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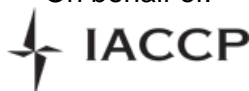
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Implications of Commerce and Urbanization for the Learning Environments of Everyday Life

A Zinacantec Maya Family Across Time and Space

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In recent decades, Maya ecocultural environments in Chiapas, Mexico, have undergone continuous change from more subsistence based to more commerce based and from more rural to more urban. Through ethnographic observations of one family during a 10-year period in rural and urban settings, activity settings analysis revealed changes on the micro level that reflected these shifts in the macro environment. The development of commerce between 1997 and 2007 led to increased reliance on technology, increases in individuation and individual choice, specialization for economic tasks, and for women, more formal education. Other changes in this period that were greatly intensified by urban dwelling included contact with strangers, contact with people of different ethnicities, and women's economic achievement. Urban dwelling also introduced freedom for young women to have unchaperoned contact with young men.

Keywords: *women; social change; Maya; learning environments; commercial activity; urbanization*

Worldwide global changes have shifted, and continue to shift, ecocultural environments from a subsistence base toward commercial activity, from rural to urban environments, and toward increased technology, larger group size, greater heterogeneity, and increasing levels of formal education. These changes can be summarized as a shift from a more *Gemeinschaft* (community) to a more *Gesellschaft* (society) environment (Tönnies,

Authors' Note: Because Maynard and Greenfield contributed equally to this article, they should be considered co-first authors. The authors would like to thank the Zinacantec Maya family who were the focus of this article for allowing us into their lives, thus providing a window for the world into the effects of social change in Chiapas, Mexico. We also would like to thank the Foundation for Psychocultural Research (FPR) and the FPR–University of California, Los Angeles, Center for Culture, Brain, and Development for its support, which made this research possible.

1887/1957). These macro changes shift children's learning environments and pathways of development in particular and predictable directions (Greenfield, 2009). Each of the above-mentioned ecological variables moves the learning environment and development in an identical direction (Greenfield, 2009). Last but not least, women's roles often change more than men's under changing sociodemographic circumstances (Efron, 2001; Seymour, 1999). As communities become more *Gesellschaft* in nature, female roles move in the direction of more choice about partners, more independence, and more freedom (Manago, Kim, Ward, & Greenfield, n.d.).

What are the implications of these changes for everyday family life, the cradle of socialization and human development? Our cumulative research in the Zinacantec Maya community of Nabenchauk in the highlands of Chiapas spans 1969 to the present as it experienced these global trends (Greenfield, 1999, 2004; Greenfield, Maynard, & Childs, 2003). We have demonstrated that as the economy decreased its basis in subsistence and became more commercial across a period of two decades, apprenticeship processes became more independent (as opposed to socially guided), teachers more often were members of the peer (as opposed to older) generation, and cognitive strategies became both more abstract (vs. detail focused) and more oriented toward processing novel (as opposed to familiar) stimuli.

These shifts are tied to changes in specific learning environments: Family participation in commercial activities (compared with subsistence activities) causes more independent apprenticeship processes in the domain of weaving and more cognitive abstraction and comprehension of novelty in pattern representation tasks. We found more children, especially girls, attending primary school as well as the introduction of television. School attendance has also moved cognitive strategies toward more abstract visual representation, and television has expanded external visual representation in the design of woven and embroidered textiles (Greenfield, Maynard, & Childs, 2003; Maynard & Greenfield, 2008).

How does the shift toward ever more developed commercial activity affect the development of new learning environments for children and youth? What is the effect of urbanization on socialization and everyday life, specifically for girls and women? Our starting hypothesis was that the impacts of urbanization and the impacts of commerce would work synergistically to move learning environments in the same direction. Using open-ended participant observation, we expected that the microlevel changes in everyday family life would reflect broader social changes as the surrounding community and society as a whole became more commercial and more urbanized.

Our research design uses long-term observations of one Zinacantec Maya family as a natural experiment. We first compare learning environments for the same family in 1997 and again in 2007, a 10-year period in which the family reflected all of these transformations of their social surroundings: Their business developed, their community became more urbanized, and they developed closer commercial and lifestyle ties with the city of San Cristóbal de las Casas. Next, we compare two different learning environments for this same family in 2007, one rural and one urban. Although family members lived and worked in both locations, the city site was primarily for business, whereas the village site functioned primarily as a family home. We expected that a number of the historical effects of commerce would be intensified in the urban environment.

Method: Activity Settings Analysis and Ethnography

We propose that an activity settings analysis of ethnographic data is an essential tool that can be used across disciplines to give a window into cultural influences on everyday interactive processes and routines (Gallimore, Goldenberg, & Weisner, 1993). Because the ethnographic lens examines practices in a variety of settings and does not presuppose universal patterns, it serves as an ideal data source for an activity settings analysis that compares different contexts and different epochs (Weisner, 2002; Maynard, 2005).

The Five Elements of Activity Settings Analysis

Activity settings analysis examines features of culture within activities. The five features of activity settings consist of the *personnel* present, the *tasks* themselves (including necessary *tools*), *scripts* for conduct, the *motives and emotional experiences* of actors in the tasks, and the *cultural values* being communicated in the activity (Gallimore et al., 1993)—in other words, who, what, when, where, why, and how.

Design and Purpose of This Study

We use activity settings analysis to investigate the changes in learning environments in one Maya family both diachronically and synchronically. First, we compare two different time periods 10 years apart (1997 and 2007). Next, we investigate the effect of an urban setting on behavior in 2007 by comparing the family's activity settings in the village with those in a new urban environment (a newly opened warehouse in the neighboring city of San Cristóbal) in which the female members of the family were living for half of every week. Our basic hypothesis was that the *Gesellschaft* way of life (Greenfield, 2009; Redfield, 1941) would become more prominent in the activity settings over time and that these trends would be intensified and magnified in the city.

Data Collection

We use ethnographic data from fieldwork with Zinacantec Maya families collected between 1997 and 2007. We have been ethnographically involved with four generations of the study family, and they have also assisted us to carry out more formal studies using methodology from developmental psychology (e.g., Greenfield et al., 2003).

For this study, we compare field notes from one Maya family in 1997 and 2007. In 2007, we collected ethnographic data using as guidelines the five central features of activity settings presented earlier. Although the 1997 observations and field notes were not based on explicit use of activity settings analysis, nor were they made with a view to doing a historical comparison, we will demonstrate how such an analysis can be applied to existing ethnographic data. We supplement the 1997 and 2007 data with ethnographic observations in 1995, 2000, 2003, and 2006.

Collectively, the three authors have spent about 30 months in the field in this 10-year period. Almost all of our interactions are conducted in Tzotzil, the home language of our participants, although competence in and acceptance of Spanish has increased as more

Zinacantecs use it in commercial activities. We use activity settings analysis to compare activities in 1997 with those taking place in 2007 and, in 2007, to compare activities in rural and urban settings. The family's establishment of a *bodega* (warehouse) in San Cristóbal in December 2006 enabled the rural–urban comparison and inspired this particular article.

At least one of us has conducted field research in Mexico in 1969, 1970, and almost every year since 1991. However, we selected these two time periods for systematic attention to include both our most recent field experiences and those of exactly 10 years prior. Most important, the 2007 ethnography had a specific research design geared toward systematically assessing the effect of urbanization on learning environments (conceptualized more broadly as activity settings).

The 1997 ethnographic observations were made by Maynard in the course of carrying out her dissertation research. Although the dissertation was based on formal videotaped observation sessions, Maynard also took ethnographic field notes on this particular family, who assisted her and with whom she lived while collecting data in the village of Nabenchauk. All observations were done in the family's home or at places the family visited within the village, such as the cemetery or stores. The focus of the observations was on activities and interactions within the family, with emphasis on the involvement of children in tasks. Field notes typically covered the family's actions from the time they woke up until the time they went to bed (approximately 6 a.m. until 9 p.m.). The 1995, 2000, 2003, and 2006 observations were made by Maynard under circumstances similar to the 1997 observations.

Design of the 2007 Observations

In December 2006, T, the father of the family, rented a *bodega* (open warehouse) in a market of the neighboring city of San Cristóbal to use for both retail and wholesale selling of agricultural produce purchased from growers in other cities. Female family members lived half the week at home in the village of Nabenchauk and half the week at their *bodega* in the city of San Cristóbal. The father supplied the *bodega* with produce but was on the road most of the week.

The goal of the 2007 research plan was to document this shift between the two locations as a natural experiment comparing learning environments in the urban *bodega* and rural household. Authors Martí and Greenfield made five observations in a 12-day period between September 14, 2007, and September 26, 2007. Observations were evenly divided between the village and urban settings, with a total of about 19 hours of observation, including days in both settings when children were in school and out of school. Field notes were handwritten on the spot. They were then entered on the computer, often with expansion, within a day or two of the original observation.

Participants

In 1997, the family consisted of mother (M), father (T), and six children: sons C (age 13) and E (age 4) and daughters Pa (age 15), R (age 9), X (age 6), and Pe (age 2). In 1997, only C was attending school, and he was the first child in the family to do so for more than a few weeks.

By the time of our second observation period 10 years later, the family had changed substantially. Pa had married and had a baby. However, her husband and her brother C had been tragically killed in a truck accident in January 2004, leaving Pa and her daughter ME (4 years old in 2007) living with her parents. At the time of our observation, X had just started junior high school, and E and Pe were attending elementary school. The junior high, called *telesecundaria*, was only a few years old in Nabenchauk, and X was the first member of the family to advance beyond elementary education. The family joined a new government program that paid families to have their children stay in school. On Thursdays, the children were excused from school to help with commercial activities: E, the remaining son, joined his father on the road while his sisters and mother worked in the bodega and in the village. There was no school on Fridays. The deaths of the eldest son and the son-in-law accelerated the development of a female role in their father's business of buying and selling agricultural products in different cities. Nonetheless, their new roles reflect the gender role change that is going on among the Maya of Chiapas as part and parcel of the sociodemographic trends already described (Manago & Greenfield, 2008, 2009).

Data Analysis and Presentation of Findings

Our use of the activity settings data is hypothesis driven, based on Greenfield's (2009) predictive theory of cultural change and human development. In the first part of the longitudinal comparisons, findings use all the categories of activity settings analysis to compare the same activity across time (1997 and 2007). The second section uses shorter excerpts describing activity settings (from the same pool of ethnographic data) to make theoretically derived points. Excerpts are shorter both for reason of space and to highlight more sharply and efficiently the theoretical issues. The third section uses the 2007 portion of the ethnographic data pool to make comparisons across space—the urban–rural contrasts. Whereas activity setting analysis was used to guide the 2007 observations and notes, the analysis is hypothesis driven and focuses on certain activity categories, notably, participants. Instead of highlighting all of the constituent categories of an activity in the analysis, we select contrasting aspects of activities to make theoretically driven points about effects of urbanization.

Comparisons Across Time and Space

Historical Comparison: 1997 and 2007

Below is a sample of a routine task documented in 1997: preparing flowers for transport and resale. In this example, the parents, M and T, are focused on the work at hand. The older children, Pa, age 15; C, age 13; and R, age 9, are all helping, while X, age 6; E, age 4; and Pe, age 2, play to one side. The younger children occasionally come in to see what the adults are doing but mostly they keep to themselves outside. (Field note excerpts have been edited for clarity. Explanatory material not present in original notes is set inside square brackets.)

9/4/97

Today is Thursday, and T [father] returned with a truckload of flowers to be prepared for sale. M [mother], Pa, C, and R are helping with unbundling, pruning, and rebundling to get

everything ready to go out again for resale. The flowers came from Mexico City, which is 18 hours away. After they [the flowers] are ready to go again, T will drive them 12 hours north to Campeche, where they will be sold to tourists. After breakfast the five of them set about preparing the flowers. I didn't know what to do to help—they were working so fast! I asked M when we were going to go see a family [for Maynard's dissertation research] and she said R would go with me in a little while after they got the flowers ready. I asked if I could help and she said I should just watch E and Pe for a while. C is going to school and likes it a lot, but he will not be able to go today because he is working. R went to school, briefly, but complained of stomach aches and did not go back. The young children are playing in the backyard, so I went out to be with them. After about an hour, M told me R would take me to see a family. I got my shawl on and R, X, E, Pe, and I all went to see a family.

This activity exemplifies typical economic patterns in this family, centered on commercial work. The activity settings analysis of this ethnographic excerpt focuses on five main features.

Personnel involved in this scenario are parents and three of their six children (ages 15, 13, and 9). The other three children are playing and stay away from the parents' work. Extended family members are typically not involved; commerce is generally a household endeavor. The task is to prepare flowers for trucking north to Campeche, where they will be resold. Members must work together to complete the task quickly so the father can get on the road; task demands include group management, which is done by the father. Various tools are required for this commercial setting: plastic wrapping for the flowers, twine to bundle them, a knife to cut twine, and of course, the truck to transport the flowers.

Examination of similar activities reveals a general script for Zinacantec work routines: Parents or older children direct the activities of younger people. Children do not argue with their parents; they simply pitch in and help. Several cultural values and cultural and family *goals* are communicated in this scenario, including separation of adult work from children's play, integration of older siblings into adult work (see also Gaskins, 1999), and sociolinguistic frames of deference to elders. The experienced motives and feelings of the participants can be described as harmonious coparticipation. The three older children feel a sense of responsibility for the family livelihood while the younger siblings play outside. In 50 days of field notes in 1997, this pattern recurred in economic efforts.

Economic Activities: 2007

Below is a similar economic activity recorded by Martí, with a somewhat altered pattern that was typical for 2007. Ten years later, the same family is involved in their warehouse, a bodega located in a larger market on the outskirts of San Cristóbal. They have rented a large space to serve local customers but have also subdivided the bodega into spaces for eating and sleeping; unlike the village home, which has an outhouse, the bodega has an attached indoor bathroom.

9/14/07

M and X were there. R stayed home [in the village] to take care of the house, feed the pigs and take care of E. T was also out [driving one of his commercial routes]. As mentioned, the store is pretty big. There's a sleeping area. Nearby is a TV on a cartoon channel with the

volume turned down; mostly seems to be ignored. There is also a sewing machine and chair set up in the back with work in progress. Next to it is a partitioned off area (partitioned by boxes). Pile of onions near the front entrance. Avocado boxes laid out near the middle. Flowers EVERYWHERE, but not organized (if they are selling them wholesale then people will come in knowing what they want; don't need to do a neat little display of everything like in the tiendas [small retail stores].) All the customers were speaking Tzotzil. Most were men, but also a few women. (If the clients are mostly Tzotzil then R's language skills are not as necessary; explains why she's home [in the village] instead of M. [R is a fluent bilingual; her mother, M, does not speak Spanish.]) From what X said, sounds like a lot of them are previous customers of T from before they started the store—building on existing networks of course. People came in both buying and selling. Bought bags of onions by the kilo and flowers in large quantity. Flowers were unwrapped before being bought (therefore not bought in same quantity/bundle as they arrived in; this is consistent with patterns from last year [2006 observations, which strongly resembled the 1997 field note excerpt presented earlier]) but otherwise stayed in the bundles. M and P are working on a big stack of bags for [a fundraising effort for an indigenous photographers' project]. Bags are already woven; they spend the down-time between customers working on plaiting the little straps. M says they have ~100 of them! M, Pa and Pe all help with the straps. Pa tells me she also has some new purses with a new design.

Personnel involved in this scenario are mother, three of her five living children (ages 25, 16, and 12), and granddaughter, age 4 years. The overarching economic task is selling flowers and produce in the bodega. Simultaneously, the women—Pa, age 25, and her mother, M—are working on woven bags commissioned for purchase. A third, less obvious, task is to care for the 4-year-old girl, ME. Task demands include setting up the store, watching for and interacting with customers, keeping an eye on ME, and tending to preparation of the bags whenever possible. Several tools are required: the bodega itself, the thread for the bags, and the flowers and produce. The general script includes division of labor, with older people responsible for selling and bag-making divided up among all who are skilled enough (everyone but the youngest). Several cultural values and cultural and family goals are communicated in this scenario, including the primacy of adult work (Gaskins, 1999) and deference to elders. The young child, ME, age 4, has no siblings and therefore gets lots of attention from mother, aunts, and uncle; the youngest of these (ages 12 and 14) may be considered classificatory siblings (Rabain-Jamin, Maynard, & Greenfield, 2003). The motives and feelings of the participants can be described as harmonious coparticipation. Each individual plays a part in the greater economic goals of the family group at large.

Comparison of Activity Settings: 1997 and 2007

Analysis of these specific entries and the entire corpus of ethnographic field notes from 1997 and 2007 reveal several changes in economic and other aspects of family life.

Multiple goals. In the 1997 scene, the entire family was together at home and, except for the younger children, working on a single goal. In the 2007 scene, they were separated from each other both geographically and in terms of division of labor as they worked on multiple goals. The greater family goal is to earn money for the household. This is accomplished by

the bodega business and the trucking activity of the father, T. In addition, Pa, a 25-year-old widow, worked on her own goal, namely, the making of 100 small woven bags for a commissioned project. Her mother helped her in this, and both women would benefit from the sale of the bags.

Changing child environments. In the 1997 scene in the rural environment, the younger children were outside playing in the safety of the family courtyard while the parents and older children were working on the flowers. In the 2007 scene in the urban bodega, the 4-year-old cannot go outside on the street unaccompanied; she must stay inside with the older members of the family for safety reasons.

Family members spend an increasing amount of time apart and with nonrelated people. Commerce and schooling require large amounts of time, and both are individualizing activities, moving people apart from each other. Hence, significant changes have occurred in the organization of personnel. The father, T, is on the road, whereas M and daughters Pa and R take care of household maintenance as well as work on individual commercial activities. They can work separately from each other, with some in San Cristóbal at the bodega and others at home in Nabenchauk. Family members who remain in the village also sell commodities (e.g., oranges are sold from the house). Two children, E, age 14, and Pe, age 12, go to primary school, and X, age 16, is in junior high school. Each child goes to a different classroom, apart from the others, and is mixed in with relative age mates who are mostly biologically unrelated. In contrast, older siblings spent their days at the same ages in a family peer group of siblings and nearby cousins.

Increasing use of technology: More mediated communication, less face-to-face communication. Television and telephone use have increased dramatically in 10 years. In Maynard's 1997 data, television was used approximately 2 hr per week. In 2007, the television was often on in the background, even when family members were not actively watching. In 2007, telephone kept family members in touch when they were physically distant and functioned to create almost continual contact between the two locations. Although there is no cellular reception in Nabenchauk, cellular phones allow long-distance contact when T is on the road. Technologically mediated communication is increasing, whereas face-to-face communication is, correlatively, decreasing in the face of more than one family residence.

Changing gender roles. Women are treated as equals in the public world of commerce. Daughter R, age 19, is working in what had previously been a man's world: She sometimes runs the bodega alone, supervising a younger male employee from a different community. X, age 16, home in Nabenchauk alone, negotiated a price for flowers and joked with the men who delivered them.

Having male friends has become more socially acceptable. In 1995 and 1997, Maynard, in her 20s, could not talk to males for fear of being thought "loose." Along with greater freedom to associate with boys before marriage, many females in our extended family sample are waiting until their 30s to get married.

9/26/2007, in the bodega

J, Aunt L's son (age 19) comes in. I ask him if he is married—says he is looking. I ask about his sisters—neither is married. (The two sisters are now 29 and 31).

Being unmarried at this age was very unusual in 1991 and unheard of in 1969-1970. Yet we know one Nabenchauk family with four unmarried daughters; the oldest was 30 in 2007.

Females are also being placed in positions of managerial responsibilities. An example follows.

9/26/2007, in the bodega

R, a few minutes ago, told employee [15-year-old boy] to move boxes. I said you are his *yakval* ["boss" in Tzotzil]. She said that her back hurt. R and boy now preparing for T's arrival that night by moving boxes of avocados to the side.

Note that R rationalizes her directive by saying her back hurts rather than admitting to having power over a male employee. This suggests a transitional stage where the female as boss still requires some extenuating circumstance.

Nonetheless, change has occurred. In sharp contrast, 16 years earlier, author Greenfield's daughter Lauren, photographing for *National Geographic*, wished to hire a Spanish-speaking assistant. At that time, the only Spanish bilinguals were men, but young Zinacantec men did not know how to talk with a woman on an equal level in a work situation. Lauren therefore chose a monolingual Tzotzil-speaking woman as her assistant, even though it meant Lauren had to learn Tzotzil.

A change in daily routine. Commerce has shifted the daily routine. In 1997, family members who were at home went to bed by 9 p.m. and arose close to dawn. In 2007, they often did not sleep at least 1 night a week to prepare commodities for the market. For example, in the summer of 2007, T, the father, arrived in San Cristóbal on Thursdays at 1 a.m. (late Wednesday nights), and the whole family helped him unload the truck before he departed by 11 a.m. for Campeche on the Yucatan Peninsula. Family members were keeping up with the fast pace of commerce.

Increase in schooling. In 2006, in a sample of 36 families with more than 120 children, about 80% of girls and 95% of boys ages 6 through 11 years were attending school (Maynard, 2007). This was a dramatic increase since 1997, when 17% of school-age children in the same families attended school (Maynard, 2004).

In 2007, children were going to school earlier and "on time" by American—and Mexican—standards. Whereas X graduated from elementary school at age 16, her niece ME is already in kindergarten at age 4. Indeed, in Nabenchauk, "*kinder*" used to start at age 5 (and many children did not start until age 6), but now many children start at age 4. Furthermore, when X was going through school, many children (including her) started and stopped or had to repeat grades. These delays caused many children to graduate from sixth grade at 16 to 18 years of age. In 2007, the graduating age had narrowed, as most children attended school continuously.

Mothers and children gave many reasons why more children were going to school and why they were starting younger and staying longer. The top reason cited by both mothers and children was a snowball effect: More children are going and that makes it all right for the others to go. The children said they liked school. Mothers also said it was good for children to learn to read and write and do math so that they can know how to do things. They realize that commerce requires these skills and that school-educated children are more successful in commerce.

That these children were excused from class on Thursdays indicates, however, that the historic conflict between work and school persists. In earlier years, work and education were treated as mutually exclusive choices, and the conflict between the two took the form of deciding whether to continue school or leave for work (for boys) or weaving and household management (for girls). In 2007, more children were receiving an education, and children were remaining in school longer; however, they had to constantly negotiate between competing school and economic duties.

Shrinking family size. In 2007, parents were having fewer children. Interviews with the town's medical doctor in 2006 indicated that several hundred women were appearing monthly for birth control shots. Interviews with 10 married women and one married man in their 20s and 30s indicated that they desired to have 3 or 4 children, not 6 or 10, as their parents had.

Shrinking family size also affects sibling caretaking interactions. In 2006, effects of shrinking family size and increased schooling were already evident: There were girls and boys who were not involved in sibling caretaking, whereas their same-age counterparts had been 9 years before. Children in smaller families face less competition for resources, including food, toys, new clothing, and parental attention. In 2006, very young children in small families were getting as much attention from parents as they had gotten from siblings in 1997.

The community effects of this shrinkage are still unknown. Zinacantec society was previously built on the older brother–younger brother distinction, which was highly prevalent in ritual life and in the community (Vogt, 1969). Eldest sisters and brothers were revered, often standing in as second mothers and fathers for the younger siblings (an additional reason cited for not sending girls to school in previous generations). This reverence may diminish as siblings abandon this role in favor of schooling, as smaller family size decreases the need for sibling help within the household and as the egalitarian framework of schooling becomes influential in children's socialization.

Increase in individual choice. By 2007, individual choices in everyday daily life had increased. For example, as recently as 2003, siblings typically ate together out of one pan around the fire, and individual food choice was not an issue. Now that there is more money and more variety, there is a much greater choice in food, especially snack foods, which are often bought by the children themselves. Part of this greater choice involves a movement away from the subsistence practice of preparing food at home and toward purchasing meals. By 1997, eating in markets or on the road had entered the driver's lifestyle; by 2007, the pattern had spread to other members of the family, particularly when living in the city.

Dwellings that provide more privacy. In 1991, the family lived in a one-room house with three beds: one occupied by the parents and baby, a second occupied by the siblings, and a third where author Greenfield or her daughter Lauren slept when they were working in the village. By 2003, there was a sleeping house and a kitchen in the backyard. In 2005, as the family size increased with the return of Pa and her daughter, the sleeping house was used by two children, and the others slept in three beds in the warmer main room, with Martí usually sharing with an older daughters when she worked in the village.

By 2007, following the pattern in the village as a whole, the house had been torn down and replaced with a multiroom dwelling. A stairway to the roof had been constructed so that it could later be transformed into a two-story dwelling.

9/24/07

The new house has 4 bedrooms and a main living room, as well as a passageway leading out to the side yard. The kitchen area is in an alcove under the stairs. Stairs lead up to a flat roof with clotheslines and Rotoplast (tank for water). A half-pipe runs from the roof to the Rotoplast, carrying rainwater. Tucked up against the side of the new house (right by the exit to the side yard) is the old kitchen. Beyond that are the bathrooms, which are reached by climbing down a muddy slope.

[There are four bedrooms: Pa and her daughter share one, X and R share another, E has his own room, and the parents share the fourth room.]

Another interesting note: the new house faces the street (whereas the old one faced the yard they shared with [T's brother and his wife, who live next door with their 3-year-old daughter].)

This new house with its four separate bedrooms provides much more individual privacy, a central characteristic of individualistic culture, and much less togetherness, a central characteristic of collectivistic culture. In addition, changing the house's face from shared courtyard to street at once makes it less social and more accessible to cars, business, and the general public.

Decrease in visitors at home. Before the commercial way of life, visitors at home, usually family members, were common. Although the number of daily visitors was already much diminished in 1997, compared with earlier years, it was still greater than 10 years later. With most adults traveling to markets for their livelihood, many fewer adults, especially males, are home in the village. During our 10.5 hour of observation in Nabenchauk in 2007, the only social visits to the house were paid by a sister-in-law and her 3-year-old daughter, who live next door. This situation contrasts with 1997, when a different sister-in-law lived across the courtyard in the same house and would typically visit on a daily basis. Two decades earlier, visitors arrived several times per day. One cause for this decrease in social activity is simply that with so much commercial activity in neighboring cities, fewer family members are at home during the day.

Continuity: Ritual life. The most striking continuity in family routines in Nabenchauk is in the area of ritual life, specifically, the attendance at the gravesides of family members in the cemetery on Sundays. The basic script for the visits is almost the same. Compare the following two observations, 10 years apart:

7/20/97 in the village

Have meat or other food ready to take for the grave. Get washed and dressed nicely. Collect flowers (they have flowers at home because they are in the flower business). Pile in the truck, front and back; stop at the store on the way to buy candles, drinks for the grave. Snacks for the children are a new addition in recent years. (There used to be more vendors at the cemetery selling nuts and other snacks.) Go to cemetery. Light the candles in a little well in the grave; lay out the food on the grave. Arrange the flowers to decorate the grave, after removing the old flowers. On the fancier graves there are cement vases. The script typically includes sharing the drinks and food with the dead, but does not occur every Sunday.

9/23/07 in the village

We leave for the cemetery in T's small truck. (He also has a larger one; I am not sure if he has another smaller one—the one the oranges were later taken out of—or if the people were sharing space with the oranges when they went to the cemetery). The group includes me [Greenfield], T, Pa [eldest daughter], ME [Pa's daughter], Pe [youngest daughter], and S1 [T's sister-in-law] and her daughter E. I rode in the front with T, Pa, and ME. The others rode in the back. We pick up T's Ladina sister-in-law, married to his younger brother, and their three children. They are coming to arrange the grave of T's father [who was Greenfield's assistant] and his wife. I thought we were going for C, T's son and for Pa's husband, but I forgot that Pa also wanted me to tend the grave of her grandfather. Before we left the house, I gave my *comadre* Pa 200 pesos as my contribution to the expenses for the graves (food, drinks, candles). [*Comadre* and *compadre* are fictive kin relationships, usually based on godparentage and adopted by Zinacantecs from Catholicism. Unlike in the United States, where the relationship is primarily between the godparent and godchild, the relationship in Mexico is primarily between parents and godparents Mexican and Zinacantee godparents (*padrinos*) are considered extended kin and have the same responsibilities and privileges as other adult members of the family.]

We stop at a store on the way to the cemetery to buy candles, fruit, water, and soft drinks for the graves. ME whines because she wants to get out and buy snacks. They buy her some kind of juice and some kind of chips. Most people in the community are walking from the cemetery rather than using trucks.

At the cemetery, I go with Pa to light a candle first at her husband's grave and then at her brother's grave. Also present there were T, Pe, and E [his two youngest children]. The males were not wearing a *pok k'u'ul* [traditional Zinacantec male poncho]. T looked very sad, standing at the foot of his son's grave. Pa tells me to go to her grandparents' graves and that ME will accompany me. I go to light candles for T's father. I goof and light two for one. I then have to move one to his wife's grave. Their grave is in a little house with open sides and benches all around. The graves are tile and are very fancy. There are cement flower holders on the top of the graves. I help [the Ladina sister-in-law] with the flowers for both graves. She arranges the food and drink.

Life cycle rituals tend to be the most conservative part of any culture. However, even though some visits to the cemetery still happen every Sunday, many families are observing Sunday as a day of leisure instead, with options for activities. In 2007, on the same Sunday that the cemetery observation described occurred, members of the family participated in four different activities in four different locations: R, age 19, went to a curing ceremony for her aunt. Her mother, M, went to a fiesta in San Cristóbal without her husband, who, after his visit to the cemetery, went to another town many miles away to see a friend. To visit an

unrelated friend in another indigenous community was something entirely new. Significantly, their friendship was a result of the urban market environment.

9/23/07 on the road from the village to the city

T and E are passing by San Cristóbal on their way to visit a Tzeltal-speaking friend in Oxchuk whom T met in the market. In response to my questions, I learn that he does not do business with the man—they just chat (*loilah*) in the market. They communicate in Spanish because that is their common language. Shows how commerce leads to multicultural relations.

This divergence in activities is a striking change from the past, when Sundays were typically very quiet days spent first at the cemetery and then eating, chatting, and sitting at home with the family, often including extended kin. In 2007, if extended kin were together at the gravesides, they typically went to separate houses to eat afterwards.

On this particular Sunday, there was not even a meal afterward at the family's village home—because the mother was off at the fiesta in San Cristóbal. This was the first time author Greenfield had ever visited the cemetery in 16 years that there was no family meal of the ritual chicken soup afterward. It was also the first time she had ever seen the wife and daughter attend a fiesta without the father of the family, an indication of increasing female independence. The appropriateness of being seen in public without family is a norm that has been gradually changing. Martí's research (conducted in the village in 2005) documented an argument between two adolescents about whether it was acceptable to attend a fiesta with extended kin versus with one's own parents (Martí, 2007).

Clothing: Continuity and change. Although clothing has become increasingly elaborate, innovative, and individuated as commerce developed (Greenfield, 2004), in 1997, women and men were still wearing their Zinacantec woven garments in Nabenchauk, and women and older men (but not young and middle-aged men) wore them outside the community as well. By 2007, men and boys were no longer wearing their woven ponchos (*pok k'u'ul*) even in the village, except at fiestas and other ritual events.

Summary: Activity Settings Analysis of Shifts From 1997 to 2007

This activity settings analysis systematically documents the constellation of changes that occurred between 1997 and 2007. Together, they signal changes in the learning environments of everyday life and the cultural values they embody.

First, the arrangement of personnel to accomplish tasks changed dramatically. In 1997, family members typically worked at home together to get a job done. In 2007, family members were spread in many directions, often at different locations doing different jobs, all related to making money for the family. A related personnel issue is the change in age of marriage and shrinking family size.

Tasks for economic support also had changed. Families were involved in more different activities, ranging from trucking to weaving. Women and girls had an expanded role in the money economy, taking key roles in business as well as commercializing textile production with the sewing machine.

Scripts of interaction shifted along with personnel but retained more continuity. Obedience and deference to elders have been maintained, and younger children still defer to older children and adults. Yet the scope of age hierarchy has narrowed. Notably, children and women now occupy the chairs that were formerly reserved only for men, and there are often enough chairs available for all family members and a number of visitors. The increase in wealth, for example, being able to buy more chairs, has played a role in narrowing intrafamily hierarchies in the village.

Materials have changed dramatically with new technology. For example, in 1997, the entire village had only one phone; in 2007, household telephones were widespread. Additionally, goods and agricultural commodities were bought and resold in increasing number and variety.

The motives and goals for hard work are still present, although money seems a more prominent topic of discussion than before. There has also been some individuation of activity goals as people find ways to accomplish more activities at once or divide labor on the basis of individual skills (e.g., weaving for sale).

The emotional experience of the actors in economic activity seems to have remained somewhat constant as well: To work together to achieve common goals helps each family member feel satisfied.

Comparison of the Rural and Urban Settings in 2007

More contact with strangers in the city. Strangers were common in the bodega as customers came and went. Interaction with strangers was much less common in the village. In the village, commercial transactions (such as buying at a store) were generally with neighbors. The village was small enough that even the shopkeeper near the cemetery on the other side of the village was well known to the family when we stopped to buy candles and other supplies.

Unchaperoned male–female contact in the city. Our urban–rural comparison in 2007 indicates a huge difference in male–female interactions between city and village. Consider the following two examples:

9/26/07 in the bodega

About 4 pm Ladino boy from Tapachula comes in to visit R. He has sold all his bananas. She met him across the street where he sells. I asked her if he was a boyfriend. She replied “friend.”

A teenage girl having a boy as a friend used to be unheard of, let alone a Ladino boy. The Maya in Chiapas have throughout the centuries suffered greatly at the hand of Ladinos, the cultural descendants of the Spanish conquest, and even today, racism against Mayans by urban Ladinos is not uncommon. A young Zinacantec woman in a friendship relationship with a Ladino man is still unlikely in the village setting.

During the same observation, R is alone in the bodega with a 15-year-old male employee from another community:

Ca. 2:15 p.m.: I arrived by taxi from the hotel. R. is alone with their worker from San Andres. I think they have eyes for each other (which she later denied). She said he was too young. And she calls him the little one. He is 15 and she is 19.

Lourdes de León, a Mexican anthropologist who has been doing research in Nabenchauk for nearly two decades, noted that R, who had been at the bodega alone with this employee and with male visitors, would never be allowed to be alone with a boy in her house in Nabenchauk.

In contrast, in the commercial transactions in the village (described earlier), neither the male who wished to buy oranges nor the man delivering payment ever left his car. During the cemetery observation on 9/23, there are no unrelated men anywhere near the unmarried female members of the family.

Greater economic responsibility for women and girls in the urban environment. The bodega, with its complex web of buying and selling different products and supervision of an employee, is being run by T's wife and daughters. The daughters, because of their knowledge of Spanish, have a particularly great responsibility. Sixteen-year-old X is the oldest literate child and, as such, has a special role as her father's assistant. Although selling spills over a bit to Nabenchauk, it is much simpler there and does not involve the size or complexity of the bodega. The greatest business responsibility at home falls on Pe, age 12, who sells oranges out of the house or at the Saturday market in the village.

9/23/08 in the village

There was a huge pile of oranges on the porch of the house. Pe (daughter) had sold them the day before at the Saturday market in Nabenchauk. It takes about two weeks to sell them all. T (father) buys them every two weeks in Campeche. Later in his truck as he was taking me [Greenfield] back to San Cristobal I asked him about the economics. He sells the oranges for double what he paid for them.

Indigenous clothing changes more in the city. Interviews with several indigenous people in San Cristóbal outside of this family indicated that they were concerned about the prejudice and discrimination they encountered when they wore indigenous clothing, especially on the job market (Manago & Greenfield, 2008). Thus integration into the Mexican commercial economy is manifest in a desire to escape the stigma of indigenous clothing. Whereas the stigma of speaking Tzotzil in the city has decreased, the stigma of Zinacantec clothing seems to have increased. This state of affairs may be because increased bilingualism allows one to rapidly adjust to present circumstances and audience. Clothing, however, cannot be changed so rapidly.

Clothing has been the way that Zinacantecs identify themselves as a member of a specific Maya community and also distinguish themselves from the Ladinos. Weaving and embroidering clothing has been a major part of the Maya way of life from before the conquest. The woman's shawl was an essential part of her dress, and a woman would never go out of the house without a woven shawl covering her blouse. But in 2007, when Pa and her little daughter came to pick up authors Greenfield and Martí in a taxi to take us to their bodega for an observation, they were not wearing shawls over their blouses. When asked

about this, Pa replied, "In Nabenchauk, I would wear a shawl." Clearly, the norms for clothing and appearance are breaking down in the city, where Zinacantec girls wearing blouses without shawls have been seen on the street. The female role is being transformed as modesty becomes less important. Some observations by author Martí (2007) indicated that hairstyle also was becoming more flexible for Zinacantec girls in urban settings. In that case, the new hairstyles had spread within a few years to the village as a whole; in the 2007 elementary school graduation, every girl had gone to a hairdresser in the city to get her hair done up in a modern Mexican style.

Reconstitution of visiting. The number of family social visits, particularly by male family members, was much diminished in Nabenchauk, as men were off on their long commercial voyages from city to city; during our village observations, we did not observe one visit from a male member of the extended family. In contrast, the city bodega was like a new village, attracting male cousins and uncles. During one observation of about 3 hr in which R was managing the bodega with the employee, her uncle, a first cousin, and the younger brother of a sister-in-law all stopped by to visit.

Conclusions

From 1997 to 2007, our observations indicate movement toward more individual activity and more privacy, with less family togetherness; toward more specialized economic roles; toward more interaction with strangers and less with family; toward more mediated communication (telephone) in the family and less face-to-face communication; toward more freedom for young women in their interactions with young men; and toward more opportunity for girls and women in the academic and economic realms. All of these generalizations were manifest in the analysis of activity settings of one family through the constituent categories of personnel, location, tools, values, and scripts. Together, these elements constituted learning environments that were reflective of and adapted to a more *Gesellschaft* environment (Greenfield, 2009). Increased commercial activity and urbanization are variables that are affecting Mexico as a whole and the Maya in particular. This case study indicates how macro changes affect activities and social life on the micro level.

The activity settings analysis also reveals how various elements of a *Gesellschaft* environment interact synergistically with each other. For instance, a more complex commercial business and a cell phone both necessitate a certain amount of literacy and numeracy (e.g., keeping financial records and programming telephone numbers). In this family, the child with the highest level of education served as her father's assistant and was in charge of precisely these tasks. Development of commerce and use of communication technologies make schooling more valuable. At the same time, the government's development and support of education beyond elementary school make it possible to extend education when there is a felt need. The addition of an urban setting for this family made the telephone more necessary. They became a four-telephone family: one in the bodega, one at home in the village, plus the two cell phones carried by the 16-year-old and her father.

Although the development of a commercial economy seemed to be the driving force in the diachronic changes in activity settings, the urban environment was a critical factor in

synchronic differences. However, note that because there was no urban family environment in 1997, urbanization of the family also contributed to diachronic differences. Comparison of activities in the urban and rural settings demonstrated that female roles were particularly altered, with abundant opportunity for unchaperoned interaction with males for young women, greatly increased interaction with strangers, and a leap forward in career development and egalitarian relations with men.

These observations support Greenfield's (in press) theory linking sociocultural change and learning environments as well as Redfield's (1941) analysis of three communities in the Yucatán in terms of folk society and urban society. The findings document effects of sociodemographic changes, particularly, the diachronic effects of a more commercial economy and the synchronic effects of an urban lifestyle, on the learning environments of everyday life.

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