As family complexity increased, perceptions of BA also increased.
Whitsett and Land (1992)	73 stepparents	Role theory, coping theory	RSI	Lack of clarity surrounded stepparent role expectations. BA was positively associated with self-role incongruence and role conflict; negatively associated with marital satisfaction.
Taanila et al. (2002)	63 single-parent families in Finland	Family systems theory	Interviews and observation	Nonconflictual interaction between parents and clarified family boundaries protected children's mental health after their parents' divorce or separation.
Stewart (2005)	3,357 married and cohabiting couples with step-, biological, or adopted children	Family systems theory	SHR	Congruence of parents' household rosters was analyzed using the NSFH data set. BA was more prevalent in stepfamilies than original two-parent families. From the wives' report, BA was negatively associated with couple relationship quality.
Illness/disability Boss et al. (1990)	70 Alzheimer's patients and their caregivers	Family systems theory	BAS ^e	BA and mastery influenced depressive symptoms in caregivers. Caregiver functioning was impacted more by ambiguity in the situation than to severity of patient impairment.

Table 1. Continued

Design/Study	Sample Characteristics	Theoretical Framework	Measurement	Primary Findings
Serovich, Greene, et al. (1992)	327 college students and unassociated parents	Family systems theory	Self-report instruments	BA surrounding who is in and out of the family influenced disclosure patterns about AIDS testing. Individuals were more likely to disclose to individuals perceived as family members.
Garwick et al. (1994)	38 extended families caring for a member with Alzheimer's	Family systems theory	Interviews	Families emphasized four themes: (a) something was "wrong," (b) uncertainty of diagnosis, (c) excluding a family member, and (d) the ambiguous nature of family life with Alzheimer's.
Mu and Tomlinson (1997)	10 families with hospitalized children in critical condition	Symbolic interaction, family systems theory	Interviews	Identified four dimensions of collective family stress perceptions: initial BA, parents' coping patterns, extrafamilial resources, and functioning of the family boundary.
Caron et al. (1999)	72 patients with Alzheimer's disease and their caregivers	Family systems theory	BAS ^f	Higher levels of BA in caregivers was found to be associated with increased problematic Alzheimer's outcomes such as activity disturbances, paranoia, and anxiety.
Kaplan and Boss (1999)	84 caregivers of spouses with Alzheimer's disease	Symbolic interaction	BAS ^f	BA was found to be linked with caregivers' depressive symptoms. BA was found to be linked with caregivers' mastery orientation, with both explaining caregiver symptoms of depression.
Tomlinson et al. (1999)	29 families with a hospitalized child, 11 interviewed	Uncertainty theory, family systems theory	BAS ^g	Identified areas of intervention to encourage family integrity included fostering family normalcy, respecting family rights, and strengthening the family boundary.
Thomas et al. (2001)	132 patients with Alzheimer's disease and caregivers	None	BAS^f	BA was a source of burden and depression in the caregiver. BA level and apathy increased the level of complaints in family caregivers.
Mu, Ma, et al. (2001)	100 Chinese mothers with a child with malignancy	Family stress theory	BAS^h	Uncertainty and BA had a high correlation, but BA was not correlated with anxiety.

Table 1. Continued

Design/Study	Sample Characteristics	Theoretical Framework	Measurement	Primary Findings
Mu, Wong, et al. (2001)	324 mothers with an epileptic child	Family systems theory, family stress theory	BAS ⁱ	BA was found to be positively associated with uncertainty and depression.
Mu et al. (2005)	316 Taiwanese mothers with a child diagnosed with epilepsy	Family systems theory	BAS ⁱ	BA was negatively correlated to coping strategies such as cooperation, family integration and social support, as well as maintaining self-esteem and an optimistic view.
Sherman and Boss (in press)	9 remarried women caregiving for a spouse with Alzheimer's	Symbolic interaction, family systems theory	Interviews	Caregivers perceived that stepchildren rejected their later-life remarriage and described a kind of "frozen boundary" in the larger family, which they did not feel they could penetrate.
Clergy families		,		, , , ,
Morris and Blanton (1994)	272 clergy husbands and their wives	Family stress theory	CFLI	Intrusions of family boundaries were inversely related to marital and parental satisfaction.
Lee (1999)	312 Protestant clergymen	Family stress theory	MDI	Intrusive demands were negatively associated with positive attitude and well-being.
Han and Lee (2004)	194 American Korean pastors	Family stress theory	MDI	Demands of BA and presumptive expectations were negatively associated with well-being and positively associated with symptomatic stress.
Other				
Boss et al. (1987)	70 midlife parents of adolescents recently left home	Family systems theory	BAS ^j	The higher the BA, the worse the couples felt about a child leaving home. Parents' BA was positively correlated to fathers' somatization.
Sluzki (1990)	1 multigenerational family	None	Case-study therapy	The family experienced high levels of BA that disrupted attempts by the family to manage stress and hindered the children's normal developmental processes.
Leavitt (1995)	6 licensed day care providers and 22 day care parents	Ecology theory	Interviews and observations	BA increased for parents when day care was provided in the personal home of the care giver. BA made parents and providers less certain about how to conduct themselves.

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Primary Findings	Secondary analysis of interviews from the Minnesota/Texas Adoption Research Project provided evidence that adopted children are psychologically present to their birthmothers.	Among other positive outcomes, those who participated in a program for grandparents raising their grandkids showed reduced levels of BA.
Measurement	Interviews	BASk
Theoretical Framework	Family systems theory	Family systems theory
Sample Characteristics	163 birthmothers placing a child for adoption	50 grandparents who were raising their grandchildren
Design/Study	Fravel et al. (2000)	Hirshorn et al. (2000)

for Divorced Adults; BAS^d = Boundary Ambiguity Scale for Children of Divorced Adults; PPFCS = Psychological Presence of Father to Child Scale; SHR = Spousal Household Roster; RSI = Role Strain Index; BAS^c = Boundary Ambiguity = Modified measured PFP—psychological Boundary Ambiguity Scale for Adolescents Leaving Home; BASk = Boundary Ambiguity Scale for Widows; KAS = Kitson's Attachment Scale; BAS^c was the WSRI-Wife's Self-Report Inventory. A subset of this inventory Family Life Inventory; MDI = Ministry Demands Inventory; BAS for Dementia; BAS^g = Health-Related Family = boundary ambiguity; BAS^a = Boundary Ambiguity Scale for MIA families (the actual instrument administered during this study This instrument was revised and is now called the BAS for wives of men declared MIA (Boss et al. 1990b); BAS^t Boundary Ambiguiry Scale for Grandparents Raising Grandchildren; MIA = missing in action that outside people have with the family was found to influence the presented definition of the family. In a theory-building chapter, Speckhard (1997) proposed that the death of an unborn child presents an emotionally traumatic situation for couples, which may lead to perceptions of ambiguous family boundaries.

Divorce, Remarriage, and Stepfamily Situations

As noted in Table 1, one of the most studied areas in the BA literature is that of divorced families and the experiences of loss and ambiguity associated with the dissolution of marriage. Associated with this are several studies investigating family change that results when individuals remarry and enter into stepfamily situations. In general, these studies have been built on the premise that families experiencing the ambiguous loss situation of divorce and remarriage may have an increased potential for high BA, which could present a barrier to postdivorce reorganization.

An unpublished dissertation by Pearce-Divorce. McCall (1989) was the first study to directly assess BA in the context of divorce. For this study, two modified versions of the original BAS were developed, one for divorced adults and another for children whose parents had divorced (later published in Boss, Greenberg, & Pearce-McCall, 1990). Building on this foundation, several studies evaluated how children's views of family boundaries are related to their postdivorce relationships with their parents (Buehler & Pasley, 2000; Taanila, Laitinen, Moilanen, & Järvelin, 2002) and to parental conflict after the divorce (Iafrate, 1996). A handful of studies and theory-based articles have expanded the use of family BA in the context of divorce by examining several aspects of coparental relationships between former spouses (Cole & Cole, 1999; Madden-Derdich & Arditti, 1999; Madden-Derdich, Leonard, & Christopher, 1999; Peterson & Christensen, 2002; Serovich, Price, Chapman, & Wright, 1992). Of primary interest in these studies is the investigation of how feelings of attachment and perceptions of interpersonal boundaries impact divorced parents' personal adjustment, their relationship with each other, and their subsequent efforts to parent together. In a theoretical paper, Kaplan, Hennon, and Ade-Ridder (1993) hypothesized that within the lens of BA, custody arrangements that split siblings between parents may be harmful to the sibling system and general postdivorce reorganization.

Remarriage and stepfamilies. Associated with BAs related to divorce, several studies have investigated boundary changes associated with remarriage and stepfamily situations. The first of such research was initiated by Pasley (1987) in an effort to assess the prevalence of BA in remarried couples. Results indicated that a significant number of remarried couples had ambiguous boundaries in that they had differing perceptions of family membership and the children regarded as residing inside or outside the home. Furthermore, this and subsequent studies have shown that BA is more prevalent in stepfamilies than original two-parent families (Stewart, 2005), and that the structure and complexity of stepfamily arrangements (e.g., nonresident children, shared biological children) influence the level of BA in stepfamilies (Hobart, 1988; Pasley; Pasley & Ihinger-Tallman, 1989; Rosenberg & Guttman, 2001; Stewart). Additional articles have examined BA related to remarried spouses' levels of clarity about their stepparent role (Whitsett & Land, 1992) and to couple formation processes during the stepfamily transition (Kheshgi-Genovese & Genovese, 1997).

Family Healthcare Issues

Mishel, Padilla, and Grant (1991) have discussed how uncertain diagnoses can play a major role in illness experience and have called for a redefinition of illness theory to include constructs related to uncertainty. BA is one conceptual avenue that scholars have utilized to better understand family stress related to ambiguity associated with illness and disability. Two primary lines of research have emerged regarding family BA and family healthcare issues: (a) studies of family caregivers of a spouse or parent with Alzheimer's disease and (b) studies on families experiencing pediatric illness.

Family caregivers and Alzheimer's disease. Boss and colleagues (Boss, Caron, Horbal, & Mortimer, 1990; Caron, Boss, & Mortimer, 1999; Garwick, Detzner, & Boss, 1994; Kaplan & Boss, 1999; Sherman & Boss, in press) have published a series of studies detailing their research applying the construct of BA to families with a member who has Alzheimer's disease or another form of dementia. In fact, in her ongoing refinement of the BA construct, Boss, Greenberg, et al. (1990) has pointed to Alzheimer families as a prototypic example of an ambiguous loss situation in which a family member is physically present, yet psychologically absent (Type

II). The focus of this line of research has been to more fully document the experience of caregiving for a loved one with dementia and to see to what degree BA plays a role in caregiver well-being. Overall, these studies have shown that there is an association between BA and depression in caregivers and that perception of high BA among caregivers is linked to negative outcomes for Alzheimer's patients. Other themes emerging from this research have included the following: (a) uncertainties surrounding a dementia diagnosis, (b) ambiguity in family interactions and communication, and (c) ambiguity in living with Alzheimer's disease and changing family roles (Garwick et al., 1994; Mortimer, Boss, & Caron, 1994; Thomas, Clement, Hazif-Thomas, & Leger, 2001).

Pediatric illnesses. In recent years, family BA has also been utilized as a primary variable in studies of families who have a child suffering from a serious illness. Similar to studies of Alzheimer's families, scholars have focused on how pediatric illness creates a context where a family member may be perceived as physically present yet is psychologically absent. Two primary lines of investigation have been initiated in this area of study: (a) studies examining the perceptions, interventions, and coping strategies implemented by families with an ill child (Mu & Tomlinson, 1997; Mu, Kuo, & Chang, 2005; Tomlinson, Swiggum, & Harbaugh, 1999) and (b) factors associated with parents' emotional wellbeing during the child's medical treatment (Mu, Ma, et al., 2001; Mu, Wong, Chang, & Kwan, 2001). Within this first line of research, Mu and Tomlinson initially studied what they called "parental uncertainty" about a child's condition when he or she first became ill. Using an interview protocol, BA was found to influence family members' collective stress perception. Building upon these findings, two other studies examined coping strategies that may help preserve family boundary integrity (as opposed to high BA) while a child receives medical treatment (Tomlinson et al., 1999; Mu et al., 2005). In the second line of pediatric illness research using family BA, Mu, Ma, et al. (2001) and Mu, Wong, et al. (2001) examined parental uncertainty when a child suffers from a serious disease (e.g., epilepsy, malignancy, and cancer). These studies identified associations between parental uncertainty of a child's condition, levels of BA, and feelings of depression and anxiety.

Families and AIDS. In another area of BA research related to family healthcare issues, Serovich,

Greene, and Parrott (1992) discussed some of the issues of privacy and boundaries involved in the AIDS testing process. The authors highlighted that a person's definition of the family and ambiguity about who is in and out of the family can influence to whom individuals disclose information about AIDS testing. Individuals were more interested in keeping the secret of having been tested for AIDS from people outside the family when compared with divulging this information to a family member.

Clergy Families

In an innovative line of research, Lee and colleagues (Han & Lee, 2004; Lee, 1988, 1995) applied family BA to experiences of intrusion between clergy families and their congregations. In a set of initial theoretical papers, Lee (1988, 1995) proposed that a unique type of BA exists when external family boundaries are intruded upon by extrafamilial systems. Lee (1999) found that BA related to the intrusiveness of congregational demands was associated with clergy members' reports of well-being, burnout, and life satisfaction. A similar study was later conducted using a sample of Korean American pastors (Han & Lee). A comparison of the two studies revealed that Korean American pastors showed significantly lower levels of BA when compared with their non-Korean counterparts. However, when BA was present among Korean pastors, it had a stronger association with reports of stress and well-being. In a study of clergymen and their wives, Morris and Blanton (2001) found that family boundary intrusion was a significant factor in predicting both spouses' reports of marital and parental satisfaction.

Other Topics

A series of single studies and theory papers have applied BA to a wide range of other topics. Although the research base for each individual topic is limited, these preliminary studies demonstrate the applicability of the BA construct and are reviewed in chronological order. Boss, Pearce-McCall, and Greenberg (1987) examined how stresses viewed as normative and expected can still create a sense of BA by studying parents whose adolescent child had left home. The researchers concluded that families with higher levels of BA were associated with more dysfunction. In an article that integrates the concepts of

shame, chemical dependence and abuse, and incest, Evans (1987) discussed the impact of the ambiguity of a child having their boundaries violated and the accompanying shame. Ziter (1988) notes that alcoholic families often experience difficulties with boundaries and that the construct of BA is helpful in understanding this situation. In a case study of an extended family wherein the parents disappeared during a political repression in Argentina, Sluzki (1990) reported that high levels of BA were impeding the family's ability to manage stress and negatively influenced the children's development. In a study examining ambiguities in the relationship between day -care providers who worked out of their home and the parents of children in the day care, Leavitt's (1995) found that despite a vocalized desire from parents to communicate regularly with their children's day care provider, this interaction rarely occurs. Burns (1987) discussed how the construct of BA applies to couples experiencing infertility. Gongla and Thompson (1987/1997) theoretically applied the construct of BA to single-parent families stressing that the absent parent is psychologically inside the family boundary, even though the parent is physically absent. Fravel, McRoy, and Grotevant (2000) conducted qualitative interviews with birthmothers of children who were placed for adoption. In general, these children remained psychologically present in their birthmother's everyday life, despite the child being physically absent. In a chapter addressing grandparents raising their grandchildren, Hirshorn, Van Meter, and Brown (2000) discussed the outcome of an intervention program designed to assist parenting grandparents. Results showed that levels of BA were lower for grandparents who participated in the program.

Measurement of BA

In addition to identifying the domains of study utilizing BA, we also set out to document the methods researchers are using to *operationalize and measure* the construct. In light of the fact that BA research is spread across several interdisciplinary domains of study, a midlevel review of how BA has been assessed in these distinct studies seemed warranted and useful. Indeed, given the diversity of topics to which family BA has been applied, it may be fair to say that methods of measurement (along with the

theory itself) are the defining feature of what integrates the BA literature. Furthermore, cross-application of measurement protocols may be the most important way that BA studies can influence each other across domains of study.

Origins of BA Measurement

As noted previously, the construct of BA and the initial BAS (originally called the Psychological Presence Scale) were developed inductively out of clinical observation (Boss, 1976) and tested deductively with a population of military families experiencing the loss of a husband/father who was MIA in Vietnam (Boss, 1977, 1980a). The development of this first measure of BA was guided by the conceptual proposition that the more family members felt the psychological presence of the missing family member, the more ambiguity there was in the system, thereby making it more difficult for the family to manage this change in boundaries. Specifically, the original BAS asked family members questions about their preoccupation of the missing family member (reflected by lingering feelings of loyalty, guilt, and dependence about the lost person) and the extent to which they were still affected by the missing family member's absence (Berry, 1990).

Since the development of the original BAS to study the experiences of MIA families, several additional versions of the scale have been developed and used in BA research. These modified versions of the BAS measure self-reports of family members' perceptions of psychological presence with physical absence (e.g., MIA, divorce), or physical presence with psychological absence (e.g., Alzheimer's). These scales utilize 4- or 5-point Likert items, require approximately 10 min to complete, and produce a single score that is calculated by summing item responses. Although they have been utilized with a variety of samples, most studies report internal consistency coefficients for the scales in the .70s, with some slightly lower (Berry, 1990). Evidence for construct validity of the early versions of the BAS was provided by a series of studies that found statistically significant yet modest correlations (r = .20 – .30) between BA and measures of individual and family dysfunction (Boss, Greenberg, et al., 1990).

There has been more diversity in the past 20 years in the measurement of BA (see Table 1), since the early studies using versions of the BAS. In fact, our review indicated that of the 37 studies using

BA as a primary variable, 27 (73%) have utilized quantitative methods (i.e., survey scales), 9 studies (24%) utilized qualitative methods (i.e., interviews, ethnographic observations, and case studies), and 1 (3%) study used a mixed quantitative/qualitative design (Tomlinson et al., 1999). We organize our review of these measures into two subsections: (a) studies based in the versions of the BAS and (b) innovations in BA measurement.

The BASs

Our review identified that 17 of the 28 (61%) published quantitative or mixed-design studies measuring BA utilized a modified version of Boss' (1980a) original BAS. The fact that the majority of BA studies have utilized a version of the BAS is both a strength and a limitation in the advancement of BA in family stress scholarship (see Implications and Future Directions). The use of a common measurement tool has been a strength in that it has grounded family BA studies in a standardized and comparable assessment. This unity of measurement allows family stress scholars to more readily synthesize research findings, compare studies in meaningful ways, and to collaboratively build cohesive lines with BA informed research. The widespread use of the several versions of the BAS is notable in that such a practice stands in contrast to the diversified measurement of many other constructs in the family field. In fact, many areas of research suffer from the proliferation and use of several measurement protocols that purport to be measuring the same construct yet have little or no connection to one another (see Bradbury, Fincham, & Beach, 2000, for review of measures of marital satisfaction). Ultimately, the use of similarly labeled, yet diverse, measures often leaves a purportedly related research literature fragmented and difficult to integrate. In contrast, the common use of the BAS to measure degree of family BA has allowed for easy adaptation of the construct to new areas of study and is likely a central factor in its establishment as a widely used midlevel construct in family stress research.

Alternative Methods for Measuring BA

In the past 20 years, there has been some innovation in measuring family BA with methods other than the versions of the BAS. In studies based in *quantitative* methods, three alternative types of measurement

approaches have emerged. First, Pasley (1987) and Pasley and Ihinger-Tallman (1989) introduced a comparison method using simple household rosters to assess congruence between family members' reports of who was in the family system. Stewart (2005) utilized a similar approach in her analysis of National Survey of Families and Households data comparing the congruence levels of family membership reports in stepfamilies and original two-parent families. The second approach to emerge has been the development of topically oriented inventories, which include a subscale assessing BA. Building on Lee's (1988) early conceptual work applying BA to clergy families, Morris and Blanton (1994) developed an "intrusiveness to family boundaries" subscale in the Clergy Family Life Inventory, and Lee (1999) incorporated a "BA" subscale in the Ministry Demands Inventory. Finally, the third development in quantitative measurement has been the use of other measures to approximate levels of BA in families. Specifically, Serovich, Price, et al. (1992) and Madden-Derdich et al. (1999) both used the Kitson's Attachment Scale to measure BA among divorced parents. Additionally, Buehler and Pasley (2000) developed the "Psychological Presence of Father to Child" scale to measure BA among children of divorced parents and their noncustodial fathers.

There are a handful of studies in the past 15 years that have utilized qualitative methods to assess and investigate family BA. The majority of these studies have thematically analyzed interviews (Brabant et al., 1994; Fravel et al., 2000; Garwick et al., 1994; Mu & Tomlinson, 1997; Sherman & Boss, in press; Tomlinson et al., 1999), whereas two studies used ethnographic observation approaches (Leavitt, 1995; Taanila et al., 2002), and another used a case-study approach in a clinical setting (Sluzki, 1990). All of these studies used domain-oriented interview protocols that asked questions about issues specific to the topic under investigation (e.g., uncertainty of an illness diagnosis, the death of a child). None of these researchers developed a formal interview structure or coding protocol, thus limiting their usefulness to other BA researchers and family professionals. However, the emergence of qualitative methods presents some promising possibilities for future BA research. In particular, interview methods may be particularly adept at capturing inconsistency in response patterns, where a person fluctuates or presents contrasting views of a matter within the interview period. This type of instability of response may indicate the

presence of ambiguity that may not be readily captured in self-report surveys or inventories.

Implications and Future Directions

We have examined the key theoretical perspectives, the domains of study, and the methods of measurement relating to the study of BA. Several overarching implications emerged from this review for scholars and family professionals as they apply the construct of BA to their future work. We organize our thoughts here according to implications for theory development, research, and practice.

Implications for Theory Development

As noted earlier, the theoretical construct of family BA remains fundamentally unchanged since its introduction to the field of family stress three decades ago. It remains heuristically under the C-factor in the ABC-X model of family stress. The fact that the construct has endured as it was first articulated is a testament to its theoretical richness and innovation. Like most lasting theoretical constructs, family BA is deep enough to capture a wide array of family processes yet parsimonious enough to permit widespread application. Although there has been relatively little explicit change in the construct of family BA since its inception, there are a number of implicit developments that have emerged in recent years that merit discussion. First, we address explicit efforts to advance BA theory, and then we examine three implicit developments that need to be further addressed by scholars and practioneers. Specifically, we address what we perceive to be a conceptual confusion among some scholars regarding the family stress constructs of BA and ambiguous loss. Next, we discuss the need for professionals to more fully articulate how BA integrates with other theories that they are using in their work and the possibility of developing a theoretical rationale for varied levels of severity of family BA.

Explicit progression of the theory. One of our primary aims in reviewing the BA literature was to evaluate theoretical advances that may have occurred during the past 30 years. From our review, it is apparent that professionals have focused more on the application of BA theory to specific stressor situations, than engaging in explicit theory development of the construct in ways that would be relevant

across domains of study. Our review identified 10 articles and book chapters in the past 30 years that could be labeled as addressing "midlevel theory" aspects of BA (not including pieces solely addressing ambiguous loss). All but one of these pieces (Berry, 1990) were articles or chapters written by Boss and colleagues (Boss, 1980b, 1983, 1987, 1992, 1993, 2002, 2004; Boss & Greenberg, 1984; Boss, Greenberg, et al., 1990) providing further articulation of the tenets of the theory. A comparison of the most recent of these publications with early manuscripts reveals that the conceptual definition of BA remains largely unchanged.

One new proposition in BA theory is Lee's (1988, 1995) theoretical reexamination of the construct and his articulation of "boundary intrusion" as a newly identified cause of high BA. Outside of Boss' (1980b) and Boss and Greenberg's (1984) early identification of types of family boundary changes (i.e., loss, physical and psychological; and inclusion), little effort has been made to identify other types of stressors that may be associated with BA or to expand upon the original conceptualization of the construct. The conceptual work done by Lee in identifying a framework to investigate stress experienced by Protestant clergy families is a notable exception. In an effort to expand upon previous conceptualizations, Lee (1995) used an ecological framework to propose that various types of *intrusion* from outside of the family system constitute a fundamentally different cause of BA than has been noted in the past. The novelty of Lee's use of the BA construct is that he explicitly distinguished BA within subsystems of the family from BA between the family and larger social systems. This distinction is useful in that it applies not only to high BA originating from situations of intrusion but also applies equally well to situations of loss or inclusion that may influence both internal and external family boundaries.

By combining Lee's (1988, 1995) theoretical efforts with Boss' (1980b, 1984, 2002, 2004, 2006), it is possible to identify a basic typology of causes or situations that may lead to high BA. As previously identified, family boundary changes can be divided into three distinctions (i.e., loss, inclusion, and intrusion), which can be further divided into four primary types. Family boundary changes associated with *loss or separation* can be divided into two primary types of absence: physical absence and psychological absence. These two types correspond with the two primary types of situations that can lead to

BA identified in the research literature to date: Type I—physical absence with psychological presence (paradigmatically modeled by MIA families)—and Type II—psychological absence with physical presence (paradigmatically modeled by Alzheimer's families). Family membership changes because of inclusion constitute a distinct type of family boundary change (Type III). BA resulting from these types of family transitions can occur whenever family membership changes because of the addition of a new member or the reintroduction of a longabsent member (paradigmatically modeled by stepfamilies). Stress to family boundaries because of intrusion also constitutes a distinct type of family boundary change (Type IV). This type of change occurs whenever a family member or the family as a whole perceives that their boundaries are being intruded on by an outside person or group (paradigmatically modeled by clergy families). This expanded typology of causes or types of high BA represents the most notable aspect of progression in theory pertaining to BA during the past three decades.

Conceptual distinctions between ambiguous loss and BA. A critical aspect of advancing theory pertaining to ambiguity in families is for scholars to make clear conceptual distinctions between the concepts of BA and ambiguous loss. As noted previously, along with the development of the family BA construct, Boss (1991, 1999, 2004, 2006) also introduced the concept of ambiguous loss to the family stress literature. Boss (2004) defines ambiguous loss as "a situation of unclear loss resulting from not knowing whether a loved one is dead or alive, absent or present" (p. 554). She contrasts this type of loss situation with "clear-cut loss" where there is more clarity of information available about the loss. Situations of ambiguous loss can become structural problems for families when they lead to BA and can create psychological problems when they lead to feelings of hopelessness, block stress management, and freeze the grief process (Boss, 2004, 2006).

Since the year 2000, there have been five articles published and two dissertations completed that utilized *BA* as a primary construct. During the same time, there have been 14 articles published and 2 dissertations completed identifying *ambiguous loss* as a primary variable in the study. This trend is somewhat puzzling in that BA is conceptualized as the broader of the two constructs in that it is a *perception variable* (C-factor) that can be present in a wide

array of stress situations, whereas ambiguous loss is a *situational variable* (A-factor) that refers to a specific type of loss situation that is less frequently experienced. Our observation is that many scholars and professionals are not making a clear distinction between the constructs of ambiguous loss and BA. In time, this pattern has become self-perpetuating in that the frequent interchanging of these terms has contributed to divergent use of these constructs from their original articulation.

Much of the confusion between ambiguous loss and BA stems from scholars mistakenly interpreting the term "ambiguous" in the construct ambiguous loss to refer to subjectively defined perceptions of a stressor, rather than to the situationally defined reality of a stressor. In other words, ambiguous loss is frequently seen as any type of loss experience that may lead to ambiguous perceptions by family members. However, this is not how Boss (1991, 1999) articulated the construct; rather, she identified ambiguous loss as a specific, relatively rare type of loss that is *inherently ambiguous* because of some situational feature that makes it impossible for families to obtain factual information surrounding the event of loss (Boss, 2002, 2006). The word "ambiguous" in the term ambiguous loss refers to an objective feature of the situation, not a subjective feature grounded in family perceptions. BA is a continuous variable ranging from high to low and is the appropriate construct for addressing family members' perceptions of a loss (or other stressor) situation (Boss, 2004). Without this type of conceptual differentiation, the construct of ambiguous loss becomes tautological in definition and use. Also, a clear distinction between these constructs enables scholars to study four types of boundary phenomena in families depending on whether or not a loss (or other type of stressor) is ambiguous or clear-cut in nature and whether BA is more or less perceived. As noted in Figure 1, this distinction is critical because it allows scholars to study not only congruent or expected associations between family loss and boundaries (i.e., Situation I, ambiguous loss with higher BA; Situation IV, clear-cut loss with clearer boundaries) but also incongruent or unexpected patterns as well (i.e., Situation II, Ambiguous loss with clearer boundaries; Situation III, clear-cut loss with higher BA).

More explicit theoretical integration. Our review revealed that a common practice among scholars is to use family BA in tandem with other theoretical

Perception of Boundary Ambiguity

"C - Factor: Based on family members perception of the loss"

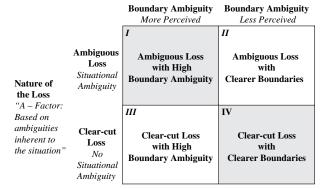


Figure 1. Conceptual Distinctions Between Boundary Ambiguity and Ambiguous Loss. *Note*. Shaded quadrants depict congruent or expected patterns of association between the type of loss and boundary ambiguity, whereas the nonshaded quadrants depict incongruent or unexpected patterns. Although applied here to family boundary change associated with loss, the conceptual distinctions made in this model also apply to boundary changes involving inclusion or intrusion. Also, to illustrate its conceptual distinction from ambiguous loss, boundary ambiguity is portrayed here in two quadrants (i.e., "more perceived" and "less perceived"). Readers should not interpret this depiction to mean that boundary ambiguity is a categorical variable. Boundary ambiguity is best conceived as a continuous variable because no family boundaries are completely clear or ambiguous all the time.

perspectives or constructs. For example, scholars have recently proposed that BA may be linked with attachment theory to better understand families experiencing a divorce (Madden-Derdich & Arditti, 1999; Serovich, Price, et al., 1992). This type of theoretical integration is promising and represents an important avenue of advancement for BA theory. However, scholars doing this type of work in the future need to take great care to provide a detailed articulation of how BA maps on to other theories. A good example of this type of theoretical integration is Boss' own efforts to integrate family BA and ambiguous loss with the ABC-X model of family stress (Hill, 1958). Boss (1980a, 2002, 2006) has articulated in detail how these linkages enriched both the theoretical utility of BA and the ABC-X model. An expansion of this type of integrative theory work is needed as scholars tie BA to other theoretical perspectives and constructs.

Degrees of family BA. To date, the issue of "severity" or "degree" of BA has largely been addressed as a measurement issue rather than a theoretical one. Specifically, degree of BA has been

identified with the score someone reports on a scaled measure, higher scores indicating higher levels of BA. Although this approach has some utility, it may prove useful to address the matter of severity in a theoretical manner as well. Since the introduction of the family BA construct, a number of new concepts have been introduced to the field of family stress. Some of these concepts may prove useful in expanding how we think about and measure BA. For example, in our own work, we have been exploring the utility of integrating BA with the concept of "levels of abstraction" of family stress (Burr & Klein, 1994; Day, 2005) as a way to theoretically articulate levels of severity or the degree of BA that may be present in stressor situations. Our relatively straightforward notion is that levels of change and levels of abstraction may apply as equally well to family BA as they do to general family stress. Although further elaboration and testing is needed to validate these ideas, this is an example of the type of integration work that is needed to more fully understand how BA influences families.

Implications for Research

Despite its long-standing use in family stress research, BA remains a construct that is more developed at the theoretical level than it is at the research level. In fact, the state of measurement and analysis in BA research remains quite rudimentary in contrast to the more elegant adaptation of the theory to various areas of study. Indeed, our review suggests that efforts to refine the research strategies and measurement protocols in BA research is perhaps the most critical issue to be addressed if BA scholarship is to reach its full utility in family stress research. There is a foundation upon which to build, but a second generation of BA research will need more sophisticated measurement strategies. We suggest several specific implications here.

The maturation of current lines of BA research. It is clear that family BA has been found to be a useful family stress construct for researchers and family professionals in a wide array of disciplines. Indeed, the 37 research studies we reviewed can be grouped into 11 unique domains of research. However, six of these studied topics are represented by a single study and only four areas (divorce, stepfamilies, healthcare issues, and clergy families) have three or more studies. Although the first 30 years of BA research have been a period of innovative expansion,

with the field being characterized more by breadth than depth, the study of BA will benefit in coming years from the maturation of existing lines of BA research. This maturity will most likely come as scholars improve the quality of the samples, designs, and measurement protocol used in BA research. The development of analytical protocols that assess BA using forms of multivariate analyses and the use of longitudinally designed studies to chart the developmental course of BA are particularly needed. This type of work will mark a transition from the current innovation phase of BA research to a refinement phase that further tests the tenets of the concept.

The expansion of domains studied using BA. Although we see the further maturation of lines of research as the primary need in BA scholarship, our review leads us to believe that there is still room for expansion into new domains of research. In particular, the construct of BA is now established enough to branch further into other types of boundary changes beyond loss. As noted previously, the construct of BA has its developmental roots in the study of father absence or, more generally, families experiencing some form of loss of membership (e.g., MIA families, death, divorce). Therefore, given these roots, it is not surprising that the construct has most frequently been applied to stressors involving the loss or separation of family members.

This concentrated focus on BA in situations of loss has been both a strength and a limitation in the development of the construct. It has been a strength in that it has allowed the theoretical construct to gain a solid base of empirical support in family situations involving similar yet distinct types of loss (e.g., unclear loss involved in dementia, divorce, missing persons). This type of narrow focus has been a limitation, however, in that it has tended to restrict the evolution of the construct into other types of life experiences that may introduce BAs for families. This restriction is also noteworthy given that early on in the development of the construct, Boss (1980b) explicitly proposed that "normative family life cycle transitions" that involve change in family boundaries through the inclusion or addition of family members (e.g., birth, marriage, adoption), as well as loss, can introduce BA into the system. As can be noted in Table 1, there have been a handful of studies on experiences of BA associated with situations of inclusion (stepfamilies and adoption), but they have been relatively few in comparison to the number of studies investigating loss or separation. Further examination of BA in normative family life cycle transitions is warranted, particularly given recent demographic transitions (e.g., delays in marriage, increases in cohabitation, nonmarital childbearing) that may increase ambiguity about inclusion for families (McLanahan, 2004).

Develop midlevel measures of BA. With regard to measurement protocols, it is striking to note that BA is a midlevel construct without a midlevel measure. To date, there have been no midlevel measures developed to assess BA across settings in a general population. Without exception, all the measurement protocols used by family professionals to assess BA have been anchored to the specific research topic under investigation. This is another issue that needs to be addressed by family stress scholars to advance the study of BA.

Refine existing measures of BA. Given that a large portion of existing BA studies has used a version of the BAS, a high priority should be given to the refinement of these scales. Whereas the repeated use of a measure typically strengthens a line of related studies, there are times when such a practice may limit research advancement. Our review leads us to believe that this may be the case for BA research.

The benefits of using a common measure can only be realized if the standardized measure is conceptually and psychometrically sound. If this is not the case, the repeated use of a measure may proliferate conceptual problems that were present in the measure's inception. In the case of the widely used versions of the BAS, a retrospective review of the measures reveals that there is incongruence between how the construct is defined and the wording of some of the indicators used in the scales to assess BA. In her early articulation of the theory, Boss, Greenberg, et al. (1990) articulated the theoretical proposition that "the higher the boundary ambiguity in the family system, the higher the family stress and the greater the individual and family dysfunction" (p. 5). Framed within the ABC-X model of family stress, Boss (2002, 2004, 2006) has defined BA to primarily be a perception variable (C-factor) in that it is the family's perception of the situation, and the associated meanings ascribed to family roles and membership, that determines the existence and degree of BA. Within this perspective, BA is conceptualized to be a predictor variable of negative stress outcomes (X-factor) such as depression, anxiety, or other forms of distress. However, a close inspection of the items used in the BAS reveals that aspects of

distress are present in the wording of some of the indicator statements. For example, respondents are asked questions that use terms such as "feel guilty," "feel it will be difficult," "will never be satisfied," "feel incapable," "have conflicts, " "experience disapproval," "become emotionally upset," "bothered because," "feelings of loneliness," "worry about," "difficult to talk with," "feel disturbed," and other types of distress-laden language. The inclusion of such distress-based statements in the BAS presents a tautological dilemma in interpreting research findings demonstrating a link between BA and family dysfunction. It is unclear if the documented link between versions of the BAS and negative outcomes can be fully attributed to the presence of BA or if the distressed statements in some of the items inflate the strength of the association.

In presenting these observations about the BASs, it should be noted that there is some evidence that our concerns are overstated. One study that potentially refutes our critique is Caron et al.'s (1999) study involving family caregivers of Alzheimer's disease. In this study, the researchers found that the BAS for dementia (Boss, Caron, et al. 1990) divided into two factors or two subscales, which they labeled "caregiver immobilization" and "caregiver closeout." Nearly all the distress-laden items loaded on the immobilization scale, whereas the nondistressed items measuring ambiguity loaded on the closeout factor. The study found that caregiver distancing from patients (measured with the closeout scale) predicted increases in the frequency of problem behaviors among patients. This finding is noteworthy and strengthens confidence that other studies using versions of the BAS have similarly identified a link between ambiguity and negative stress outcomes. However, this conclusion cannot be drawn with certainty given that the Caron et al.'s study is the only study to date to separate the BAS into two distinct subscales. All the other studies we reviewed using a version of the BAS utilized a combined scale that included the distress-laden items mentioned previously. Future efforts should be made to refine the BASs and address these issues. Indicators of distress need to be replaced with neutral statements or removed from analyses to avoid perpetuating the tautological problems we propose are in the current versions of the scales. Future efforts also need to more fully investigate the validity and reliability of other scales used to measure BA. Future scholarship and intervention efforts will be benefited by the development of a standardized battery of psychometrically refined scales to measure BA.

Develop family-level measures of BA. Another issue of importance related to BA research is the level of measurement targeted by assessment tools. To date, BA has been almost exclusively measured at the individual level by focusing on individual family members' perceptions of roles and membership within the family. This focus is not surprising or unwarranted given Boss' (1988, 2006) early and later writings theoretically distinguishing her views of the perceptive aspects of family boundaries from traditional notions emphasizing the structural nature of boundaries in the family system. However, with this emphasis on perception, the construct of BA has come to be generally regarded and measured as an individual measure. In other words, nearly all measures of BA assess ambiguity within individual family members but do not attempt to assess ambiguity among family members. It should be noted that this gravitation to the individual level of measurement is a common issue for "family" variables used in "family" research. It should also be noted that Boss emphasized that the original versions of the BAS were developed to be "individual measures" and she stated that "group measures of boundary ambiguity are also needed to fully examine the degree of boundary ambiguity in a family system" (Boss, Greenberg, et al., 1990, p. 2).

Although the vast majority of scholars have measured BA at the individual level, there are a few examples of scholars who have measured the construct at the dyadic or familial level. The household roster studies noted previously (Pasley, 1987, 1989; Stewart, 2005) and Garwick et al.'s (1994) analyses of family conversations are examples of this type of approach in that they examined the level of consistency among family members' reports of who was in the family system. We believe that the development of dyadic or family-level measures deserve additional attention in future BA research. Also, we are optimistic that with recent advances in multivariate analyses strategies (e.g., hierarchical linear modeling), there is potential for the development of new ways to examine BA at the familial level. Measuring BA at the familial level will also likely require conceptual integration with the conflict and consensus literatures in family processes. Family-level measurement of BA may prove to be of noted importance where collaborative decision making is needed in families, as in the case of illness—where incongruence

between family member's views may be particularly problematic.

Develop qualitative methods for measuring BA. There are some aspects of BA that suggest that it is a phenomenon that may be best measured using qualitative methods. Quantitative measurement is traditionally based in a psychometric approach that emphasizes consistent response patterns to standardized questions. Thus, the emphasis is on internal consistency of items clustered to form scales and the importance of reliability of measurement over time. An interesting question for scholars, however, is how do you consistently measure a phenomenon such as BA that is by definition ambiguous, uncertain, inconsistent, and possibly cyclical? There are at least two possible solutions. One is to explore creative ways to measure BA with quantitative methods. For example, instead of using scales that try to capture a consistent response pattern to ambiguousbased items, scholars may want to explore trying to measure BA by identifying ambiguous or inconsistent responses to nonambiguous items (although such an approach would be at odds with many assumptions of traditional psychometrics). Another, and perhaps more viable approach, would be to utilize qualitative methods that may be better suited to identify varied or uncertainty in responses. In this regard, the development of standardized interview protocols that facilitate the qualitative assessment of BA would be particularly helpful. Such approaches offer much promise to a deeper and more fully developed assessment approach to experiences of BA in family life.

Implications for Practice

BA has been a useful construct for family professionals seeking to better understand stepfamilies, clergy life, family caregiving, and numerous other topics important to families. In her recent writings, Boss (2004) has articulated some of her reflections on how family professionals can move this theory into practice as they work with families. When addressing situations of high BA, it is often helpful for practioneers to name the situation as one of BA, normalize stresses and ambivalence, set the stage for family members to listen to each other's perceptions of the situation, and help families reconstruct roles, rules, and rituals. The long-term goal of intervention around high BA is to help families find meaning about their family boundary change (i.e., loss,

inclusion, intrusion) and to negotiate new patterns that clarify roles and membership within the family. Family professionals should carefully distinguish if the ambiguity a family is experiencing is because of an inherent lack of information about the situation or if it is primarily based in family members' perceptions of a clearer type of boundary change. In situations of ambiguous loss or another form of ambiguous boundary change, families may need to learn to adapt to a situation where certainty is not possible. In these situations, some families or family members are able to exhibit a high tolerance for ambiguity and move forward despite a lack of information (see Boss, 2006, for a detailed discussion of using BA and ambiguous loss theory in practice settings).

Conclusions

By and large, BA has been a midlevel construct utilized to study and intervene with specific issues and problems. However, if there is one overarching implication that emerges from this review, it is the need for scientists and practioneers to engage in more midlevel scholarship using BA across various family situations, in addition to applying BA to their specific domains of research or practice. As a prototypic midlevel scholar, Boss' work has always been primarily theoretical rather than topical in nature. More of this midlevel theory building and scholarship is needed surrounding family BA and family stress theory in general. We look forward to seeing a second generation of family BA scholars take this work forward during the next 30 years.

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