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## Embracing Death: Mexican Parent and Child Perspectives on Death

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Death is so entwined with Mexican culture that many consider it to be the national symbol (Lomnitz, 2005). Images of death are ubiquitous in Mexico, where death is both embraced and celebrated. A vivid example of this approach to death was captured by Nobel laureate Octavio Paz: “The word “death” is not pronounced in New York, in Paris, in London, because it burns the lips... The Mexican, in contrast, is familiar with death, jokes about it, caresses it, sleeps with it, celebrates it; it is one of his favorite toys and his most steadfast love” (1985, p. 57). A key aspect of this view of death is that children are not only an integral part of annual death rituals, but also encounter symbolic images of death on an almost daily basis. These attitudes and practices stand in stark contrast with those in the European-American culture where parents often attempt to shield their children from death, believing that young children are cognitively and emotionally incapable of coping with death (Rosengren, Miller, Gutiérrez, Chow, Schein, & Anderson, 2014).

The research reported here focuses on young children and their parents in the state of Puebla, Mexico. This study extends research that recognizes the dearth of developmental work on children’s socialization with respect to death in *any* cultural group and seeks to identify the socializing practices to which young children are exposed; to ascertain the meanings that parents associate with those practices; and to determine the cognitive and affective understandings that children arrive at within their respective communities. Additionally, this research joins the growing list of studies that combine qualitative and quantitative methods to better understand development in cultural contexts (e.g., Duncan, Huston, & Weisner, 2007; Garcia Coll & Marks, 2009; Weisner, 2005). Key assumptions that drive our work include the idea that socialization and cultural practices play an important role in influencing children’s cognitive and affective understanding and that it is important to examine how children’s understanding develops in diverse contexts in order to understand both individual and universal aspects of development.

Traditionally, there have been two streams of research investigating children’s relationship with death, one that focuses primarily on children’s cognitive understanding of death (Carey,

1985; Piaget, 1929; Speece & Brent, 1984; 1996) and the other that focuses primarily on children's bereavement (McCown & Pratt, 1985; Prichard & Epting, 1992; Zambelli, Clark, Barile, & de Jong, 1988). Fewer researchers have examined the interaction of the children's cognitive and affective understanding of death (Orbach, Gross, Glaubman, & Berman, 1985; Rosengren et al. 2014; Slaughter & Griffiths, 2007; Yalom, 1980). We begin with a discussion of these different approaches to understanding how children confront death and then focus on how children are socialized with respect to death.

## Children's Cognitive Understanding of Death

Researchers in cognitive development, dating back to Piaget (1929), have been interested in how children reason about death from a biological perspective (e.g., Carey, 1985; Nguyen & Gelman, 2002; Poling & Evans, 2004). Researchers from this tradition generally view death as an important part of children's emerging theory of biology (Carey, 1985; Wellman & Gelman, 1998). Viewing death from a biological perspective as the cessation of biological processes that define life (e.g., eating, breathing), researchers have identified four main sub-concepts of death that are part of children's (and adults') overall understanding of death (Speece & Brent, 1984; 1996). These sub-concepts include that all living things die (*universality/inevitability*), that death is final and cannot be reversed (*finality/irreversibility*), and that all life processes stop at death (*non-functionality*). Non-functionality is often examined with respect to the cessation of both biological and psychological functions after death. The fourth sub-concept referred to as *causality* captures the idea that death can be brought about by a variety of internal (e.g., illness) and external (e.g., car accident) causes, not just old age, all of which lead to the cessation of biological and psychological processes.

A number of researchers have investigated children's sub-concepts of death (Nguyen & Gelman, 2002; Panagiotaki, Nobes, Ashraf, & Aubby, 2015; Rosengren et al., 2014; Slaughter, 2005; Speece & Brent, 1984; 1996), reporting that children exhibit a well-developed understanding of these concepts by age 7 (Speece & Brent, 1996). Many of these studies present death in a somewhat hypothetical manner, asking about "death in general." When researchers focus on less hypothetical situations by providing pictures and narratives linking the child being interviewed to another child who has experienced a death (Rosengren et al., 2014) or have focused on death in plants (Nguyen & Gelman, 2002), an organism unlikely to elicit strong emotions, children as young as three or four have been shown to exhibit an understanding of these sub-concepts of death. We adopt a similar approach as used by Rosengren et al. (2014) where we provided photographs and a narrative that linked the child being interviewed to the child depicted in the photographs. We adopt this approach as it makes the interview less hypothetical/abstract and more grounded than alternative interview approaches. This grounding enables a more accurate assessment of children's understanding than traditional approaches and it provides a more culturally sensitive interview context.

Generally, researchers looking at children's understanding of death have found somewhat similar results in different countries leading some authors to suggest that the timing and emergence of an understanding of the death sub-concepts is relatively universal (e.g., Panagiotaki et al., 2015). However, to our knowledge, there has been no exploration of this

issue in Mexican culture or in other cultural groups where death is actively embraced. This perspective of death in Mexican culture might influence everyday attitudes towards death and impact children's exposure to death-related information, creating a different socialization milieu that could lead to differences in children's understanding of the sub-concepts of death.

## Coexistence of Beliefs about Death

There has been growing interest in how different types of beliefs (e.g., scientific, spiritual) might coexist in the minds of children and adults (Busch, Watson-Jones, & Legare, 2017; Harris & Giménez, 2005; Legare, Evans, Rosengren, & Harris, 2012; Rosengren et al., 2014). This past research has found that co-existent beliefs are prevalent across different cultural groups, but that the nature and characteristics of these beliefs vary depending on the groups examined (Evans, 2001; Legare & Gelman, 2008). Death is one topic area where coexistent beliefs have been shown to occur in both children and adults (Astuti, 2011; Busch et al., 2017; Harris & Giménez, 2005; Rosengren et al., 2014). In many religions, death is believed to mark a transition to an afterlife, and in the United States the majority of adults report believing in some sort of non-corporeal continuity after death (Greeley & Hout, 1999). Non-corporeal continuity, involving belief in an afterlife, has been thought of as a fifth sub-concept of death, one that focuses on non-biological aspects of death (Rosengren et al., 2014).

In some of the first studies to investigate children's beliefs in the afterlife, Bering and colleagues (Bering, 2008; Bering & Bjorklund, 2004; Bering, Hernández Blasi, & Bjorklund, 2005) found that young children judged that psychological but not bodily functions would continue after death and that these beliefs were stronger in children attending religious schools than non-religious ones (Bering et al., 2005). Harris and his colleagues (Astuti & Harris, 2008; Harris, 2011a, b; Harris & Giménez, 2005) have argued that afterlife beliefs increase over late childhood and are more likely to be elicited when children are presented with a religious context compared to a non-religious one. Similar results suggesting that a religious or supernatural context increases afterlife beliefs have been found in several countries including the United States (Lane, Liqi, Evans, & Wellman, 2016), Spain (Harris & Giménez, 2005), Madagascar (Astuti, 2011; Astuti & Harris, 2008) and Vanuatu (Busch, et al., 2017; Watson-Jones, Busch, Harris, & Legare, 2017). In line with this research, another goal of the current study was to examine the impact of socialization and culture on the prevalence of coexistence beliefs about death in Mexico, a deeply religious country (Lipka, 2016).

## Children's Affective Responses to Death

Much of the past research on children's affective and emotional responses to death has been conducted by clinicians working with grieving children and their families (Corr, 1996; Grollman, 1995; Shapiro, 1994). A considerable amount of this research is based on a Piagetian account (Piaget, 1929) specifying that young children lack the cognitive abilities to comprehend death, believing that death is temporary and reversible (American Academy of Pediatrics, 2000; Grollman, 1995).

Clinicians have primarily focused on grieving children, arguing that fear and anxiety interferes with children's cognitive capacity to reason about death (Orbach et al., 1985; Yalom, 1980). A basic assumption of much of this research is that children feel anxious about death and even fear it, and that this clouds the way children reason about death. Yet, few researchers have explored how non-grieving children handle the affective dimensions of death (but see: O'Halloran & Altmaier, 1996).

## Research Examining Both Cognitive and Affective Understandings of Death

Relatively few researchers have examined both children's cognitive and affective understanding and responses to death. A number of studies have suggested that fear of death may negatively influence children's reasoning about death (Orbach et al., 1985; Yalom, 1980). Other research has suggested that more advanced knowledge of death from a biological perspective may reduce children's fear of death (Slaughter & Griffiths, 2007). Indeed, Bluebond-Langner (1978), who has investigated terminally ill children, has argued that children come to a better understanding of death than their adult caregivers believe that they do.

One of the few studies to focus on both children's cognitive and affective understanding of death was conducted by Rosengren et al. (2014). These researchers used a mixed-method design to examine children's understanding of death in the social context of a community of approximately 100,000 people in the Midwest of the United States. Rather than focus on children's fear and anxiety related to death, these researchers asked children questions that probed their understanding of the sub-concepts of death and also about how a child similar to themselves should respond to the death of a loved one. Rosengren et al. (2014) reported that only one child (out of 101), felt uncomfortable talking about death and exhibited any signs of anxiety or fear that led the interviewer to terminate the interview. These researchers did not explicitly ask children whether they feared death. Explicitly asking this question may perhaps prime children to think that fear is an appropriate response. When children were asked about how a target child (matched on age, ethnicity, and gender) felt about the loss of a relative, they said that the child would feel sad about the relative's death. A quarter of the children also stated that parents should provide some sort of reassurance or emotional support. This research suggests that even in a culture that shields children from death, children understand that expressing sadness is a suitable emotional response to the loss of a loved one. We might expect that in a culture like Mexico, where children are socialized about death in a very different manner that children's affective responses might be different and more complex.

## Parents' Reports of Socialization Beliefs and Practices

Parents' beliefs and understandings about death and how children should be socialized with respect to death form an important part of the context in which children come to understand death (Rosengren et al., 2014). For example, Gutiérrez, Rosengren, and Miller (2015) report that children in the Puebla area of Mexico play an active role in death-related rituals. In contrast, Rosengren et al. (2014) reported that parents in a Midwestern town in the United States tended to shield their children from death and death related experiences. We argue

that these different parental attitudes towards the role of children in death-related practices creates a different socialization milieu that leads to a different cognitive and affective understanding of death. The focus on concepts of death and practices associated with death as social constructions has a relatively rich background in history and anthropology (Aries, 1974; Lomnitz, 2005), but has generally been lacking in psychology, where an emphasis on cultural universals in cognitive development has long prevailed (Shweder, 1990, p. 7). Researchers investigating the socialization of death have generally examined children's questions and parental responses to death and conducted surveys of various socialization practices.

Children's questions about death and parents' responses may provide important insights into the socialization process and the acquisition of a deeper understanding of death. Chouinard (2007) has argued that children's questions are a key mechanism in driving the advancement of children's thinking more generally. Children's questions and adult responses are also a central aspect of how children may learn from testimony. Harris and Koenig (2006) have argued that learning from the testimony of others is especially important for a number of key concepts, including death, which are difficult for young children to directly observe. While past research has primarily focused on children's questions and parental responses in terms of shaping children's cognitive development, these questions and responses also clearly serve an important role in the early socialization of beliefs and practices.

A number of studies have explored children's questions related to death. Christ (2000) reported that grieving children often asked questions about the individual who had died, asking about the possibility of their return, suggesting that young children are struggling to understand the meaning of death. In an online study conducted in Canada, Renaud, Engarhos, Schleifer, and Talwar (2015) found that 75% of the parents sampled indicated that they had talked with their children about death, that many of the children had initiated the conversations, and that most parents felt quite comfortable talking about death with their children. Parents reported that the initial conversations occurred when children were as young as 3 to 3 1/2-years of age.

As part of the Rosengren et al. (2014) study, parents responded to a survey asking them to describe questions that their young children had asked about death and dying, and how they had responded. Most parents (83%) stated that their children had asked them about death and dying. In responding to their children, all of the parents provided some factual information or some type of explanation regarding death and dying. Two-thirds of the parents also provided some type of reassurance to the child (e.g., suggesting that a death in media was fiction; stating that someone would not die for a long time). Parents in this study were more likely to talk about emotional and psychological issues related to death when responding to questions about deaths portrayed in media compared to deaths in general. A similar approach examining children's questions and parental responses was used in the current study.

## Puebla Children's Socialization Via Participation

There have been relatively extensive analyses of the beliefs and practices related to death in Mexico (Brandes, 2003; Lomnitz, 2005; Moore, 1971). A prevailing view is that contemporary rituals and practices surrounding death in Mexico reflect a continuation of indigenous beliefs and practices along with a blending between indigenous and Spanish Catholic beliefs and practices with respect to death (Lomnitz, 2005; Moore, 1971). This is most clearly seen in the *día de los muertos* celebration, which combines aspects of All Saints' and All Soul's Days remembrances with aspects of the Aztec festivals that were devoted to dead children and adults (Lomnitz, 2005, p.45). Likewise, the elaborate *ofrendas* (a ritual altar) set-up in private homes and public settings have origins dating back to the Aztecs (Lomnitz, p. 45), but blend indigenous elements (e.g., food, incense, flowers) with Spanish Catholic ones (e.g., crucifixes). These elements from different traditions are even combined in complex ways. For example, bright yellow flowers (*cempaxóchitl*), a symbol from indigenous traditions that are used to guide the returning souls, are sometimes used by children to make rosaries, a symbol prominent in Spanish Catholic tradition (Andrade, 2001).

Mexican children's exposure to death is embodied in *día de los muertos*, the most elaborate death-related ritual in Mexico. On this national holiday, occurring in early November, families welcome the return of their deceased loved ones. Traditional celebrations include: constructing an *ofrenda*, visiting the cemetery where family members are buried, and visiting *ofrendas* in the homes of neighbors and friends. *Día de los muertos* celebrations vary in different regions of Mexico, with greater participation in the southern regions and in communities with larger indigenous populations (Gutiérrez et al., 2015).

Although several studies have acknowledged children's participation in these festivities (Andrade, 1998, 2001; Garcíagodoy, 1998; Green, 1969; Haley & Fukuda, 2004), Gutiérrez et al. (2015) was the first study to our knowledge to focus on *día de los muertos* as a socializing venue. The fieldwork for this study was conducted in October-November 2007 in the state of Puebla in and around the cities of Cholula and Puebla; Gutiérrez engaged in participant-observation in *día de los muertos*, accompanying families as they prepared for and celebrated the holiday and talking with family members about their memories. The most striking finding was that children of all ages were included in all aspects of *día de los muertos*. The research reported by Gutiérrez et al. (2015) is a nice example of the cultural paradigm of how children in different cultures in the Americas learn from others by observing and pitching in (Gaskins & Paradise, 2010; Lancy, 2015; Rogoff, 2014; Rogoff, Mejia-Arauz, & Correa-Chavez, 2015).

For example, children in Puebla participated in the elaborate preparations that take place during the month of October, beginning with trips to the market to obtain the items needed for the *ofrendas* (Gutiérrez et al., 2015). Children were actively involved in the construction of *ofrendas* in homes, schools, and public places. These *ofrendas* typically include photographs of deceased relatives, food, candles, and flowers. The food and fragrances of the flowers, through their essences, are thought to guide and provide nourishment for the dead. Gutiérrez et al. (2015) found that young children pitched in by arranging the fruit on

the *ofrenda* and pulling the petals from the flowers to create a floral trail to guide the dead. Children also participated in family discussions about the favorite foods and objects of the deceased, thereby helping to personalize the *ofrendas* for the dead. Older children became responsible for cooking food for the dead.

Children also visited the *ofrendas* of other families, and they accompanied their parents to the cemetery, where they played with other children, helped to decorate the graves, shared family meals, listened to live bands, and held vigils, while awaiting the return of the dead. These activities contrast with the strong proscriptions often associated with bereavement practices in cemeteries in the United States, demanding quiet and subdued behavior (Eisenbruch, 1984).

Although the celebration of *día de los muertos* is the most elaborate and extensive example of how Mexican's embrace death, it is important to note that images of death are pervasive in Mexican homes, businesses, and public spaces throughout the year (Gutiérrez et al., 2015). The Pueblan children's prolonged, intimate, and annually recurring exposure to symbols of death, their myriad forms of participation in the rituals of death, and their increasing contributions to these rituals varies greatly with the experience of the children studied by Rosengren et al. (2014) growing up in a predominantly European-American community in the Midwestern United States. Not only was there no annual death-related ritual, the majority of children (3 to 6 years old) had never attended a funeral or memorial service. Also, 75% of the parents in that study reported that they shielded their children from media images of death (e.g., books, movies).

## Focus of Current Research

To summarize, previous ethnographic research has established that children in Puebla are active participants from an early age in all aspects of *día de los muertos*, the annual celebration of death (Gutiérrez et al., 2015), creating a very different milieu for the socialization of death from European-American counterparts in the United States (Rosengren et al., 2014), who were largely excluded from participating in death rituals and shielded from death. The current study draws upon knowledge obtained from these past two investigations and focuses on five issues: First, we examined reports from parents in Puebla about their own and their children's experiences and understanding of death rituals and practices, and children's questions about death. Second, we examined how children in Puebla report about their own experiences of death and of death-related rituals. Third, we examined how children in Puebla make sense of the affective dimensions of death. Fourth, we examined how children in Puebla make sense of the cognitive dimensions of death. Finally, we examined whether children in Puebla have coexistence views that incorporate both a biological and non-biological understanding of death. This research extends past work examining children's cognitive and affective understanding of death (e.g., Rosengren et al., 2014) to examine children growing up in a culture where children are extensively socialized with respect to death (Gutiérrez et al., 2015). In addition, we explicitly explored children's understanding of the rituals and practices associated with *día de los muertos*.



The majority of the research on children's understanding of death has assumed or focused on universal trends (e.g., Panagiotaki et al., 2015; Speece & Brent, 1984; 1996), finding more similarities than differences across cultural groups. Even though previous research in developmental psychology has found cultural similarities on children's understanding of death, we argue that this may be due in part because researchers in this field have not examined cultural groups that celebrate death. Celebrations like *día de los muertos* in Mexico provide a view of death that clashes with the popular view in many Western countries. We argue that this difference likely leads to a distinctive socialization process around death that influences children's understanding of death. In order to more fully understand the cultural context of children's socialization process with respect to death, we used a mixed-method approach in our research. We used a quantitative approach to explore Mexican children's cognitive and affective responses to death and then used a qualitative approach to examine parents open-ended responses regarding children's questions about death and death related rituals and their answers. By using this approach, we hoped to gain a richer understanding of the cultural context related to death in Puebla.

## Method

### Participants

Fifty-three families with young children participated in this study. Children ( $N = 61$ ) ranged in age from 3.5 to 6.9 years ( $M_{\text{age}} = 5.1$  years). This is the same age of children as studied by Rosengren et al. (2014). Demographic information of the children can be seen in Table 1. Of these families, data were primarily obtained from mothers ( $n = 51$ ). Mothers' ages ranged from 20.7 to 45.7 years ( $M_{\text{age}} = 30.5$ ). In addition, we collected data from three fathers (ages 26.4 to 31.5 years,  $M_{\text{age}} = 29.6$ ), and five grandmothers (ages 44.4 to 58.9 years,  $M_{\text{age}} = 52.1$ ). Three parents did not provide information about their age. The families in our study were identified primarily as low- to middle-class "mestizo" Mexicans (individuals with a combined indigenous and European descent). This is the predominant cultural group in the Puebla area. We focused on this group in part because they live in the Puebla region, an area where *día de los muertos* is widely celebrated. Table 2 shows the demographic information for the parents.

Families were recruited from the cities of Cholula (population 200,000) and Puebla (population 1.5 million) from the state of Puebla, Mexico. Puebla is Mexico's fifth most populous state with a population of approximately 5.4 million people. Its capital, the city of Puebla, is one of Mexico's oldest towns and the second largest in population. The community is primarily Roman Catholic and the religion as it is practiced also includes elements of indigenous beliefs and traditions. Cholula is a neighboring town less than 8 miles from Puebla. They are part of the same Metropolitan area and the differences between the people living in one city or the other are relatively small. Most of the children in this study ( $n = 36$ ) were recruited from a local preschool. The remaining participants ( $n = 25$ ) were recruited through a local consultant, a professor of Sociology at the Benemérita Universidad Autónoma de Puebla (BUAP). This individual has lived in Puebla for over 35 years and has worked closely with many of the families in the community. She drew upon her informal network (e.g., friends, neighbors) to help identify possible participants.

## Materials

**Child Interview.**—The children’s interview consisted of three components: knowledge and practices surrounding *día de los muertos*, death-related experiences, and life and death processes. The latter two components were adapted from Rosengren et al. (2014). Two bilingual native Spanish speakers translated all of the items into Spanish and then back-translated them into English and resolved any discrepancies between the original and back-translated versions.

Items in the first part assessed children’s knowledge of and participation in the *día de los muertos* celebration, including past experiences (e.g., “Did your family celebrate *día de los muertos* this past year? What things did your family do during this past *día de los muertos*? Did your dead relatives eat the food?”), feelings towards *día de los muertos* (e.g., “What do you feel when you celebrate *día de los muertos*? Do you think the *día de los muertos* celebration is scary?”), and knowledge of the elements of the celebration (e.g., “When is the ‘bread of the dead’ used? Why are sugar skulls used? What are candles and incense used for?”). For the latter questions, there was a picture corresponding to each element. The second part of the interview consisted of questions about children’s other death-related experiences, such as whether a friend, close relative or family pet had died in the past few years.

The final section of the children’s interview asked questions about children’s knowledge of life and death more generally adapted from Rosengren et al. (2014). The materials for this section consisted of a booklet containing three sets of pictures each with three different entities (set 1: girl, couch, plant; set 2: aunt, dog, plant; set 3: dog, doll, fish). For sets 1 and 3, the questions pertained to life processes, and their order was counterbalanced. For set 2, the items pertained to death, there were two questions that targeted universality, two that targeted finality, eight that targeted non-functionality (four for physical and four for psychological non-functionality) and two that targeted causality for each of the three dead entities. Additionally, there was one question about each entity that was meant to tap into the affective dimension of death. The children were asked how would a child of their same age and gender feel if their aunt, dog, or plant died. The online supplementary material contains all of the questions in set 2 in both English and Spanish. The booklet contained the image of a child, which matched the children in gender and ethnicity.

**Parental Interview.**—The parent’s interview consisted of three sections. The first section focused on *día de los muertos*, including childhood memories (e.g., “Did you grow up celebrating *día de los muertos*?”), current practices (e.g. “Do you currently celebrate *día de los muertos*? Did you prepare an *ofrenda* at home? Does your child participate in *día de los muertos*?”), and their children’s questions about *día de los muertos* (e.g., “Has your child ever asked you questions about the *día de los muertos* celebration? How did you respond?”). Parents were also presented with the Paz quote about death in Mexico (see introduction) and asked to comment on it.

The next section focused on other death-related practices, including death rituals (e.g., “What is your earliest memory of participating in a ritual regarding death, such as a funeral, wake or memorial service, or setting of an altar?”), current practices of death-related rituals

(e.g., “Are there religious/cultural rituals or traditions that you practice when a loved one dies?”), their children’s involvement in these rituals (e.g., “Does your child participate in rituals regarding death, such as a funeral, wake or memorial service, or setting of an altar?”), and the portrayal of death in the media (“Have you tried to shield your child from movies, cartoons, or TV programs that portray death? Have you tried to shield your child from books that portray death?”).

The final section of the parent interview contained questions about the family’s religious beliefs, including the importance of religion (e.g., “How would you describe the importance of religion in your life?”), frequency of religious practice (e.g., “How often do you attend religious services?”), specific beliefs and rituals (e.g., “How do your religious beliefs influence the rituals and activities that you practice regarding death? Do you believe in an afterlife?”), and children’s involvement in religious practices (e.g., “Have you talked to your child about the afterlife? How important is it to you that your child becomes a believer in [religion mentioned by the parent]? How often does your child attend religious services?”). We also asked parents to rate themselves on how religious, spiritual, scientific, and rational they viewed themselves on a 5-point scale (1 = not at all, to 5 = very). The online supplementary material contains the scale in both English and Spanish.

## Procedure

The lead author of this paper, a native Spanish speaker who is bilingual, conducted the interviews. Interviews were conducted in Spanish over a six-month period (from February to July) at a place that the parent found convenient (e.g., child’s school, church, family home). Because a signed consent form process is not common in Mexico, consent was provided orally. Parents were present during the children’s interview.

The interview began with the experimenter asking the children about their knowledge and practices of *día de los muertos* and whether they had had any death-related experiences (e.g., the death of a pet or close relative). After this, the experimenter gave the children a break and interviewed the mother or other caregivers (e.g., father, grandmother, etc.). The parental interview lasted between 1 to 2.5 hours depending on the detail of the caregivers’ responses. After the parental interview, the experimenter concluded the child interview focusing on the questions about life and death processes. The entire child interview lasted about an hour. Families received 150 pesos (about \$15 U.S. dollars) for their participation. All parent interviews were audio recorded and transcribed verbatim by two fluent bilingual researchers. The child interviews were transcribed by the first author and these interviews were coded by two fluent bilingual researchers.

## Qualitative coding

In order to analyze the qualitative responses, a Spanish-English bilingual researcher (native Spanish speaker, second author) read through all the questions and answers that parents provided and identified themes that cut across the different questions and answers. After identifying the themes, the same researcher went back and coded all the questions and answers allowing for multiple codes per question or answer. Questions and answers were coded independently (i.e., answers were coded for the themes contained in them without

looking at the question). Another one of the authors, a fluent bilingual of Mexican descent (fourth author), coded 25% of the questions and answers using the coding schemes created by the second author to ensure reliability and to potentially identify additional themes. The percent agreement between coders was above 80% for all of the themes and content areas. Cohen's Kappa for questions about death (0.85), answers about death (0.81), questions about *día de los muertos* (0.60), and answers about *día de los muertos* (0.67) were all acceptable. Disagreements were resolved through discussion.

For the questions and answers regarding *día de los muertos*, parents reported between 0 and 2 questions that their children had asked them and the responses they gave about different topics. The question topics included: *día de los muertos*, death and dying in general, the death of a friend or family member, and the death of a pet. For the responses regarding *día de los muertos* the coders identified the following themes: the meaning behind specific elements or rituals, non-corporeal continuity, the cause of the person's death, evidence of visitation, religion, and emotions. Descriptions and examples of these themes can be seen in Table 3. Of the 60 questions and 58 answers, one question and two answers did not fit any of these themes. The second coder did not identify any missing themes.

A similar procedure was used to analyze the remaining three topics (i.e., death and dying in general, death of a friend or family member, and death of a pet), however these topics were analyzed together given their similarity. The second author used the sub-concepts of death as a starting point to create the coding scheme, as these were the codes used by Rosengren et al. (2014) to analyze similar questions. However, after reading all the answers, it was determined that the sub-concepts did not capture all the themes found in the data. The final coding scheme included the following themes: universality, non-functionality, causality, non-corporeal continuity, religion, consequences, emotions, and death rituals. Descriptions and examples of the themes can be seen in Table 4. Once again, questions and answers were allowed multiple codes. Of the 103 questions and 100 answers, six questions and ten parental answers did not fit these themes but rather reflected other (idiosyncratic) themes.

Lastly, the same members of the research team analyzed responses to the question, "How do your religious beliefs influence the rituals and activities that you practice regarding death?" The two coders first independently assessed the responses to this question for evidence of common themes. Disagreements in the developed themes were resolved through discussion. This resulted in a coding scheme with five themes: religion as informing or determining rituals, simply describing the rituals, connections to *día de los muertos*, decay of the physical body or continuation of the soul, and religion as providing comfort or relief (See Table 5). Using these final themes, all 40 responses were independently coded by both coders.

## Results

Before we present the results for children's cognitive and affective understanding of death, we present some data about children's death-related experiences. These experiences include taking part in the various *día de los muertos* celebrations and losing a loved one. Then, we present a quantitative analysis of children's cognitive understanding of death examining age effects for each sub-concept independently. We combine this analysis with verbal reports

from the children that suggest they have a spiritual understanding of death in addition to their biological understanding. Next, we look at children's affective understanding of death, and explore the relation between children's cognitive and affective understanding of death. We end the results section by looking at the parent interview to gain some insight into how children were socialized with respect to death. We look at parents' report of questions their children asked them about *día de los muertos* and death more generally, and how parents responded. We also examine parental reports of the importance of religion in their lives and in the death-related rituals they practice.

### Children's Reports of Experiences of Death and Death-Related Rituals

Fifty-two out of 61 children (85.2%) said that their family currently celebrated *día de los muertos*. Forty-three of the children (89.5%) whose parents reported currently taking part in the celebration, stated that they also take part in the celebration. On the other hand, five of the children whose parents reported currently not taking part of the celebration, stated that they did take part in the celebration. When we asked children about specific elements associated with *día de los muertos*, we found that the children correctly identified many of the elements and their purposes: visiting the cemetery (68.8%), sugar skulls (62.2%), skeletons (62.2%), *ofrendas* (59.0%), flowers (49.1%), bread (45.9%), and candles (36.0%). The responses among siblings were fairly consistent. Of the 8 pairs of siblings, 5 of the pairs identified the same number of elements or the older sibling identified one more element. For the other 3 pairs, the older sibling identified more elements than the younger sibling. There was never a case in which a younger sibling identified an element that the older sibling did not identify. This makes sense, as older children have had more opportunities to participate in the ritual and learned more about the specific elements associated with the celebrations.

We tested whether this pattern held for the entire sample. We ran a multiple regression predicting the number of elements identified from the child's age (in months) and whether the parents reported that child takes part in the *día de los Muertos* celebration. We found that older children identified more elements than younger children,  $F(1, 52) = 34.63, p < .001, \eta_p^2 = .392$ . Additionally, children that took part in the celebration identified more elements than those whose parent said they did not participate,  $F(1, 52) = 4.84, p = .055, \eta_p^2 = .055$ .

Parental reports indicate that 34 of the 53 (55.7 %) families had experienced the death of a loved one, often the death of a grandparent. Additionally, 31 of the 61 (50.8%) children had attended a funeral or memorial service.

### Children's Cognitive Understanding of Death

We examined differences in biological understandings of death for each of the four sub-concepts of death (universality, finality, non-functionality, and causality). We used the same coding procedure employed by Rosengren et al (2014). We coded whether participants' answers to the death questions were accurate from a biological view point. Participants were given a 1 if their response was biologically correct, and 0 if it was not. Then we summed their scores for all the questions that targeted a specific sub-concept together. The score for each sub-concept was obtained by adding the number of biologically correct answers in the three entities (aunt, dog, and plant). We used linear regressions to predict participants' scores

for each sub-concept, except non-functionality, which was examined in a separate analysis, from their age (in months) and their parents' religious and spiritual thinking. Parental religious and spiritual thinking was very highly correlated,  $r = .86$ ,  $t(54) = 12.61$ ,  $p < .001$ . In order to avoid multicollinearity, we combined parents' self-reported religious and spiritual thinking into a single variable that was used as a covariate. This is in line with past research studying parental beliefs that has found that these scales are highly correlated and load on to a single factor (Braswell, Rosengren, & Berenbaum, 2012). For non-functionality, we ran a liner mixed-effects model with age, parental religious and spiritual thinking, and type of non-functionality as fixed effects. We also included interactions between type of non-functionality and age, and non-functionality and parental religious and spiritual thinking. We included a by-subject random intercept and a by-subject random slope for the type of non-functionality.

**Universality.**—The majority of the children showed at least some biological understanding of universality, with only 1 four-year old, 1 five-year-old and 7 six-year-olds, showing limited biological understanding of universality (a score of 0). Fifteen four-year-olds, 13 five-year-olds, and 6 six-year-olds, had a good biological understanding of this sub-concept (defined as having a score of half the total number of points or higher). These numbers contrast with prior research that has found that universality is one of the first sub-concepts children understand. There was no effect of age on children's understanding of universality,  $F(1, 53) = 3.27$ ,  $p = .076$ ,  $\eta_p^2 = .058$ . In fact, the relation between children's age and their score in the universality questions was negative ( $b = -0.03$ ). This contrasts with prior research in which children's biological understanding of death increases with age. There was no effect of parental religious and spiritual thinking,  $F(1, 53) = 0.07$ ,  $p = .799$ ,  $\eta_p^2 = .001$ .

**Finality.**—The majority of the children showed at least some biological understanding of finality, with only 1 four-year old, 1 five-year-old and 2 six-year-olds, showing little biological understanding of finality. Eighteen four-year-olds, 18 five-year-olds, and 17 six-year-olds, had a good biological understanding of this sub-concept. There was a main effect of age,  $F(1, 53) = 5.11$ ,  $p = .028$ ,  $\eta_p^2 = .09$ . Older children tended to provide more biologically correct answers than younger children. Parental self-reported religious and spiritual thinking was not significant,  $F(1, 53) = 0.10$ ,  $p = .751$ ,  $\eta_p^2 = .002$ .

**Non-functionality.**—The majority of the children showed at least some biological understanding of non-functionality, with 6 four-year old, 3 five-year-olds and 1 six-year-old, showing limited biological understanding of non-functionality. Eight four-year-olds, 15 five-year-olds, and 15 six-year-olds, had a good biological understanding of this sub-concept. As predicted, we found an effect of age such that older children provided more biologically correct answers to the non-functionality questions than younger children,  $F(1, 53) = 7.77$ ,  $p = .007$ . Contrary to prior research, there was no difference in children's answers to questions about physical and psychological non-functionality,  $F(1, 53) = 0.20$ ,  $p = .656$ . There was no interaction between age and type of non-functionality,  $F(1, 53) = 0.75$ ,  $p = .391$ . Parental religious and spiritual thinking was not significant,  $F(1, 53) = 0.15$ ,  $p = .698$ , and neither was the interaction with age,  $F(1, 53) = 0.93$ ,  $p = .338$ .

**Causality.**—The majority of the children showed at least some biological understanding of causality, with 3 four-year olds, 1 five-year-old and 3 six-year-olds, showing limited biological understanding of causality. Six four-year-olds, 7 five-year-olds, and 12 six-year-olds, had a good biological understanding of this sub-concept. These numbers are similar to prior research that shows that causality is the last sub-concept children typically understand. Surprisingly, there was no effect of age,  $F(1, 53) = 3.24, p = .078, \eta_p^2 = .06$ . However, unlike with universality, the relation between age and causality follows the hypothesized positive direction. Parental religious and spiritual thinking was not significant,  $F(1, 53) = 0.83, p = .365, \eta_p^2 = .01$ .

### Coexistence of Beliefs about Death

The foregoing results suggest that children in Puebla held biological concepts of death, at least to a certain extent. Next, we examined whether the socialization practices surrounding death in Puebla foster a spiritual perspective on death, in addition to a biological perspective.

To examine whether children in Puebla held concepts that involved spiritual understandings of death, we asked them about their belief that dead relatives come back to visit. Fifty children (81.9%) stated that they believed their dead relatives came back to visit during *día de los muertos*. In addition, 51 children (83.6%) reported that someone in their family put out food for the dead relatives and forty-eight (78.6%) believed that the dead relatives consumed the food. We also asked how they knew their dead relatives came to visit and ate the food put out on the *ofrenda*. Forty-six children gave a reason for their belief: 34 children stated that they sensed (saw, smelled, or interacted with) a dead relative, 12 stated that they knew that the relatives had visited because of the fact that they were dead or it was *día de los muertos*, 10 children said that they were told by their parents that the dead relatives had visited, four children inferred that the dead relatives visited based on evidence (e.g., “when I woke up, the plate [of food] was empty”), one child said that he knew the relative visited because “they loved them,” and one child dreamt the dead came to visit. Five children gave reasons that could not be interpreted by the researchers (e.g., “When they die they take them”, “Playing with my girlfriends”). In sum, the vast majority of our sample believed that the dead came back to visit during *día de los muertos*, suggesting that a spiritual perspective on death coexisted with a biological concept of death.

### Children’s Affective Responses to Death.

Nineteen of the children (31.1%) reported feeling scared during *día de los muertos*, and the percentage decreased with age (55.0% of the 4-year-olds, 28.6% of the 5-year-olds, 15.0% of the 6-year-olds),  $\chi^2(2, N = 61) = 6.57, p = .037$ . By contrast, the percentage of children who reported feeling happy or excited during *día de los muertos* increased with age (45.0% of the 4 year-olds, 52.4% of the 5 year-olds, 55.0% of the 6 year-olds).

Turning to the hypothetical scenarios of death, the majority of children said that the child would feel sad in response to the death of a relative (70.5%), pet (73.8%), and houseplant (70.5%). Some children answered that the child would feel happy in response to the death of a relative (19.7%), pet (11.5%), and plant (14.7%).

We then examined whether socialization practices and age predicted children's affective responses to the hypothetical scenarios. We found that differences in socialization (i.e., the extent to which children participated in *día de los muertos* festivities) and parental shielding did not predict children's affective responses to a hypothetical death scenario,  $F(1, 53) = 0.09, p = .764, \eta_p^2 = .002, F(1, 53) = 0.368, p = .547, \eta_p^2 = .007$ , respectively. This is not surprising, given the relatively uniform participation of children in *día de los muertos* and in their affective responses. We found that older children reported more negative affective responses than younger children,  $F(1, 53) = 22.51, p < .001, \eta_p^2 = .31$ .

### Relation between Cognitive and Affective Understanding

We also examined how children's cognitive understanding related to their affective responses to hypothetical scenarios of death. To do this, we calculated the correlation between the affective measure and a combined score of each of the biological sub-concepts of death for the hypothetical death of an aunt/uncle. Children who scored higher in the sub-concepts of death tended to have more negative emotions towards death,  $r = .34, t(59) = 2.79, p < .01$ . Given this relation we explored if there were any difference by sub-concept. As there are four biological sub-concepts of death, we used a Bonferroni correction for our alpha ( $\alpha = .0125$ ). A significant correlation was found between the sub-concepts of finality and non-functionality in humans and hypothetical affective response of an aunt/uncle dying, such that higher scores in finality and non-functionality were related to more negative affective responses,  $r = .35, t(59) = 2.85, p = .006, r = .47, t(59) = 4.06, p < .001$ . None of the remaining correlations reached significance.

### Parents' Reports of Socialization of Beliefs and Practices

Most parents (84.9%) stated that they celebrated *día de los muertos* as a child. Of these parents, 97.8% reported setting up an *ofrenda* and 91.1% reported visiting the cemetery during the celebration. Many parents (72.0%) recognized the importance of death in the Mexican society by agreeing with the quote by Octavio Paz. For example, the parent of a 4-year-old boy said "Death is so natural. It is a stage in our lives. We can't cover something that's unavoidable." A parent of a 6-year-old girl responded: "We laugh about death. We are not afraid of it. ... As Mexicans we hug death, we accept it and at the same time we make fun of it." In addition, most parents (79.2%) reported that they currently celebrated *día de los muertos*, including setting up an *ofrenda* at home (83.3%) and visiting the cemetery (83.3%). One of the parents who denied currently celebrating *día de los muertos* still mentioned setting up an *ofrenda*.

With respect to questions concerning *día de los muertos*, we found that the majority of children asked questions related to the meaning behind specific elements or rituals in *día de los muertos* (68.3%), evidence of visitation (15.0%), and reasons for/circumstances of a person's death (10.0%). The majority of parents' answers included information about non-corporeal continuity (51.7%), meaning behind specific elements or rituals (41.4%), and evidence of visitation (17.5%). Figure 1a shows the relation between children's questions and their parents' responses for questions related to *día de los muertos*. There was a discrepancy worth noticing between children's questions and adult responses. While a number of children asked about the meaning behind specific elements or rituals, many



parents responded with answers that focused on aspects of non-corporeal continuity (15 parents) or expanded their answer to include a focus on non-corporeal continuity (6 parents). This focus is likely due to the nature of the celebration which revolves around the dead coming back to visit, thereby highlighting non-corporeal continuity.

Concerning questions about death in general, we found that the majority of children asked questions related to causality (61.2%), non-corporeal continuity (11.6%), and death rituals (10.6%). The majority of parents' answers included information about causality (55.0%), religion (22.0%), and universality (7%). Figure 1b shows the percentage of child questions and parental answers for all themes. Although religion was the second most common theme among the parents' answers, none of the children mentioned religion in their questions. In a number of cases, parents responded to a child's question about causality or a death-related ritual with an answer that dealt with religion or non-corporeal continuity, or provided answers that expanded on the topic of the child's question to include information about these two themes.

### Importance of Religion

The majority of the families in our sample ( $N=49$ ) reported having a religious affiliation, with only one parent reporting no affiliation (four parents did not answer this question). The majority of our sample reported being Catholic or Christian (see Table 2). When asked to rate how important religion was in their lives on a 5-point scale (5 = very important) the mean was 4.20 ( $SD=1.06$ ). Most of the parents reported attending religious services either once a week (26.4%) or several times per month (24.5%). One family attended religious services daily, and one attended several times per week. The remaining parents attended once a month or less. The same trend was observed when asked how frequently their children attended religious services. Most of the parents reported that their children attended religious services either once a week (30.2%) or several times per month (18.9%). One family reported they attended daily, and one reported they attended several times per week. The remaining children attended religious services once a month or less. Parents also reported that it was important for them that their children were believers in their same religion ( $M=4.37$ ,  $SD=0.95$  on a 5-point scale; 5 = very important). The majority of the parents reported believing in an afterlife (79.2%), but very few parents reported talking explicitly to their children about the afterlife (13.2%).

When parents were asked, "How do your religious beliefs influence the rituals and activities that you practice regarding death?", 20 out of the 40 respondents simply described the rituals. For example, a participant said, "Bringing our dead to church, ringing the bells, and having a funeral mass." Another revealed, "When people die they have rosaries and mass." While these participants, merely stated the rituals that they performed, 16 participants made an explicit connection between the rituals they performed and the role that religion played in influencing these rituals. One participant stated, "Because religion is the one that teaches us what we have to do. When someone dies, to pray for them and visit them." Similarly, another explained, "When someone dies, our belief is that we go to church, when the body is taken to church and they put dirt on the coffin and holy water and a cross. They bless the tomb and I think that they have to do with one another."

Moreover, 5 participants mentioned physical decay of the body or continuation of the soul. A participant explained, “We believe that the body is something that will decompose and that doesn’t exist anymore and the soul and the spirit are someplace else.” Another participant said, “To turn on the candle signifies life, guide, path to god. [So] you don’t get lost.” Besides providing participants with an idea of the soul’s destination after death, religion also appeared to provide a general sense of comfort or relief for two participants. These two participants said, “They give us comfort” and “I was very bad and I felt bad mentally and then I looked for blessings and what is death and life. I looked for it in the bible, where they go after they die, I was looking for an answer. I use to think that when someone died they were dead. After I read and looked for answers, I read and concluded that people don’t die. They are present but live somewhere else.” For both of these individuals, religion provided comfort from the uncertainty that is attached to death overall. In addition, one participant made the connection between religion and *día de los muertos*, “My mother taught us that the Catholic religion goes together with the *ofrendas*.” Finally, one response did not fit into any existing category.

## Discussion

This study extends past work on children’s cognitive and affective understanding of death (Rosengren et al., 2014) to a cultural group where death is embraced and celebrated. The study also extends past research that provided an ethnographic description of young children’s participation in *día de los muertos* in Puebla, Mexico (Gutiérrez et al., 2015) by inquiring into parents’ experiences and beliefs about death and children’s understanding of death-related rituals and practices. The results of our investigation deepen our understanding of the socialization of death in this community by revealing widespread parental acceptance of death as well as widespread support for young children’s participation in the annual *día de los muertos* celebration. Together, these beliefs and practices form a socializing milieu within which the children in Puebla developed understandings of death that differs dramatically from that of European-American parents and children in the United States (Rosengren, et al., 2014).

### Children’s Cognitive Understanding of Death

The children in Puebla generally understood the four biological sub-concepts of death (universality, finality, non-functionality, and causality). However, older children in Puebla were less likely to respond that all living things must die. This contrasts with findings in the United States that show that biological understanding increases with age (Rosengren et al., 2014). It is likely that growing up as part of a cultural group where death is celebrated and children are socialized to believe that dead relatives return every year, partake in food, and even interact with the living, leads children to adopt a non-biological view of death. This finding suggests that with age, children in Puebla are more likely to embrace a co-existent view of death. This result supports previous findings of increases in religious views of death as a function of increasing age as reported by Harris and colleagues (Astuti & Harris, 2008; Harris & Giménez, 2005). However, we find this trend at a much earlier age than reported in other investigations, perhaps due to our focus on a community where death plays a more prominent symbolic role.

Past research on children's understanding of death has suggested that the emergence of children's understanding of the sub-concepts of death as a biological phenomenon follows a similar trajectory in terms of the pattern and timing of sub-concept acquisition (e.g., Panagiotaki et al., 2015). The view has been that this sequence of development is universal. Our data contrasts with these past findings in showing that children in Puebla differ significantly in their biological understanding from those reported in other studies (Panagiotaki et al., 2015; Rosengren et al., 2014). There are a number of possible reasons for these disparate findings. First, the cultural embrace of death to which the children in Puebla were exposed is different from the cultures examined in previous research. For example, the parents in the European-American culture often attempt to behave as if death can be avoided, actively shielding their children from death related experiences (Rosengren et al., 2014). Death beliefs and rituals in Mexico and the United States may represent two ends of a continuum; one embracing death, while the other actively shielding children from death. Our view is that a more extensive cataloging of cultural practices related to death is likely to reveal cultures that span this continuum. These cultures may exhibit a range of various patterns of socialization with respect to death, likely resulting in variation in children's understanding of the cognitive and affective dimensions of death.

Second, much of the past work has used abstract, open-ended questions about hypothetical deaths. In contrast, the death interview used in this study, based on Rosengren et al. (2014), attempted to situate the questions in a more personalized context that was relevant and familiar to the child. For example, we showed children a picture of a target child that looked like them and asked the children questions about death of specific individuals, pets, and plants known to the target child. In this manner, we attempted to make our death interview less hypothetical and more grounded in situations that the child could relate to.

A third issue that may explain why our results differ in important ways from previous research findings is differences in demographic characteristics. Generally, our families in Puebla were less affluent and had fewer years of formal education than those reported on in Rosengren et al. (2014). Our parents from Puebla also characterized themselves as highly religious and less scientific than the Rosengren et al.'s sample. Taken together these differences likely served to magnify the differences between the sample collected in Puebla and the groups studied previously in the United States. However, neither of these studies sampled for particular characteristics, suggesting that both of these samples were representative of the local communities they were drawn from.

There is one final set of findings relating to the biological sub-concepts that deserves comment. When we examined understanding of the sub-concepts of death among children in Puebla in relation to how they believed a child should respond to the aunt's death, we found that children who scored higher in terms of a biological understanding of the death sub-concepts reported expecting stronger negative emotions in response to the aunt's death. Upon further investigation we found that higher scores on finality and non-functionality were primarily driving this correlation. This finding suggests that children socialized about death in Puebla, who embrace a less biological view of death, might cope with the death of loved ones differently than children brought up in communities that do not embrace death to the same extent as in Mexico.

## Coexistence of Biological and Spiritual Perspectives on Death

Children in Puebla clearly had a biological understanding of death, as captured in their responses to questions related to the different sub-concepts. But it is also clear that the majority of the children believed that their dead relatives returned to visit on *día de los muertos*. Many of these children stated that during these visits the dead consumed food offerings left on the *ofrenda*. In follow-up questions, many children responded that they had seen, smelled, or interacted with a deceased relative. These data suggest that for the majority of the children in our sample, a biological understanding co-existed with an alternative spiritual understanding that accepts that dead relatives can return, communicate with the living, and function both biologically and psychologically. Our work adds to a growing body of research suggesting that different ontological categories of belief, often thought to be contradictory, can coexist in the minds of young children (Busch et al., 2017; Harris & Giménez, 2005; Legare et al., 2012; Rosengren et al., 2014; Watson-Jones et al., 2016).

Harris and Koenig (2006) have suggested that children might be likely to learn from testimony of others about concepts, such as death, that are not readily observable. About twenty percent of our children said that they knew a dead relative had visited on *día de los muertos* because they had been told so by their parents. Parents in Puebla conveyed information about the *día de los muertos* in a number of ways other than via direct testimony, including visiting graves of loved ones, and preparing both symbolic and favorite foods for the deceased that are placed on the *ofrenda* or shared during meals at the cemeteries during *día de los muertos*. Some children reported that they knew the dead relatives had returned because they noticed, on the morning after *día de los muertos*, that the food on the *ofrenda* had been eaten. In a cultural group where children are socialized to believe that dead relatives return and where adults consistently model, year after year, practices that embody such beliefs, direct testimony may be only one of many ways children learn about death.

Interestingly, parental religious beliefs were not significantly related to children's understanding of the sub-concepts of death or their affective responses. On the surface this seems somewhat surprising as the majority of our parents expressed having strong religious beliefs. However, the fact that most parents viewed themselves as strongly religious and participated in *día de los muertos* suggests that religion permeates the beliefs of this sample. The consistency of religious beliefs and practices in our sample make it unlikely that we would obtain quantitatively significant results related to religion.

## Children's Affective Responses to Death

Only 31% of the children in Puebla reported that they were scared during the *día de los muertos* celebration and this number declined with age. With increasing age, children were also more likely to say that they felt happy or excited during *día de los muertos*. The change in the affective reaction towards this event likely reflects children's deeper understanding of the celebration and of the cultural values regarding death.

When we compared children's responses to a hypothetical death (e.g., how should Terry feel about the death of her aunt?) we found that children in Puebla generally did not express a lot

of negative affect. Although these are hypothetical questions about the death of a somewhat distant relative (i.e., aunt), these results suggest that early socialization about death may influence children's affective associations to death, even placing death in a somewhat less negative perspective.

### Parents' Reports of Socialization Beliefs and Practices

One of the most telling findings from the parental interview was that the majority of Puebla parents agreed with Paz's quote when asked to comment on it. These beliefs about death—that death is a natural phase of life, something to be embraced and even joked about—form a powerful context for children's socialization.

These beliefs are also embodied in the annual celebration of *día de los muertos*, which is deeply ingrained in the Puebla society. Most parents celebrated the holiday when they were young, continued to celebrate it, and included their young children in the celebration. The majority of parents encouraged their children to set up *ofrendas* in the home, visit cemeteries, and visit other homes to view *ofrendas*. Consistent with parents' reports, the majority of children reported taking part in *día de los muertos*, and knew the purpose of its key symbols.

It is hard to overestimate the importance of *día de los muertos* as a socializing context for the children in Puebla. This celebration provided prolonged, annual exposure to the symbols and rituals of death from early childhood onwards. This exposure normalized death through association with family, food, music, and play, and offered children avenues to participate in ever more substantial ways as they grow older. There is simply no parallel to *día de los muertos* in children's experience growing up in the United States and many other Western cultures. Additionally, the children in Puebla encountered significantly more experiences of the death of relatives, friends, and pets, compared with the children in the United States studied by Rosengren et al. (2014). While Bluebond-Langner and Schwallie (2009, p. 240) have argued that "Death is not a stranger to children. It is part of their lived experience," our research suggests that this lived experience may vary substantially from culture to culture.

Similar to the finding by Renaud et al. (2015), the parents in Puebla reported that many of their children asked questions about death. Many of the questions concerned with *día de los muertos* focused on the meaning of various symbols related to the event. While some parents responded with information about the symbols, a larger number of parents used their children's questions to convey to the child that their dead relatives returned and consumed the food laid out on the *ofrenda*, thereby affirming the idea of non-corporeal continuity. These self-reported conversations suggest that it is relatively common for children and parents in Puebla to talk about death, thereby supporting Chouinard's (2007) argument that parent-child conversations are an important context for the socialization of death.

### Limitations of the Current Research

It is important to highlight some important limitations of the current research. First, an important issue is to what extent the children and adults' beliefs that we obtained are impacted more by traditional Aztec-based beliefs inherent in the *día de los muertos* celebrations or by the predominantly Spanish Catholic religious traditions stemming from a

more European-based set of beliefs and practices. We did not collect data that enables us to address this issue. However, as we mentioned in the introduction, many beliefs and practices include a mixture of symbols from both indigenous and Spanish Catholic traditions. This is clearly seen in the construction of the *ofrendas* which may include traditional foods and flowers, but also crucifixes. Further, as in the example of the rosaries created by children from *cempaxóchitl*, symbols from both traditions are even blended in to a novel instantiation. In addition, the traditions associated with *día de los muertos* have been evolving over time. For example, in photographs collected by Gutiérrez et al., (2015), symbols from Halloween (e.g., costumes of witches, pumpkins), not found in traditional *día de los muertos*, can now be seen worn or carried by children as they visit the *ofrendas* of their neighbors and friends. An interesting follow-up would be to include questions about the origins of certain symbols used in *día de los muertos* celebrations in interviews with adults.

A second limitation of the current study concerns of the identity of our participants. We report that they were primarily mestizos. As many of the beliefs and practices involved in *día de los muertos* stem from indigenous traditions, it would be useful to conduct similar interviews with individuals from indigenous, mestizo, and European traditions living in Mexico. As this was the first study to examine in detail the socialization of death in Mexico, we were not able to collect these different samples. However, as we were most interested in examining the socialization of death in a community where death was uniformly embraced, we opted to interview children and parents from Puebla.

A final limitation to be raised concerns the issue of generalization. As we discussed in the introduction, the celebrations of *día de los muertos* varies greatly by region in Mexico. This means that without sampling from diverse sites in Mexico, we should be careful about generalizing beyond the community in which our data was collected. However, our work does strongly suggest that it is important to consider the social-cultural context when examining aspects of cognitive and affective development. Children's cognitive and affective understandings of death are clearly influenced by the broader cultural milieu.

## Implications

Our research has highlighted that children growing up in Puebla, Mexico are socialized about death from an early age in ways that yield affective and cognitive understandings of death that differ from those reported in the literature, especially for the European-American children (Rosengren et al., 2014). Children in Puebla embraced both spiritual and biological views of death, and responded less negatively to death in general than children reported in Rosengren et al. (2014).

One implication of this research is that children growing up in a cultural group that embraces death might be less fearful or anxious about death. Our results suggest that this may be true. However, *día de los muertos* is a celebration that is held once a year to remember those who have died. Just because children, with increasing age, find this celebration to be fun and enjoyable does not mean that they are not upset about the death of a loved one or fearful about death when a loved one becomes seriously ill. It may be that while children in Puebla and their parents are more open about and accepting of death in

general than children in other cultural groups, actually coping with the death of a loved one and navigating the bereavement process may not be that different. Or it may be that the profound differences in attitudes and practices toward death do, in fact, permeate the grieving and bereavement processes.

Still another possibility is that the death of a loved one has the same immediate impact in Puebla and the United States, but the long-term coping and bereavement show a different pattern. In short, whether qualitatively different patterns of socialization about death influence coping and bereavement is an open question, but one that is not easy to examine given the ethics of studying children who have recently lost a loved one. In a study conducted in the United States, adults' retrospective memory of early socialization related to biological sub-concepts of death predicted positive coping with the loss of a loved one (Martine eková, Jiang, Adams, Menendez, Hernandez, Barber, & Rosengren, 2018). It may be that the key issue is not whether the socialization of death is in a biological or spiritual context, but that parents talk to their children about death (e.g., Wallin, Steineck, Nyberg, & Kreicbergs, 2016). However, as highlighted in the previously parents are only one source of information about death. Children likely gain information and understanding about death and coping through engagement in ritual and other cultural practices surrounding death. Future research should examine whether socialization and participation in ritual practices regarding different aspects of death has a differential impact on coping.

Our current work reframes the previous studies on children's understanding of death by bringing culture to the forefront. By studying one cultural group in-depth, rather than simply studying children from different countries, we were able to identify how specific cultural practices might lead to differences in child development. Our results suggest that cultural practices, like *día de los muertos*, create a socialization milieu that might have led to qualitatively different trends in children's cognitive and affective understanding of death.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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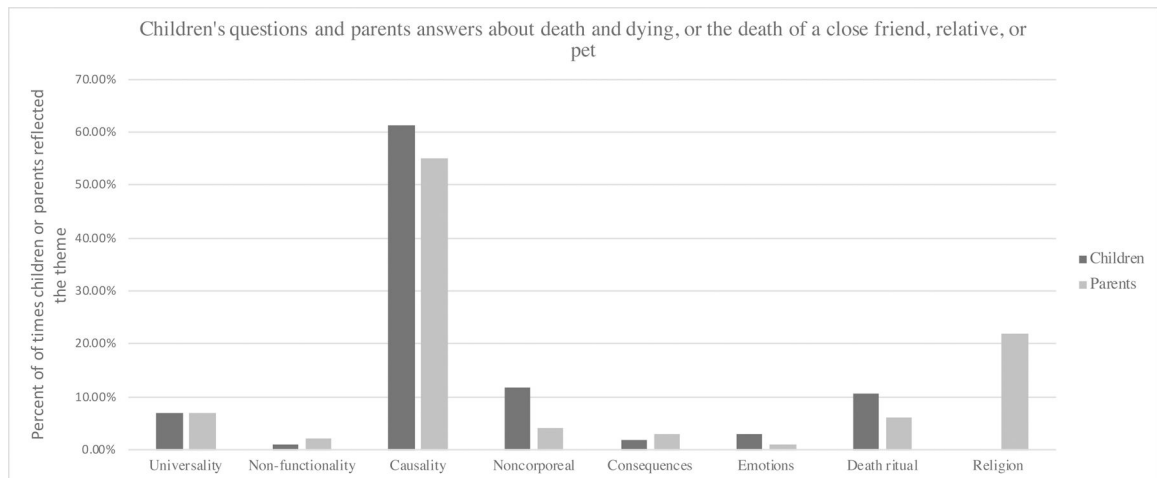
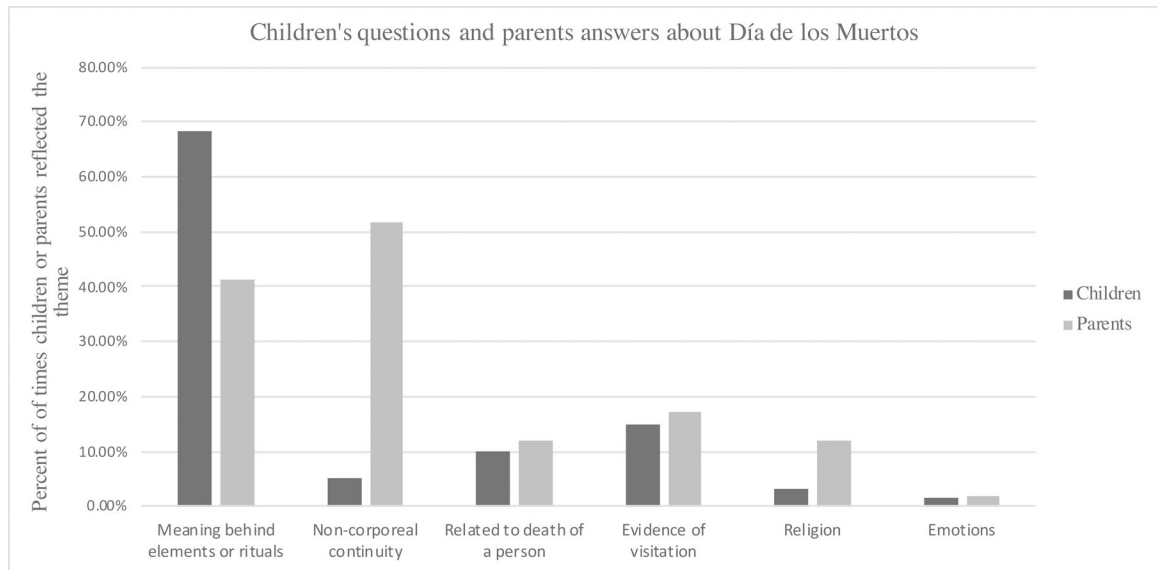
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**Figure 1.** Themes of children’s questions and parental answers. a. shows the questions and answers about *día de los muertos*. b. shows the questions and answers about death and dying.

**Table 1.**

## Child demographics

|   | <b>M</b> | <b>SD</b>  |
|---|----------|------------|
| Age (in months)                           | 61.21    | 11.22      |
|   | <i>N</i> | Percentage |
| Male                                      | 31       | 50.8%      |
| <i>Death related demographics</i>         |          |            |
| Experienced death of a pet                | 41       | 67.2%      |
| Experienced death of a relative           | 34       | 55.7%      |
| Attended funeral or memorial service      | 31       | 50.8%      |
| Participates in <i>día de los muertos</i> | 52       | 85.2%      |
| <i>Religion</i>                           |          |            |
| Catholic                                  | 32       | 52.5%      |
| Christian                                 | 3        | 4.9%       |
| Does not practice religion                | 26       | 42.6%      |

**Table 2.**

## Parental demographics

| Age (in years)                            | M        | SD         |
|---|----------|------------|
| Mothers                                   | 30.5     | 6.6        |
| Fathers                                   | 29.6     | 2.7        |
| Grandmothers                              | 52.1     | 6.6        |
|   | <i>N</i> | Percentage |
| Mothers                                   | 46       | 76.7%      |
| Fathers                                   | 3        | 5.0%       |
| Grandmothers                              | 7        | 11.7%      |
| NA  | 4        | 6.7%       |
| <i>Education</i>                          |          |            |
| Elementary school                         | 12       | 22.6%      |
| Middle school                             | 10       | 18.9%      |
| High school                               | 6        | 11.3%      |
| Technical degree                          | 13       | 24.5%      |
| College degree                            | 8        | 15.1%      |
| NA  | 4        | 7.5%       |
| <i>Religion</i>                           |          |            |
| Catholic                                  | 44       | 83.0%      |
| Christian                                 | 2        | 3.8%       |
| Jehovah's Witness                         | 2        | 3.8%       |
| None                                      | 1        | 1.9%       |
| NA  | 4        | 7.5%       |
| Believe in afterlife                      | 42       | 79.2%      |
| <i>As a child</i>                         |          |            |
| Participated in <i>día de los muertos</i> | 45       | 84.9%      |
| Prepared <i>ofrenda</i>                   | 44       | 83.0%      |
| Visited cemetery                          | 41       | 77.4%      |
| <i>As an adult</i>                        |          |            |
| Participate in <i>día de los muertos</i>  | 42       | 79.2%      |
| Prepare <i>ofrenda</i>                    | 37       | 69.8%      |
| Visit cemetery                            | 40       | 75.5%      |

**Table 3.**Description of codes use for question and answers about *día de los muertos*.

| Code   | Explanation  | Sample question   | Sample answers   |
|--|--|---|--|
| Meaning or reasons behind specific elements or rituals | Mentioning the function of specific elements or items involved in <i>día de los muertos</i> . Asking or giving a reason behind any of the rituals involved in <i>día de los muertos</i> (i.e. visiting the cemetery) | “Why an “ofrenda” is set at grandmother’s house and not at her house?”<br>“Why do we go to the cemetery?” | “That they are placed on <i>día de los muertos</i> so that when they(dead) come they will see that we received them with flowers and candles.”<br>“To remember the dead” |
| Non-corporeal continuity                               | Mention of spirits or the death relatives coming back or still being around that does explicitly make a religious reference (e.g. God or Heaven).  | “Where do they (dead) go? “   | “Because every year the dead(souls) come for what we offer them”   |
| Reasons for/ circumstances of the person’s death       | Any specific information related to the death of a person or the context surrounding it.   | “She(daughter) asks why she (girl who they visit at the cemetery) died?, what happened to her?”           | “Because he was an older person and he was sick”   |
| Evidence of visitation                                 | Asking for concrete evidence or confirmation about the visit of a dead relative  | “How do you know that they came?”   | “You don’t see them but they do come to be with us to say hi. Sometimes she says that she sees her grandma. “  |
| Religion   | Any mention of God, Heaven or any other religious reference.   | “Why did God take them with him?”   | “Because God decided so. She needed to go.”  |
| Emotions   | Any mention of emotions or how to feel.  | “Why do we cry for the dead?”   | “Because they loved him/her so much and they got attached to him/her. I tell him that he/she will rest in peace”   |

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**Table 4.**

Description of codes use for question and answers about death in general.

| Code                     | Explanation   | Sample question   | Sample answers  |
|--------------------------|---|---|---|
| Universality             | Mentioning that everyone dies or that death is unavoidable.   | “Are we all going to die?”  | “Yes, we all are going to die.”   |
| Non-functionality        | Any reference to functions that a person is not able to perform when or because they are dead.  | “Why they (dead) don’t walk?”   | “He/ she is not breathing anymore”  |
| Causality                | Mentioning the reason behind a death, or what causes someone to die.  | “Why did my grandfather died?”  | “The person was maybe sick and he/she died or someone run over him/her”               |
| Non-corporeal continuity | Mention of spirits or the death relatives coming back or still being around that does explicitly make a religious reference (e.g. God or Heaven). | “Did the dog went to heaven?”   | “She won’t leave us completely and you will always feel her”                          |
| Religion                 | Any mention of God, Heaven or any other religious reference.  |   | “He died because God wanted to take him so he could sleep”                            |
| Consequences             | Mention of the consequences of the death to the people that are still alive or about their belongings   | “If their father(neighbors’) died, was he (neighbor’s child) going to be left alone?” | “No, they were not left alone because they have a mother and other relatives.”        |
| Emotions                 | Any mention of emotions or how to feel.   | “Why are they sad?”   | “Because grandmother died and they loved her so much and they didn’t want her to die” |
| Death ritual             | Question or explanations about a ritual surrounding death (that is not <i>día de los muertos</i> )  | “Why was there a coffin?”   | “That’s where his body would rest.”   |

**Table 5.**

Description of codes use for answers about the how religion influences death-related practice

| Code   | Explanation  | Sample Answer   |
|--|--|---|
| Religion as informing or determining rituals           | Explicit mention of how religion or an aspect of religion helps determine death ritual | “Because religion is the one that teaches us what we have to do. When someone dies, to pray for them and visit them.” |
| Simply describing the rituals                          | Mention of the ritual without explicit connection to religion                          | “In the prayings, rosaries that take place, and candles.”   |
| Connections to <i>día de los muertos</i>               | Connection made between religion and <i>día de los muertos</i>                         | “My mother taught us that the catholic religion goes together with the ‘ofrendas’”                                    |
| Decay of the physical body or continuation of the soul | Reference about decay of the physical body or about continued existence of the soul    | “By praying and having requiems the dead rests more in the afterlife.”  |

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