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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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## Abstract

In recent decades, ecocultural environments of the Maya in Chiapas, Mexico have undergone continuous change from more subsistence-based to more commerce-based and from more rural to more urban. Comparing ethnographic observations of one family over a ten-year period and across rural and urban environments, we used activity-setting analysis to investigate changes on the micro level that would reflect 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 same period of time were greatly intensified by urban dwelling: contact with strangers and people of different ethnicities, women's economic achievement, and greater freedom for young women to have unchaperoned contact with young men.

**KEYWORDS:** women, social change, Maya, learning environments, commercial activity, urbanization

Implications of Commerce and Urbanization for the Learning Environments of Everyday Life:  
A Zinacantec Maya Family Across Time and Space

Worldwide global changes have shifted and continue to shift ecocultural environments, transitioning from a subsistence base toward commercial activity, from rural to urban environments, as well as 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 (Tonnies 1887/1957/1988). There is evidence that these macro changes shift children's learning environments and pathways of development in particular and predictable directions (Greenfield, submitted for publication). There is also evidence that each of the above-mentioned ecological variables moves the learning environment and development in an identical direction (Greenfield, submitted for publication). Last but not least, women's roles are often changed the most under changing sociodemographic circumstances (Efron, 2001; Seymour, 1999). What are the implications of these changes for everyday family life, the cradle of socialization and human development? In particular, how will they affect female socialization and development?

Our past research in the Zinacantec Maya community of Nabenchauk in the highlands of Chiapas has followed the community from 1969 to the present, as it experienced these global trends (Greenfield, 1999; Greenfield, Maynard, & Childs, 2004; Maynard & Greenfield, in press). We demonstrated that as the economy decreased its basis in subsistence and became more commercial over 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 could be tied to shifts in specific learning environments: family participation in commercial activity (as differentiated from participation in subsistence activities) was causally associated with more independent apprenticeship processes in the domain of weaving and more abstraction and comprehension of novelty in the cognitive domain of pattern representation. Other ecocultural changes consist of an increase in the number of children, especially girls, attending primary school and the introduction of television. School attendance has moved cognitive strategies in the direction of more abstract visual representation, while television has expanded the use of external visual representation in the design of woven and embroidered textiles (Greenfield, Maynard, & Childs, 2003; Maynard & Greenfield, 2008).

But what does the shift toward ever more developed commercial activity do to the development of new learning environments for children and youth? What is the effect of urbanization on socialization and everyday life? With an emphasis on girls and women, these were our key questions. 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 micro-level changes in everyday family life would reflect broader social changes - as the surrounding community and society as a whole developed an increasingly commercial economy and became more urbanized.

Our research design utilizes our long-term observations of one Zinacantec Maya family as a natural experiment. We first compare learning environments for the same family in 1997 and 2007, a period in which the family reflected all of these transformations of their social surround: 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. Then we compare two

different learning environments for this same family in 2007, examining daily routines in their village and city homes. While both locations were live/work, the city location was explicitly for business, where in the village, business was secondary to its function as a family home. We expected to find a number of the historical effects of commercial development to be intensified in the urban environment.

*Methodology: Activity Settings Analysis and Ethnography*

Children's learning is not isolated but occurs as part of their participation in and observation of daily activities and routines. 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 the cultural influences of 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 (Weisner, 1997, 2002), it serves as an ideal data source for an activity settings analysis that compares different contexts and different epochs (Maynard, 2005).

A shift in focus from the individual to the activity as the ethnographic unit of analysis allows for examination of how children's own participation facilitates and reinforces social learning, and how this socialization is affected by the local context and other participants (Rogoff, 1998; Vygotsky, 1978). Children learn and perform different patterns of appropriate behavior depending on the setting, the activity, and the individuals present (Goodwin, 1990).

Following the ecocultural approach of the Whittings (Whiting & Edwards, 1988; Whiting & Whiting, 1975), the premise of Weisner and Gallimore's activity settings analysis is that the activities that make up everyday routines provide opportunities for children to learn what is important in their culture and how to behave in culturally-appropriate, meaningful ways

(Weisner, 1989). An activity settings approach can be useful to understand cultural communities (O'Donnell, Tharp, & Wilson, 1993; Tharp & Gallimore, 1988) as well as the meaning which cultural activities hold for their participants.

### *The Five Elements of Activity Settings Analysis*

Activity settings analysis examines features of culture within activities and contexts surrounding 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, the who, what, when, where, why, and how of activities.

The *personnel* who are available to children may vary according to ecocultural factors such as the particular social organization of a group of people and the local economy and work patterns (e.g. sibling caretakers may be preferred if both parents work) (Weisner, 1989). Routine *tasks* shape the skills available to children -- for example learning to weave, care for infants, or figure the area of a triangle. The *scripts* describe appropriate conduct in the activity, including the typical pattern of social interaction and the cultural norms for self-expression. For example, Zinacantec Maya children acquire an implicit script for social interaction which includes showing respect to those older than oneself. Analysis of *motives* or purpose for the task requires understanding the meaning or meanings an activity holds for its participants. For example, a sibling caring for a young child may teach her how to make tortillas in order to lessen the older sibling's work load, while at the same time being motivated to contribute to the family collective. Lastly, an activity settings analysis involves understanding the underlying *cultural values* and beliefs of the people participating. Looking at activities through the lens of the

culture's goals or values helps the researcher to understand how activities shape a child's developing cultural competence

### *Design and Purpose of this Study*

In this paper, activity settings analysis is used to investigate the changes in learning environments in one Maya family both diachronically and then synchronically. First, we compare two different time periods, 10 years apart (1997 and 2007), in the village setting of Nabenchauk. Next, we investigate the effect of an urban setting on behavior by comparing the family's activity settings in the village with those in a brand new urban environment (a newly opened warehouse in the neighboring city of San Cristóbal de Las Casas) 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, submitted; 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*

Our paper uses ethnographic data from fieldwork with Zinacantec Maya families conducted between 1997 and 2007. The authors have conducted research in Nabenchauk, and more recently in the city of San Cristóbal de las Casas, approximately 30 minutes from Nabenchauk by car. We have been ethnographically involved with four generations of the study family and they have also helped us to carry out more formal studies using methodology from developmental psychology (e.g., Greenfield, Maynard, & Childs, 2003; Maynard & Greenfield, 2003).

For this study, we use field notes from one Maya family taken in 1997 and 2007. In 2007, ethnographic data were collected using as guidelines the five central features of activity settings

presented above. The 1997 data did not have such an explicit schema, but this schema provides a lens for its presentation here. We supplement our ethnographic observations with some of Maynard's longitudinal findings from fieldwork in 1995, 2000, 2003, and 2006.

Collectively, we 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, though there is an increasing acceptance of Spanish as more Zinacantecs learn to speak it and use it in commercial activities. The method of activity settings analysis is used to examine differences in activities: across the two time periods in a rural setting, and in 2007 between the rural setting and a new urban setting. It was the establishment by this family of a *bodega* (warehouse) in San Cristóbal in December 2006 that enabled and inspired this particular paper.

Though one or the other of us has conducted field research in Mexico in 1969, 1970, and almost every year since 1991, we selected these two time periods for systematic attention in order to include both our most recent field experiences and 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. For purposes of the study, we conceptualize learning environments more broadly as activity settings, with their five elements: personnel, tasks, motives, scripts, and values.

This analysis complements the prior research comparing 1969 and 1970 with the early 1990s (Greenfield, 1999, 2004; Greenfield, et al., 2003). Here, the earlier periods will be used where appropriate in order to give a longer time perspective on ongoing change trends: Greenfield has a time perspective going back to 1969; while Maynard's field research in Nabenchauk began in 1995 and Martí's began in 2004.

*The 1997 Observations*

The 1997 ethnographic observations were made by Maynard in the course of carrying out her dissertation research. While the dissertation was based on formal videotaped observation sessions, Maynard also took ethnographic field notes on the the family on which we focus here;, this family was assisting her with her dissertation study and she lived with them while in the village of Nabenchauk. While the 1997 observations and field notes were not based on explicit use of activity setting 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. All of the observations were done in the family's home in Nabenchauk or at places the family visited within the village, such as the cemetery or stores. The focus of the observations was on the activities and interactions within the family, with emphasis on the involvement of the children in tasks. Field notes were taken on 50 days, live at the scene, and then expanded in the evenings when there was more time to write about what went on during the day. Field notes typically cover 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.).

#### *Design of the 2007 Observations*

In December 2006, the father of the family rented a *bodega* (open warehouse) in the neighboring city of San Cristóbal to use for both retail and wholesale selling of the 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 de las Casas. The father was on the road most of the week. He supplied the bodega with produce.

The goal of the 2007 research plan was to document this shift between the two locations as a natural experiment comparing learning environments (operationalized as activity settings) in the urban bodega and rural household environments.

Authors Martí and Greenfield made five observations in a twelve-day period between September 14, 2007 and September 26, 2007. Observations were evenly divided between the village and urban settings, with about nine hours in each. Because school attendance affects schedules (and consequently the personnel available in a setting), we observed in each location both 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*

The family which we observed consisted, in 1997, of the mother (M), the father (T), and their six children: sons C (age 13) and E (age 2) and daughters Pa (age 15), R (age 9), X (age 6) and Pe (age 2). At the time of the 1997 observations, only C was attending school, and he was the first child in the family to attend school for more than a few weeks.

Ten years later, the configuration had changed substantially. Pa's husband and her brother C had been tragically killed in a truck accident three and a half years earlier, leaving her and her daughter ME, now four years old, living in her parents' home. 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 the village, 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 in the bodega and in the village, for the female members of the family, and on the road, helping the father, for E, the remaining son. There is 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 described earlier (Manago & Greenfield, 2008).

*Comparisons across Time and Space*

We will focus on comparing activity settings across time (1997 and 2007) and across space (village compared with city) in 2007.

*Background: General Sociodemographic Changes from 1969 to 2007*

In 1969 and 1970, the Zinacantec economy was based on subsistence agriculture: food (mainly corn and beans) was grown for the consumption of one's family and most clothing was hand woven and sewn within the family. Sheep were raised for their wool, which was spun and woven into warm clothing for men and women. Water had to be carried from an external source; and wood for fuel also had to be carried, usually for large distances. There were no vehicles or phones in the village. Electricity was installed at the very end of our field research in 1970, but it was not yet clear what it would be used for apart from light. The overall rate of schooling was 29.35% with most of the schooled children being boys; schooling for girls was just getting started and schooled girls were found only among the youngest participants (Maynard & Greenfield, 2008). The village had a population of about 1500. Houses had but one room and were made out of mud and wattle often with thatched roofs. Land was rented in hot country to grow corn and beans, and the harvest was used to feed the family with surplus being sold. So money-based commerce had begun, but barely.

When Greenfield and Childs returned to Nabenchauk in 1991, the population had doubled to 3000. Because of lower corn prices, Zinacantec men no longer rented agricultural land in the lowlands. Because of increased population and use of village land to raise flowers for

sale, there was very little room for sheep to graze and diminished space to grow corn. In the mid 90s, the price of corn having been further lowered by the North American Free Trade Agreement, families started to buy corn, thus destroying the Maya corn culture that was at the heart of the Maya way of life. Decorative brocade weaving and hand embroidery had started to give way to machine embroidery (Greenfield 2004). There was now piped water in the village, although it has, until present, never been available all day. Televisions were widespread, with 26% of households owning a TV (Maynard & Greenfield, 2008). Many families had trucks or vans, which were used for commercial purposes and were the heart of the new commercial economy. The rate of schooling had jumped to 50.38%, with the rate of male schooling doubling and that of females more than quadrupling (Maynard & Greenfield, 2008) Women and girls were also involved in commerce, and expanding the traditionally female domain of textile production into commercial businesses, such as selling their weavings and embroidery or running a retail thread store. These activities gave women more economic independence from their fathers or husbands. Coca Cola and other soft drinks had become so prevalent that they were used along with *pox*, the local liquor, in rituals. By 1997, the North American Free Trade Agreement (NAFTA) and the resulting Zapatista movement had been in place for three years, and other changes were evident. For example, Nabenchauk had a limited indigenous taxi service. The first two-story house had been built.

By 2007, there was little agricultural subsistence; most available agricultural land was being used for flowers, which were sold commercially. Men wore store-bought Mexican clothing for everyday use and locally woven and embroidered clothing was worn only for fiestas and special occasions. Most women and girls still wore the distinctive Zinacantec outfits, however the price of hand woven clothing had risen with an increasing conception of labor and

time as economically valuable (and store-bought clothes increasingly cheap, probably a byproduct of NAFTA), and even some women complained that Zinacantec clothes were too expensive for everyday use. For example, a Zinacantec woman was observed at the sixth grade graduation, a major annual event, wearing store-bought Western clothes because, according to her, Zinacantec clothes were too expensive. There were private cars in the village, and wood fires had begun to be replaced by gas stoves and charcoal braziers. Two-story houses were very prevalent. A junior high school (*telesecundaria*) had come to the village a few years earlier. Cameras and video cameras had come into the village, even to the point of having paparazzi at the sixth grade graduation!

### *Findings*

First we compare activities and activity settings across time. Next we compare across space, that is, the rural setting compared with the urban.

### *Historical Comparison: 1997 compared with 2007*

Below is a sample of a routine task documented in Maynard's fieldnotes 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 nine, are all helping, while X, age six, E, age four, and Pe, age two, play to one side. The younger children occasionally come in to see what the adults are doing, but mostly they keep to themselves, outside.<sup>1</sup>

9/4/97

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

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<sup>1</sup> Field note excerpts have been edited for clarity. Explanatory material not present in original notes is set inside square brackets.

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 back yard, 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 is an example of the typical economic patterns in this family, which are focused around commercial work. The activity settings analysis of this ethnographic excerpt focuses on five main features:

1) The *personnel* involved in this scenario are the 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 in commerce; it is strictly a household endeavor. 2) The *task* is to prepare flowers for trucking north to Campeche where they will be resold. The individuals must work together to complete the task quickly so the father can get on the road, and *task demands* include management of the group, which is done by the father. A variety of *tools* are required for this commercial setting, including plastic wrapping for the

flowers, twine to bundle them, a knife to cut twine, and of course the truck to transport the flowers. 3) Examination of similar activities reveals a general *script* of Zinacantec work routines, in which the parents or older children direct the activities of younger people. The children do not argue with their parents; they simply pitch in and help. 4) There are several *cultural values* and cultural/family *goals* communicated in this scenario, including the separation of adult work from children's play, the integration of older siblings into adult work (see also Gaskins, 1999), and sociolinguistic interactional frames of deference to elders. Although the children are playing nearby, the parents focus on their work and do not get involved in the children's activities. 5) The experienced *motives and feelings* of the participants can be described as harmonious co-participation. 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, Maynard observed a similar pattern in economic efforts: commercial work was directed by parents and did not require school-based skills. Older children with strength and cognitive skills of organization helped with the hustle and bustle of getting the flowers prepared while the younger children played outside, out of the way of the adults' work. School-based skills were not required for the tasks the older children engaged in. The father managed any tasks requiring math and literacy on his own, such as orders for flowers, amounts owed, and dates to be delivered. All the work that family members were involved in, except for the father, took place in the home or in the front courtyard.

#### *Economic Activities: 2007*

We now present a similar sample of a typical economic activity recorded by Martí in 2007. In this case, the Pavlu family is involved in their warehouse, a *bodega* located in a larger market on the outskirts of San Cristóbal de Las Casas. They have rented a large space to be able

to serve more local customers, but the bodega has also been subdivided into spaces for eating and sleeping as well as an attached indoor bathroom.

9/14/07

M and X were there. R stayed home to take care of the house and 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 pile of blankets, looks like where they sleep. 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 instead of M. [R is the second-oldest daughter and 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 buying and selling both. Bought bags of onions by the kilo and flowers in larger quantity. One man bought several huge bunches of palm(?) leaves. X cut off the tips of the stems to make them even. 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 of the family preparing flowers for retail and transport, which strongly resembled the 1997 fieldnote 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. Same as the others? I ask her. No, she says, new style, like this: She brings out a blouse with woven pattern in hollow diamonds. She shows me another blouse -- this one is acrylic, she says, but this one is cotton.

1) The *personnel* involved in this scenario are the mother, three of her five living children (ages 25, 16, and 12), and her granddaughter, age four years. Other people who were not present here but have participated in other store-based activities include R, age 19, E, age 14, and the children's father, T.

2) 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 sale. A third, less obvious, task is to care for the 4-year-old girl, ME. The *task demands* include setting up the store, watching for and interacting with customers, keeping an eye on ME, and tending to the preparation of the bags when possible. Several *tools* are required for this activity, the bodega itself, the thread for the bags, and the flowers and produce in the bodega.

3) The general *script* includes a division of labor, with older people being responsible for selling and the bag-making being divided up among all who are skilled enough (in this case everyone but the youngest)

4) There are several cultural *values* and cultural/family *goals* communicated in this scenario, including the primacy of adult work (Gaskins, 1999) and the deference to elders. The young child, ME, age four, doesn't have siblings to interact with. She therefore gets a lot of attention from her mother and her aunts and uncle; the youngest of these (ages 12 and 14) may be considered classificatory siblings (Rabain-Jamin, Maynard, & Greenfield 2003). 5) The experienced *motives and feelings* of the participants can be described as harmonious co-participation. The individuals are playing a part in the greater economic goals of the family group at large.

#### *Comparison of the Economic Activity Settings: 1997 and 2007*

Content analyses of these specific entries and of the entire corpus of ethnographic field notes from 1997 and 2007 reveals several themes of change in the economic patterns of families from Nabenchauk.

*Multiple goals.* As seen in the ethnographic notes above, whereas in 1997 the entire family was at home together and, with the exception of the younger children, working on one goal, in 2007 they were separated from each other both geographically and in terms of division of labor as they worked on more than one goal. There is the greater family goal of earning money, having enough to run the household. This is accomplished by the bodega business and the trucking activity of the father, T. Pa, a 25-year-old widow, participated in the overall family goal, but also 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 will benefit from the sale of the bags.

*Family members spend an increasing amount of time apart, and with non-related people.* Commerce and schooling require large amounts of time from the family members, and both are individualizing activities, moving people apart from each other. Hence, there have been significant changes in the organization of personnel. The father, T, is on the road, trucking. M and her daughters Pa and R take care of household maintenance as well as working on individual commercial activities. They can work separately from each other, with some in San Cristóbal at the bodega while others are at home in Nabenchauk. There are also commodities to sell in Nabenchauk (e.g. oranges being sold from the house), so the members who remain in the village also manage those tasks. Two of the children, E, age 14, and Pe, age 12, go to primary school, while X, age 16, is the first in her nuclear family to go to secondary school. Each child goes to a different classroom, apart from the others and they are mixed in with relative age-mates who are mostly unrelated to them biologically. This is quite different from the way that their older siblings spent their days at the same ages in a peer group consisting of siblings and nearby cousins.

*Increasing use of technology: More mediated communication, less face-to-face communication.* Television and the use of the telephone have increased dramatically between the two time periods. In Maynard's 1997 data, the television was used approximately two hours per week. In 2007, the television is often on in the background, even when family members are not actively watching. The telephone keeps family members in touch when they are physically distant, and is used to create almost continual contact between the two locations. Cellular phones also allow contact across even further distances, e.g. when T is on the road, although there is no

cellular reception in Nabenchauk itself. The phone technology has made it possible to be separate while still maintaining ties. But it is also significant that technologically mediated communication is increasing while face-to-face communication is, correlatively, decreasing.

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

Having male friends has also become more socially acceptable. In 1995 and 1997, Maynard, in her 20s, could not talk to males for fear of being thought "loose," however in 2007 R referred to a boy she was chatting with in the store as a friend; she also has opportunities to have unchaperoned contact with boys in the bodega, including a hired assistant.

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 1969-70. Yet we know a family of cousins of this family in which none of four girls has seen fit to get married. The oldest was 30 in 2007.

Females are also being placed in positions of managerial responsibilities. For example:

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 arrival that night by moving boxes of avocados to the side.

However, note that R does not admit to having power over a male employee but instead rationalizes her directive by saying her back hurts. This suggests a transitional stage where the female as boss still requires some extenuating circumstance.

Nonetheless change has taken place. As a 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 available 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 to work with her.

9/26/07 in the bodega

R is working in what has been a man's world. They are treating her as an equal.

*A change in the daily routine.* Commerce has not only shifted the family apart from each other, it has shifted the daily routine. In 1997, family members who were at home went to bed by 9 pm and arose close to dawn. By 2007, they often did not sleep at least one night a week in order to prepare commodities for the market. For example, in the summer of 2007, T, the father, arrived in San Cristóbal on Thursdays at 1 am (late Wednesday nights), and the whole family helped him unload the truck before he departed by 11 am for Campeche in the Yucatan Peninsula. As in 1997, T still was going to Mexico City and Campeche, with a stop in Nabenchauk or San Cristóbal in between, but the cycle was faster than before. Family members were keeping up with the fast pace of commerce. Thursdays have become critical days in the

family's weekly economic cycle, to the extent that the children received permission from their teachers to miss school on that day in order to work.

This state of affairs indicates that the conflict between work and schooling, which has existed historically, is still present today. 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 schooling or to leave in favor of work or apprenticeship (for boys) or weaving and household management (for girls). In 1997, more children were receiving an education, and they were remaining in school for longer. School and work were no longer incompatible; however the conflict still existed in a new form as children had to constantly negotiate between competing school and economic duties throughout their school careers.

*Increase in schooling.* In 2006, in a sample of 36 families with over 120 children, about 80% of girls and 95% of boys ages six through 11 years were attending school (Maynard, 2007). This was a dramatic increase over 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 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 five (and many children did not start until age six), but now many children start at age four. Furthermore, when X was going through school, many children, including her, started and stopped or had to repeat grades. These delays all had a role in many children being 16 to 18 years old at sixth grade graduation. In 2007, most children are "on time" by American standards, e.g., children who are 13 in the eighth grade,

Mothers and children gave many reasons why more children were going to school and why they were starting younger and remaining longer. The top reason cited by both mothers and children was that more children are going and that makes it all right for the others to go, a snowball effect. 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. It is evident that commerce requires these skills, and that children who develop those skills may be more successful in commerce.

*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 three or four children, not six or ten as their parents had.

Shrinking family size is having effects on sibling caretaking interactions. In 2006, Maynard could already see the effects of shrinking family size and increased schooling: there were girls and boys who were not involved in sibling caretaking whereas their same-age counterparts had been just eight years before. Children in smaller families face less competition for resources, including food, toys, and new clothing, and parental attention. In 2006, Maynard found that very young children in small families were getting as much attention from parents as they were getting from siblings in 1997.

Shrinking family size is probably having effects, still unknown, on the fabric of society. Zinacantec society was previously built upon the older brother-younger brother distinction, which was highly prevalent in ritual life and in the community (Vogt, 1069). 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 older brothers and sisters become more rare, and as the egalitarian framework of schooling becomes influential in children's socialization.

*Increase in individual choice.* By 2007 there has also been an increase in individual choices in everyday daily life. For example, as recently as 2003, individual food choice was not an issue -- siblings typically ate together out of one pan around the fire and did not question what they were given. Now that there is more money and more variety, there is a much greater choice in food, especially snack foods that 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 towards eating out more. By 1997, this had come into the driver's lifestyle where they eat in the markets or on the road; by 2007, the pattern had spread to other members of the family, particularly when living in the city.

*Change toward dwellings that provide more privacy.* In 1991, the family lived in a one-room house. There were three beds in the house, with 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 in the back yard, and some family members slept there while others slept in the main house. Next a kitchen room was added, also in the back yard. In 2005, as the family size increased, the sleeping house was used by two children while the others slept in three beds in the warmer main room, with Martí usually sharing with one of the oldest 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 multi-room 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 roof drainage. 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.

Pa says the front right bedroom is hers and ME's (that's where she led me to change my clothes). [E has his own room, X and R share a 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 in a one-room dwelling 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. Indeed, during the weekday observation in Nabenchauk, a car and a truck stopped by, one to buy oranges, the other looking for the father, most likely on business.

*Decrease in visitors at home.* Before the commercial way of life, visitors at home were common. Although the number of daily visitors was already much diminished in 1997, compared with earlier years, it was still greater than ten years later. With most adults traveling to markets for their livelihood, there are many fewer adults, especially males, at home in the

village. During our nine hours of observation in Nabenchauk in 2007, the only social visit to the house were paid by a sister-in-law and her four-year-old daughter, who live next door. One cause for this decrease in social activity may be simply because fewer family members were at home during our observation times. This is in contrast to 1997, when a different sister-in-law and her family, with one daughter, lived next door. They would typically visit the house every day for at least some period of time. Two decades earlier, the house had many visitors several times a day.

*Continuity: Ritual life.* The most striking continuity in the daily routines in Nabenchauk that we noted in our data 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, ten years apart:

7/20/97

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

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, T, Pa [eldest daughter], ME [Pa's daughter], Pe [T's 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 from 1969 to 1993 – died in 1994 - 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<sup>2</sup> Pa 200 pesos as my contribution to the expenses for the graves (food, drinks, candles). 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

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<sup>2</sup> *Comadre* and *compadre* are fictive kin relationships, usually based on godparentage and adopted by Zinacantecs from Catholicism. Unlike in the US where the relationship is primarily between the godparent and godchild, Mexican and Zinacantec godparents (*padrinos*) are considered extended kin and have the same responsibilities and privileges as other adult members of the family.

me. I go to light candles for [the grandfather]. 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, they are not required, and 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 above took place, we observed members of the family participating in four different activities in four different locations. R, age 19, went to a curing ceremony for a relative. 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

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 was that there was not even a meal afterwards at the family's house – because the mother M was not at home, but off at the fiesta in San Cristóbal. This was the first time author Greenfield had ever visited the cemetery in sixteen years that there was no family meal of the ritual chicken soup afterwards. It was also the first time she had ever seen the wife and daughter attend a fiesta without the father of the family, a first in the domain of increasing female independence.

*Clothing: Continuity and change.* While 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, were wearing them outside the community as well. By 2007, men and boys were no longer wearing their woven ponchos (*pok k'u'ul*) except at fiestas and other ritual events, including trips to the cemetery.

#### *Summary Activity Settings Analysis of Shifts from 1997-2007*

This activity-settings analysis systematically documents the constellation of changes that occurred in the decade 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.

The *tasks* for economic support also had changed. Families were involved in an increasing number of 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 developing more commercialized textile production with the sewing machine.

The *scripts* of interaction shifted along with personnel, though there was still some continuity. The script of obedience and deference to elders has 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 if men were present in the setting. One factor in this is that there are often many small chairs available in a household, enough for all the family members and a number of visitors to sit down. The increase in wealth, for example being able to buy more chairs, has played a role in narrowing hierarchies in the village.

*Materials* have changed dramatically with the introduction of new technology. For example, in 1997 there was one phone in the entire village, but in 2007 telephones and televisions were both in widespread use. Additionally, goods and agricultural commodities are bought and resold in an increasing number and variety.

The *motives and goals* for hard work are still present, though 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.

The *emotional experience* of the actors 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 Multiethnic Contact*

Other than T's Ladina sister-in-law, and ourselves, there was no multiethnic contact within our subject family in Nabenchauk during our observations. But even this is a historical change: before Ru entered the family in the 1990s, bringing a Ladina woman into the community was a very phenomenon in the community. Interestingly, she and her husband met in an urban market at the beginning of the commercial period. So multiethnic contact was a byproduct of commerce. In 2007, Ru's sister is engaged to marry a Zinacantec cousin of Ru's husband. Although ethnic intermarriage may be gradually increasing in Nabenchauk, it seems to be a byproduct of urban market encounters.

*Use of Spanish for multiethnic contact.* One characteristic of multiethnic contact is that it most often takes place not in the maternal language of Tzotzil, but in Spanish the historical language of the Conquest and the language of public schooling in Nabenchauk and other Zinacantec communities. Here is an example of a multiethnic commercial transaction in which Spanish was used as the *lingua franca*.

A stranger came in and bought 1 box avocados, 1 box pepinos [cucumbers], 37 kilos of cebollas [onions]. They spoke to him in Spanish. [I] don't know if [he] speaks Tzeltal but [I] know he does not speak Tzotzil.

We have never seen a female carry out a business transaction with a non-Tzotzil-speaking man in Nabenchauk even in 2007. Indeed, use of the national language of Spanish by females in Nabenchauk itself is almost nonexistent, even among bilingual women. This excerpt is an instance in which urban life has intensified an historical trend that reached males before females.

*Unchaperoned Male-Female Contact in the City.*

Our controlled 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. Not only that, but he is a Ladino (non-indigenous Mexican). The Maya in Chiapas have over the centuries suffered greatly at the hand of Ladinos, who are the political 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 would have been unheard of heretofore. It is still unheard of in the village setting.

In addition, during the same observation, R is alone in the bodega with a fifteen-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 15-yr-old boy employee and with male visitors, would never be allowed to be alone with a boy in her house in Nabenchauk. Just a couple of years earlier, it was a matter of discussion among R and her peer group of cousins and sisters as to whether a young woman needed to be accompanied by her mother to go to a public fiesta (Martí, 2007).

*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. The sixteen-year-old, X, has her special duties as well because she is the only one of them who knows how to read and write. While the work of 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 in the village is when Pe, age 12, remains to sell oranges out of the house or sells them in the Saturday market in the village.

*Indigenous Clothing Changes More in the City*

Interviews with several indigenous people in San Cristóbal outside of the P family indicated that they were concerned about the prejudice and discrimination they encountered when they wore indigenous clothing, especially in the job market (Manago & Greenfield, 2008). Thus integration into the Mexican commercial economy is reflected in a desire to escape the stigma of indigenous clothing. Whereas the stigma of speaking Tzotzil in the city had decreased, the stigma of Zinacantec clothing seemed to have increased. This may be because code switching allows language to rapidly adjust to present circumstances and audience. Clothing, however, cannot be changed so rapidly.

Clothing has been the way par excellence that Zinacantecs identified themselves as a member of a specific Maya community and also distinguished themselves from the Ladinos (the name for those who identify as Mexican in the predominantly Maya state of Chiapas and the Maya countryside of Guatemala). 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 through 2006, 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 several times. In this particular case, it is the female role that is being transformed as modesty becomes less important. Some observations by author Martí (2007) indicated that another aspect of appearance – 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 (Martí & Greenfield, in preparation). The same thing will undoubtedly happen – very soon, it will not be necessary to wear a shawl when one goes out in Nabenchauk.

#### *Reconstitution of Visiting*

While the number of social visits, particularly male visits, was much diminished in Nabenchauk, the extended family was somewhat reconstituted in the city bodega. The market was like a new village, attracting male cousins and uncles. During one observation of about three hours in which R was manning 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 towards more individual activity and more privacy, with less family togetherness; toward more specialized economic roles; toward more interaction with strangers and less with family; towards more mediated communication (telephone) in the family and less face-to-face communication; towards more

freedom of 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, submitted). The variables of 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 setting analysis also reveals how the various elements of a *Gesellschaft* environment interact synergistically with each other. For instance, a more complex commercial business and the cell phone both necessitate a certain amount of literacy and numeracy, as in programming a cell phone with telephone numbers, making a list of numbers, and keeping financial records. In our study family, the child with the highest level of education served as her father's assistant and was in charge of precisely these tasks. The development of commerce and the use of communication technologies make schooling more valuable. At the same time, the government's development and support of education beyond the elementary school level provides the possibility of extending education when there is a felt need. The addition of an urban residence and place of work for the family also meant that the telephone became more valuable for them, and they became a four-telephone family -- one in the bodega, one at home in the village -- plus the two cell phones carried by the sixteen year old and her father.

While 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. 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 magnified interaction with people of ethnicities different from one's own, and a leap forward in career development and egalitarian relations with men.

These observations support Greenfield's theory linking sociocultural change and learning environments, as well as Redfield's analysis of three communities in the Yucatán in terms of folk society and urban society (Greenfield, submitted; Redfield, 1941). Our findings concern the effects of sociodemographic changes, particularly the diachronic effects of an increasingly developed economy, and the synchronic effects of an urban lifestyle on the activity settings in which development and learning take place.

### Author Note

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