Grooming and cultural socialization: A mixed method study of caregiving practices in Burma (Myanmar) and the United States

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Grooming behaviours are thought to be a crucial aspect of parenting and integral to the sociality of non-human mammals, but there have been few empirical studies on how grooming might be relevant to parenting and socialization processes in humans. Study 1 is a quantitative cross-cultural comparison of grooming practices in two cultural settings: an urban centre in Burma (Myanmar) and an urban centre in the United States. The study uses naturalistic video data of 57 families to analyse grooming behaviours directed at children. A broad range of ages was sampled in each culture to examine the developmental trajectory of grooming behaviours. Results indicate that significant cultural differences exist between Burma and the United States, with Burmese children being groomed by their caregivers more often than U.S. children. Results also indicate that cultural differences in grooming practices begin early and remain constant across age. An unexpected finding was that Burmese families were more variable in their behaviour than U.S. families. Study 2 attempts to explain this variability by using ethnography to describe how sociodemographic changes in Burma are leading to changes in parental values and socialization practices in the schools, but how embodied primary care in the homes appear resistant to change.

Keywords: Culture; Caregiving; Grooming; Socialization; Social change.
and children more often than caregivers in a society with a value system oriented towards independence and self-reliance (i.e. the United States) (Markus & Kitayama, 1991), where children would be expected to perform these activities on their own at a much earlier age.

In Study 2, qualitative case studies are drawn from the Burmese sample in Study 1. The goal of the case studies is to contextualise and extend the quantitative findings documented in Study 1 in order to understand how parents respond to social change in socializing their children. In particular, Study 2 addresses whether embodied (Piaget, 1954), automatic (Bargh & Morsella, 2008) parenting practices involving primary care (i.e. grooming) are culturally transmitted in tandem with abstract parental values during periods of significant sociodemographic change or if the two cultural traits (i.e. values vs. practice) are on different timelines of change.

THE EVOLUTIONARY FUNCTIONS OF GROOMING

From the standpoint of disease avoidance and parasite removal, both personal and allogrooming are basic to human survival. Allogrooming looms particularly large for infants who cannot meet basic hygiene needs on their own and necessarily require the assistance of a caregiver. The importance of grooming to infant survival lies not only in its more immediate role in reducing risk of disease and infection, but also in its relationship to other physiological and hormonal systems that are essential for long-term health. Tactile contact, an integral feature of most forms of grooming, is linked to temperature regulation in infants. Social grooming has been linked to coalition building, reconciliation, appeasement and general patterns of social reciprocity among non-human primates (de Waal, 1997). In non-human mammals such as rats, maternal contact in the form of licking and grooming has been linked to behavioural and endocrine responses to stress, as well as to the intergenerational transmission of maternal behaviours (Francis & Meaney, 1999).

GROOMING AND CULTURAL SOCIALIZATION

Grooming activities and the rituals that surround them have been shaped to a large degree by culture. In humans, where personal and allogrooming activities encompass behaviours such as manicures, pedicures, brushing and braiding, the daily routines that surround grooming can be particularly elaborate. Grooming practices both reflect and have a bearing upon culturally specific notions about ideal forms of self and personhood, including values about how independent children and adults should be at different stages of development. Phrases such as self-care activities and personal hygiene drive home the point that, in the United States, day-to-day grooming activities are expected to be performed on one’s own and in private.

Cultural values about caregiving and Interdependence in Burma-Myanmar and the United States

For this study, predictions about cultural differences in grooming behaviours are based on the theoretical formulation of developmental pathways (Greenfield, Keller, Fuligni, & Maynard, 2003), as well as prior ethnographic work. In particular, what informs current predictions about cultural differences in grooming pertain to variation in values and sentiments about caregiving and interdependence between Burma-Myanmar and the United States.

Prior ethnographic work indicate that the Burmese hyperrecognise the emotions and sentiments that are involved in caregiving. Socialization of young children in Burma-Myanmar is geared towards cultivating a sense of nurturant responsibility for smaller, weaker social others (Thein, 2013). Because the motive to nurture, protect and take care of others is not only encouraged but also valorised, dependency is also valued. Both Spiro (1970) and Tu (1964) observed that dependency is a salient feature of what they believed to be Burmese personality structure. Much like Doi’s (1973) account of the Japanese, rather than being viewed as an undesired characteristic, dependency is a highly indulged motive among the Burmese.

In contrast to Burma-Myanmar, the United States has been portrayed as a society that values independence, self-reliance, personal choice and agency (Markus & Kitayama, 1991). Rather than being valorised, the dependency motive is often looked upon with ambivalence (Weisner, 2001) and even regarded as pathological.

GROOMING, CULTURAL TRANSMISSION AND SOCIODEMOGRAPHIC CHANGE

While some qualitative and idiographic descriptions of day-to-day grooming practices, including visual data drawn from video case studies, have been provided in earlier studies (Mead, Bateson, & Bohmer, 1954), no quantitative cross-cultural comparisons of children’s grooming practices exist. A particular dearth exists regarding information on the role of grooming and other primary care behaviours in cultural transmission. Existing studies of caregiving behaviours indicate that more frequent bodily contact and motor stimulation may socialize infants and children into a more interdependent pathway of

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2 Allo is a Greek prefix meaning other. The term allogrooming is used to denote the grooming of another animal belonging to the same species.
development (Keller, 2007). However, little is known about the role of primary care behaviours such as feeding and grooming in the intergenerational transmission of culture.

A main question that remains unanswered with regard to the nature of cultural transmission is whether embodied behaviours employed during primary care transmit culture in the same manner as explicit parental values. And if so, what happens to embodied caregiving practices during periods of sociodemographic change? While there has been little explicit theorising on patterns of cultural transmission during periods of sociodemographic change within psychology, previous researchers have hypothesised that both caregiving practices and cultural traits (including parental values) tend to shift away from interdependence as societies become more commercialised, urbanised and complex (Greenfield, 2009; Keller, 2007).

Greenfield (2009) has highlighted two pathways through which children’s learning environments can be altered during periods of sociodemographic change. One pathway describes how parental values mediate the relationship between children’s learning environments and sociodemographic changes. In this case, particularly during the early stages of urbanisation, parental values would be hypothesised to shift towards independence first, whereas more embodied, automatic practices such as grooming remain unchanged. The second pathway highlights how children’s learning environments can be altered directly by changes in sociodemographics. In this second case, grooming habits and other primary care activities would be hypothesised to shift first, whereas more abstract cultural values of parents remain intact.

OVERVIEW OF STUDIES

The following two studies fill a significant gap in the literature on grooming, caregiving and socialization processes in humans. Together, the two studies used mixed methods with a nested design (qualitative case studies from Study 2 are drawn from the sample analysed quantitatively in Study 1). Study 1 is a quantitative comparison of caregiver-to-child grooming practices in two settings: an urban environment in Burma-Myanmar and an urban environment in the United States. Study 2 contextualises the findings of Study 1 and attempts to explain the variability found in the Burmese sample by describing how sociodemographic change in Burma-Myanmar is giving rise to new patterns of cultural transmission and change.

STUDY 1

The first study is a quantitative comparison of grooming behaviours in two cultural settings: an urban centre in Burma-Myanmar and an urban centre in the United States. The study focuses on allogrooming that is directed at children by caregivers and others in their environment, with the prediction that children in a society with more interdependent values (Burma-Myanmar) will be groomed more often than children in the United States, where developmental goals emphasise socialization towards independence. A broad range of ages was sampled in each culture in order to examine the developmental trajectory of grooming behaviours.

Allogrooming behaviours, rather than personal grooming behaviours, are examined for both theoretical and methodological reasons. In terms of theory, caregiving and the maintenance of social bonds is linked to behaviours in which organisms groom others, rather than behaviours in which organisms are simply attending to their own hygiene needs. Methodologically, it is much more challenging to discern and reliably code for personal grooming behaviours than it is to discern and reliably code for allogrooming behaviours because humans, including children, are necessarily in constant contact with their own bodies. For the remainder of this article, the word grooming will refer to allogrooming behaviours that are directed at children.

Predictions about cultural differences in grooming practices

The following hypotheses were formulated with regard to differences between children in urban environments in Burma-Myanmar and the United States:

Hypothesis 1: Caregiver-to-Child Grooming. It was predicted that children in Burma-Myanmar would have higher counts of caregiver-to-child grooming compared to children in the United States.

Hypothesis 2: Developmental Trajectory for Caregiver-to-Child Grooming. It was predicted that, in Burma-Myanmar, counts of caregiver-to-child grooming behaviours would remain at the same levels across developmental time, whereas in the United States, caregiver-to-child grooming would decrease as children got older.

Method

Participants

The sample comprised 57 children from 33 families. All participants in the Burmese sample came from various suburbs of Yangon, a large urban centre in the southern part of Burma-Myanmar. This subsample included 33 children from 21 families. Participants in the U.S. sample came from various suburbs of Los Angeles, a large urban centre on the west coast of the United States. This subsample comprised 24 children from 12 families. The age range of children in Burma-Myanmar was 6 months–8...
years ($M = 3.76, SD = 1.73$). The age range of children in the United States was 7 months–9 years ($M = 3.31, SD = 2.19$). The Burma-Myanmar sample comprised 19 males and 14 females; the U.S. sample consisted of 12 males and 12 females. In Burma-Myanmar, 49% of the children were ethnically Burmese, 24% belonged to ethnic minority groups native to Burma-Myanmar, 21% were of mixed Burmese and ethnic minority descent, and 6% were of mixed Burmese and Chinese descent. In the United States, 88% of the children were European American. There were two children from one family that were of African American descent and one child from another family of mixed descent (Mexican American and European American).

Family household size ranged from 3 to 7 in Yangon ($M = 4.81, SD = 1.18$) and from 3 to 6 in Los Angeles ($M = 4.26, SD = 0.69$). A total of 40% of Burmese children (13 families) and 9% of U.S. children (1 family) had extended family members residing in the household with them. The modal number of live-in nannies in the Burmese sample was 2. The modal number of siblings in both samples was 1. All Burmese and U.S. families can be classified as being middle-class relative to the standards of their own society. All the families in Los Angeles and 20 of 21 families in Yangon were two-parent households. All families in both samples had access to running water, indoor plumbing and safe flooring inside their homes, items that cannot be taken for granted in Burma-Myanmar.

**Procedure**

Video focal follows were the method of data collection. Video focal follow is a method whereby the researcher follows each subject (in this case the focal child in each family) with a camera and continuously records their activities as they go about their daily routine. The video focal follows that are analysed in this study were originally collected as part of a study that compared children’s daily activities, in particular meal-times, in Burma-Myanmar and the United States. In the United States, potential participants were approached and recruited in public places. Because the political climate in Burma-Myanmar did not allow researchers to recruit in public, Burmese families were recruited through intermediary contacts in the community. If participants agreed to take part in the study, an appointment was made to visit them in their home in order to collect data.

Because the original goal of the video focal follows was to record the family mealtime from beginning to end (Thein, 2013), as well as other routine family activities that preceded and followed the mealtime, no arbitrary time limits were set on the video-recordings. Although one child was designated as the *focal child* (i.e. the child on which the camera was to be trained at all times), the camera was positioned in such a way that the behaviours of all the children present during any given activity were captured at some point during the activity. The data from all children filmed are analysed for this study; however, because focal children were by definition on camera for longer periods of time, being a focal child or not was used as a control variable in the statistical analyses.

All focal follows were conducted at participants’ homes. Video focal follows ranged from 10 minutes 9 seconds to 2 hours 10 minutes 41 seconds in Burma-Myanmar ($M = 50$ minutes 29 seconds; $SD = 27$ minutes 7 seconds) and from 13 minutes 38 seconds to 1 hour 50 minutes 14 seconds in the United States ($M = 36$ minutes 56 seconds; $SD = 25$ minutes 52 seconds). Because of this wide time range in the videotaped observations, total observation time was also used as a control variable in the statistical analyses.

**Dependent measure**

A count of grooming was operationalised as occurring when a caregiver made (a) motor movement(s) directed at a child that could be interpreted as having the goal of cleaning the child, maintaining the child’s appearance or making the child neater (this allowed coders to distinguish grooming from other behaviours that involved touching the child, but where there was no inferred goal of cleaning or maintaining the child’s appearance). Examples of grooming behaviours included, but were not limited to, washing hands, mouth, nose or other body part; combing hair or running fingers through hair in order to detangle the hair; and removing lint, hair or food stains from the child’s clothing. Contact with children could be with bare hands or with an object, such as a brush or washcloth. Coding was done in such a way that each discernible motor movement was coded as a single count of grooming. This was the case even if that motor movement was a part of a larger repertoire of grooming behaviour. For example, if a caregiver wiped the child’s hands for 5 seconds, then each movement of the caregiver’s hand that was a discernable “wipe” was coded as a count of grooming.

In addition to the criteria described above, the relationship of the person who was grooming the child, the body parts that were groomed, and the activity that the child was engaging in while he or she was being groomed was also coded.

**Data coding and analyses**

The video was coded using Inqscribe, a software system that is designed specifically for analysing video data. The author served as the primary coder. The first step in coding was to identify all the counts of grooming that occurred during the videotaped sessions for each participant. After each count of grooming had been identified, each count was coded according to the criteria described under Dependent Measures.
TABLE 1
Results of mixed effects model

<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>Parameter</th>
<th>Estimate&lt;sup&gt;a&lt;/sup&gt;</th>
<th>SE</th>
<th>z statistic</th>
<th>p value</th>
</tr>
</thead>
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<tr>
<td>Grooming</td>
<td>Intercept</td>
<td>−1.07</td>
<td>.439</td>
<td>−2.43</td>
<td>.015</td>
</tr>
<tr>
<td></td>
<td>Burmese&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.18</td>
<td>.374</td>
<td>3.14</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Age 3–4&lt;sup&gt;c&lt;/sup&gt;</td>
<td>−.486</td>
<td>.315</td>
<td>−1.54</td>
<td>.122</td>
</tr>
<tr>
<td></td>
<td>Age 5&lt;sup&gt;c&lt;/sup&gt;</td>
<td>−.686</td>
<td>.363</td>
<td>−1.89</td>
<td>.059</td>
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<td>.306</td>
<td>−3.69</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Time&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.016</td>
<td>.005</td>
<td>2.89</td>
<td>.004</td>
</tr>
</tbody>
</table>

<sup>a</sup>Estimates for grooming in log-count units. <sup>b</sup>Compared to American reference group. <sup>c</sup>Compared to Age 0–2 reference group, overall effect of age is not significant, χ<sup>2</sup>(2) = 4.15; p = .126. <sup>d</sup>Time measured in minutes.

Interrater reliability. After the primary coder had identified each count of grooming, the next step was to have a second coder independently identify all the counts of grooming and independently code each count of grooming according to the criteria described under Dependent Measures. Interrater reliability was assessed by having the second coder code the data for 12 of 57 (21%) participants (six from Burma-Myanmar and six from the United States). Cohen’s Kappa and percentage agreement was computed with Stata 12.1. The Cohen’s Kappa for caregiver-to-child grooming was 0.81, z = 22.52, p < .001, with coders agreeing 92.26% of the time.

Calculating final score for grooming. The final score for grooming per child was calculated by tallying all the counts of caregiver-to-child grooming. Frequency of grooming (counts per minute) was also calculated for each child for descriptive purposes.

Controlling for focal child status and length of video observation. It was possible for children, who were not the focal child to be groomed off-camera; therefore, the children’s focal status (whether or not a participant was a child whom the camera was to be trained at all times) was controlled for by adding it as a predictor to the regression models. As the variability in length of time of the video focal follows could potentially impact the total counts of grooming, length of time for the focal follows was also controlled for by adding it as a predictor to the regression models.

Quantitative data analysis. A negative binomial mixed effects model was used to predict variation in grooming. Negative binomial models are appropriate for modelling overdispersed count data, whose distributions are strictly positive, discrete and skewed, all of which make linear regression models less appropriate. Country and age were of primary interest and entered as fixed effects. Age was analysed as a categorical variable (2 years and younger, 3–4 years and 5 years and older).<sup>3</sup> Time (length of time of the focal follows), Focal Status (whether the child was the subject of the focal follow or a sibling who was also taped during the focal follow) were also included as fixed effects in the model to control for their confounding effects. Family Membership was modelled as a random effect, to account for the nesting of children within families.

Results

Hypothesis 1: Cultural differences in grooming

As predicted, after controlling for the effects of Time and Focal Status, a highly significant main effect was found for Country, b = 1.18, SE = .37, p = .002, with more counts of grooming per participants in Burma-Myanmar (M = 67.61, SD = 134.28) as compared to the United States (M = 16.54, SD = 30.04). There was no significant main effect found for Age, Wald χ<sup>2</sup>(2) = 4.15, p = .13. Table 1 shows the results of the negative binomial mixed

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<sup>3</sup>Age categories utilised for the regression model are based approximately on infancy (2 years and younger), toddlerhood (3–4 years) and the age of school onset (5 years and older).
effects model for grooming. Figure 1 shows the mean frequency of grooming per minute in Burma-Myanmar and the United States according to age.

Table S1 (Supporting Information) shows counts and percentages of persons grooming the child in each culture. In both countries, the mother was the most frequent groomer. In Yangon, nannies were the most frequent alternative groomer to mothers; in contrast in Los Angeles, it was the father. Because so much caregiving was performed by nannies in the Burmese sample, but not in the U.S. sample, analyses were done to ensure that cultural differences were not nanny–mother differences. As seen in Table S2, when the same negative binomial mixed effects model was run on grooming, after all counts of nanny-to-child grooming had been removed, there was still a significant main effect found for Country, $b = 1.22$, $SE = .59$, $p = .037$.

**Grooming and daily activities.** In order to gain a better understanding of how consistently caregivers groomed children in Burma-Myanmar versus the United States and during which activities the grooming occurred, I took two children in Burma-Myanmar and the United States, with very similar total counts of grooming (129 and 116, respectively), who additionally had both been filmed during the morning hours before the school day began, and plotted how grooming behaviours were distributed within and across activities. As seen in Figure S1, the U.S. child tended to experience short instances of concentrated grooming predominantly during daily activities that were explicitly structured around hygiene goals. In contrast, grooming practices in Burma-Myanmar were more evenly distributed within and across daily activities.

**Hypothesis 2: Developmental trajectory for grooming**

The second hypothesis postulated that children in Burma-Myanmar would receive the same levels of grooming from their caregivers across developmental time, whereas caregiver-to-child grooming would decrease as children in the United States became older. This hypothesis was tested by adding an interaction of Age and Country to the model described under Hypothesis 1. The results of the data analysis did not support the second hypothesis. There was no significant interaction between Country and Age for caregiver-to-child grooming, $\chi^2(2) = 0.80$, $p = .67$. The cultural differences began early and remained constant across age levels.

**Variation in the Burmese sample**

Unexpectedly, counts of grooming per participant were more variable and had a greater range in Burma-Myanmar ($SD = 134.28$, $MIN = 0$, $MAX = 697$) than in the United States ($SD = 30.04$, $MIN = 0$, $MAX = 116$). This difference in variability was significant according to Levene’s robust test of equality of variances, $F(1, 55) = 6.069$, $p = .017$.

**Discussion: Study 1**

Study 1 documents cultural differences between Burma-Myanmar and the United States with regard to caregiving-to-child grooming practices, with Burmese children being groomed by their caregivers more often than children in the United States. With samples comprising a wide range of age levels, the study was also able to document cultural differences in the developmental trajectory of grooming behaviours. Results indicated that cultural differences in caregiver grooming practices begin early and remain constant across developmental time.

While the predictions made in this study were based on previous ethnographic work about cultural values in Burma-Myanmar versus those of the United States, future studies should seek to identify specific predictors of grooming practices and test out competing hypotheses regarding why cultural differences in caregiving behaviours exist. Grooming practices could be linked to other variables such as overall tendency on the part of caregivers to engage in distal versus proximal parenting or the presence of multiple caregivers in the environment. The United States is a culturally diverse society; it would be worthwhile in future studies to explore whether or not pronounced cross-national differences would exist if data are collected from a more diverse U.S. sample.

Differences in caregiver-to-child grooming could be due to differential health ecology in the two societies, including access to safe infant environments. Although all families in the two samples had access to indoor plumbing, running water and safe flooring for children, there could have been other ecological factors relevant to child health that were unaccounted for and that could have contributed to differences in caregiving. Differences in grooming practices could be due to perceptions and realities of disease-risk, especially the risk of acquiring skin parasites.

The finding, illustrated by Figure S2, that the U.S. child has short instances of concentrated grooming predominantly during daily activities that were structured explicitly around hygiene goals in contrast to the Burmese child, whose grooming was distributed more evenly within and across daily activities, seems to support the hypothesis that Burmese caregivers maintain a constant vigilance with regard to risk of infection.

An unexpected finding that does not support the hypothesis that differences in grooming practices pertain to differences in disease-risk, as opposed to differences in cultural values, were differences in variability between Burmese and U.S. families. It was found that the Burmese...
families were significantly more variable in their grooming behaviours than U.S. families—something that cannot be accounted for by differences in perceptions or realities of disease-risk, as all Burmese families were residing in the same disease ecology.

The variability found in the Burmese sample is interesting in light of the fact that Burma-Myanmar had been undergoing significant sociodemographic changes prior to the period of data collection (Silbereisen & Tomasik, 2010). Study 2 describes how sociodemographic change in Yangon has resulted in more variable caregiving practices by giving rise to new patterns of cultural transmission.

**STUDY 2**

A key finding reported in Study 1 concerns the differences in variability between the Burmese and U.S. samples. While the U.S. sample had low counts of grooming behaviours across most families, there was considerable variation among the Burmese. Study 2 attempts to make sense of this variability by examining two case studies that document how sociodemographic changes in Yangon contribute to new patterns of cultural transmission and change (Greenfield, 2009).

**Method**

The method employed in Study 2 is structured ethnography. The author spent approximately 500 hours performing participant observations of children’s daily routines in Burma-Myanmar. The following two case studies are based on field notes, interviews with caregivers and qualitative descriptions of video footage taken in the respective households.

**Ethnographic background**

The current ethnography is based on fieldwork conducted in Yangon in 2008 and 2009. This period of Burmese history was deeply impacted by major historical shifts, including the changes in policy that occurred as a result of the 1988 uprisings. Prior to 1988, Burma had been under a one-party socialist system with a centralised economy for 26 years. While the 1988 uprisings did not result in democratization, shifts in policy that followed the unrest resulted in an end to the one-party system and a slow movement towards privatisation. The movement towards privatisation allowed for the proliferation of private elementary schools in the Yangon area throughout the 1990s and early 2000s.

I encountered the effects of economic and social changes and the adaptations made by parents in response to these changes at every turn. Particularly salient was the need for middle-class parents residing in Yangon to adapt to economic realities in which their children would need to develop a sense of independence and agency that was not required of them during their own youth. Although parents expressed deep concerns about their children’s future, including having their children develop the appropriate skills that would allow them to be independent, I observed that there was often a discrepancy between their explicitly stated values and daily caregiving practices. This was especially evident when one contrasted parental values with everyday practice in domains that could be considered automatic forms of behaviour, or those actions that comprised their *habitus* (Mauss, 1973), such as day-to-day grooming practices.

In the following ethnography, I describe two patterns of cultural transmission and change observed in Burmese families in response to sociodemographic changes in Yangon.

**Case Study 1: Shifting values, enduring practice**

Winmar4 is 6 years old and lives on the second floor of an apartment building in Yangon with her family. Winmar’s father, Thura, works long hours as an administrator for a foreign non-governmental organisation (NGO). Winmar’s mother also works full-time.

During my first visit to Thura’s home, he shared with me the developmental goals he had for his children, as reflected in my field notes:

> Thura described... that... especially for (Winmar), he pushes her to do things on her own... He also said that, sometimes, she even takes the rickshaw by herself... Thura proudly informed me that she knows how to bargain for the rickshaw ride—she knows when the price is too high.5

In the same conversation, Thura related to me that his valuing of independence and self-reliance was tied to his anxieties about the future. He was especially concerned about the changing nature of Burmese society, including the emergence of a more complex social and economic life:

> I asked him... why he raised his children so differently, given that he was raised a certain way. He said that circumstances (were) different now... He said that his... daughter will have to take care of herself and do things on her own... so she would need independent skills.

The changing nature of economic life in Yangon compelled Thura to place priority on independent values
over interdependent ones (Greenfield, 2009). Rather than recreating the learning environment that he had known during his own youth, he was attempting to prepare Winmar for a world in which independence would be an adaptive trait.

Although Thura emphasised independent values, I observed that the learning environment in the home with regard to more automatic, embodied practices such as brushing teeth remained unchanged. Perhaps, what was most surprising was that Thura did not seem to realise that his caregiving behaviours were at odds with the values to which he had assigned a high priority:

Given how concerned Thura was about having his daughters develop independent living skills … I was surprised when, at the end of the conversation, I asked off-handedly and quite casually, whether his daughter Winmar (a 6-year-old) brushed her own teeth. He replied, “No, she is too young.”

Caregiving practices seemed to operate automatically, below explicit conscious awareness, and as such they appeared to lag behind the consciously espoused value of independence. Thus, there was often a discrepancy between independent parental values and interdependent grooming behaviours.

**Case Study 2: Shifting practice, enduring values**

Soe is 2 years old and lives with his family in one of the townships that is part of greater Yangon. His father previously worked in construction, but now owns a successful company. Soe’s mother is a stay-at-home mother. Soe has been attending a private preschool for the last 4 months. I performed extensive participant observations at Soe’s school and observed that it emulated Western models of education, based on developing independent child behaviours.

During a visit to their home, I interviewed Soe’s mother, Mya, about developmental goals that she had for her children. She conveyed the following:

I teach them how to talk with elders as well as younger people. Actually, both of my sons listen to what I say, you know. . . I tell them not to interfere or interject when elders are conversing.

When asked about the developmental goals that she had for her children, one of the first goals Mya emphasised concerned interdependent values, such as an understanding of age-based hierarchies and respect for authority.

When I enquired further about concerns that she had for the future, Mya discussed the changing nature of Burmese society and the prospects of having to send her children away to school when they are older:

There are some parents, you know, who send their children away from them when they are really young . . . They cannot be with them and see them or what they are doing . . . I will let them get an education here, so that I can control them and give nurturance.

It is interesting to note that both Thura and Mya were responding to the same types of sociodemographic changes and the corresponding socialization pressures. While Thura was attempting to help his children develop independent skills, Mya emphasised how she would give them as much nurturance as possible, for as long as possible.

The socialization that Soe received at school conflicted with Mya’s interdependent values. Soe would assert often that he wanted to perform routine tasks related to primary care such as eating, drinking and grooming on his own:

I asked his nanny whether he washed his face on his own, and she told me that he always insisted on doing it himself. She also informed me that he was taught this at his preschool.

The movement towards privatisation opened up new opportunity structures for families. Families were able to send their children to privately run elementary schools, many of which emulated Western educational practices. One such school, with its emphasis on independence and self-reliance, had directly altered Soe’s learning environment (Greenfield, 2009). Embodied, automatic practices involving primary care were beginning to shift in the home through the child’s insistence.

Although Soe often insisted on performing grooming activities on his own, he did not always succeed in convincing his caregivers. Rather than seeing one type of behaviour in the household (either independent or interdependent), there was a mixture of practices on display and a constant negotiation between parent and child.

**Discussion: Study 2**

The current ethnography fills a need to better understand the nature of cultural change. In the first case study, new independent parental values were paired with older interdependent caregiving practices. In the second case study, the school was socialising the child into independent behaviours, socialization practices that conflicted with the family’s interdependent caregiving practices and values. In the first case, social change evokes a conflict between values and practices, with values taking the lead and embodied practice lagging behind. In the second case, the school acts as a social change agent, preparing children for a society in which independent traits are potentially more adaptive, but at odds, in this case, with parenting values and practices.
OVERALL DISCUSSION

This article fills an important need to better document both within- and between-population differences in primary care behaviors, particularly grooming. Despite evidence that grooming is possibly central to outcomes that are relevant to a wide range of topics within psychology, including stress and temperature regulation, resilience and the intergenerational transmission of maternal behaviors, Study 1 of the current article is the first quantitative study of grooming and how it relates to human caregiving.

The findings presented in the quantitative study also shed light on the nature of continuity in cultural differences across ontogenetic time. It was found that cultural differences in caregiver grooming behaviors are apparent early in life (from the period of infancy) and maintained across a significant span of development (after children have entered school). The question of how and when individuals “acquire” culture and when appreciable and consequential differences emerge between cultures is a long-standing debate within cultural psychology and psychological anthropology. This study contributes to the literature by addressing this key issue.

Lastly, this article fills a need to better understand the specific mechanisms through which children are socialized into their respective cultures. In particular, the current findings suggest that automatic, embodied primary care behaviors such as bathing, washing and other forms of grooming play an important role in cultural socialization. While previous quantitative studies of socialization focused largely on documenting how abstract values are culturally transmitted, the current findings contribute to the existing literature by suggesting that embodied habits involving primary care may also contribute significantly to how children are socialized along independent or interdependent pathways. The ethnographies of social change suggest that embodied primary care practices in the family are resistant both to changing parental values and to new socialization practices employed by the school.

Future studies are needed to identify specific psychosocial outcomes that are associated with caregiver grooming practices. Differences in caregiver grooming may shape a wide range of psychological, neurological and social outcomes that are of key interest not only to psychologists, but to researchers from other disciplines, including neuroscientists, psychological and biological anthropologists, sociologists and those interested in evolutionary theory. Taken together, the quantitative comparison and ethnographic case studies constitute an initial step in repositioning grooming as being central to the study of both human caregiving and cultural socialization.

SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article:

Table S1. Counts and percentage of persons grooming children in Burma-Myanmar and the United States

Table S2. Results of mixed effects model after removing all counts of nanny-to-child grooming

Figure S1. Comparison of counts of caregiver-to-child grooming per minute for a U.S. subject and a Burmese subject with similar total counts of grooming.

REFERENCES


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