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Lee T. Gettler

Patty X. Kuo

Abet Bas

Judith B. Borja

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The Roles of Parents in Shaping Fathering Across Generations in Cebu, Philippines

Lee T. Gettler,^{1,2,3} Patty X. Kuo,^{1,3}
Abet Bas,⁴ & Judith B. Borja^{4,5}

1 Department of Anthropology, University of Notre Dame, Notre Dame,
IN 46556.

2 The Eck Institute for Global Health, University of Notre Dame, Notre
Dame, IN 46556.

3 William J. Shaw Center for Children and Families, University of Notre
Dame, South Bend, IN 46635.

4 University of San Carlos-Office of Population Studies Foundation, Inc.,
University of San Carlos, Cebu City, Philippines.

5 Department of Nutrition and Dietetics, University of San Carlos, Cebu
City, Philippines.

Current address P.X. Kuo – Department of Child, Youth & Family Studies,
University of Nebraska–Lincoln, email pkuo2@unl.edu

Abstract

Objective: This study examined how parental caregiving and parent–child closeness are associated with future fathering among 335 Filipino men who are participants in a long-running birth cohort study.

Background Few studies have multidecade longitudinal data to test the pathways through which parenting is transmitted across generations, with most relevant research conducted in the United States, Europe, and other similar settings. The roles of mothers and fathers in shaping their sons' future parenting is particularly understudied despite fathers having the potential to positively influence child health and development.

Method: Participants' mothers (Generation 1 [G1]) reported on caregiving during Generation 2 (G2) participants' early life, and the G2 males reported parent–child

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closeness during adolescence. G2 fathers reported on their own child-care involvement and the salience of care-giving to their parenting identity. We tested whether parent-child closeness moderated the effect of early-life care to predict later-life fathering.

Results: G1-G2 closeness moderated the association between G1 parents' caregiving and G2 fathers' parenting identity (for both G1 parents) and caregiving time (for G1 fathers only). When the G1-G2 mother-son relationship was not close, there was a negative correlation between G1 maternal care and G2 fathers' caregiving identity. For G2 men who were close to their fathers, there were positive associations between G1 paternal care and G2 fathers' caregiving identity and time, respectively. Among G2 men who were not close to their fathers, the slopes relating G1 paternal care to G2 fathers' care-giving identity and time, respectively, were negative.

Conclusion: These findings reflect that developmental experiences with both mothers and fathers are predictive of men's identity as parents in adulthood and that closeness between fathers and sons moderates whether sons' paternal care tends to emulate or diverge from their fathers' caregiving patterns.

Keywords: caregiving, child care, cross-cultural issues, fatherhood, identity, intergenerational

Understanding the intergenerational transmission of parenting has been a longstanding inquiry in developmental and family science (Belsky, Conger, & Capaldi, 2009; Chen & Kaplan, 2001; van Ijzendoorn, 1992). Caregiving experiences received in early childhood are thought to be foundational for a parent's caregiving practices with their own children and are influential in explaining individual differences thereof (Belsky et al., 2009). Although much of the empirical focus has been on the links between early mother-child relationships and later life parenting (Belsky, Jaffee, Sligo, Woodward, & Silva, 2005; Bouchard, 2012; Neppl, Conger, Scaramella, & Ontai, 2009), early father-child relationships are also potentially associated with future parenting roles, particularly for men (Daly, 1993; Hofferth, Pleck, & Vesely, 2012). Because fathers contribute to positive social, emotional, and cognitive outcomes for their children (Lucassen et al., 2011; Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008; Scelza, 2010), understanding the development of paternal investment is paramount. In this article, we focus on how men's experiences in early life and adolescence with their parents shape their own parenting practices and identity in adulthood.

Theory and background

Attachment theory and related perspectives emphasizing the quality of parent-child relationships have served as foundational frameworks through which much of the existing research on the intergenerational transmission of parenting has emerged (Belsky, 1984; Chen & Kaplan, 2001). Specifically, in his influential process model of parenting, Belsky (1984) postulated that when children have close, emotionally supportive relationships with a parent, which would tend to emerge through sensitive parenting experiences early in life, those individuals would be likely to engage in supportive, warm parenting in adulthood. This conceptualization is consistent with the notion that attachment relationships with caregivers foster internal working models, which are mental representations of the self and others that help individuals anticipate, navigate, and interpret social interactions. Internal working models that emerge from attachment relationships with early-life caregivers are thought to scaffold future social relationships and help shape trajectories of psychosocial development that influence later life relationship functioning (Bretherton & Munholland, 1999). Through these processes, internal working models help shape individual differences in the formation of and engagement in nurturing, emotionally supportive relationships across the life course, including as parents (Capaldi, Pears, Patterson, & Owen, 2003; Chen & Kaplan, 2001; Hofferth et al., 2012). Consistent with these frameworks, longitudinal, multigenerational studies on the transmission of parenting in the United States, Europe, and other similar settings generally find continuity in such practices, such that close parent-child relationships and emotionally supportive, constructive familial interactions tend to be transmitted across generations (Chen & Kaplan, 2001; Erzinger & Steiger, 2014; Hofferth et al., 2012; Kerr, Capaldi, Pears, & Owen, 2009). Although some research has investigated intergenerational transmission of parenting in other settings, such as China and Japan, these studies used retrospective reports of the parents' experiences in childhood to correlate with their parenting behaviors toward their children (Kitamura et al., 2009; Niu, Liu, & Wang, 2018; Wang, Xing, & Zhao, 2014).

U.S.-based longitudinal studies in this area have likewise shed light on some of the transmission pathways through which this continuity

occurs, such as through associations with children's future psychological well-being and interpersonal functioning. For example, children with positive experiences with their own parents have been shown to exhibit healthier emotional adjustment during adolescence, engage in more supportive marital relationships, and attain higher socioeconomic status. These respective outcomes for the second generation then predicted the recapitulation of warm, constructive parenting practices with their own children (Chen & Kaplan, 2001; Chen, Liu, & Kaplan, 2008; Kerr et al., 2009). Meanwhile, two other relevant longitudinal studies found intergenerational continuity in sensitive, warm parenting but were not able to determine the mediating mechanisms (Belsky et al., 2005; Hofferth et al., 2012), suggesting further insights on relevant pathways are needed.

Consistent with Belsky's (1984) model, a close parent-child relationship also makes it more likely the child will identify positively with the parent as a model worthy of emulation (i.e., modeling), including in future parenting (Cowan & Cowan, 1987; Floyd & Morman, 2000; Hofferth et al., 2012). Although not inconsistent with the pathways explored in prior studies (noted previously), we suggest that this modeling framework could be tested by looking at the second generation's self-concepts and identities as parents alongside their parenting behaviors (Adamsons, 2013; Chen & Kaplan, 2001; G. L. Fox & Bruce, 2001; Marsiglio & Cohan, 2000). To our knowledge, past longitudinal research in this area has not specifically tested for effects of parent-child experiences on future parenting identity, although some studies have focused on related cognitive processes for parenting beliefs (Erzinger & Steiger, 2014).

Given that children are equally capable of forming secure attachments and close relationships with both mothers and fathers (N. A. Fox, Kimmerly, & Schafer, 1991), close father-child relationships should predict intergenerational continuity in sensitive, constructive parenting (Belsky, 1984). Yet, as Hofferth et al. (2012) point out, few studies explicitly model the importance of fathers in shaping their children's later life parenting, and maternal effects on their children's parenting remain much more thoroughly studied, particularly for mothers and daughters (Belsky et al., 2005; Bouchard, 2012; Neppl et al., 2009). When studies do bifurcate the contributions of mothering and fathering in Generation 1 (G1), the results vary in terms of whether maternal and paternal effects overlap, vary (i.e., separately

predicting distinct patterns in Generation 2 [G2]), or singularly predict G2 outcomes (e.g., effects only related to mothering, see Belsky et al., 2005; Erzinger & Steiger, 2014; Hofferth et al., 2012). However, past U.S.-based qualitative work has suggested that fathers typically use their own fathers, instead of mothers, as a reference point for their own parental roles (Daly, 1993). This hints that father-son experiences and relationships may be particularly salient in terms of shaping sons' future parenting when compared with mother-son dynamics in families with opposite-sex parents. (Hofferth et al., 2012; Thornberry, Freeman-Gallant, Lizotte, Krohn, & Smith, 2003).

Family life and parenting in the Philippines

The overwhelming majority of the existing longitudinal studies in this area have been conducted in the United States, Europe, and other similar societies. Cultures differ in terms of idealized beliefs and practices regarding gender roles, family divisions of labor, and household structure, which in turn shape parenting and parent-child relationships (Gettler, 2016; Parke, 2013; Shwalb, Shwalb, & Lamb, 2013; Worthman, 2010). These dynamics of family life, their effects on both children and parents, and the factors shaping them are of interest to multiple scientific disciplines and policy makers and are commonly a focus of interventions aimed at improving family and child outcomes (Fagan & Iglesias, 1999; Panter-Brick et al., 2014). Hence, it is important to test whether the ways in which intergenerational patterns of parenting come to fruition vary across cultural contexts to inform such discourses and practices (Panter-Brick et al., 2014).

The present study explores these questions in the context of the Philippines, which is an island nation with more than 100 million residents. Although the Philippines is home to a diverse array of cultural and language groups, a majority of the country's residents speak Tagalog, the primary language spoken in the capital, Metro Manila, which is considered a major cultural hub influencing norms in the broader society. Due to its long history as a Spanish colony and the associated influence of the Catholic church, the country is overwhelmingly Catholic (Francia, 2013). The prevalence and salience of Catholicism influences a number of dynamics related to family life, such as divorce being illegal, natural family planning or traditional

contraceptive approaches being common, and family size and fertility generally being relatively high when compared with many other East and South-east Asian nations (Abalos, 2014; Francia, 2013; Hirschman & Bonaparte, 2012; Medina, 2001; Philippine Statistics Authority, 2013).

In much of the Philippines, including populations residing in large metropolitan areas, such as our study sample, there is a predominant cultural emphasis on men's masculinity being tied to getting married, having children and large families (i.e., demonstrating fertility and virility), and providing for and protecting their families (Rubio & Green, 2011). Along those lines, fathers' roles have commonly centered on providing resources and being the symbolic head of the household, which includes instilling moral values in their children and ensuring they avoid behavioral problems (Alampay & Jocson, 2011; Medina, 2001). In the latter domain, there is evidence that contemporary fathers retain tendencies towards authoritarian parenting attitudes, which can include harsh punishment (Alampay & Jocson, 2011; Medina, 2001), and a large cross-national survey found that Filipino fathers reported less warmth toward their children than did mothers (Putnick et al., 2012). Nonetheless, and perhaps owing to the importance of fatherhood status and fathers' provider and protector roles to prevailing models of masculinity, fathers are thought to have a particularly important influence in shaping their sons' behavior and responsibility. Through these effects, fathers help prepare their sons to take on culturally valued fatherly roles as adults (Rubio & Green, 2011).

Meanwhile, Filipino mothers have traditionally done the overwhelming majority of child care, particularly in nuclear family households. Fathers in the Philippines generally engaged in very little caregiving, on average, in past generations (Tiefenthaler, 1997). However, there appears to have been a qualitative shift in the degree to which current fathers tend to be involved with child care. The present generation of fathers commonly spends more time directly engaged with their children than did their own fathers, although this is not ubiquitous (Gettler, McDade, Agustin, Feranil, & Kuzawa, 2015; Medina, 2001; Rosenbaum, Gettler, McDade, Bechayda, & Kuzawa, 2018; Tiefenthaler, 1997). The factors that have precipitated this shift in how some Filipino fathers have approached parenting responsibilities have been little studied.

During the past few decades, women from many parts of the Philippines have migrated overseas to seek better, higher paying employment opportunities, enabling them to send remittances back home to their families (Porio, 2007). Pingol (2001) has argued that these labor and migratory dynamics have required a reconstitution of masculinities for many Filipino males. By directly affecting who is available to engage in child care for families with young children, these labor and migration patterns may have provided an opening for a shift in the nature of fathering roles (Pingol, 2001). Similarly, Gettler (2016) has also argued that factors related to financial crises, globalization, and neoliberal economic policies in the Philippines have led to increasing labor opportunities in sectors that are typically female-centric, such as service industries. These political economic and employment realities have affected family life, particularly the roles available to and perhaps required of at least some Filipino fathers (Pingol, 2001). Against this backdrop and as we noted previously, it appears that some Filipino fathers are more engaged in day-to-day child care than in prior generations (Gettler et al., 2015; Medina, 2001; Tiefenthaler, 1997). Yet there remains great variation among Filipino fathers' current levels of engagement with their children (Gettler et al., 2015).

Study aims

One of the major goals of this article is to test hypotheses regarding the conditions that help shape individual differences in continuity from men's childhood experiences with their fathers to their engagement with their own children in a major metropolitan center in the Philippines. To help shed new light on the potential pathways through which such recapitulation occurs, we test whether parent-child experiences shape men's parenting identities, alongside their fathering behaviors, and whether those effects are independent of socioeconomic and demographic variables related to contextual risk (Capaldi et al., 2003; Erzinger & Steiger, 2014). To do so, we draw on data from the Cebu Longitudinal Health and Nutrition Survey (CLHNS). This is a large, ongoing birth cohort study in Metropolitan Cebu in the Philippines (Adair et al., 2011), which is the second largest metropolitan area in the country. Following the enrollment of a large cohort of

pregnant women in 1983, the study has followed their infants across childhood, adolescence, and adulthood. We focus on the G2 sons who had transitioned to fatherhood by their mid 20's ($n = 335$). We test whether G2 fathers' engagement and their caregiving identity were predicted by the interaction of their early-life caregiving experiences (quantity of care by G1) and the closeness of their adolescent relationships with their own parents (a marker of the quality of the G1-G2 parent-child relationship).

Based on frameworks that emphasize the importance of high-quality parent-child relationships to children's modeling of behavior (Belsky, 1984; Floyd & Morman, 2000), we predict that the association between G1 fathers' quantity of child care and G2 men's own quantity of child care and caregiving identity as fathers will be moderated by G1-G2 father-child closeness. We specifically hypothesize that for G2 men who were close to their own fathers, G1 fathers' quantity of care will be positively related to G2 fathers' quantity of care and caregiving identity. For G2 men who were not close to their own fathers, the association between G1 fathers' quantity of child care and G2 fathers' parenting could reflect recapitulation of negative parenting (i.e., that potentially contributed to a lack of G1-G2 closeness during G2 childhood) or compensatory behavior by G2 fathers (Floyd & Morman, 2000). As such, we predict that the associations between G1 fathers' quantity of child care and G2's quantity of care and caregiving identity, respectively, will be relatively flat or negative when compared with those of G2 males who were close to their fathers.

Frameworks focusing on the importance of parent-child relationship quality do not assume gender-differentiated processes in how early-life experiences with mothers or fathers may shape adult children's later life parenting. However, previous research has identified that adult sons may use their fathers more as models of their own parenting (Daly, 1993). These theoretical frameworks thus set up contrasting predictions as to maternal and paternal effects on their sons' future parenting. Thus, a secondary question was to examine whether experiences with mothers and fathers differentially predict G2 men's quantity of child-care involvement and caregiving identity. To test this, we included G1 maternal caregiving, G1-G2 mother-son closeness, and the interaction between G1 maternal caregiving and G1-G2 mother-son closeness in our models predicting G2 father engagement and caregiving identity.

Method

Data and Participants

We draw on data from the CLHNS, a large, population representative, birth cohort study of infants and their mothers that began in 1983 and 1984 in Metropolitan Cebu in the Philippines. For full information on CLHNS sampling design and methodologies, see Adair et al. (2011). Among the G2 birth cohort infants, we solely have parenting data from fathers and limit our analyses to them, as there was not a comparable G2 female survey in 2009. We report descriptive statistics for the sample in **Table 1**.

Table 1. Descriptive Characteristics for the Sample ($N = 335$)

<i>Study variables</i>	<i>M</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>
Dependent variables				
G2 quantity of child care (adulthood; min)	1,562.19	2,018.28	0.00	10,500.00
G2 caregiving identity score (adulthood) ^a	16.33	2.47	10.00	20.00
Key independent variables				
G1 maternal care (infancy; min)	3,086.77	977.94	0.00	6,160.00
G1 paternal care (infancy; min)	233.88	353.77	0.00	1,827.00
G2 close to mother (adolescence; % close to mother)	88.7	-		
G2 close to father (adolescence; % close to father)				
G1 descriptive statistics and covariates	78.5	-		
G1 maternal age at G2's birth (years)	26.28	5.99	15.50	45.50
G1 maternal education (highest grade)	7.08	3.67	0.00	17.60
G1 paternal education (highest grade)	7.59	3.80	0.00	17.80
G1 maternal work status (infancy; % working)	71.3	-		
G1 alloparental care (infancy; min)	679.42	917.57	0.00	5,393.00
G2's birth order	3.35	2.28	1.00	15.00
G2 descriptive statistics and covariates				
G2's age in 2009 (years)	25.99	0.32	25.00	26.63
G2's number of children (adulthood)	1.59	0.82	1.00	6.00
G2's residence with own children (adulthood; % residing with own children)	88.6	-		
G2's education level (adulthood; highest grade)	10.29	3.23	1.00	16.00
G2 work status (% working)	76.7	-		

a. $N = 334$. G1 = Generation 1; G2 = Generation 2

The CLHNS was originally designed to assess how feeding decisions were made for infants, what social and environmental factors were associated with those decisions, and how they impacted health, particularly for the infant (Adair et al., 2011). Specifically, mother–infant dyads from singleton births were followed up intensively every 2 months between 1983 and 1986, from the infant’s birth through 2 years of age. Multiple subsequent waves of data collection have occurred between 1986 and 2009 (G2 participants’ age: 26.0 ± 0.3 years). Attrition rates during the early years of the project ranged between 9% and 11% and have declined to ~5% in the adult surveys, with a majority of the attrition resulting from the sample migrating out of Metro Cebu (Perez, 2015). Of the original mothers, those who have remained enrolled in the CLHNS tend to come from lower socioeconomic status households, whereas for their sons, those with higher socioeconomic status have tended to be retained (Adair et al., 2011). For waves conducted in 1983 to 1986, 1991, and 1994, the G1 mother was the main respondent. During the 1983 to 1986 surveys, G1 mothers reported on the presence of their spouse in the household, rather than the father of the G2 males, explicitly. Based on comparisons of demographic data from surveys between 1983 and 1991, the majority of these men were likely to be the biological fathers of the infants. In 1998, the G2 boys reported on father–son closeness, and the data on household composition specifically provide insights on whether the G2 boys’ fathers were present. Although the biological relatedness of these fathers was not reported, these men were serving in parenting roles that merited being identified as the boys’ fathers. We refer to the mother’s spouse (1983–1986) and the men identified as fathers (1998) as the G1 fathers.

Analytical Sample of G2 Fathers

In addition to these G1 maternal reports, we draw on data collected from interviews with the G2 males in 1998, when they were adolescents, as well as in 2009, for those who had become fathers. In 2009, there were data from 446 G2 fathers from the original birth cohort. Of those 446 G2 men, 7 were not in the 1998 survey. Of the remaining 439 men, 360 had data from 1998 on closeness to their mothers and fathers (see Measures section). Boys with missing data on mother–child closeness were not residing with their mothers. Similarly, ~85% of boys with missing father–child closeness data were not residing

with their fathers. Of the 360 males with full closeness data, an additional 25 participants did not have full mother–infant data, including early-life caregiving data, from 1983 to 1986. For those 25 participants, the mother–infant dyad was not located for at least one of the three relevant surveys between 1983 and 1986. Those two inclusion criteria led to the pool of 335 G2 fathers included in the present analyses. In addition, one G2 participant did not have caregiving identity data in 2009. We used full information maximum likelihood estimation to handle missing data. Of the 335 fathers included in these analyses, 99% reported having at least one biological child. All data were collected with informed consent and ethical approval from the University of North Carolina-Chapel Hill and Northwestern University (Evanston, IL).

Measures

Dependent Variables

G2 paternal care. In 2009, G2 fathers reported the amount of time (in hours and minutes) they had allocated in the past week to a list of 20 paternal caregiving behaviors informed by a large-scale survey on fathering and caregiving in the Philippines. The list included the following: preparing children’s meals, feeding them, watching over them, playing, singing, reading, telling stories, watching television with them, listening to the radio with them, taking them on walks or outings, bathing them, attending to toilet needs or training, dressing or grooming them, putting them to sleep, bringing them to or from school, helping them with schoolwork, washing their clothes, and three “other” care behavior options (Gettler et al., 2015). The domains of caregiving are not mutually exclusive, and thus some behaviors could co-occur. We analyzed this variable as total minutes of care.

G2 caregiving identity. Caregiving identity was defined as how important it was to a father to be an invested, involved caregiver (Maurer, Pleck, & Rane, 2001). This scale was derived from a shortened, modified version of the Caregiving and Breadwinning Identity and Reflected-Appraisal Inventory (Maurer et al., 2001), which consists of a series of multiple-choice questions, each on a five-point scale (1 = *strongly disagree*; 5 = *strongly agree*). The 2009 CLHNS wave included six questions from the inventory. Relevant items were reverse scored according to the instrument’s scoring instructions (Maurer et

al., 2001). The men's responses to these questions were tallied and summed. We used Cronbach's α analyses and Stata's (StataCorp, College Station, TX) "item detail" command to assess the internal consistency of the scale. We eliminated two items that reduced the scale's reliability. The resulting four-item scale had a Cronbach's $\alpha = .73$. Example items included "I should not be very involved in the day-to-day matters of physically caring for my child" and "I should be committed to actively meeting my child's physical needs."

Key Independent Variables

G1 maternal and paternal caregiving. During three waves of the 1983 to 1986 data collections, the mothers reported which household members engaged in caregiving in response to the question, "Did [the] household member care for children (0-5 years of age) in the household last week?" and then "minutes spent by [the] household member in caring for children (0-5 years) last week." Mothers reported those data when the G2 males were 2, 6, and 14 months of age. We averaged the values for those three time points to create caregiving variables for G1 fathers and mothers. Fathers were given a zero value if they were household members but mothers did not report them caring for the children or if the mother was interviewed but the father was absent and not a member of the household. Of the G2 males, 90% included in these analyses had a father figure present at 2, 6, and 14 months of age. In total, these G1 caregiving variables are indicative of the average amount of care provided to young children (0-5 years old) by mothers and fathers who were household members at the times of the interviews, when the G2 participants were between 2 and 14 months old.

G1-G2 parent-child closeness. In the 1998 wave, G2 participants were asked to report whether they felt they were close to their mothers and fathers, respectively. We used this variable as a long-term indicator of the quality of the parent-child relationship. Responses were recorded as "close," "not close," or "not applicable" (NA). Those who responded "NA" were excluded from the present analysis because that generally indicated that the parent was absent and the G2 participants did not report whether they felt close to that parent (see also Analytical Sample of G2 Fathers section). The 1998 wave was the only CLHNS data collection period during which this closeness question was asked and the only survey item that directly pertained to parent-child relationship quality.

Covariates

G1 alloparental care. Paralleling the G1 maternal and paternal caregiving data for the 1983 to 1986 data collections, we used G1 maternal reports to create a variable for care from others who resided in the household (nonparental or “alloparental” caregivers). We included this variable as a covariate as an index of parental support. We focused on alloparental caregivers 6 years of age or older. More than 92% of the reported nonparental care was from kin, and only 3% of participants received alloparental care solely from live-in, paid, nonfamilial caregivers. The five most commonly listed alloparental caregivers were G2’s older sisters, G2’s older brothers, G2’s maternal aunts, G2’s maternal grandmothers, and G2’s paternal aunts.

G1 sociodemographic variables. G1 mothers’ and fathers’ highest educational attainment was recorded at each survey in which they were participants. Mothers also reported their household’s total income (pesos), which was divided by the number of household residents to create a per capita income variable. As a cumulative measure of socioeconomic status, we averaged these maternal education, paternal education, and income variables, respectively, across the G2 participants’ childhood (1983–1998). At the 2-, 6-, and 14-month follow-ups (1983–1986), G1 mothers reported their own employment status, which we dichotomized as working (fully or partially employed) versus not working during those waves. In 1998, the majority of boys whose fathers were absent from the household did not report on father–child closeness (see G1–G2 Parent–Child Closeness section). However, a small number of boys ($n = 20$) had a father absent at the time of the 1998 interview and reported closeness data. Although these fathers were likely absent temporarily, for example, related to travel for work, we controlled for whether boys’ fathers were present in 1998.

G2 sociodemographic variables. During the 2009 survey, G2 men reported their educational attainment, residence status as fathers (i.e., whether they lived with their children), and employment status, which we dichotomized as working (fully or partially employed) versus not working.

Statistical Analyses

We conducted our statistical analyses using Stata 14.0 and MPlus 7.0 (Muthén & Muthén, 1998–2010). We provide descriptive statistics

for the sample in Table 1. Using Pearson's r , χ^2 tests, and independent-sample Student's t -tests, we also report associations between G1 parental caregiving and G1-G2 closeness for each parent. To test our hypotheses that G2 men's current caregiving time and caregiving identity are predicted by the interaction of their parents' involvement in child care and perceived closeness between G2 men and their parents, we conducted regression analyses using full information maximum likelihood for missing data estimation in MPlus 7.0 (Muthén & Muthén, 1998–2010). Full information maximum likelihood allows for cases with missing values on some variables instead of throwing the entire case out of the analysis. It uses all observed variables for each case (Allison, 2001; Cham, Reshetnyak, Rosenfeld, & Breitbart, 2017). G2 men's caregiving time was right-skewed due to the high frequency of zeros. Nonresidential fathers were overrepresented among the fathers reporting no caregiving time. To account for this in our analysis of G2 men's caregiving time, we used zero-inflated negative binomial regression and refer to G2 fathers' residence status as the "zero-inflating variable." The G2 caregiving time variance was also above the 1,000,000 limit in MPlus, thus we divided values by 10 and rounded to the nearest integer prior to running the models. We used ordinary least squares regression for models focused on G2 men's caregiving identity scores, as this variable more closely approximated a normal distribution. All variables were centered prior to creating interactions, and centered variables were entered into the models. We were particularly interested in the interaction effects, which tested whether the association of G1 early-life caregiving with G2 caregiving identity and involvement in child care was moderated by G1-G2 parent-child closeness. G1 mothers' and fathers' involvement in caregiving and closeness with G2 children were included together in the models to be able to assess whether there were gender-differentiated processes in the intergenerational transmission of caregiving (i.e., G1 paternal effects above and beyond G1 maternal effects).

Drawing from Belsky's determinants of parenting model, we included covariates in both regression models that captured family environmental factors during G2's childhood (G1 maternal education; G1 paternal education), sources of familial stress (G1 mothers' work status, household income, number of children), and social support (the G1 household's level of nonparental caregiving assistance). Contextual

risks, such as lower socioeconomic status, household instability, and unemployment, can also reoccur across generations and are associated with parenting (Capaldi et al., 2003). Thus, we included G2 men's education levels, residence status with their children (i.e., whether they lived with their children), and employment status as covariates to help control for their potential contributions to relationships between G1-G2 parent-child experiences and G2 parenting. G2 fathers' residence status is included as covariate only in the G2 caregiving identity model, as it is incorporated into the G2 caregiving time model as the zero-inflating variable. We evaluated statistical significance at $p < .05$.

Results

Descriptive Statistics and Bivariate Associations

As we report in Table 1, G2 men in this sample were 26.0 years old ($SD = 0.3$) at the time of their interviews in 2009. They had between one and two children in their families on average, $M = 1.59$, $SD = 0.8$, and the majority of the G2 fathers resided with one or more of their children (~89%). The G2 fathers reported an average of 1,562.19 ($SD = 2018.3$) minutes of caregiving time per week, which equates to 3.7 hours of child care per day, and their caregiving identity scores averaged 16.33 ($SD = 2.5$), ranging from 9 to 20 (Table 1).

In G1 families, mothers were the primary caregivers, $M = 3,086.77$ minutes of child care per week, $SD = 977.9$, with G1 fathers, $M = 233.88$ minutes, $SD = 353.8$, and alloparental caregivers serving in secondary roles, $M = 679.40$ minutes, $SD = 917.6$, on average (Table 1). For G1 families in which fathers were more involved in child care, mothers' time spent in child care was lower, $r = -.23$; $p < .001$. Boys who were closer to their fathers were significantly more likely to report also feeling close to their mothers, $\chi^2 = 44.10$; $p < .001$. The distribution of G1-G2 closeness was as follows: ~74% felt close to both parents, ~14% to mothers only, ~4% to fathers only, and ~7% to neither. G1 mothers' caregiving time during G2's infancy was not significantly different based on whether G2 boys later reported feeling close to mothers; similarly, G1 fathers' caregiving time during G2's infancy did not significantly vary based on whether G2 adolescents later felt close to their fathers, $ps > .5$.

Across parents, G1 fathers' early-life caregiving was not significantly different according to G2 boys' feeling of closeness to their mothers, $p > .6$. However, for G2 boys who did not feel close to their mothers as adolescents, their fathers did more caregiving when the G2 males were young, $M = 386.84$ minutes, $SD = 436.2$, compared with boys who reported feeling close to their mothers, $M = 214.31$, $SD = 337.7$ SD, $t(333) = 2.86$; $p < .01$.

G2 Caregiving Identity

G1 mothers' greater caregiving time predicted lower caregiving identity among G2 fathers, $p < .01$, and this was further qualified by a significant interaction between G1 mother caregiving time and G1 mother-G2 son closeness, $p < .01$; **Table 2**. See **Figure 1** for a plot of the interaction. Post hoc simple slopes analyses revealed that the slope for G2 men not close with their mothers was significantly different from zero, $p < .05$. Specifically, among G2 men not close with their

Table 2. Predicting G2 Fathers' Caregiving Identity and Weekly Caregiving Time From G1 Parental Caregiving \times G1-G2 Closeness

Predictor variables	Caregiving identity ($n = 334$)			Caregiving time ($n = 335$)		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
Main effects						
G1 maternal caregiving	-0.010	0.004	.006	-0.001	0.002	.754
G2 close to mother ^a	-0.047	0.451	.916	0.312	0.218	.152
G1 paternal caregiving	-0.017	0.009	.064	-0.007	0.004	.115
G2 close to father ^a	0.014	0.336	.967	0.029	0.163	.860
Interaction term						
G1 Maternal Caregiving \times G2 Close to Mother	0.011	0.004	.006	< 0.001	0.002	.152
G1 Paternal Caregiving \times G2 Close to Father	0.023	0.010	.020	0.011	0.004	.025
Covariates						
G1 alloparental caregiving	< 0.001	< 0.001	.132	< 0.001	< 0.001	.408
G1 maternal work status ^b	0.624	0.295	.035	-0.079	0.138	.564
G1 maternal education	0.049	0.049	.318	-0.028	0.023	.223
G2 birth order	0.014	0.064	.825	0.017	0.032	.584
G1 average household income	< 0.001	0.001	.700	< 0.001	< 0.001	.564
G1 paternal education	-0.038	0.048	.428	-0.011	0.023	.642
G2 education	0.189	0.045	<.001	0.060	0.023	.010
G1 father residing in home (1998) ^c	-0.459	0.554	.408	-0.184	0.261	.482
G2 work status ^d	-0.490	0.301	.103	-0.517	0.144	<.001
G2 residence status with child ^e	1.277	0.406	.002	-	-	-
Zero-inflating variable						
G2 residence status with child ^e	-	-	-	-6.945	1.074	<.001
R^2		.084			.596	

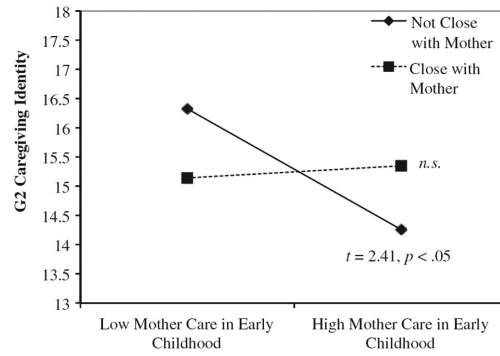


Figure 1. Interaction Plot of Minutes of Care by G1 Mother × G1-G2 Mother-son Closeness Predicting G2 Caregiving Identity in Adulthood. Simple slopes statistics reported where significant, n.s. = nonsignificant. Low mother care in early childhood = -1 SD below the sample mean. High mother care in early childhood = $+1$ SD above the sample mean. G1 = Generation 1; G2 = Generation 2; SD = standard deviation.

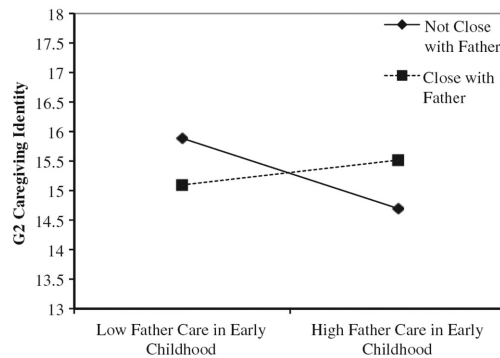


Figure 2. Interaction Plot of Minutes of Care by G1 Father × G1-G2 Father-son Closeness Predicting G2 Caregiving Identity in Adulthood. Simple slopes statistics were nonsignificant. Low father care in early childhood = -1 SD below the sample mean. High father care in early childhood = $+1$ SD above the sample mean. G1 = Generation 1; G2 = Generation 2; SD = standard deviation.

mothers, lower G1 mother caregiving time predicted G2 men's stronger caregiving identity in adulthood, but higher G1 mother caregiving time predicted G2 men's weaker caregiving identity. Similarly, the interaction between G1 father-G2 son closeness and G1 fathers' caregiving time was also significant in predicting G2 caregiving identity, $p < .05$; Table 2. See **Figure 2** for a plot. Post hoc simple slopes analyses were nonsignificant. Together, these results indicate that the slopes of the lines for closeness were significantly different from each other, but not significantly different from zero. Put another way, G1 father caregiving time predicted G2 caregiving identity differently depending

on whether the G1-G2 relationship was close, but within each closeness group, the amount of G1 caregiving time did not predict significant differences for caregiving identity. Finally, G2 men had higher caregiving identity when they lived with their children, had higher levels of education, and when G2 men's mothers worked ($ps < .05$).

G2 Caregiving Time

Similar to the results for G2 caregiving time, we found a significant cross-over interaction between G1 father-G2 son closeness and G1 fathers' caregiving time in predicting G2 caregiving time, $p < .05$; Table 2. See **Figure 3** for a visual depiction of the interaction effect. We note that because the distribution of G2 caregiving time required the use of zero-inflated negative binomial regression, it was not possible to conduct simple slopes analyses. G1 maternal caregiving time, G1-G2 mother-child closeness, and the interaction between these two variables did not significantly predict G2 child-care time, all $ps > .05$. Finally, G2 fathers' education levels and work status were significant covariates ($ps < .05$). See Table 2 for parameter estimates.

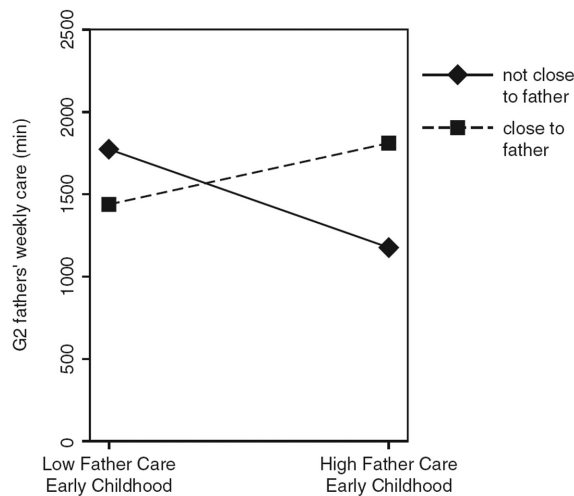


Figure 3. Interaction Plot of Minutes of Care by G1 Father \times G1-G2 Father-son Closeness Predicting G2 Caregiving Time in Adulthood (Weekly Minutes). Low father care in early childhood = -1 SD below the sample mean. High father care in early childhood = $+1$ SD above the sample mean. As noted in the Results section, it was not possible to conduct post hoc simple slopes analyses for these results. This figure is provided solely for visual purposes of illustrating the interaction effect. Following a zero-inflated negative binomial regression model that mirrors the model in Table 2, this figure was produced using predictive margins in Stata 14.0 (StataCorp, College Station, TX). G1 = Generation 1; G2 = Generation 2; SD = standard deviation.

Discussion

Drawing on longitudinal data collected over multiple decades from a large birth cohort study in the Philippines, we explored whether aspects of men's parenting were associated with their own early-life experiences of parental care and the closeness of their relationships (as adolescents) to their parents. We found that the closeness of the G1 and G2 father-child relationship interacted with G1 fathers' quantity of caregiving to predict the G2 fathers' own time spent in caregiving as well as their internal perceptions of their roles as parents (caregiving identity). We found a similar interaction between G1 mothers' caregiving and G1-G2 mother-son relationship for G2 fathers' caregiving identity. We describe these interaction effects in more detail later. In total, our findings add to the growing body of literature that harnesses longitudinal data to model the recapitulation or divergence of parenting across generations and specifically indicate that both mothers and fathers shape aspects of their sons' future parenting in this setting.

As noted by Cabrera, Tamis-LeMonda, Bradley, Hofferth, and Lamb (2000), parents' absolute level of involvement alone is unlikely to shape child outcomes positively, independent of the quality of that involvement and closeness of the parent-child relationship (Cabrera et al., 2000). Existing theoretical models similarly posit that the quality of parent-child interactions and parent-child closeness influence children's emulation of parenting styles in adulthood (Belsky, 1984; Floyd & Morman, 2000). Consequently, we think it is unsurprising that we observed minimal evidence that quantity of G1 caregiving alone, unqualified by an interaction with closeness, predicted G2 fathers' caregiving and caregiving identity. Rather, we found that G1 early-life caregiving time predicted the expression of G2 fathering when the moderating effect of G1-G2 parent-child closeness (i.e., relationship quality) was considered.

The results for G1 maternal effects on their sons' caregiving identity was such that G2 fathers reported elevated scores when the G1-G2 mother-child relationship was not close and G1 mothers were involved in child care at relatively low levels (when compared with other families). This effect was statistically significant in our simple slope analyses. This pattern is consistent with frameworks and past research that emphasize that some children with negative experiences with

their own parents will compensate in adulthood by adopting a different, parenting style (Capaldi et al., 2003; Floyd & Morman, 2000). As it relates to their experiences with their own mothers, we suggest that these G2 men were actively diverging from their own mother-child histories across development, at least in terms of how they conceptualized their identity as parents. In contrast, if G1 mothers were highly involved with early child care and the G1-G2 relationship was not close, then G2 fathers reported that being involved in caregiving was less critical to their parenting identity. Although speculative, it is plausible that these G2 males received harsh care from their mothers or grew up experiencing hostile, negative social interactions with them, on average, contributing to a distant G1-G2 mother-child relationship and tendencies toward G2 fathers identifying less strongly as caregivers. Meanwhile, for G2 men who felt close to their mothers, there was no significant association between G1 maternal care and G2 fathers' parenting identity.

Overall, the results for G2 men who did not feel close to their mothers are consistent with some predictions from attachment-based frameworks. Specifically, they lend support to the idea that parent-child relationship qualities help shape later life parenting, without specific emphases on dynamics that are contingent upon gender matching between parent and child (i.e., mother and daughter, father and son). Those results thus diverge from frameworks that place an emphasis on the importance of children's identification with their same sex parent (e.g., father-son modeling; Daly, 1993). In the context of Cebu, it seems that negative mother-son relationships have a particularly prominent link with the way that the second generation conceptualizes their parenting roles. Because we included G1 mothering and fathering in the same models, those maternal effects are uniquely predictive, above and beyond our measures of G1 fathering. In this sample and in this setting more broadly, there was little G1 caregiving balance between mothers and fathers (Tiefenthaler, 1997). As the primary caregivers, G1 mothers' caregiving time was an order of magnitude higher than that of G1 fathers', on average. Our results point to the salience of mothering and negative mother-child relationships to sons' parenting identities and the need to understand how and why those specific dynamics shape sons' later concepts of self, at least related to family life. If replicated in future work, these findings may

point to individual-level differences in orientations to fathering that are relevant to interventions aimed at preventing the recapitulation of negative parenting practices across generations, which remains an important challenge for this area of study (Neppl et al., 2009; Thornberry et al., 2003).

We likewise found significant interactions between G1-G2 father-son closeness and G1 caregiving in predicting G2 fathers' parenting identity and caregiving involvement, respectively. For these results, we observed complementary cross-over interactions in which the effects of G1 paternal caregiving time on G2 parenting outcomes were in opposite directions, depending on G1-G2 father-son closeness. G1 fathers' increased caregiving time predicted stronger caregiving identity in G2 men when the G1-G2 relationship was close. Similarly, there was a positive association between G1 and G2 paternal caregiving time when G2 males reported a close relationship with G1 fathers. However, when the G1-G2 relationship was not close, higher caregiving by G1 fathers' predicted weaker G2 caregiving identity and there was a negative association between G1 and G2 paternal caregiving time, respectively. The results for close G1-G2 father-son dyads are consistent with attachment-based frameworks that emphasize that a strong parent-child bond contributes to the second generation emulating the parenting style of the first (Belsky, 1984; Bretherton & Munholland, 1999; Capaldi et al., 2003; Chen & Kaplan, 2001; Hofferth et al., 2012). Similar to our findings for G1 mothers, we also observed evidence that a lack of G1-G2 closeness is associated with divergence from the first generation's parenting style (Capaldi et al., 2003; Floyd & Morman, 2000). To our knowledge there has not been extensive research on father-child relationships and modeling of gender and familial roles in the Philippines. However, other researchers have emphasized the importance that Filipino families tend to place on cultivating responsibility in children, particularly responsibility to the family in sons and that fathers' interactions with their sons, such as through discipline, may be important in that regard (Rubio & Green, 2011).

Our results point to the importance of childhood experiences in shaping the quantity of time men are inclined to invest in parental caregiving and also in forming men's sense of self as fathers and the salience of identity concepts related to family life (G. L. Fox & Bruce, 2001; Marsiglio & Cohan, 2000). To our knowledge, our findings are

among the first to demonstrate links between variation in parents' caregiving and closeness of parent-child relationships and their sons' own later life concepts of self as parents. These cognitive processes related to fathering identity are significant because they influence the types of roles fathers are apt to take on with their children. Moreover, they also at least potentially contribute to the quality and commitment they bring to those roles, with implications for child outcomes (G. L. Fox & Bruce, 2001; Marsiglio & Cohan, 2000). Indeed, a large longitudinal study of U.S. men becoming fathers showed that those who more centrally identified with their role as new parents had closer father-child relationships 9 years later (Adamsons, 2013).

Few longitudinal studies of the transmission of parenting practices have attempted to disentangle differential contributions of G1 fathers versus mothers to G2 parenting. Our cross-over interaction results for G1-G2 fathering link-ages indicate that the associations between G1 fathering and G2 sons' parenting in this setting are linked to both close and more distant father-son relationships and G1 paternal care. In particular, our results for G2 fathers who had a close relationship with their own fathers generally align with recent findings from the United States showing that G1 engaged fathering predicted similar fathering among G2 sons, whereas G1 mothering measures did not (Hofferth et al., 2012). Our findings suggest that in Cebu G2 sons may emulate or compensate in their own parent-child relationships with G3 children based on G2's experiences and relationships with G1 fathers.

Our findings also shed light on factors that can contribute to lower male engagement with caregiving roles across generations despite putative benefits of alternatives for child outcomes. Specifically, based on their own familial experiences and contextualized within the broader social ecology of Cebu, G2 men who were close to fathers who were not involved in child care appear to be modeling their parenting behavior and identities after a culturally valued archetype of fathering that they may view in a positive light. Studies of fathers' roles, their effects on children, and programs to shift men's perceptions of themselves as parents continue to expand to new global settings (Boyet, Lew-Levy, & Gettler, 2018; Heilman, Levtov, Gaag, Hassink, & Barker, 2017). We suggest that it is critical to consider locally valued models of fathering and their function and meaning within cultural systems, including as mechanisms through which fathering is transmitted across generations. Our findings suggest that enhancing the

qualities of parent-child relationships, rather than focusing on the sheer amount of time children spend with specific caregivers, is an important point of emphasis for future, locally informed interventions geared towards fathering.

Our study has multiple limitations that warrant discussion. As we mentioned previously, the CLHNS was not explicitly designed to model cross-generational patterns in parenting. Thus, our analyses are limited by having measures of G1 parental caregiving quantity only from G2's infancy period, and the study lacks indicators of parent-child relationship dynamics until G2 males' adolescence. Repeated measures on the quality of familial interactions and relationships along with data on caregiving quantity and types of caregiving behaviors would likely have improved our analyses. For the purposes of our analyses, these limitations of the study design likely increase our likelihood of Type II errors. That said, it is beneficial to have caregiving measures across G2's infancy, which represent sensitive periods for attachment formation. Past longitudinal research also suggests that the quality of parent-child relationships is stable from childhood to adolescence and early adulthood (Aquilino, 1997; Paikoff & Brooks-Gunn, 1991). As such, we are confident that measuring G1-G2 closeness at adolescence can provide valid insights on long-term parent-child relationship dynamics.

However, we also acknowledge that a dichotomous single-item measure of parent-child closeness in adolescence is a minimal, limited measure of the qualities of those relationships. A prospective study geared toward these issues would likely use extensive, validated surveys or observational methods geared toward measuring different components of parent-child relational qualities, including during adolescence. For example, such qualities might include warmth, respect and regard, and conflict (McGue, Elkins, Walden, & Iacono, 2005), which could interrelate with closeness and have implications for boys' future orientations toward fathering. Our G1-G2 closeness data are further limited by the fact that most G2 males with an absent mother or father did not respond to the closeness question. Consequently, our results largely inform on the contributions that parents who are present during adolescence make to their sons' future parenting. One additional limitation of our data on G1 fathers for both early caregiving and G1-G2 closeness is that we cannot explicitly determine the biological relatedness of the fathers to the sons. Most G1 mothers in the

study sample were stably married across the study, thus the vast majority of G2 males had a stable presence of a father figure from early life to adolescence. We suggest that the biological relatedness of the father-son dyad is unlikely to impact our core findings for G1-G2 father-son pairs with close relationships, particularly.

In addition, our G1 caregiving data are limited to those individuals residing in the household at the time of interview with the G1 mother, which means our early-life caregiving data may underestimate the role of nonresidential family members in shaping G2 outcomes. For example, prior data from the Philippines suggest that upwards of 90% of grandparents are involved with the day-to-day care of their grandchildren (Agree, Biddlecom, & Valente, 2005). Although non-residential G1 fathers' caregiving contributions are missing from our data, past research suggests that their involvement was likely minimal (Gettler et al., 2015). Moreover, G1 mothers were the sole reporters of child-care responsibilities in the household. Past U.S.-based studies have found that there are discrepancies between maternal and paternal reports of fathers' involvement. In such work, the magnitude of those discrepancies also varies by key familial characteristics, such as marital quality, maternal employment status, and socioeconomic status (Coley & Morris, 2004; Mikelson, 2008). Our analyses controlled for some of these relevant covariates. However, we do not have marital quality data from the G1 parents, thus we cannot rule out its effects or those of other unmeasured variables that could be associated with maternal reports of G1 fathers' caregiving time. In contrast, the G2 boys, themselves, reported our G1-G2 closeness measure, as opposed to parental reports. Our core findings reflect the interaction of G1 caregiving and G1-G2 closeness, rather than solely a main effect of G1 caregiving, which helps to attenuate this maternal reporting concern for G1 fathers' caregiving. Finally, we also note that the G1 and G2 caregiving were measured in different ways. The G1 measure only addressed caregiving time, without explicit activities specified, whereas the G2 variable is a summary measure of an array of activities. The G2 variable includes father-child play, which is a category of parenting to which fathers often devote a large percentage of their parent-child interaction time (Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). In total, we suggest that the fact that we find significant, theoretically consistent results with meaningful effect sizes for G2 fathering despite these limitations gives us confidence in the

robustness of the coupling between early-life social experiences and parenting in adulthood at this site.

In summary, our findings from this multiple decade study in the Philippines align with predictions from attachment-based and compensation-oriented theoretical perspectives on the intergenerational transmission of parenting. Studies with multigenerational data on family life and parenting are not common and fathering generally receives less research attention than mothering. Thus, our finding for mothers' and fathers' separable and differentiated contributions to their sons' future fathering identities are notable as are the complementary effects of G1 fathers on their sons' caregiving time. Given variable family structures and caregiving practices across cultures and within large, diverse societies, including the United States, these outcomes are relevant to future questions regarding the roles of parents and children's relationships with them in shaping intergenerational patterns of family function.

Note

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