

## Connecting Societal Change to Value Differences Across Generations: Adolescents, Mothers, and Grandmothers in a Maya Community in Southern Mexico

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*Journal of Cross-Cultural Psychology* published online 19 March 2014

DOI: 10.1177/0022022114527346

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# Connecting Societal Change to Value Differences Across Generations: Adolescents, Mothers, and Grandmothers in a Maya Community in Southern Mexico

Journal of Cross-Cultural Psychology

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DOI: 10.1177/0022022114527346

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Adriana M. Manago<sup>1</sup>

## Abstract

This study tests the hypothesis that societal change from subsistence agriculture to a market economy with higher levels of formal schooling leads to an increase in individualistic values that guide human development. Values relating to adolescent development and the transition to adulthood were compared across three generations of women in 18 families in the Maya community of Zinacantán in southern Mexico. Grandmothers grew up in Zinacantán when it was a farming community; mothers grew up during the introduction of commerce in the late 1970s and 1980s; daughters are now experiencing adolescence with an opportunity to attend high school in their community. Comparisons were also conducted between 40 female and male adolescents in high school and a matched sample of 40 adolescents who discontinued school after elementary. Values were measured using eight ethnographically derived social dilemmas about adolescent relationships with parents and peers, work and family gender roles, and sexuality and partnering. One character in the dilemmas advocates for interdependent values; a second character advocates for independent values. High school adolescents were more likely to endorse characters articulating independent values than non-high school adolescents, mothers, and grandmothers. Involvement in a market economy was also associated with higher levels of independent value endorsement in the mother and grandmother generations. Results suggest that the introduction of commerce drove value changes between grandmother and mother generations, and now schooling drives change. Qualitative examples of participants' responses also illustrate how families negotiate shifting values.

## Keywords

culture change, values, adolescence, transition to adulthood, gender roles, sexuality, independence, interdependence, autonomy, relatedness

Since the late 1970s, the indigenous Maya community of Zinacantán in the southern Mexican state of Chiapas has been shifting away from a subsistence farming lifestyle. Many families that lived in Zinacantán's rural mountain hamlets have moved into what used to be the municipality's

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ceremonial center, now a commercial hub, with shops, tortillerias, electricity, trucks, and paved roads connecting it to Mexican cities (Cancian, 1994; Vogt, 1990). In 1999, Zinacantán center inaugurated a new high school instituted by the Mexican government, which created the first generation of Zinacantec adolescents to receive a secondary education. In many ways, Zinacantán represents a microcosm of a global transformation away from rural, subsistence-agricultural ways of living. Families around the world are adapting to increasingly urban, mobile, and market-based economic lifestyles that involve mixed-sex formal schooling during adolescent development and the transition to adulthood.

The historical timing of societal change in Zinacantán provides conditions for examining whether sociodemographic shifts relate to psychological differences across generational cohorts. This study compares grandmothers, who grew up in Zinacantán when it was predominantly rural and agricultural in the 1950s, 1960s, and early 1970s; with mothers, who grew up during the introduction of commerce in the late 1970s and 1980s; and adolescent girls, who are now growing up with an opportunity for secondary education. Like any cross-sectional design, cohort differences and age-related differences are confounded in these comparisons. Thus, to more precisely test whether the sociodemographic changes in Zinacantán are connected to cultural and psychological change, this study examines associations between values and involvement in a market-based economy, and compares values among male and female adolescents in high school and those adolescents discontinuing their education after elementary school. Importantly, high school was not universal in Zinacantán at the time of data collection.

The psychological change of interest in this study is the core value system guiding developmental tasks during adolescence and the transition from childhood dependence to adult responsibilities. The study examines whether values for family interdependence and individual independence during adolescence are associated with prominent forms of sociocultural change spreading around the world, that is, increasing integration into a global market economy and higher levels of formal schooling.

## Societal Change and Psychological Change

The psychocultural model from anthropology (Whiting & Whiting, 1975) considers culture as deeply embedded in daily routines. Daily routines can be regarded as *cultural practices*, which include tasks, scripts, goals, and people in relationships influencing psychological development (Rogoff, 2003; Weisner, 2002). Societal level sociodemographic changes are likely to transform cultural practices, which may then shape psychological development, including beliefs and values, in new directions.

A theoretical framework for conceptualizing the impact of sociodemographic change on cultural practices and psychological development is Greenfield's (2009) theory of social change and human development. The theory adopts the terms *Gemeinschaft* and *Gesellschaft* from sociologist Ferdinand Tönnies (1887/1957) to characterize the social ecology of small-scale, subsistence-agricultural communities (*Gemeinschaft*) and commercial, urban societies with higher levels of technology and formal education (*Gesellschaft*). Greenfield predicts that a *Gemeinschaft* to *Gesellschaft* shift pushes cultural practices, and thus psychological development, away from family interdependence and toward individual independence. According to the theory, changes like those happening in Zinacantán decrease priorities related to family connectedness and family obligation during the transition to adulthood and increase priorities related to personal fulfillment, personal achievement, and personal choice.

Values for family interdependence and individual independence have historically been considered in terms of Western versus non-Western cultures (e.g., collectivism and individualism, Triandis, 1995; interdependence and independence, Markus & Kitayama, 1991; egocentric and sociocentric selves, Shweder & Bourne, 1984). However, research in cross-cultural psychology

shows that interdependent and independent values emerge under increasing affluence, urbanization, and higher levels of formal schooling in a variety of societies (Freeman, 1997; Georgas, 1989; Reykowski, 1994). Greenfield's theory considers these sociodemographic factors as existing on a continuum, constituting relatively more *Gemeinschaft* to relatively more *Gesellschaft* environments, which correspond to continua of values guiding development. Thus, values for family interdependence and individual independence are not binary categories; rather, they are considered anchors, with intermediate points in between that represent levels of adaptation to affordances in *Gemeinschaft* and *Gesellschaft* environments.

The effect of a worldwide proliferation of *Gesellschaft* conditions on adolescents' pathways to adulthood is emerging as an important topic in the psychology of adolescence (e.g., Arnett, 2002; 2010; Brown, Larson, & Saraswathi, 2002; Larson, 2002; Mortimer & Larson, 2002; Pinquart & Silbereisen, 2005). Higher levels of education and more complex adult work roles in market-based, technological societies lengthen the period of preparation for adulthood and involve more time and effort crafting personal skills (Arnett, 2010; Shanahan, Mortimer, & Kruger, 2002). Urbanization is associated with more mobility during adolescence, less family interconnectedness, and more fleeting interactions with diverse others, including strangers (Call et al., 2002; Larson, Wilson, Brown, Furstenberg, & Verma, 2002). Education, urbanization, and commercialization are all related to more time spent with peers, more cross-sex interactions, higher rates of non-marital sexuality, and postponement of marital unions that increasingly involve negotiated, rather than ascribed, gender roles (Larson et al., 2002). These trends reflect cultural practices that deemphasize family connectedness and obligation and emphasize personal fulfillment, achievement, and choice. Similar patterns of change in cultural practices during adolescence have happened in Zinacantán over the past three generations.

## Shifting Pathways of Adolescent Development in Zinacantán

### *Adolescence in Zinacantán 1950s-Early 1970s*

In the 1950s, 1960s, and into the early 1970s, the fundamental unit of social life for adolescents was the patrilineal and patrilocal extended family living in house compounds and sharing a single source of maize (Vogt, 1969). Kinship was organized in terms of a gender and age hierarchy that was instantiated into everyday practices and rituals. For example, younger bowed to older, older walked in front of younger, and men walked in front of women. Entire families participated in social activities together; often men performed at the center of the religious festivals and women watched on the sidelines. Formal schooling was uncommon during childhood. After about 9 years old, there was a rigid adherence to sex segregation; girls could not be in public without the accompaniment of a family member and they were forbidden from talking with boys outside the family. At the age of 10 or 11, girls were helping to weave clothing for the family, raise children, fetch wood and water, herd sheep, and make tortillas from the corn that men farmed. By the time boys reached 12 to 14 years old, they were working with the older men in their families in low-land cornfields and accompanying their fathers to the markets.

Adolescence did not last long during this historical period in Zinacantán. The official marker of adulthood was marriage, at about 17 or 18 years old for boys and about 15 years old for girls (Fishburne, 1962). Marriage involved elaborate yearlong rituals symbolizing the union of two families. Boys entered into marriage proposals with the sponsorship of their fathers and respected elders; girls generally had little say in whether a marriage proposal would be accepted. The saying that "a man needs a woman to cook his tortillas and a woman needs a man to raise her corn" captured the interdependent and complementary essence of the marriage relationship in Zinacantán (Vogt, 1969). Marriage also established young men's participation in the lower ranks of an age-graded cargo system, a hierarchical series of positions tied to religious festivals whereby

men, representing their families, contribute back to the community (Vogt, 1969). In sum, daily tasks, scripts, goals, and relationships emphasized adolescents as interdependent with their kin and obedient to the authority of elders and men.

### *Adolescence in Zinacantán Late 1970s-1980s*

The next generation of adolescents came of age during a period of integration into a cash-based economy (Cancian, 1994; Vogt, 1990). Mining companies brought paid work, road construction increased, and Zinacantecs began to own trucks and participate in a post-industrial commodity economy within Mexican society. Large proportions of young men were drawn away from farming with their fathers to engage in wage labor and other commercial activities. Some women also began to sell weavings and agricultural products at markets outside Zinacantán. As young men gained more financial independence through involvement in a cash economy, they shunned traditional bride service that indebted them to work for their fiancés' families for months before marriage, and elopements increased (Collier, 1989; Flood, 1994). Fewer families lived in extended patrilocal compounds in rural hamlets, populating Zinacantán center more densely with homes that included televisions and telephones (Cancian, 1994).

Alongside, change was cultural continuity. Customs persevered, including ongoing use of the Tzotzil Maya language, the cargo system, religious festivals, the age and gender hierarchy, and the sexual division of labor (Vogt, 1990). However, commerce provided alternatives to traditional adult work roles and drew women increasingly away from the home. Marriage began to involve negotiations between two individuals, rather than between two families. Hence, adolescents transitioned to adulthood in ways that fostered increasing independence from families, deviating from ascribed pathways, and making personal choices about adult work and family roles.

### *Adolescence in Zinacantán 1990s-2000s*

In the previous generation, it became more common for boys to attend a few years of elementary school to learn to read and write in Spanish, so that they would be proficient in new economic activities<sup>1</sup> (Cancian, 1994). However, when the state of Chiapas instituted a middle school in Zinacantán in the 1980s and a high school in 1999, many families did not send their adolescents to school, perceiving it as a waste of time, especially for girls, and a threat to customs for gender segregation during adolescence. However, high school attendance in Zinacantán is steadily increasing. In fall of 2007, principals reported a school enrollment of 92 students, 28 of them girls; in the fall of 2008, 105 students, 30 girls; in the fall of 2009, 114 students, 39 girls. Most of these students live in Zinacantán center, with a population of about 3,700 (Instituto Nacional de Estadística y Geografía [INEGI], 2005).

Families may be increasingly convinced of the utility of high school as a preparation for new kinds of adult work roles first instigated by economic development in the late 1970s and 1980s. College education has become more accessible with the establishment in 2005 of an Intercultural University in the nearby colonial city of San Cristóbal, aimed to attract indigenous students (Schmelkes, 2009). Some Zinacantec youth are also attending a new bilingual teacher-training institute in Zinacantán center, becoming elementary school teachers. High school attendance is also lucrative in and of itself; a Federal grant incentive program, *Oportunidades*, provides families in Zinacantán with 1,500 pesos (about US\$130) every 2 months for each child in high school and 800 pesos (about US\$70) for each child in middle school.

Once adolescents are in high school, the context undermines traditional pathways for adolescent development. When I lived in Zinacantán and volunteered at the high school in 2008-2009, I observed boys and girls learning skills that would channel them toward equivalent adult gender

roles in a cash economy. Boys and girls were doing school projects together, socializing as friends in class and during breaks, walking home together after school, and sometimes pairing off together. They were attending school dances and community festivals with schoolmates, rather than with their families, and navigating cross-sex peer relations without family guidance. In general, high school students were learning through cultural practices involving participation in an adolescent peer culture in an educational institution, instead of adhering to traditions via participation in family activities.

## Shifting Cultural Practices and Psychological Change

Whereas connections between sociodemographic change and shifting cultural practices are observable, the link to values is more complicated. Many scholars of globalization and modernization argue that core cultural values persist in the midst of social change, hybridizing with new meanings and ideals (Hermans & Kempen, 1998; Pieterse, 1994; Schlegel, 1999; Tomlinson, 1999). Developmental approaches suggest that in cultures with long-standing values for family interdependence, increasing wealth and urbanization facilitate children's independence; however, independence is combined with ongoing interdependent socialization, resulting in relatedness-autonomy value blends (Kağitçibaşı, 2005). For example, in the traditionally interdependent Cameroonian Nso community, Lamm, Keller, Yovsi, and Chandhary (2008) found that Nso mothers of infants who relocated to urban areas articulated more autonomous socialization goals than rural Nso mothers; however, the two groups did not differ in their goals for relatedness. Kapadia and Miller (2005) also found evidence of value blends in adolescent-parent negotiations among upper-middle-class Hindu families in urban India. According to Greenfield (2009), these value blends represent intermediate points in a gradual movement down a continuum if *Gesellschaft* conditions continue to persist and expand. Continuums of value change are difficult to detect without testing several generations in communities undergoing expanding *Gesellschaft* conditions over historical time. This study aims to empirically test whether a continuum of value changes exists in association with the successive expansion of *Gesellschaft* factors across three generations.

This test is of course limited because cross-sectional comparisons of generations at one point in time could reflect differences across groups due to maturation or social role changes across the lifespan, rather than due to sociodemographic changes. For this reason, I also examine whether values are associated with the two major sociodemographic shifts participants in the sample have experienced to varying degrees: integration in a market economy and formal education. Based on Greenfield's (2009) theory, I hypothesize that involvement in commerce will be associated with more individualistic values among grandmothers and mothers and that adolescent girls attending high school will endorse more individualistic values than their mothers and grandmothers. However, non-high school adolescent girls, who are growing up in a sociodemographic environment more similar to the mother generation, will not differ from the mothers in the sample in their individualistic value orientation.

Furthermore, to explore potential gender differences in the current generation of adolescents, I compare values among male and female high school and male and female non-high school adolescents. On one hand, young men in Zinacantán are accorded more opportunities for independence with or without a high school education. That is, regardless of education, they may be more individualistic than girls because they may be more involved in *Gesellschaft* sociodemographic activities, such as wage labor or commerce, traveling, and interacting with a diversity of others outside Zinacantán. On the other hand, despite more independence granted to men's roles in many different cultures, research has failed to find gender differences in cultural values (e.g., Miller, Bersoff, & Harwood, 1990).

Examining interdependent and independent values as they are applied to adolescent development is important because the tension between interpersonal closeness and personal autonomy is particularly relevant to navigation of the transition to adulthood. Critical transformations in parental authority and individual autonomy commonly occur during adolescence (Steinberg, 1990). Moreover, a hallmark of adolescent identity development is negotiating the balance of basic human needs for both relatedness and autonomy (Kroger, 2004). In addition, adolescents are learning how to express their personal sexual desires, while preparing to appropriately fulfill adult gender roles in their community (Manago, Greenfield, Kim, & Ward, 2014; Schlegel & Barry, 1991).

On account of their developmental tasks and their place in society, adolescents have been notable pioneers of sociocultural change (LeVine, 2011; Mead, 1978). Although they are socialized during childhood with parental values from the previous generation, they may also construct new values to successfully transition to adulthood when societal conditions change. Indeed, studies in various modernizing societies such as Japan (Rosenberger, 2001), the Middle East (Moghadam, 2003), and Sub-Saharan Africa (Nsamenang, 2002) have shown that adolescents and young adults often embody values for gender roles and sexuality that contrast those of previous generations and that emphasize personal choice and self-fulfillment. Importantly, these generational value changes occur particularly among adolescents exposed to *Gesellschaft* factors. For example, recent studies in increasingly *Gesellschaft* Chinese society show that it is adolescents growing up in urban, versus rural, areas who are less likely to endorse family obligation (Fuligni & Zhang, 2004) and parental obedience (Zhang & Fuligni, 2006), and more likely to endorse self-determination (Lahat, Helwig, Yang, Tan, & Liu, 2009).

## Current Study

This study is designed to illuminate a possible *direction* of psychological change in conjunction with increasing *Gesellschaft* sociodemographic conditions. According to Greenfield's theory, change in any of the sociodemographic factors toward *Gesellschaft* environments moves psychological values in a common direction, toward more independent values. This study tests that prediction by comparing multiple groups representing ascending levels of exposure to *Gesellschaft* factors in a community (grandmothers growing up during agriculture, mothers growing up with commerce, adolescents in high school, adolescents discontinuing their education after elementary school). First, I hypothesize that grandmothers will endorse interdependent values, mothers will endorse mixed levels of interdependent and independent values, and adolescent daughters in high school will endorse higher levels of independent values. Furthermore, integration into a market economy will be associated with independent values in the grandmother and mother generations. Second, I hypothesize that non-high school female adolescents will be more similar in their value orientation to mothers in the sample than the high school female adolescents. Third, I hypothesize that female and male adolescents in high school will endorse higher levels of independent values compared with female and male non-high school adolescents. I also explore potential gender differences in these analyses.

Transporting measures from outside the culture raises conceptual and methodological issues (Gibbons, Hamby, & Dennis, 1997). Thus, ethnographically derived social dilemmas about adolescents' transition to adulthood in Zinacantán are used to index interdependent and independent values. The dilemmas measure participants' perspectives contextualized in Zinacantán, but represent universal issues of family interdependence and individual independence during the transition to adulthood. In addition, comparisons can be made across individual dilemmas to examine whether values are changing in a certain task during adolescence, but not in others. Furthermore, responses to the stories also enable qualitative analyses, which can unpack not just *whether* values are changing, but *how* they are changing. These analyses focus on two questions about how

**Table 1.** Sociodemographic Backgrounds of Adolescents.

Participants	Age	Mother	Father	Wealth	Mother	Father
		Years of schooling	Years of schooling	(technology items in home) (0-6 items)	Involvement in market economy (1-3 scale)	Involvement in market economy (1-3 scale)
High school girls (n = 20)	17.15 (1.09)	1.65 (2.66)	4.32 (2.95)	3.01 (1.34)	1.80 (0.77)	2.25 (0.58)
Non-high school girls (n = 20)	16.00 (2.38)	1.95 (2.63)	3.00 (3.02)	3.00 (1.49)	2.00 (0.73)	2.26 (0.56)
High school boys (n = 20)	17.00 (1.38)	2.60 (3.02)	3.80 (2.69)	3.60 (1.14)	1.40 (0.60)	2.42 (0.51)
Non-high school boys (n = 20)	17.60 (2.09)	1.35 (2.48)	3.45 (2.26)	2.55 (1.19)	1.65 (0.59)	2.26 (0.45)

individuals negotiate sociocultural change: (a) Do individuals adopt values for autonomy with increasing Gesellschaft conditions while maintaining values for relatedness, as Kağitçibaşı (2005) would predict? (b) How do families reconcile intergenerational differences in values?

## Method

### Participants

In September 2009, there were 44 students (20 girls) in their first year at Zinacantán high school, 40 students (15 girls) in the second year of school, and 30 students (4 girls) in the last year of school. The goal was to select about 20 female participants and about 20 male participants representing all three grades of students. The school principal randomly selected names from a hat, seven males and seven females from each of the three grades, totaling 21 females and 21 males. Because there were only four girls in the last year of high school, all were included in the study and three more female names were selected from the middle grade. Selected students were told that I wanted to audio record a conversation with them about how people behave in Zinacantán and that they would receive 200 pesos (about US\$20) for their time. If they wanted to participate, they were asked to get their parents' permission. All selected students participated.

To recruit non-high school participants, high school participants were required to bring to the interview a sibling, cousin, or neighbor from Zinacantán who had discontinued schooling before entering middle school. In this way, the high school and non-high school samples were maximally matched for background factors. This was a largely successful recruiting tactic; however, one high school girl could not find anyone willing to come to the interview and one high school boy brought someone to the interview who actually had attended a year of middle school. Thus, these two high school adolescents were dropped from the sample to preserve the matched pair design. The age range of girls was 16 to 19 years ( $M = 17.15$ ). The age range of boys was 15 to 20 years ( $M = 17.00$ ). The age range of non-high school girls was 13 to 20 years ( $M = 16.00$ ) and non-high school boys was 14 to 21 years ( $M = 17.60$ ). To a large extent, this recruiting method created a matched sample; see Table 1 for high school participants' family background characteristics.

In addition, high school girls were asked to recruit their mothers and grandmothers to also participate in the study. Of the final 20 high school girls in the sample, 18 had both mothers and grandmothers who were alive and willing to participate. The age range of mothers was 30 to 55 years ( $M = 42.50$ ;  $SD = 6.27$ ). The mean age of mothers indicates that, on an average, mothers were teenagers in the early 1980s, the period of the introduction of commerce. The age range of grandmothers was 50 to 85 years ( $M = 67.39$ ;  $SD = 9.71$ ). The mean age of grandmothers indicates that, on an average, grandmothers were teenagers in the 1950s when Zinacantán was a

**Table 2.** Sociodemographic Backgrounds of Grandmothers and Mothers.

Participants	Age	Years of schooling	Involvement in market economy (1-3 scale)
Grandmothers ( <i>n</i> = 18)	67.39 (9.71)	0 (0)	1.39 (0.50)
Mothers ( <i>n</i> = 18)	42.50 (6.27)	1.17 (2.36)	1.78 (0.81)

subsistence-agricultural community. There is, however, a small overlap in the age ranges of the mothers and grandmothers: In 2009, two of the mothers were 55 years old, one grandmother was 50 years old, and one was 53 years old. Even with this overlap, 16 of the 18 mothers were between the ages of 30 and 45 years old in 2009, and thus, adolescents during the late 1970s and 1980s when commerce was developing in Zinacantán. Only one grandmother who was 50 years old was still a teenager by the late 1970s.

In addition, the involvement of mothers and grandmothers in commerce and schooling fits the sociodemographic parameters of interest for their generation (see Table 2). None of the grandmothers indicated that they had ever been to school. The average years of education for mothers was less than two years; there were, however, two outliers, one mother finished sixth grade and one mother finished eighth grade of middle school. As Table 2 indicates, grandmothers on average had lower levels of involvement in a market economy than mothers; the next section describes how this variable was measured.

## Measures

**Schooling.** All of the participants were asked how many years of formal schooling they had completed, as well as how many years of schooling their fathers and mothers had completed.

**Involvement in a market economy.** All participants were asked in an open-ended format what they did for work and what their fathers and mothers did for work. The most common forms of work included cultivating and selling agricultural products, cultivating and selling greenhouse flowers, and weaving/embroidery and selling these products as handicrafts. An additional prompt asked specifically to what extent their work directly involved them in commerce. Sales were done in the nearby Mexican cities of San Cristóbal de las Casas and Tuxtla Gutiérrez. Level of involvement in a market economy was classified according to a 1-to-3 scale, lowest to highest: (1) work characteristic of a *Gemeinschaft* ecology (subsistence agriculture work including raising animals, weaving only for the family, and housework), (2) work in transition to a *Gesellschaft* ecology (growing agricultural products and selling them outside Zinacantán, cultivating flowers, weaving and embroidery but selling these products through an intermediary), (3) work characteristic of a *Gesellschaft* ecology (merchant of flowers or weavings, professional work, wage work such as bricklayer and taxi driver).

**Wealth.** Due to the sensitive nature of asking about family income, wealth was indexed by asking adolescents how many of the following technology possessions were present in the family home: television, vehicle, house phone, cell phone, radio, and sewing machine. Thus, wealth was represented on a continuous scale of 0 to 6. The quantity of goods a family possesses is a good indication of wealth in Zinacantán, especially owning a vehicle, as this has been the basis of a new economic elite after the period of commerce (Cancian, 1994).

**Social dilemmas.** To measure participants' values, I created eight social dilemmas from my observations of changes happening in the community when I lived in Zinacantán as a volunteer English teacher at the high school. The stories consist of two points of view; one character in the story

**Table 3.** Social Dilemmas Measuring Values for Family Interdependence and Individual Independence.

Dilemma	Family interdependence	Individual independence
1. Gender status	Hierarchical interdependence	Equal individuals
2. Gender roles	Complementary and ascribed	Equivalent and chosen
3. Cross-sex relations	Restricted social interactions	Unrestricted social interactions
4. Marriage	Family manages partnering	Adolescent manages partnering
5. Transition to adult work (men)	Family obligation Family connectedness	Personal choice Achievement and fulfillment
6. Transition to adult work (women)	Family obligation Family connectedness	Personal choice Achievement and fulfillment
7. Adolescent peer relations (girls)	Family obligation Restricted social interactions	Personal choice Unrestricted social interactions
8. Adolescent peer relations (boys)	Family obligation Restricted social interactions	Personal choice Unrestricted social interactions

represents a family interdependent point of view and the other character represents an individual independence point of view. Participants are asked to choose the character in the story with whom they most agree.

The first four dilemmas deal specifically with gender and sexuality. The last four dilemmas deal with work and social relations during adolescence and the transition to adulthood. Points of view that represent interdependence versus independence in each of the dilemmas are presented in Table 3. Cronbach's alpha for the scale was .72. Dilemmas were first piloted with adolescents, parents, and grandparents, and then three research assistants from Zinacantán who were attending university helped to refine the stories. Next, one student conducted the first round of translations of the interview instrument from Spanish to Tzotzil (Tzotzil is the native oral language, but Zinacantecs go to school in Spanish). A second student, who teaches Tzotzil writing in the high school *talleres* (workshops) and whose grandfather was one of the first Zinacantecs to learn to write in Tzotzil, edited and improved upon the first student's translations. Finally, the third student did a back translation of the interview instrument to Spanish, to ensure that the Tzotzil translation had captured the original meaning of the dilemmas and questions. Interviews were conducted in Tzotzil because, although adolescents and most mothers speak Spanish well, not all grandmothers do. For all participants, Tzotzil was their native tongue.

### Procedure

The first author scheduled interviews for the mornings and early afternoons before school (classes at Zinacantán high school last from 2:00 p.m. to 9:00 p.m.). High school adolescents arrived for their appointments in pairs with their same gender non-high school partner and then one waited in a separate room while the other was interviewed. Interviews took place in a private room at Zinacantán's cultural center, which houses a modest library, city hall offices, and an art and theater space.

The same college students who helped to develop the interview instrument conducted the audio-recorded interviews in Tzotzil, matching the gender of the interviewer with the participant. Participants were assured that their responses to the dilemmas would be kept confidential. Interviews began with sociodemographic background questions, then the social dilemmas, read out loud to the participants in Tzotzil by the college student assistants. Interviews lasted between 30 and 40 min and participants were paid 200 pesos after the interview was completed.

Interviews with mothers and grandmothers of the high school female adolescents were conducted after the adolescent interviews had been completed. The female college student who conducted the female interviews conducted the grandmother-mother interviews. The interviews followed the same procedure except that they were scheduled as visits to the students' homes and

were conducted with mothers and grandmothers together. This format was culturally consonant with a gossip session and the general group-orientation of the culture. Although this procedure is not ideal for gathering independent data, it was determined to be most comfortable and culturally sensitive for participants who were uneasy with and suspicious about one-on-one interviewing. This procedure may also impede support for hypothesized differences between mothers and grandmothers. However, the interviewer did emphasize that we were interested in each person's point of view, that there were no right or wrong answers, and that they were free to disagree with one another. Mothers and grandmothers were paid 200 pesos each for the interview. All interviews were transcribed in Tzotzil and translated to Spanish by the same college students who conducted the interviews.

## Analysis

The author (fluent in Spanish) and a native Mexican Spanish speaking undergraduate student coded responses. Responses were coded as "1" if participants endorsed the character in the story who represented a family interdependent point of view, "2" if they had a mixed response endorsing both points of view, and "3" if they endorsed the character in the story who represented the individual independence point of view. The two coders coded the entire adolescent sample separately and then a weighted Kappa was calculated for each dilemma. Kappas ranged from .82 to .91, considered "very good" (Landis & Koch, 1977). For the grandmother and mother data, some training was required because answers were less structured. The first 10 grandmother–mother interviews were used for training, and then reliability was conducted on the last 8 interviews, 44% of the data. Weighted Kappas for the grandmother–mother data had a larger range, from .61 to 1.0, considered "good" or "very good." After Kappa was calculated on this last 44% of the data, the two coders discussed disagreements until they arrived at an agreed upon code. Codes were then summed across all eight dilemmas and then divided by eight for a total value score. The range of scores therefore went from 1 to 3; family interdependence values were at the lower end of the scale and individual independence values at the higher end of the scale.

## Results

### *Hypothesis 1: Intergenerational Comparisons*

The average responses to the eight dilemmas among the grandmothers ( $M = 1.51$ ,  $SD = 0.26$ ), mothers ( $M = 1.67$ ,  $SD = 0.40$ ), and their adolescent high school daughters/granddaughters ( $M = 2.31$ ,  $SD = 0.36$ ) demonstrated differences in the predicted direction. Grandmothers and mothers tended to choose the character in the story representing the family interdependence point of view or they had a mixed response. Daughters/granddaughters tended to choose the character in the story representing the individual independence point of view or they had a mixed response.

A one-way repeated-measures ANOVA was conducted to examine overall differences between the three generations in the families. Mauchly's test indicated that the assumption of sphericity had been violated,  $\chi^2(2) = 10.83$ ,  $p = .004$ , therefore degrees of freedom were corrected using Greenhouse–Geisser estimates of sphericity ( $\epsilon = .67$ ). Confirming predictions, there were significant mean differences overall across generations,  $F(1.34, 22.79) = 25.05$ ,  $p = .0001$ ,  $\eta_p^2 = .60$ . Pairwise comparisons based on a priori hypotheses showed that high school daughters' dilemma responses were more independent compared with mothers ( $p = .001$ ), and that mothers, in turn, were more independent in their responses than grandmothers ( $p = .042$ ). Involvement in a market economy among mothers and grandmothers was significantly correlated with more independent responses to the dilemmas ( $r = .34$ ,  $p = .042$ ). The next two sets of analyses further explore whether the sociodemographic factor of formal education during adolescence can account for differences in values between the mother and daughter generations.

**Table 4.** Differences Across Dilemmas.

	Dilemma 1*	Dilemma 2*	Dilemma 3*	Dilemma 4*	Dilemma 5*	Dilemma 6	Dilemma 7*	Dilemma 8*
Daughters ( $n = 18$ )	2.77 (.55)	2.28 (.96)	2.31 (.46)	2.22 (1.00)	2.67 (.59)	2.50 (.79)	1.61 (.78)	2.11 (.32)
Mothers ( $n = 18$ )	1.83 (.99)	1.39 (.78)	1.94 (.42)	1.33 (.77)	1.89 (.90)	1.94 (.87)	1.17 (.38)	1.89 (.32)
Effect size ( $\eta_p^2$ )	.27	.21	.15	.21	.22	.11	.12	.11

\*Significant difference between mothers and daughters,  $p < .05$ .

### *Hypothesis 2: High School and Non-High School Adolescents and Mothers*

Here, I test the hypothesis that, in contrast with adolescent girls attending high school in the previous analysis, adolescent girls in the current generation not attending high school will endorse interdependent values more in line with the mothers in the sample. Indeed, non-high school adolescent girls ( $M = 1.75$ ,  $SD = 0.45$ ) tended to endorse interdependent characters in the dilemmas or have mixed responses, as did the mothers of the high school girls ( $M = 1.67$ ,  $SD = 0.40$ ). To test whether non-high school girls were significantly different from the mothers, a one-way between-subjects ANOVA was conducted. Results showed that non-high school girls were not significantly different from the mothers in their responses to the dilemmas ( $p = .60$ ).

### *Hypothesis 3: High School Versus Non-High School Adolescents*

The average response to the dilemmas among adolescents attending high school ( $M = 2.32$ ,  $SD = 0.37$ ) indicated values oriented toward endorsement of the independent character in the dilemmas or mixed endorsement. The average response to the dilemmas among non-high school students ( $M = 1.87$ ,  $SD = 0.46$ ) indicated values oriented toward endorsement of the interdependent character in the dilemmas or mixed endorsement. To examine the effect of high school and gender on responses to the dilemmas, a two-way between-subjects ANOVA was conducted. The main effect of high school was statistically significant,  $F(1, 76) = 24.35$ ,  $p = .0001$ ,  $\eta_p^2 = .243$ . The main effect of gender was not significant,  $F(1, 76) = 3.21$ ,  $p = .077$ ;  $\eta_p^2 = .041$ ; adolescent girls overall ( $M = 2.01$ ,  $SD = 0.48$ ) were not different in their responses than adolescent boys overall ( $M = 2.18$ ,  $SD = 0.45$ ). In addition, the interaction between high school and gender was not significant,  $F(1, 76) = .82$ ,  $p = ns$ .

To examine whether family background characteristics might also be associated with adolescents' responses to the scenarios, correlations were conducted between responses to the social dilemmas, mothers' and fathers' years of schooling, mothers' and fathers' level of involvement in a market economy, and family wealth. Family wealth was correlated with years of schooling of mothers ( $r = .33$ ,  $p = .003$ ) and fathers ( $r = .23$ ,  $p = .046$ ). However, none of the other correlations were significant.

### *Differences Across Individual Dilemmas*

To examine whether some dilemmas were more subject to value differences between generations than others, a between-subjects MANOVA was conducted comparing mean responses on each of the eight dilemmas among mothers and their adolescent daughters in high school. Table 4 shows means scores for mothers and daughters for each dilemma and the effect sizes of the differences between their scores. The dilemmas that showed the biggest effect sizes ( $\eta_p^2 > .20$ ) were *Gender Status*, *Gender Roles*, *Marriage*, and *Transition to Adult Work (Men)*. Three out of four specifically concerned gender roles and sexuality. Table 3 lists the points of view associated with independent and interdependent values in these dilemmas. The largest effect size and the highest (most independent) score for high school girls came in response to the dilemma, *Gender Status*, which suggests that adolescent girls were particularly likely to depart from their mothers' values

for gender hierarchy. The following example illustrates how adolescent girls in high school may be more attuned to notions of gender equality than their mothers:

It's better what Chepil says [that men and women should walk side by side] because now we are equal, women are not less . . . (High School Girl, "3")

The way I see it, both are fine, men first and women behind, or men behind, it almost seems the same to me. (Mother, "2")

The dilemmas that showed smaller differences between mothers and daughters were *Cross-Sex Relations*, *Transition to Adult Work (Women)*, *Adolescent Peer Relations (Girls)*, and *Adolescent Peer Relations (Boys)*. In this case, two out of four of these dilemmas concerned gender roles and sexuality, *Cross-Sex Relations* and *Transition to Adult Work (Women)*, and it was in these two dilemmas that mothers endorsed the most independent values. The lowest (most interdependent) score for mothers, as well as daughters, was in response to the dilemma, *Adolescent Peer Relations (Girls)*. This dilemma was about an adolescent girl socializing with friends outside the home versus staying at home to help her mother. The following example from one family suggests that values for family obligation during adolescence are not shifting as drastically as the values for gender roles and sexuality:

It is bad to be outside, it is good to be with the mother. I think there are times to leave but not every day, like here and there, what she is doing is bad. (High School Girl, "1")

The mother is right because when they want to leave it is because they don't want to do anything in the house, they only want to have fun . . . apart from the times when they have homework to do with their classmates, it isn't good to go hang out (*van a pasear*) with their girlfriends because they don't want to do anything in the house. (Mother, "1")

## Qualitative Analyses

*Shifts in autonomy and relatedness.* The question of whether values for autonomy can shift while preserving relatedness was particularly salient in responses to the dilemma, *Transition to Adult Work (Men)*. This dilemma was among the dilemmas that showed the largest effect sizes in generational differences between daughters and mothers (see Table 4). The dilemma asked whether participants agreed with Jose, the teacher who says that young men should do what they want to do and pursue work and educational opportunities in Mexican cities, or Manuel, the teacher who says young men should listen to the advice of their parents and remain in the village to stay close to their families. The following responses were coded as interdependent, Gemeinschaft-adapted values, and they reflect seamless integration of personal and parental desires in decision-making during the transition to adulthood. That is, the self is connected to parents in such a way that the notion of obedience is experienced in terms of a harmonious and coordinated common perspective of the correct way to be.

For me it's better to obey the advice of parents, because as you know, sometimes they don't like it when their sons go far away, they say who gave this idea to my son, who took my son away, that's what some say. They don't like it very much. (Non-High School Boy, "1")

It's better that they study here close, like this their parents won't miss them, but they will live happily together with their son we say. (Non-High School Girl, "1")

Contrasting this harmonious experience of obedience among non-high school adolescents are the following responses to the same dilemma, coded as mixed Gemeinschaft-Gesellschaft value

orientations. Here, adolescents in high school begin to articulate a more separated self from parents, one that may have different perspectives and opinions from them. This may arise from socialization in school settings that involves alternative experiences outside the family. In these quotes, there is evidence of a more distinctive boundary between self and other. With this separation, the nature of autonomy necessarily shifts; obedience to the authority of parents is now experienced as restriction on one's personal desires.

On the one hand it's good what Jose says [to leave the village], they can return to visit their houses here in Zinacantán. If your father is in agreement you are going to continue studying [outside Zinacantán], then you are happy. But if my father doesn't give me permission, I don't go. (High School Girl, "2")

It seems good what Jose says [to leave the village] because with all of his heart the boy has thought about leaving and looking for work, to work with happiness. If his father is not in agreement, then he can't go, and he will not work with a lot of motivation, he won't work with happiness because he doesn't like that kind of work. When he has thought about it for himself he will work with all of his heart, with all of his heart he will look for money. (High School Boy, "2")

These comments illustrate that when socialization environments (school) increasingly involve cultural practices of separation from the family, as well as alternative experiences from family experiences, boundaries between adolescent selves and parents may become more distinct. Accordingly, personal desires are more salient and pull for increased emphasis on autonomy, now infringed upon with persistence of respect for parental authority. Thus, shifts toward independent values incorporate *both* agency and the degree to which adolescents understand themselves as connected to their families. This is an intermediate point on the interdependent–independent spectrum.

Farther along the spectrum are responses that were coded as Gesellschaft-adapted independent values. Here, the emphasis on personal desires becomes even more salient, such that personal fulfillment and personal achievement take priority over respect for parental authority *and* priority over staying close to the family. In the following examples, we see the emergence of negotiations with parents and expectations that parents will compromise with the desires of the adolescent.

This is what I think, each of us have our own destiny . . . if it is in our heart to continue studying, we can't hold ourselves back . . . we will continue with our own decisions . . . yes our parents will miss us, but they will know well where we are because we should talk to them before, they are going to understand. (High School Boy, "3")

It's good what Jose says [to leave the village], because it is good to look for work, but as Manuel says, we will leave our family, they will miss us. We can look for work in another place but we can come to see our parents on occasion, it's good what Jose says. (High School Girl, "3")

This continuum of responses illuminates the ways both connectedness (relatedness) and obedience (heteronomy) in an interdependent family value system give way to separation and autonomy as personal fulfillment and personal achievement are increasingly prioritized during adolescent development when Gesellschaft conditions expand.

*Reconciling new values with previous generations.* Evidence of "reverse socialization" was revealed when exploring how families reconcile intergenerational value shifts. This phenomenon was particularly visible in the social dilemma, *Cross-Sex Relations*, which was about boys and girls socializing at school. It was among the dilemmas with the smallest effect sizes in generational

value differences between mothers and daughters and it was the dilemma in which mothers had the highest (most independent) mean score (see Table 4). In contrast to traditional paradigms where older generations pass culture down to younger generations, reverse socialization highlights how adolescents can persuade elders to accommodate their more *Gemeinschaft*-adapted values and ideals to an increasingly *Gesellschaft* environment.

Qualitative data suggested that parents are shifting traditional perspectives about male–female segregation as they observe platonic cross-sex interactions become increasingly normative among adolescents in the high school. A number of adolescents stated that their parents accommodated their rules to the norms introduced by high school. For example,

Now my parents don't scold me, before they scolded us for talking to boys. (High School Girl)

Of course my father permits me talk to girls, already he knows how youth are today, maybe it wasn't like this when he was born, but now he already knows how boys and girls today think. (High School Boy)

Parents in Zinacantán may be adjusting their socialization principles to the way their children participate in *Gesellschaft* institutions because they have already become convinced of the utility and legitimacy of advanced schooling in a post-industrial economy through their own integration into a market economy during their transition to adulthood. Increased value for formal schooling brings acquiescence to the legitimacy of the cross-sex relations that happen in co-educational schooling. As the quote above suggests, parents may be learning from their children how to “think,” so that cross-sex interactions during adolescence become more acceptable to them. Parents may also be open to compromising with children on matters of cross-sex relations because, as anthropologists noted, the introduction of commerce in the 1980s corresponded with an increase in elopements (Collier, 1989; Flood, 1994), such that parents in 2009 were already primed with values for individual rather than family negotiations of partnering.

One way that parents may learn from the ways their children think is through explicit negotiations of differing perspectives. The following quote illustrates how a mother and a daughter collaborate to reconcile new points of view with traditional ones. Here, a mother who endorsed a more *Gesellschaft*-adapted value in response to the cross-sex relations dilemma suggests that her daughter is communicating with her to make new norms comprehensible within traditional frameworks, and thus less threatening.

It's good if boys and girls walk and behave well. Those that walk together are already like siblings, that is what they [adolescents] say, they chat as if they were siblings. (Mother of High School Daughter)

In this family, the adolescent is bridging the traditional and the new, persuading her mother to accept cross-sex relations by referencing kin relations, a concept familiar to previous generations. In this way, the daughter scaffolds her mother to new understandings of platonic cross-sex relations and assuages intergenerational tensions. Thus, we see how new cultural values build on and modify previous ideals and meanings as families negotiate the process of adapting to new social conditions.

However, Grandparents, who grew up before the age of commerce and elopements, may be less likely to be persuaded by new norms and values. Qualitative analyses revealed that grandmothers' traditional values are not accommodated, but rather, are rendered irrelevant by the disintegration of social structures that facilitated family interdependence. In the following example, a grandmother's view endorsing elder protection over adolescents' partnering behavior is undermined by contemporary circumstances in Zinacantán, which allow adolescents more freedom and mobility outside family surveillance:

Our parents didn't let us talk to boys . . . If you go on your own . . . there would be no way to intervene if your husband ends up making a mistake. This is what the parents say, "If I give you to him with my permission, then we can come to an agreement to bring the boy's bad behavior to his parents' attention to tell him not to mistreat you." When the boy asks for the girl's hand, parents ask, "Your son is fine, no problems with alcohol? Tell me because I will not give my daughter if your son is not good." . . . Together we can get the boy's attention if he is not behaving well, because he will become our son . . . We as women didn't grow up free, we were always going with our mothers, it's not like this now, women as much as men go free. [I: Is it ok that your granddaughter talks to boys?] I don't know, it's whatever they prefer, I can't say anything because I don't see where they go. (Grandmother of High School Granddaughter)

This example highlights how a grandmother preserves her values through memories of traditional practices while recognizing the powerlessness of her value system in the socialization of younger generations in the present day. In this case, reverse socialization happens by way of older generations surrendering their power to contemporary circumstances, without transforming deeply held interdependent values and assumptions about male–female relations.

## Discussion

The current study connected sociodemographic change to shifting psychological values by capitalizing on the progression of sociodemographic change that has occurred in the Maya community of Zinacantán in the last three generations. The first major change was the introduction of commerce, which was associated with more independent values among grandmothers and mothers in the sample. The second major change was the introduction of secondary education, which was associated with more independent values in the current generation of adolescents. Adolescent girls were more independent than mothers and grandmothers, but only those adolescent girls who attended high school. Adolescent girls who discontinued their education after elementary school had value orientations that were similar to mothers in the sample. These results suggest that the significant sociodemographic change driving shifts in values between the grandmother and mother generations was integration into a market economy and today it is high school causing change in the most recent generation.

Together the analyses demonstrate one of Greenfield's (2009) tenets that various sociodemographic components of a *Gesellschaft* environment—here commerce and formal education—push developmental change in a common direction, toward increasing individual independence, and that the motor driving value change depends on which of the major sociodemographic factors is shifting during a particular period. The data in this study indicate that generational differences in values were specifically tied to exposure to the sociodemographic variable that shifted at a particular point in time. That is to say, it was involvement in a market economy and involvement in formal schooling that showed associations with higher levels of independent values, not simply generational status. Although we must be cautious about using cross-sectional comparisons of values to infer historical value change, associations between values and the sociodemographic changes in Zinacantán support the notion that the generational differences found between grandmothers, mothers, and daughters in the sample were more than just an artifact of age or generational role status.

In fact, differences between mothers and daughters in each of the eight individual scenarios suggest that cultural values specifically around gender and sexuality may be shifting as Zinacantán becomes increasingly integrated into a market economy and as formal schooling among Zinacantec youth becomes more common. The dilemmas that showed the largest value differences between mothers and daughters were those that related to gender role equivalence, gender egalitarianism, and increasing adherence to personal choices in the transition to adult work and marriage roles. Adolescent daughters in high school were more attuned to fairness and equality

between women and men than their mothers, and more likely to prioritize personal choices in dating/partnering and career selection over adherence to parental authority. Although maturation and social role changes may partly account for these differences, the high school learning environment can also explain the findings. Values for gender equivalency and personal preferences are prominent in the school learning environment where girls and boys are expected to fulfill the same roles and expectations, where they engage in flirtations and romantic pairings, and where they are encouraged by their teachers to explore their personal interests in their education and their careers.

Independent values that specifically undermine gender segregation during adolescence and early marriage for women were not only common among adolescents in high school, but also among their mothers, who showed the most independent value endorsement in these two dilemmas. Qualitative analysis suggests that one explanation may be reverse socialization. Qualitative examples illustrated that adolescents scaffold their mothers to become more accepting of the cross-sex interactions that are part and parcel of co-educational academic institutions. Mothers who permit their adolescent daughters to attend school may be more open to this reverse socialization and are also more likely to look favorably upon women postponing marriage for educational and career attainment to ensure their own economic security. In fact, interviews with some of the first professional indigenous women living in the colonial city of San Cristóbal de las Casas illustrated that with increasing involvement in a market economy, the ability to provide for one's own economic security through integration in a market economy is increasingly compelling to indigenous women; it draws them to a more individualistic value orientation, which they endeavor to pass on to their children (Manago & Greenfield, 2011).

The area in which generational value change was less robust was in terms of adolescents' obligation to help their families in the home. Both adolescent high school girls and their mothers endorsed more interdependent values in these contexts. This pattern of change, values for hierarchical gender roles in the family shifting faster than values for family obligation, replicates a pattern of change found earlier in Greece (Georgas, Berry, van de Vijver, Kağitçibaşı, & Poortinga, 2006). Values relating to family obligation and support may be resistant to change or they could change more gradually with increasing *Gesellschaft* conditions.

### *Hybridization Versus a Continuum of Shifts in Value Priorities*

The direction of change revealed in this study has implications for the argument that increasing independence that emerges with economic development does not necessarily cause a shift in family connectedness (Kağitçibaşı, 2005). From this point of view, the interdependent–independent dimension has confounded two orthogonal dimensions, autonomy versus heteronomy, and relatedness versus separateness. Kağitçibaşı (2005) defined autonomy as agency and volition, being subject to one's own rules versus others' rules. She defines relatedness as interpersonal distance, boundaries, and connection between the self and others. She points out that in places such as Turkey, which has recently become more urbanized and economically developed, values for autonomy and relatedness coexist. In other words, increasing independence in Turkey has elevated the importance of autonomy, but has not diminished the importance of family connection.

The current study made visible a direction of change along a continuum of interdependent and independent values in connection with progressively increasing *Gesellschaft* conditions. Composite quantitative data across the individual dilemmas suggest that combinations of autonomy and relatedness could actually reflect intermediate points on the interdependent–independent value continuum: Grandmothers endorsed the most interdependent values on average, followed by mothers and non–high school adolescents who endorsed less interdependent and more independent values on average, and then finally high school adolescents who showed the

least interdependent and most independent value endorsement. Furthermore, qualitative analyses of a continuum of Gemeinschaft-, Mixed, and Gesellschaft-adapted responses to a dilemma about transition to adult work roles demonstrated that shifts in autonomy and separateness go hand in hand. Example responses from participants illustrated how conceptions and priorities related to autonomy and separateness are interlaced.

Autonomy and relatedness are both necessary for healthy adolescent development (Cooper, Grotevant, & Condon, 1983; Steinberg & Silverberg, 1986); however, this study suggests that with sociodemographic change, they take on different meanings and are balanced and enacted in different ways. In an interdependent value system, autonomy and relatedness are experienced in the context of virtually indistinguishable boundaries between self and others. To do what one wants to do is the same as what parents want because in a prototypical Gemeinschaft environment, there is more closeness, fewer opportunities for alternative experiences, and less multiplicity in perspectives (Manago, 2012; see also Lerner, 1958). Thus, for example, early adolescents in China experience autonomy through the internalization of adults' decisions, which is facilitated through relatedness (Bao & Lam, 2008; see also Deci & Ryan, 2000, for discussion on autonomy as internalization of authority in collectivistic cultures).

With increasing Gesellschaft conditions and independent cultural practices during adolescence, the self is more separated from the other, and in that separation, the potential for personal desires to be different than parental desires may flourish. Values for family closeness and shared perspectives transform, such that closeness and differing perspectives are now *negotiated* with parents. This distinction has been noted between authoritarian parenting styles among Chinese parents that encourage obedience and North American authoritative parenting styles that allow negotiation of rules (Chao, 1994; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987). In this study, family closeness and internalization of parental authority were both compromised with increasing Gesellschaft conditions that afford adolescents more mobility, alternative experiences, and relationships outside the family.

### *Adolescents as Pioneers of Value Change*

Increasing involvement in institutions where peer relations during adolescence can thrive has implications for the intergenerational transmission of cultural values. In traditional Zinacantec culture, like many other Gemeinschaft environments, elders are the ultimate source of guidance and knowledge. However, the creation of an age segregated social environment for adolescents in a Mexican educational institution, separate from hierarchical family relationships, forges the conditions for the rise of a youth culture to innovate upon traditional culture (Schlegel, 1999; Schlegel & Barry, 1991). Qualitative data in this study suggested a process of "reverse socialization" where adolescents are constructing new norms in the high school and new perspectives that have an influence on their elders. This study adds to previous observations that, under conditions of social change, adolescents are uniquely positioned socially to have an influence on others in the community as they reformulate cultural meanings and values to successfully transition into adult work and family roles (LeVine, 2011; Manago, 2012; Mead, 1978). Adolescents can demonstrate to parents and grandparents that new behaviors and values are adaptive to changing sociodemographic circumstances (i.e., school) and will ensure future resources and well-being (i.e., jobs in a market-based economy).

### *Limitations*

Limitations primarily rest on the lack of actual longitudinal data that would track historical value change over time diachronically. There may also be unique cultural features of this Maya community at this point in historical time that make it open to value changes in particular contexts,

which may not be generalizable to other cultures. In addition, the need to interview mothers and grandmothers together for the sake of cultural sensitivity may have led to an underestimation of value differences between the mother and grandmother generations, especially considering the cultural value of consensus. Despite these limitations, the study provides both quantitative and qualitative evidence of decreasing family interdependence and increasing independence in conjunction with sociodemographic change and shifting cultural practices during adolescence and the transition to adulthood.

### Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was supported by the University of California Institute for Mexico and the United States (UC-Mexus) Grant 09-44 and by a grant awarded to the project titled, "Adolescent Gender and Identity Development in the Context of Social Change in a Maya Community" from the Foundation for Psychocultural Research: Culture, Brain, Development Program."

### Note

1. In 2010, out of a population of 36,489 in the entire municipality of Zinacantán, those 5 years and older with some primary education is 16,610 (Instituto Nacional de Estadística y Geografía; [www.inegi.org.mx](http://www.inegi.org.mx)).

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