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Parental Invasive Behaviors and Emerging Adults' Privacy Defenses: Instrument Development and Validation

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Building from previous efforts by Petronio (1994) and Ledbetter, Heiss, Sibal, Lev, Battle-Fisher, and Shubert (2010), the chief purposes of this investigation were to (a) develop instruments measuring parental invasive and children's defensive privacy behaviors and (b) validate the instruments by examining associations with family satisfaction and family communication patterns. Confirmatory factor analysis identified three dimensions of parental invasion (verbal, spatial, and mediated) and five dimensions of children's defense (secrecy, mediated, avoidance, direct, and peer). Both parental invasions and children's defenses were negatively associated with family satisfaction and conversation orientation, and positively associated with family conformity orientation. High family conversation mitigated against the positive contribution of conformity to secrecy, direct, and peer defenses.

Although children's management of privacy is a chief developmental concern throughout the lifespan of the parent-child relationship, conflict about privacy especially occurs as children transition into adulthood (Petronio, 2002). During the period of life between approximately 18 and 30 years, many young adults leave the parental home, seek higher education, find meaningful employment, and perhaps enter marriage and start families (Arnett, 2007). Although this developmental phase necessitates increased independence from the family of origin, young adults often remain dependent on their parents for financial resources (Galambos, Turner, & Tilton-Weaver, 2005), social network ties (Myers & Glover, 2007), and emotional support (Larose & Boivin, 1998).

As such, this phase of development can generate role ambiguity for both parents and young adults (Arnett, 1994). Recognizing this tension, Arnett described this phase as *emerging adulthood*, a time "created in part by the steep rise in the typical ages of marriage and parenthood that has taken place in the past half century" (Arnett, 2004, p. 4). Regarding privacy, the change and uncertainty characterizing this stage generate "more opportunities for mixed messages regarding parents granting personal control over [children's] privacy needs" (Petronio, 1994, p. 244).

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Through adolescence and emerging adulthood, a major developmental goal is the formation of an individual identity distinct from that of parents (Lapsley & Edgerton, 2002), such that "in a fundamental way, through managing privacy, adolescents enact the individuation process" (Petronio, 2010, p. 185). Thus, Petronio's (2002) Communication Privacy Management (CPM) theory is particularly useful for understanding how emerging adults communicatively control their private information. Previous research (Petronio, 1994) has identified *parental invasive behaviors* (i.e., those that attempt to breach emerging adults' privacy) and *children's defensive behaviors* (i.e., those that emerging adults enact to protect against such invasions), with Ledbetter, Heiss, Sibal, Lev, Battle-Fisher, and Shubert (2010) providing an updated version of the typology incorporating mediated forms of invasive/defensive behavior. Informed by these prior inductive efforts, the chief purpose of this study was to deductively create and validate a quantitative instrument measuring parental invasive and children's defensive behaviors; such a measure could prove useful for both theoretical understanding of families and practical application intended to facilitate satisfying parent/child privacy boundary management. A secondary, but related, goal was to further validate the instrument by testing the association between family communication environments and invasive/defensive behaviors.

THEORETICAL BACKGROUND

Communication Privacy Management Theory

Petronio (2002) developed Communication Privacy Management theory from earlier work on self disclosure and intimacy (e.g., Altman & Taylor, 1973). In contrast to such earlier research, Petronio disassociated the two constructs, instead focusing on the communicative practices by which people conceal, reveal, and manage private information. To date, CPM research spans an impressively diverse set of contexts, including health (Bute & Vik, 2010), intercultural (Faulkner & Mansfield, 2002), computer-mediated (Metzger, 2007), and family (Caughlin & Afifi, 2004) communication research.

CPM theory advanced the *boundary* as a central metaphor for understanding privacy management processes: "In this theory, privacy is defined as the feeling that one has the right to own private information, either personally or collectively; consequently, boundaries mark ownership lines for individuals" (Petronio, 2002, p. 6). Individuals communicatively create and maintain such boundaries; likewise, communication also can generate *boundary turbulence*, or episodes when "[boundary] coordination does not . . . function in a synchronized way" (Petronio, 2002, p. 12), either intentionally or unintentionally. Emerging adulthood is a developmental phase especially likely to generate increased boundary management and turbulence (Ledbetter et al., 2010).

Petronio (2002) noted that privacy boundaries are nonexistent in infancy, with such boundaries appearing in early childhood and increasing in number and strength throughout maturation. By adolescence, "one of the chief issues in the deindividuation process is the formation of privacy borders" (Petronio, 2002, p. 7), with many adolescents constructing thicker and less permeable boundaries around their private information. These developmental changes create role ambiguity for parents accustomed to access to information about their children (Arnett, 1994), and parents "may see this divergence from a general orientation to private information as a challenge" (Petronio, 2002, p. 165).

Highlighting this boundary turbulence, Finkenauer, Engels, and Meeus (2002) reported that secret keeping is common in adolescence and, moreover, that keeping secrets is associated with not only emotional autonomy but also loneliness and depressive mood. Especially given such mixed outcomes, it is unsurprising that some parents engage in invasive behaviors designed to breach young adult children's boundaries and obtain their private information (Petronio, 1994).

For example, because "adolescents become less dependent on their parents" and "increasingly rely on friends for social support" (Finkenauer et al., 2002, p. 124), some adolescents may conceal information about their peer network from parents, especially if they anticipate parental disapproval of their friends. In response, a parent might snoop through the young adult child's cell phone call list to discover information about the child's peer network (Ledbetter et al., 2010). Such invasive behaviors may foster parent-child conflict (Hawk, Keijsers, Hale, & Meeus, 2009), undermine the young adult's sense of confidence and autonomy (Petronio, 2010), and perhaps even generate negative psychosocial outcomes in the young adult (Caughlin & Malis, 2004).

Petronio (1994) articulated several types of parent-child invasive/defensive behaviors in emerging adulthood, with factor analysis identifying separate *direct* and *subversive* (i.e., indirect) dimensions of parental invasive behaviors and *confrontational* (i.e., direct) and *evasive* (i.e., indirect) dimensions of children's defensive behaviors. Ledbetter and his colleagues (2010) updated this typology, using content analysis of open-ended responses to identify four different categories (*spatial*, *verbal*, *telephone*, and *computer*) applicable to both invasive and defensive behaviors.

Despite the value of this inductive approach, Ledbetter et al. (2010) did not deductively evaluate the dimensional structure of the typology. Regarding theory, deductively testing the typology may help understand key CPM processes within families, such as the three levels of family privacy boundary permeability (high, moderate, and low) noted by Petronio and Caughlin (2006) or patterns of topic avoidance identified by Caughlin and Afifi (2004). In addition to theoretical advancement, CPM is a practical theory with "the aim [of] solving problems in everyday life" (Petronio, 2004, p. 194), and development of a measure for assessing invasive/defensive behaviors may enable scholars to provide advice for maneuvering the boundary turbulence so common between parents and their college-aged children (Petronio, 2002).

Thus, following other recent development of CPM-inspired survey measures (e.g., Child, Pearson, & Petronio, 2009), the central purpose of this investigation is to develop an empirically derived survey instrument that measures parental invasive and children's defensive behaviors. Accordingly, an important step in instrument development is the establishment of convergent validity with theoretically-related constructs; here, one such meaningful construct is family satisfaction, with Petronio (1994) and others (e.g., Caughlin & Golish, 2002) reporting that family satisfaction is inversely associated with invasive/defensive behaviors. Thus, we predict:

H1: Invasive behaviors are inversely associated with family satisfaction.
H2: Defensive behaviors are inversely associated with family satisfaction.

Family Communication Patterns

To further validate our invasive/defensive behaviors instruments, we examine the association between these behaviors and overall family communication climate. Specifically, we employ Koerner and Fitzpatrick's (2002b) theory of *family communication patterns*, which identifies

conversation and *conformity orientations* as two primary dimensions of family communicative functioning. Conversation orientation addresses the extent to which families feel comfortable sharing thoughts, feelings, and opinions with each other. Previous research has found that conversation orientation is associated with a host of parent-child communication behaviors, including affection, confirmation (Schrodt, Ledbetter, & Ohrt, 2007), and willingness to address conflict (Koerner & Fitzpatrick, 1997). From the perspective of CPM, such open lines of communication might help to routinize privacy expectations and thus reduce possibilities for boundary invasions (Petronio, 2002). Thus, we predict:

H3: Conversation orientation inversely predicts parental invasive behaviors.

Conformity orientation addresses the extent to which families exhibit a hierarchical family structure and enforce parental rules. In other words, parents expect children to obey guidelines set by the parents (Koerner & Fitzpatrick, 2002b), and previous research has indicated that such families are characterized by children's conflict avoidance (Dumlao & Botta, 2000) and lower parental communication competence (Schrodt et al., 2009). Because noninvasive privacy boundary coordination is communicatively complex and may provoke conflict (Petronio, 2002), such parents may, instead, attempt to invade emerging adults' privacy. We hypothesize:

H4: Conformity orientation positively predicts parental invasive behaviors.

Although previous research often has investigated conversation and conformity orientations separately (Schrodt, Witt, & Messersmith, 2008), Koerner and Fitzpatrick (2002a) emphasized the importance of the interaction between the orientations vis-à-vis outcomes. Toward this end, they advanced a typology of four family types arising from the two underlying orientations (Koerner & Fitzpatrick, 2002b): (a) *consensual* (high conversation, high conformity), (b) *pluralistic* (high conversation, low conformity), (c) *protective* (low conversation, high conformity), and (d) *laissez-faire* (low conversation, low conformity). Some evidence has suggested that high conversation orientation mitigates negative outcomes arising from high conformity orientation (Schrodt, 2005). Thus, we might expect that parental authority (i.e., high conformity orientation) may not stimulate invasive behaviors when parents have open lines of conversation with their offspring (i.e., high conversation orientation). We predict:

H5: Conversation and conformity orientations will interact to predict parental invasive behaviors, such that high conversation orientation reduces the positive association between conformity orientation and such behaviors.

We expect a similar pattern for young adult children's defensive behaviors: First, that conversation orientation promotes healthy, routinized boundary coordination in families (e.g., through less frequent demand/withdraw patterns, Schrodt & Ledbetter, 2007) and thus reduces the need for defensive behaviors (Finkenauer, Frijns, Engels, & Kerkhof, 2005); second, that high conformity orientation might encourage defensive action (e.g., conflict avoidance, Dumlao & Botta, 2000) against such strong parental authority; and third, that high conversation orientation might mitigate against the need for defensive actions against high conformity (Schrodt, 2005). Thus:

H6: Conversation orientation inversely predicts children's defensive behaviors.
H7: Conformity orientation positively predicts children's defensive behaviors.
H8: The interaction between conversation and conformity orientations will predict children's defensive behaviors, such that high conversation orientation reduces the positive association between conformity orientation and such behaviors.

METHOD

Participants

The sample contained 367 participants (55.6% female) enrolled in an introductory communication studies course at a medium-sized public university in the United States Midwest. Most participants ranged from 18 to 30 years (99.5%; $M = 19.3$, $SD = 1.71$), and most reported a White/Caucasian racial/ethnic identity (91.0%). A majority of participants were from nondivorced families (72.5%), although some were from divorced families (25.3%) and others did not answer the question (2.2%). Although we did not assess whether participants were parents themselves, the age distribution of the sample and lack of commuter students at the university suggests exceedingly few, if any, had adolescent children.

Procedures

Privacy invasions and defensive behavior

Ledbetter and his colleagues (2010) reported several subcategories of invasive/defensive behavior types nested within eight supercategories. Guided by this prior work, we developed items designed to assess each subcategory, resulting in an initial Parental Privacy Invasions Instrument (16 items) and a Children's Defensive Behaviors Instrument (16 items). Respectively, from the point of view of the young adult child, each measure assessed how frequently participants perceived that parents breached their privacy boundaries and participants' defensive actions.

Both measures included a *facet item* (i.e., an item unambiguously addressing the central domain of the construct) designed to assess the face validity of the other items (respectively, "My parents invade my privacy" and "I defend against my parents' privacy invasions"). A frequency scale metric solicited responses on a Likert-type scale ranging from 0 = Never to 5 = Very Often. As the primary goal of this investigation was to develop and validate the item pool and establish the dimensionality of the construct domain via factor analysis, estimates of internal reliability are reported alongside these analyses (below).

Family communication patterns

Koerner and Fitzpatrick's (2002b) Revised Family Communication Patterns (RFCP) instrument (more specifically, the version assessing the family from the child's perspective) assessed two dimensions of generalized family communication schemata: (a) conversation orientation (15 items, e.g., "In our family we often talk about topics like politics and religion

where some persons disagree with others") and (b) conformity orientation (11 items, e.g., "My parents feel that it is important to be the boss"). All items were assessed on a seven-point Likert-type scale (1 = Strongly Disagree, 7 = Strongly Agree). Previous research has established both the validity and reliability of the RFCP (for a meta-analysis, see Schrodt et al., 2008), and likewise both conversation ($\alpha = .91$) and conformity ($\alpha = .80$) orientations obtained acceptable estimates of internal reliability in this study.

Family satisfaction

A revised version of Huston, McHale, and Crouter's (1986) Marital Opinion Questionnaire, modified to assess satisfaction in family relationships (e.g., Schrodt & Afifi, 2007), measured the participant's overall satisfaction with the family. The measure consists of a series of ten word pairs (e.g., Miserable/Enjoyable, Empty/Full) assessed on a seven-point semantic differential scale, as well one Likert-type item ("All thing considered, how satisfied have you been with your relationship with your family the last month?") measured on a seven-point scale (1 = Completely Dissatisfied, 7 = Completely Satisfied). The instrument demonstrated acceptable internal reliability ($\alpha = .93$) in this study.

Data Analysis

As the main purpose of the investigation was to refine the Parental Privacy Invasions and Children's Defensive Behavior Instruments, exploratory factor analysis (EFA) using SPSS 15.0 and confirmatory factor analysis (CFA) using LISREL 8.80 sequentially evaluated item fit and construct dimensionality. Kline (2005) notes that conducting CFA after EFA on a single sample can yield biased results, and thus SPSS randomly assigned cases to one of two subsamples. EFA initially examined dimensional structure in one subsample ($n = 183$), and CFA subsequently tested and refined dimensional structure on the other subsample ($n = 184$). Hypotheses and research questions were evaluated using hierarchical linear regression using SPSS 15.0. When appropriate, the small number of missing values were replaced using the EM imputation algorithm in the SPSS 15.0 Missing Values package.

RESULTS

Exploratory Factor Analysis

Quantitative methodologists strongly recommend that theory should guide tests of dimensional structure (Little, Lindenberger, & Nesselroade, 1999; Kline, 2005). Accordingly, then, both Petronio's (2002) general theoretical work on communication privacy management and previous investigations of parent-child privacy communication behavior (Ledbetter et al., 2010; Petronio, 1994) guided scale development and refinement. Using this logic, the purpose of EFA was, as the method is named, exploratory; in other words, we did not use EFA with the intent of deriving a fixed relationship between items and constructs but rather to inform the initial design of the confirmatory model.

The 15 items of the Parental Privacy Invasions Instrument (i.e., all except the facet item) were submitted to exploratory factor analysis with principal components extraction and varimax (i.e., orthogonal) rotation. Using the criterion of eigenvalue > 1.0, the initial analysis obtained a four-factor solution that explained 62.9% of the item variance. However, inspection of the item loadings revealed several items with weak and cross-factor loadings, as well as the possibility that the fourth factor was spurious. After removing the sole item that strongly loaded on the fourth factor ("My parents request that I come home to visit them"), item removal proceeded using the .60/.40 criterion recommended by McCroskey and Young (1979).

The final EFA solution contained 11 items loading on three factors: (a) mediated invasion (e.g., "My parents look through my call list on my cell phone without my permission"), (b) verbal invasion (e.g., "My parents ask personal questions that I don't want to answer"), and (c) checking up (e.g., "My parents make phone calls to check up on me while I'm at college"). Following the procedure outlined by Johnson and Wichern (2002), this solution was compared to solutions using two rotation procedures (i.e., varimax and promax) across two extraction methods (i.e., principal components and maximum likelihood), and all approaches yielded a similar pattern of results. However, inspection of the dropped items suggested that all of them possessed face validity as indicators of spatial invasion (e.g., "My parents go through my personal belongings without my permission"), a dimension identified in Ledbetter and his colleagues' (2010) typology. Thus, based on EFA's limited ability to recover true latent factor structure (Little et al., 1999) these items were retained for loading on a fourth spatial invasion factor during CFA.

Likewise, the 15 items (i.e., not including the facet item) of the Children's Defensive Behaviors Instrument were initially submitted to EFA using the same procedures as for the Parental Privacy Invasions Instrument. However, initial tests suggested that strong intercorrelations among the scale items limited the effectiveness of varimax rotation for obtaining a robust factor solution. Thus, the data were revisited using maximum likelihood extraction and promax (i.e., nonorthogonal) rotation, with a .60/.40 criterion for item removal.

The final EFA solution contained 11 items loading on three factors: (a) secrecy (e.g., "I keep personal information secret from my parents"), (b) mediated defense (e.g., "I change passwords for online accounts so that my parents will not snoop on me"), and (c) avoidance (e.g., "I avoid going to my parents' house"). However, inspection of the dropped items suggested the possibility of two additional factors. First, two items possessed face validity as indicators of direct defense behaviors (e.g., "I ask my parents to stop invading my privacy"); that Petronio (1994) theorizes such behaviors as a coherent type of defensive behavior supported retaining these items. Second, two items addressed peer defense, or segregating peer interaction from parental oversight (e.g., "I avoid making phone calls when my parents are around"). These items were retained for further test through CFA.

Confirmatory Factor Analysis

Guided by EFA results and theoretical assumptions, the Parental Privacy Invasions Instrument and Children's Defensive Behaviors Instrument were separately submitted to CFA. For all CFA analyses, four commonly used indices assessed model fit: (a) model chi-square, (b) the root mean square error of approximation (RMSEA), (c) the non-normed fit index (NNFI), and (d) the comparative fit index (CFI). Model fit is considered acceptable if CFI and NNFI values exceed

.90 (with close model fit exceeding .95) and the RMSEA value does not exceed .08 (with close model fit not exceeding .05) (Kline, 2005). Given this investigation's focus on scale development, individual items (rather than item parcels; Little, Cunningham, Shahar, & Widaman, 2002) served as latent construct indicators.

The initial confirmatory model for the Parental Privacy Invasions Instrument demonstrated mediocre model fit, $\chi^2(84) = 189.39$, $p < .01$, RMSEA $= .083$ $_{(90\%\ CI:\ .067\text{-}.099)}$, NNFI $= 0.92$, CFI $= 0.93$. Given that both theory and empirical results should guide model modification (Kline, 2005; Little et al., 1999), we examined both the modification indices and theoretical coherence of the item set. The items in the checking up factor yielded a low estimate of internal reliability ($\alpha = .44$) and a weak (albeit significant) correlation with the facet item ($r = .11$, $p < .05$). Further consideration of these items suggested that perhaps these reflect frequency of parent-child contact but indicate parental invasive behavior only weakly. Thus, the checking up items ("My parents make phone calls to check up on me while I'm at college," "My parents use online communication (for example, sending e-mails) to check up on me while I'm at college," "My parents come and visit me at college") were removed from the model. After permitting a correlated residual between two items ("My parents eavesdrop on my face-to-face conversations with others," "My parents ask personal questions that I don't want to answer"), this three-factor model demonstrated acceptable fit, $\chi^2(40) = 89.40$, $p < .01$, RMSEA $= .077$ $_{(90\%\ CI:\ .053\text{-}.100)}$, NNFI $=$ 0.95, CFI $= 0.97$.

The items within all factors demonstrated acceptable internal reliability ($.74 \leq \alpha \leq .79$) and robust correlations with the facet item ($.62 \leq r \leq .64$). Constraining the strongest inter-factor correlation (i.e., between verbal and spatial invasions, $r = .86$, $p < .01$) to 1.0 significantly decreased model fit, $\Delta\chi^2(2) = 13.55$, $p < .01$, suggesting the soundness of the three-factor solution. Table 1 presents the final item set and Table 2 presents the item loadings and residuals for each item in the model.

TABLE 1
Dimensions and Items of the Parental Invasive Behavior Instrument

Items
Factor 1: Mediated Invasion
1. My parents look through my call list on my cell phone without my permission.
2. My parents read through my text messages without my permission.
3. My parents read my private online communication (such as e-mails or IM conversations) without my permission.
4. My parents monitor my phone calls by looking over the phone bill.
5. My parents check up on me through social networking websites such as Facebook or MySpace.
Factor 2: Verbal Invasion
6. My parents demand that I change my behavior in some area of my life.
7. My parents ask personal questions that I don't want to answer.
8. My parents give unwanted advice about some area of my life
Factor 3: Spatial Invasion
9. My parents go through my personal belongings without my permission.
10. My parents go through my postal mail without my permission.
11. My parents eavesdrop on my face-to-face conversations with others.

TABLE 2
Loading and Intercept Values, Residuals, and R^2 Values for Each Indicator in the Confirmatory Factor Analysis Model for Parental Invasive Behavior (N = 184)

	LISREL Estimates		*Standardized*		
Indicator[a]	*Loading (SE)*	*Intercept (SE)*	*Loading*[b]	*Theta*[b]	R^2
Mediated:					
1.	0.55 (0.06)	0.28 (0.06)	0.72	0.49	0.52
2.	0.42 (0.05)	0.24 (0.05)	0.59	0.65	0.35
3.	0.56 (0.06)	0.41 (0.06)	0.65	0.58	0.42
4.	0.74 (0.09)	0.76 (0.09)	0.62	0.62	0.38
5.	0.43 (0.08)	0.52 (0.07)	0.44	0.80	0.20
Verbal:					
6.	1.03 (0.10)	1.31 (0.10)	0.75	0.44	0.56
7.	0.97 (0.09)	1.48 (0.10)	0.75	0.44	0.56
8.	0.92 (0.09)	1.75 (0.10)	0.71	0.50	0.50
Spatial:					
9.	0.89 (0.08)	0.94 (0.08)	0.78	0.39	0.61
10.	1.04 (0.11)	1.29 (0.11)	0.70	0.51	0.49
11.	0.81 (0.08)	1.04 (0.09)	0.70	0.52	0.49

[a]Indicator numbers refer to Table 1 (consult for item text).
[b]Estimates are from completely standardized solution.

The initial five-factor approach to the Children's Defensive Behaviors Instrument indicated acceptable model fit, $\chi^2(82) = 173.33$, $p < .01$, RMSEA = .074 (90% CI: .058-.091), NNFI = 0.97, CFI = 0.97. Examination of the latent construct correlation matrix revealed that the strongest correlation was between the secrecy and peer defense constructs ($r = .88$, $p < .01$); testing an alternative model whereby this correlation was constrained to 1.00 produced a significant decline in model fit, $\Delta\chi^2(4) = 14.86$, $p < .01$, and thus the five-factor solution was retained. The items within each factor demonstrated acceptable internal reliability ($.72 \leq \alpha \leq .81$) and robust correlations with the facet item ($.57 \leq r \leq .67$). Table 3 presents the final item set and Table 4 reports the item loadings and error residuals for each item in the CFA model.

Invasive/Defensive Behaviors, Family Satisfaction, and Family Communication Patterns

For regression analyses, factor scores were created by averaging items within each factor. Table 5 presents descriptive statistics and Pearson product-moment correlations among the study's continuous variables. The first two hypotheses predicted inverse associations between family satisfaction and both parental invasive (H1) and children's defensive (H2) behaviors. Examination of the Pearson product-moment correlation matrix (Table 5) revealed that all invasive and defensive behavior types are significantly and inversely associated with family satisfaction. This pattern of results supports both H1 and H2.

A series of hierarchical linear regression analyses tested the remaining hypotheses. Prior to regression analysis, a series of *t*-tests, correlation tests, and multivariate analyses of variance

TABLE 3
Dimensions and Items of the Children's Defensive Behavior Instrument

Items
Factor 1: Secrecy Defense
1. I keep personal information secret from my parents.
2. I lie to my parents about my personal life.
3. I hide personal belongings from my parents.
4. I try to have personal mail sent to me at college instead of my parents' house.
Factor 2: Mediated Defense
5. I change passwords for online accounts so that my parents will not snoop on me.
6. I delete online communication (such as e-mails or IM conversations) so that my parents won't see it.
7. I conceal my cell phone from my parents.
8. Because my parents might see, I exercise caution about what I post on social networking sites (such as Facebook or MySpace).
Dimension 3: Avoidance Defense
9. I avoid responding to my parents' phone calls.
10. I avoid responding to my parents' online communication (such as e-mails).
11. I avoid going to my parents' house.
Factor 4: Direct Defense
12. When my parents invade my privacy, I try to make them feel guilty about it.
13. I ask my parents to stop invading my privacy
Factor 5: Peer Defense
14. I avoid meeting face-to-face with my friends when my parents are around.
15. I avoid making phone calls when my parents are around.

(MANOVAs) examined whether study variables (i.e., conversation orientation, conformity orientation, all invasive behavior variables, all defensive behavior variables, and family satisfaction) differed significantly based on participant age, participant sex, and family divorce status. Results indicated that study variables were significantly associated with all three of these demographic variables. Therefore, subsequent regression analyses controlled for the demographic variables by entering them in the first step. One participant did not report age and eight participants did not report divorce status, reducing effective sample size by nine participants (final $n = 358$).

The next three hypotheses (H3-H5) addressed the association between family communication patterns and invasive behaviors. A series of three hierarchical regression analyses (i.e., one for each of the three invasive behaviors as a dependent variable) tested these hypotheses, with demographic variables (participant age, participant sex, and family divorce status) entered in the first step, conversation and conformity orientation in the second step, and the conversation by conformity interaction term in the third step. Following Little, Card, Bovaird, Preacher, and Crandall (2007), the interaction term was created by mean-centering the first-order predictors and orthogonalizing the product term by regressing it onto the first-order predictors and saving the unstandardized residual.

Results supported both the prediction that conversation orientation is (with the exception of mediated invasion) inversely associated (H3), and conformity orientation positively associated (H4), with invasive behaviors. However, the interaction effect predicted by H5 received no support. Table 6 reports results of the first and second steps of these analyses (the table omits

TABLE 4
Loading and Intercept Values, Residuals, and R^2 Values for each Indicator in the Confirmatory Factor Analysis Model for Children's Defensive Behavior (N = 184)

	LISREL Estimates		*Standardized*		
Indicator[a]	*Loading (SE)*	*Intercept (SE)*	*Loading*[b]	*Theta*[b]	R^2
Secrecy:					
1.	1.02 (0.10)	1.89 (0.11)	0.72	0.48	0.52
2.	0.83 (0.09)	1.40 (0.09)	0.67	0.55	0.45
3.	1.01 (0.09)	1.50 (0.10)	0.77	0.41	0.59
4.	0.78 (0.11)	1.18 (0.11)	0.52	0.73	0.27
Mediated:					
5.	0.95 (0.07)	0.63 (0.08)	0.83	0.30	0.70
6.	0.84 (0.07)	0.79 (0.08)	0.77	0.41	0.59
7.	1.11 (0.09)	0.91 (0.10)	0.79	0.37	0.62
8.	0.85 (0.10)	1.05 (0.10)	0.63	0.61	0.39
Avoidance:					
9.	0.74 (0.07)	0.59 (0.07)	0.72	0.49	0.51
10.	1.63 (0.06)	0.45 (0.07)	0.73	0.48	0.53
11.	0.83 (0.08)	0.86 (0.09)	0.68	0.54	0.46
Direct:					
12.	1.10[c] (0.07)	1.18 (0.11)	0.76	0.42	0.58
13.	1.10[c] (0.07)	0.89 (0.09)	0.90	0.19	0.81
Peer:					
14.	0.87[c] (0.06)	0.62 (0.08)	0.82	0.33	0.68
15.	0.87[c] (0.06)	1.17 (0.10)	0.68	0.54	0.46

[a]Indicator numbers refer to Table 3 (consult for item text).
[b]Estimates are from completely standardized solution.
[c]Within the Direct and Peer Defense constructs, both lambda loadings were constrained to equality to prevent local underidentification (Kline, 2005).

the third step due to its nonsignificant variance change). All regression analyses explained small to moderate amounts of variance ($.08 < R^2 < .15$) in the dependent variable. Demographic predictors were nonsignificant for all invasive behaviors except verbal invasions, with divorce associated with fewer such invasions in the first regression step; however, this association became nonsignificant in the second step, suggesting that divorce is unassociated with invasive behavior after family communication patterns are controlled.

A similar set of regression analyses investigated predictions regarding the association between family communication patterns and defensive behaviors (H6–H8). Table 7 summarizes results of these analyses. Overall, conversation orientation inversely predicted all defensive behavior types, whereas conformity orientation served as a positive predictor, thus supporting both H6 and H7. Moreover, the interaction effect significantly predicted three of the five defensive behaviors (i.e., all except mediated and avoidance). Decomposition of the interaction effects (Cohen, Cohen, West, & Aiken, 2003) revealed a similar pattern for all three defensive behavior types. Specifically, as predicted by H8, the positive association between conformity orientation and defensive behavior weakens as conversation orientation increases. Figure 1 presents the decomposition for peer defense as a representative example.

TABLE 5
Descriptive Statistics and Bivariate Correlations Among Continuous Variables (N = 367)

Variables	*M*	*SD*	*α*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1. Inv-Med.	0.46	0.71	.79	1.00									
2. Inv-Verb.	1.58	1.11	.79	.50**	1.00								
3. Inv-Spat.	1.13	1.01	.74	.53**	.66**	1.00							
4. Def-Secr.	1.57	1.11	.79	.36**	.61**	.45**	1.00						
5. Def-Med.	0.85	1.02	.81	.59**	.58**	.48**	.59**	1.00					
6. Def-Avoid.	0.68	0.85	.73	.39**	.51**	.44**	.57**	.49**	1.00				
7. Def-Direct	1.11	1.23	.81	.45**	.61**	.58**	.61**	.61**	.52**	1.00			
8. Def-Peer	0.96	1.09	.72	.40**	.55**	.46**	.65**	.63**	.59**	.61**	1.00		
9. Convers.	4.68	1.06	.91	−.12*	−.36**	−.29**	−.34**	−.19**	−.42**	−.25**	.35**	1.00	
10. Conform.	3.74	0.93	.80	.26**	.34**	.29**	.31**	.39**	.20**	.37**	.33**	−.16**	1.00
11. Fam. Sat.	5.80	1.02	.93	−.16**	−.42**	−.35**	−.41**	−.24**	−.58**	−.34**	−.36**	.51**	−.15**

*$p < .05$ **$p < .01$.

TABLE 6
Hierarchical Regression Analysis Results – Parental Invasive Behavior (N = 358)

	Mediated $\Delta R^2/B\ (\beta)$	*Verbal $\Delta R^2/B\ (\beta)$*	*Spatial $\Delta R^2/B\ (\beta)$*
Step one	*.01*	*.02**	*.01*
Sex[a]	−0.03 (−.05)	−0.11 (−.10)	−0.03 (−.03)
Divorce[b]	−0.02 (−.03)	−0.15 (−.12)*	−0.10 (−.09)
Age	−0.04 (−.10)	−0.02 (−.03)	0.01 (0.02)
Step two	*.07***	*.20***	*.14***
Sex[a]	−0.02 (−.03)	−0.03 (−.03)	0.03 (.03)
Divorce[b]	0.01 (.01)	−0.08 (−.07)	−0.05 (−.04)
Age	−0.03 (−.08)	−0.02 (−.04)	0.01 (.02)
Conversation	−0.05 (−.08)	−0.33 (−.32)**	−0.25 (−.26)**
Conformity	0.19 (.25)**	0.34 (.28)**	0.27 (.25)**

*$p < .05$ **$p < .01$.
[a]Sex entered as a contrast coded variable: −1 = male; +1 = female.
[b]Divorce status entered as a contrast coded variable: −1 = nondivorced, +1 = divorced.

TABLE 7
Hierarchical Regression Analysis Results – Children's Defensive Behavior (N = 358)

	Secrecy $\Delta R^2/B\ (\beta)$	*Mediated $\Delta R^2/B\ (\beta)$*	*Avoidance $\Delta R^2/B\ (\beta)$*	*Direct $\Delta R^2/B\ (\beta)$*	*Peer $\Delta R^2/B\ (\beta)$*
Step one	*.01*	*.05***	*.04***	*.01*	*.04***
Sex[a]	0.09 (.06)	−0.01 (−.01)	−0.15 (−.18)**	−0.04 (−.03)	−0.20 (−.18)**
Divorce[b]	−0.09 (−.07)	−0.16 (−.14)**	0.03 (.04)	−0.10 (−.07)	−0.11 (−.09)
Age	−0.01 (−.02)	−0.10 (−.16)**	0.01 (.02)	−0.01 (−.01)	−0.06 (−.09)
Step two	*.17***	*.16***	*.18***	*.17***	*.18***
Sex[a]	−0.02 (−.02)	0.02 (.02)	−0.08 (−.09)	0.01 (.01)	−0.12 (−.11)*
Divorce[b]	−0.03 (−.02)	−0.10 (−.08)	0.07 (.07)	−0.02 (−.01)	−0.05 (−.04)
Age	−0.01 (−.02)	−0.08 (−.14)**	<0.01 (<.01)	<0.01 (<.01)	−0.06 (−.09)
Convers.	−0.31 (−.30)**	−0.15 (−.16)**	−0.31 (−.38)**	−0.22 (−.19)**	−0.30 (−.30)**
Conform.	0.31 (.26)**	0.38 (.35)**	0.15 (.16)**	0.45 (.34)**	0.32 (.27)**
Step three	*.01**	*<.01*	*<.01*	*.02***	*.02***
Sex[a]	−0.02 (−.01)	0.02 (.02)	−0.08 (−.09)	0.02 (.01)	−0.12 (−.11)*
Divorce[b]	−0.02 (−.02)	−0.10 (−.08)	0.07 (.07)	−0.01 (−.01)	−0.04 (−.04)
Age	−0.01 (−.02)	−0.08 (−.14)**	>−0.01 (>−.01)	>−0.01 (>−.01)	−0.06 (−.10)*
Convers.	−0.31 (−.30)**	−0.15 (−.16)**	−0.31 (−.38)**	−0.22 (−.19**)	−0.31 (−.30)**
Conform.	0.31 (.26)**	0.38 (.35)**	0.15 (.16)**	0.45 (.34)**	0.32 (.27)**
Cv. X Cf.	−0.09 (−.10)*	0.01 (.02)	−0.04 (−.06)	−0.13 (−.15)**	−0.13 (−.15)**

*$p < .05$ **$p < .01$.
[a]Sex entered as a contrast coded variable: −1 = male; +1 = female.
[b]Divorce status entered as a contrast coded variable: −1 = nondivorced, +1 = divorced.

DISCUSSION

The main purpose of this study was to develop instruments for measuring parental invasive and children's defensive behaviors vis-à-vis privacy and to validate these measures by examining associations with family satisfaction and family communication patterns. The investigation met these goals, offering a methodological tool for CPM theorists and practical research in family

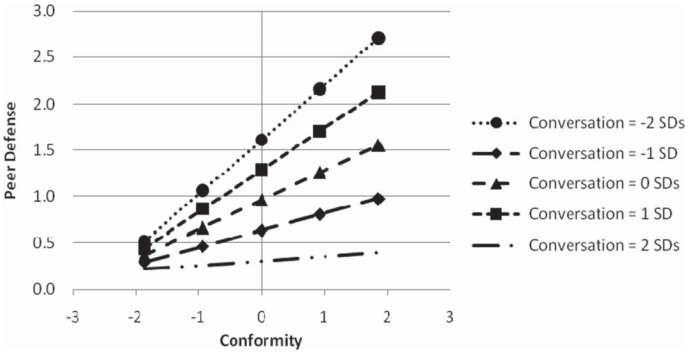

FIGURE 1 Decomposition of the interaction effect between conversation and conformity orientations on peer defenses.

Note. Possible peer defense scores range from 0 (Never) to 5 (Very Frequently). Conformity is mean-centered (i.e., zero = mean score).

contexts. In this discussion, we will discuss the theoretical and practical implications of these results.

Invasive/Defensive Behavior Dimensions and Family Satisfaction

The final version of the Parental Privacy Invasions Instrument, derived via CFA, revealed three dimensions of parental invasive behavior: (a) mediated, (b) verbal, and (c) spatial invasions. Overall, these dimensions contained face similarity, yet also meaningfully diverged, from the Petronio (1994) and Ledbetter et al. (2010) typologies. The Petronio typology collapsed several discrete invasive behaviors into two dimensions of parental invasion, *subversive* ("such acts as going through personal belongings without permission, eavesdropping on conversations, and listening to a telephone conversation on an extension without permission") and *direct* ("such acts as asking for personal information, making unsolicited remarks about the child's personal life, and giving advice") (Petronio, 1994, p. 248). Overall, this study's spatial invasion dimension (with items assessing eavesdropping and investigating personal belongings) was similar to Petronio's subversive dimension, and our verbal invasion dimension (with items assessing demands, questions, and unwanted advice-giving) was similar to Petronio's direct dimension. To these categories our investigation added mediated invasions, although factor analysis collapsed different technologies into one dimension versus the multiple dimensions postulated by Ledbetter et al. (2010).

The final version of the Children's Defensive Behavior Instrument measured five dimensions of defensive behavior: (a) secrecy, (b) mediated defense, (c) avoidance, (d) direct defense, and (e) peer defense. Petronio's (1994) typology identified *confrontational* ("such as . . . asking the parents to stop") and *evasive* ("such as making phone calls outside the home and hiding personal belongings") actions as two chief dimensions of children's defensive behaviors. In addition to the similarity between the confrontational dimension and our direct defense dimension, our results extended Petronio's (1994) work by elaborating four distinct domains of evasive behaviors (secrecy, mediated, avoidance, and peer defenses). Petronio theorized that

confrontational strategies are *reactive* in nature, as they restore a boundary violated by parental invasion, whereas evasive strategies *proactively* guard against anticipated parental invasions. By further mapping specific types of defensive behaviors, these results provide a heuristic base for future investigation regarding which proactive defensive behaviors are most effective in specific circumstances.

Ledbetter and his colleagues (2010) provided some evidence that defenses are reciprocal to invasion type (e.g., mediated defense in response to mediated invasions, or secrecy in response to spatial invasions), and this instrument provides one tool for investigating this hypothesized reciprocity pattern. What remains unanswered, however, is whether such reciprocity is the most competent or effective means of managing boundary turbulence. This is an especially practical question regarding indirect invasion tactics. For example, consider a young adult child who, upon returning to his or her bedroom, discovers evidence that a parent has been snooping through belongings (i.e., an indirect spatial invasion). The child may ruminate over whether to engage in the face-threatening task of directly confronting the parent or risk future invasions by relying on indirect defenses only (Petronio, 1994). This instrument represents a significant methodological advance for answering such practical questions. Such future investigation may be particularly practical if communication competence is included in the statistical model, testing, for instance, whether invasive/defensive behaviors mediate the association between competence and well-being outcomes (Schrodt et al., 2009).

The first two hypotheses predicted inverse associations between family satisfaction and both parental invasive (H1) and children's defensive (H2) behaviors. Both hypotheses received support along each dimension of both behavior sets. This pattern of findings demonstrated criterion validity for the instrument, given previous research that has reported inverse associations between relational satisfaction and topic avoidance (Caughlin & Golish, 2002), intra-family secrets (Caughlin, Golish, Olson, Sargent, Cook, & Petronio, 2000), and family privacy orientation (Serewicz, Dickson, Morrison, & Poole, 2007). More practically, these results identified specific communication behaviors that constitute distressed privacy boundary management. Moreover, the results suggested that any intervention designed to help families avoid such behaviors must account for the overarching communication patterns present within the family.

Family Communication Patterns

A secondary goal of this project was to examine the extent to which family communication patterns (Koerner & Fitzpatrick, 2002b) predict invasive and defensive behaviors. Overall, results indicated that both conversation and conformity orientations predicted privacy management behaviors. We first discuss significant associations with invasive behaviors before turning attention to defensive behaviors.

Invasive behaviors

Supporting the third hypothesis, results demonstrated that conversation orientation inversely predicted all invasive behaviors except mediated invasions. Likewise, H4 was also supported, as conformity orientation positively predicted all three invasive behavior dimensions. The interaction effect between conversation and conformity orientations did not emerge as a significant

predictor (H5), thus indicating only main versus typological (Koerner & Fitzpatrick, 2002b) effects on invasive behaviors.

Previous research has identified conformity orientation as a predictor of positive attitudes toward communicating online (Ledbetter, 2010). Because high conformity orientation families emphasize adherence to rules (perhaps inflexibly; Koerner & Fitzpatrick, 2002b), they may emphasize relational rule-keeping (Argyle & Henderson, 1984); along this line of reasoning, Ledbetter (2010) speculated, "to the extent that high conformity orientation families are inherently rule-based and thus emphasize rule-keeping, children may be more likely to perceive online communication as useful for keeping such social rules" (p. 109). According to Koerner and Fitzpatrick (2002a), in high conformity families "parents are expected to make the decisions for the family, and children are expected to act according to their parents' wishes" (p. 86); thus, such parents probably believe parental oversight is an important relational rule and thus employ mediated communication to enact it from a distance.

This explanation suggests that recent concerns about excessive parental involvement, sometimes termed "helicopter parenting" (Thompson, 2009), may be more likely to arise from parents of high conformity families. Because invasive behaviors are often face-threatening (Petronio, 2002), such parents may prefer mediated communication because it buffers against such threat (O'Sullivan, 2000) and facilitates high self-monitoring of communication behavior (Child & Agyeman-Budu, 2010). It is worth noting that some universities now offer programs designed to manage parental involvement (White, 2005). Given the association with conformity orientation here, such preventive programs may experience greater success by addressing the broader family communication climate and not only the specific invasive/defensive behaviors that manifest it.

Conformity orientation also served as a positive predictor of both verbal and spatial invasions. Excessively high levels of conformity orientation are associated with an authoritarian parenting style (Baumrind, 1971), whereby parents exercise a strong degree of oversight and control over their children. In such families, verbal and spatial invasions may serve as the communicative mechanisms by which such oversight occurs. This explanation positions parenting style as a mediator of the relationship between family communication patterns and invasive behaviors, an explanation only testable in future research. These results also accord with Petronio's (1994) claim that parental invasive behaviors "may send a message to college-aged children that indicates the reluctance of parents to let go" (p. 245), thus generating decreased family satisfaction in the emerging adult.

Although no evidence emerged to suggest that conversation orientation moderates conformity, conversation did make a separate, inverse contribution to spatial and verbal invasions. The latter association is especially noteworthy, as it is provides a rare example of a communication behavior that high conversation orientation families (i.e., those with "a climate in which all family members are encouraged to participate in unrestrained interactions about a wide array of topics," Koerner & Fitzpatrick, 2002a, p. 85) exhibit less frequently. Demand/withdraw patterns are one other such behavior (Schrodt & Ledbetter, 2007).

Taken together with the positive association between conversation orientation and communication competence (Schrodt et al., 2009), what emerges, then, is a picture not of completely unrestrained family communication, but rather communication guided by respectful and appropriate understanding of the communicative needs of all family members. This understanding of conversation orientation is consistent with Petronio's (2002) argument "that disclosure is meaningful only in relationship to privacy" (p. 14); in other words, competent family disclosure and

conversation is associated with competent respect for privacy (Afifi, 2003), as evidenced in our results by decreased frequency of verbal invasions. Spatial invasions, as a subversive technique, likely signal that parents and young adult children are unable to discuss a topic, and thus also may arise from low communication competence.

Defensive behaviors

A similar pattern of effects emerged for the main effects of conversation and conformity orientations on defensive behaviors, such that conformity positively predicted such behaviors and conversation served as an inverse predictor. Finkenauer and her colleagues (2005) not only found that parents' perception of concealment was positively associated with adolescents' actual concealment behavior, but that that parental perceptions fostered negative parenting behaviors that engendered adolescent concealment. Such a pattern seems especially likely when parents emphasize the emerging adults' obedience (i.e., high conformity) and/or lack open lines of communication with the emerging adult (i.e., low conversation).

Because privacy boundary management occurs across a reciprocal sequence of communication episodes (Ledbetter et al., 2010; Petronio, 2002), we suspect that theoretical explanations offered above for invasive behaviors (e.g., parenting styles and communication competence) also pertain to defensive behaviors. This highlights a practical bind, essentially a conversational dilemma ("encounters in which people feel that no matter what they say, they are almost always bound to lose," Daly, Diesel, & Weber, 1994, p. 127), for the emerging adult: He or she may either cease defensive action and sacrifice autonomy to placate the parent, or continue to defend and thus foster further parental invasion and relational dissatisfaction.

Unlike parental invasive behaviors, three of the five defensive behaviors were predicted by the interaction between conversation and conformity orientations. In other words, the typology served as a significant predictor of defensive behaviors, such that secrecy, direct, and peer defenses particularly characterized the protective family type. It is worth noting that all three of these behaviors are proactive, versus reactive, in nature (Petronio, 1994). In protective families, "parents . . . believe that they should be making the decisions for their families and their children, and they see little value in explaining their reasoning to their children" (Koerner & Fitzpatrick, 2002a, p. 87). In the language of CPM theory, protective parents afford relatively little respect for the integrity of young adult children's privacy boundaries. If parents have reacted negatively to young adult children's secrets in the past, Afifi and Steuber's (2010) cycle of concealment model predicted young adult children will expect such negative reactions in the future and, in turn, conceal secrets and experience decreased relational closeness with the parent. Thus, it is not surprising that young adult children in protective families seem especially vigilant, establishing a variety of proactive boundary maintenance strategies against parents with proven proclivity toward boundary violation.

In contrast, although consensual families also possess high conformity orientation, their simultaneously high conversation orientation generates an environment whereby parents "[spend] time and energy in explaining their decisions to their children in the hope that their children will understand the reasoning, beliefs, and values behind the parents' decisions" (p. 87). Because consensual parents are more communicative about boundary negotiation, young adult children in such families may experience less need to engage in proactive boundary management

behaviors, and react less alarmingly to secret revelation (Afifi & Steuber, 2010), although the pattern of results suggested that consensual young adult children still are likely to employ direct (i.e., reactive) and mediated defenses. Overall, then, this pattern of results accords with Schrodt's (2005) finding that open family communication can, in some cases, moderate negative effects of family conformity.

CONCLUSION

Any study must be interpreted in light of the limitations inherent in the research design. Although privacy boundary management is an inherently dyadic (or group) process (Petronio, 2002) occurring over a period of time (Afifi & Caughlin, 2006), this study assessed only the young adult child at a single time point. Without doubt, longitudinal and dyadic studies would enhance understanding of the reciprocal nature of invasive and defensive behaviors (Ledbetter et al., 2010). Most participants reported a Caucasian ethnic identity, and because Petronio (2002) identified culture as a determinant of privacy management rules, different results may emerge from a similar study of a different cultural group.

Because privacy boundary management changes over a child's cognitive and social development, studies of adolescents would complement these results. Although most items possess face validity for investigation of other age groups, some items may be specific to the emerging adult population (e.g., "I try to have personal mail sent to me at college instead of my parents' house" on the secrecy defense subscale) and may need to be dropped or modified for younger or older age groups. Investigation of other age groups, especially longitudinally, would provide greater theoretical and practical insight to the boundary changes and turbulence frequently noted as a fundamental part of children's social development (Petronio, 2002).

We hope the measures developed here will serve as a useful tool for both understanding family communication processes and refining theoretical understanding of privacy boundary management. To the extent that healthy privacy management fosters satisfying parent-child relationships (Caughlin & Golish, 2002) and psychosocial well-being (Afifi & Caughlin, 2006), future investigations of these processes are well worth the effort. Our investigation of the extent to which patterns of privacy boundary management arise from overarching family communication patterns provides one possible theoretical and methodological foundation for such future investigation.

REFERENCES

Afifi, T. D. (2003). 'Feeling caught' in stepfamilies: Managing boundary turbulence through appropriate communication privacy rules. *Journal of Social and Personal Relationships*, *20*, 729–755. doi:10.1177/0265407503206002.

Afifi, T. D., & Steuber, K. (2010). The cycle of concealment model. *Journal of Social and Personal Relationships*, *27*, 1019–1034. doi:10.1177/0265407510378301

Afifi, W. A., & Caughlin, J. P. (2006). A close look at revealing secrets and some consequences that follow. *Communication Research*, *33*, 467–488. doi:10.1177/0093650206293250

Argyle, M., & Henderson, M. (1984). The rules of friendship. *Journal of Social and Personal Relationships*, *1*, 211–237. doi:10.1177/0265407584012005

Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. New York, NY: Holt, Rinehart, & Winston.

Arnett, J. J. (1994). Are college students adults? Their conceptions of the transition to adulthood. *Journal of Adult Development*, *1*, 213–224. doi:10.1007/BF02277582

Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York: Oxford University Press.

Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, *1*, 68–73. doi:10.1111/j.1750-8606.2007.00016.x

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology*, *4*, 1–103. doi:10.1037/h0030372

Bute, J. J., & Vik, T. A. (2010). Privacy management as unfinished business: Shifting boundaries in the context of infertility. *Communication Studies*, *61*, 1–20. doi:10.1080/10510970903405997

Caughlin, J. P., & Afifi, T. D., (2004). When is topic avoidance unsatisfying? Examining moderators of the association between avoidance and dissatisfaction. *Human Communication Research*, *30*, 479–513. doi:10.1111/j.1468-2958.2004.tb00742.x

Caughlin, J. P., & Golish, T. D. (2002). An analysis of the association between topic avoidance and dissatisfaction: Comparing perceptual and interpersonal explanations. *Communication Monographs*, *69*, 275–295. doi:10.1080/03637750216546

Caughlin, J. P., Golish, T. D., Olson, L. N., Sargent, J. E., Cook. J. S., & Petronio, S. (2000). Intrafamily secrets in various family configurations: A communication boundary management perspective. *Communication Studies*, *51*, 116–134. doi:10.1080/10510970009388513

Caughlin, J. P., & Malis, R. S. (2004). Demand/withdraw communication between parents and adolescents: Connections with self-esteem and substance use. *Communication Reports*, *21*, 125–148. doi:10.1177/0265407504039843

Child, J. T., & Agyeman-Budu, E. A. (2010). Blogging privacy management rule development: The impact of self-monitoring skills, concern for appropriateness, and blogging frequency. *Computers in Human Behavior*, *26*, 957–963. doi:10.1016/j.chb.2010.02.009

Child, J. T., Pearson, J. C., & Petronio, S. (2009). Blogging, communication, and privacy management: Development of the Blogging Privacy Management Measure. *Journal of the American Society for Information Science and Technology*, *60*, 2079–2094. doi:10.1002/asi.21122

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Daly, J. A., Diesel, C. A., & Weber, D. (1994). Conversational dilemmas. In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of interpersonal communication* (pp. 127–158). Hillsdale, NJ: Lawrence Erlbaum Associates.

Dumlao, R., & Botta, R. A. (2000). Family communication patterns and the conflict styles young adults use with their fathers. *Communication Quarterly*, *48*, 174–189. doi:10.1080/01463370009385589

Faulkner, S. L., & Mansfield, P. K. (2002). Reconciling messages: The process of sexual talk in Latinas. *Qualitative Health Research*, *12*, 310–328. doi:10.1177/104973202129119919

Finkenauer, C., Engels, R. C. M. E., & Meeus, W. (2002). Keeping secrets from parents: Advantages and disadvantages of secrecy in adolescence. *Journal of Youth and Adolescence*, *31*, 123–136. doi:10.1023/A:1014069926507

Finkenauer, C., Frijns, T., Engels, R. C. M. E., & Kerkhof, P. (2005). Perceiving concealment in relationships between parents and adolescents: Links with parental behavior. *Personal Relationships*, *12*, 387–406. doi:10.1111/j.1475-6811.2005.00122.x

Galambos, N. L., Turner, P. K., & Tilton-Weaver, L. C. (2005). Chronological and subjective age in emerging adulthood: The crossover effect. *Journal of Adolescent Research*, *20*, 538–556. doi:10.1177/0743558405274876

Hawk, S. T., Keijsers, L., Hale, W. W., III, & Meeus, W. (2009). Mind your own business! Longitudinal relations between perceived privacy invasion and adolescent-parent conflict. *Journal of Family Psychology*, *23*, 511–520. doi:10.1037/a0015426

Huston, T. L., McHale, S., & Crouter, A. C. (1986). When the honeymoon's over: Changes in the marriage relationship over the first year. In R. Gilmour & S. Duck (Eds.), *The emerging field of personal relationships* (pp. 109–132). Hillsdale, NJ: Lawrence Erlbaum Associates.

Johnson, R. A. J., & Wichern, D. W. (2002). *Applied multivariate statistical analysis* (5th ed.). Upper Saddle River, NJ: Prentice-Hall.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford.

Koerner, A. F., & Fitzpatrick, M. A. (1997). Family type and conflict: The impact of conversation orientation and conformity orientation on conflict in the family. *Communication Studies*, *48*, 59–75. doi:10.1080/10510979709368491

Koerner, A. F., & Fitzpatrick, M. A. (2002a). Toward a theory of family communication. *Communication Theory*, *12*, 70–91. doi:10.1093/ct/12.1.70

Koerner, A. F., & Fitzpatrick, M. A. (2002b) Understanding family communication patterns and family functioning: The roles of conversation orientation and conformity orientation. *Communication Yearbook 26*, 36–68. doi:10.1207/s15567419cy2601_2

Lapsley, D. K., & Edgerton, J. (2002). Separation-individuation, adult attachment style, and college adjustment. *Journal of Counseling & Development*, *80*, 484–492.

Larose, S., & Boivin, M. (1998). Attachment to parents, social support expectations, and socioemotional adjustment during the high school-college transition. *Journal of Research on Adolescence*, *8*, 1–27. doi:10.1207/s15327795jra0801_1

Ledbetter, A. M. (2010). Family communication patterns and communication competence as predictors of online communication attitude: Evaluating a dual pathway model. *Journal of Family Communication*, *10*, 99–115. doi:10.1080/15267431003595462

Ledbetter, A. M., Heiss, S., Sibal, K., Lev, E., Battle-Fisher, M., & Shubert, N. (2010). Parental invasive and children's defensive behaviors at home and away at college: Mediated communication and privacy boundary management. *Communication Studies*, *61*, 184–204. doi:10.1080/10510971003603960

Little, T. D., Card, N. A., Bovaird, J. A., Preacher, K., & Crandall, C. S. (2007). Structural equation modeling of mediation and moderation with contextual factors. In T. D. Little, J. A. Bovaird, & N. A. Card (Eds.), *Modeling contextual effects in longitudinal studies* (pp. 207–230). Mahwah, NJ: Lawrence Erlbaum Associates.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, *9*, 151–173. doi:10.1207/S15328007SEM0902_1

Little, T. D., Lindenberger, U., & Nesselroade, J. R. (1999). On selecting indicators for multivariate measurement and modeling with latent variables: When "good" indicators are bad and "bad" indicators are good. *Psychological Methods*, *4*, 192–211. doi:10.1037//1082-989X.4.2.192

McCroskey, J. C., & Young, T. J. (1979). The use and abuse of factor analysis in communication research. *Human Communication Research*, *5*, 375–382. doi:10.1111/j.1468-2958.1979.tb00651.x

Metzger, M. J. (2007). Communication privacy management in electronic commerce. *Journal of Computer-Mediated Communication*, *12*, 335–361. doi:10.1111/j.1083-6101.2007.00328.x

Myers, S. A., & Glover, N. P. (2007). Emerging adults' use of relational maintenance behaviors with their parents. *Communication Research Reports*, *24*, 257–264. doi:10.1080/08824090701446633

O'Sullivan, P. B. (2000). What you don't know won't hurt me: Impression management functions of communication channels in relationships. *Human Communication Research*, *26*, 403–431. doi:10.1093/hcr/26.3.403

Petronio, S. (1994). Privacy binds in family interactions: The case of parental privacy invasion. In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of interpersonal communication* (pp. 241–257). Hillsdale, NJ: Lawrence Erlbaum Associates.

Petronio, S. (2002). *Boundaries of privacy: Dialectics of disclosure*. Albany, NY: State University of New York Press.

Petronio, S. (2004). Road to developing communication privacy management theory: Narrative in progress, please stand by. *Journal of Family Communication*, *4*, 193–207. doi:10.1207/s15327698jfc0403&4_6

Petronio, S. (2010). Communication privacy management theory: What do we know about family privacy regulation? *Journal of Family Theory & Review*, *2*, 175–196. doi:10.1111/j.1756-2589.2010.00052.x

Petronio, S., & Caughlin, J. P. (2006). Communication privacy management theory: Understanding families. In D. O. Braithwaite & L. A. Baxter (Eds.), *Engaging theories in family communication: Multiple perspectives* (pp. 35–49). Thousand Oaks, CA: Sage.

Schrodt, P. (2005). Family communication schemata and the circumplex model of family functioning. *Western Journal of Communication*, *69*, 361–378. doi:10.1080/10570310500305539

Schrodt, P., & Afifi, T. D. (2007). Communication processes that predict young adults' feelings of being caught and their associations with mental health and family satisfaction. *Communication Monographs*, *74*, 200–228. doi:10.1080/03637750701390085

Schrodt, P., & Ledbetter, A. M. (2007). Communication processes that mediate family communication patterns and mental well-being: A mean and covariance structures analysis of young adults from divorced and non-divorced families. *Human Communication Research*, *33*, 330–356. doi:10.1111/j.1468-2958.2007.00302.x

Schrodt, P., Ledbetter, A. M., Jernberg, K. A., Larson, L., Brown, N., & Glonek, K. (2009). Family communication patterns as mediators of communication competence in the parent/child relationship. *Journal of Social and Personal Relationships*, *26*, 853–874. doi:10.1177/0265407509345649

Schrodt, P., Ledbetter, A. M., & Ohrt, J. K. (2007). Parental confirmation and affection as mediators of family communication patterns and children's mental well-being. *Journal of Family Communication*, *7*, 23–46. doi:10.1207/s15327698jfc0701_3

Schrodt, P., Witt, P. L., & Messersmith, A. (2008). A meta-analytical review of family communication patterns and their associations with information processing, behavioral, and psychosocial outcomes. *Communication Monographs*, *75*, 248–269. doi:10.1080/03637750802256318

Serewicz, M. C. M., Dickson, F. C., Morrison, J. H. T. A., & Poole, L. L. (2007). Family privacy orientation, relational maintenance, and family satisfaction in young adults' family relationships. *Journal of Family Communication*, *7*, 123–142. doi:10.1080/15267430701221578

Thompson, B. (2009). Parent-teacher e-mail strategies at the elementary and secondary levels. *Qualitative Research Reports in Communication*, *10*, 17–25. doi:10.1080/17459430902756203

White, W. S. (2005, December 16). Students, parents, colleges: Drawing the lines. *The Chronicle of Higher Education*, *52*, p. B16.