Adolescent Autonomy in Taiwan: Changes and Determinants

Yeu-Sheng Hsieh
Department of Agricultural Extension
National Taiwan University

Chin-Chun Yi
Institute of Sociology
Academia Sinica

Yuh-Huey Jou
SunYat-Sen Institute for Social Science and Philosophy
Academia Sinica

Abstract

This research explores parent's control behaviors toward adolescent in Taiwan, analyzes the types of parent's control behaviors in terms of adolescent autonomy and their transitions during junior high school period, and examines the rural-urban difference and gender difference in adolescent autonomy. The data used for this research is from Taiwan Youth Project, a panel study which began in 2000. The latent class models and structural equation models have been utilized to analyze the data. Five types of adolescent autonomy have been characterized namely: low autonomy, activity autonomy, networking autonomy, high autonomy, and partial autonomy. And, high transition of the type of adolescent autonomy occurs across junior high school period. That rural-urban difference in adolescent autonomy is found. Adolescent autonomy in the previous year is found to be an intervening variable between region and autonomy at the later time. Gender difference in autonomy is only partly supported in this study. These results warrant further attention to more aspects of adolescent autonomy for Taiwan's youths.

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There is an intensive research interest in adolescent autonomy or parenting style to development psychologist either in the western societies or in the Chinese-culture societies (GRAY and STEINBERG 1999;BRENNER and FOX 1999;JULIAN, MCKENRY, and MCKENRY 1994;NOOM, DEKOVIC, and MEEUS 2001;NOOM, DEKOVIC, and MEEUS 1999;PAVLIDIS and MCCAULEY 2001;CHOU 2000;KIM and GIM CHUNG 2003). However, most culture-specific autonomy studies are based on the Asian-American families in the U.S. with some exceptions in Hong Kong's samples. The study on parenting behavior using Taiwanese samples is rare and needs to be brought to light.

Parents are one of the important socialization agents in the life of an adolescent and they have the obvious influence on how an adolescent perceives his or her autonomy at home. Taiwanese parents, as Chinese parents, Korean parents, and Hong Kong's parents, expect their children to have a high level of education. Due to highly competition in entrance examinations of different levels of education in Taiwan, adolescents start to face a very strict academic preparation or training requested either

by parents or by school teachers once they enter the junior high school. Not only do adolescents feel to lose some freedom to decide what they want to do at home or outside home, but also parents even change their ordinary activities to have more time to supervise children's study or to accompany at home. Parents control toward children's activity and friendship networking, which is considered as parental responsibilities in Chinese or Taiwanese culture, may result in different perceptions of autonomy to autonomy at home.

Noting in a comparative cultural study, Sue and Kitano (SUE and KITANO 1973) described Asian-American families as hard working, conforming, ad cohesive, transmitting cultural values similar to those of Caucasian, middle-class families. Lin and Fu (1990) also found that Chinese Americans were more controlling, more achievement oriented, and encouraging of independence than were Caucasian parents (JULIAN, MCKENRY, and MCKENRY 1994;LIN and FU 1990).

For Taiwanese parents, they control children's behavior at home with different purposes, but expect the same educational goal for children. At adolescence, parents want to manage youth's time, activities, and friendship networks to expect children to spend as much time as possible in studying and prepare to succeed in the entrance examination. Adolescents, however, want to get more free time to participate in activities interesting to them and go out with friends. The conflict between parent control and adolescent autonomy often occurs in the family and it always leads to negative outcomes of adolescent.

Nevertheless, we don't have clear a picture on how Taiwanese parents control their adolescent behavior at home, on one hand. We don't know yet how adolescents perceived their parent's control behaviors in terms of autonomy at home, on the other hand. In addition, how the adolescent autonomy at home changes over his/her junior high year under an extremely high examination pressure environment also need to be

explored. Adolescents living and studying in a rural area may experience different pressure from entrance examination. Beside, under the concerns of overall social safety and different expectation of family roles for girls, they may also experience different parent's control behaviors at home, except for expecting more time to study. It is also worth looking into whether rural-urban difference and gender difference in adolescent autonomy exist among Taiwan's youths.

This research uses information from the Taiwan Youth Project, a panel study, to understand the contents of adolescent autonomy among Taiwan's Youth, and assess its changes in the adolescent life in their junior high school period to shed light on the Taiwanese adolescent life profile. In addition, the differences in adolescent autonomy between rural and urban youth and between male and female are also examined. The underlying assumptions of this research are that rural/urban differences do exist in the pattern which parents give autonomy to their adolescent children as well as in gender-specific patterns of autonomy giving. Furthermore, these differences are best understood as an outcome of parent's control behaviors toward their children at home in Taiwan's cultural and educational contexts in which parent-child relationship and the emphasis on the value of education are different from those in the western societies, U.S. in particular.

Therefore, the purposes of this study have three: (1) to describe and characterize parent's controls behaviors related to structuring, regulating, and supporting adolescent behaviors at home during junior high years; (2) to identify the distinct types of parent's control behaviors toward adolescent in terms of adolescent autonomy at home; (3) to investigate the transitions of adolescent autonomy from the beginning to the third year of junior high; and (4) to examine rural-urban difference and gender difference in adolescent autonomy among Taiwan's youths.

THEORECTICAL PERSPECTIVE

Parent's Control Behaviors and Perceived Adolescent Autonomy

Parenting control behaviors or parenting practices toward adolescent is a separate dimension of parenting behavior in adolescence, distinct from "parenting style" (JULIAN, MCKENRY, and MCKENRY 1994;CARTER and WELCH DAVID 1981;DARLING and STEINBERG 1993;BAUMRIND 1971;BAUMRIND 1991;LIN and FU 1990) or "involvement in decision making" (JULIAN, MCKENRY, and MCKENRY 1994;GECAS and SCHWALBE 1986;GECAS 1971;DORNBUSCH 1989). As defined by Baumrind (JULIAN, MCKENRY, and MCKENRY 1994;GECAS and SCHWALBE 1986;GECAS 1971;BAUMRIND 1971;BAUMRIND 1991), parenting style is a pattern of attitudes that parents express toward their children and it can be recognized by the amount of parental control over the child's activities and behaviors. Darling and Steinberg (DARLING and STEINBERG 1993) have made an important theoretical distinguishing between parenting style and parenting practices. Parenting style is defined as a stable complex attitudes and beliefs that form the context in which parenting behaviors occur. Parenting style is appropriately classified into four types, authoritative, authoritarian, permissive and rejecting-neglecting. Parenting practice, on the other hand, are "specific goal-directed behaviors through which parents perform their parental duties" (BRENNER and FOX 1999;DARLING and STEINBERG 1993). Limiting a child to do things to induce behavior to spend more time in studying in order to obtain the success in entrance examination are the examples of parenting practices or parent's control behaviors. While the influence of parenting style on child's life is indirect, parent's control behaviors or parenting practices have a direct and strong effect on children's outcomes. In other words, parenting practices intentionally induce the

child's behavior to an expected direction to achieve a pre-set goal by parent or by both parent and child. However, the parenting practices are perceived by the child in terms of child's autonomy, which in turn react to parents practices. Further, parents may adjust their parenting practices to make sure that their parenting goal must be accomplished. These reciprocal mechanism between parental and child behavior often lead to the occurrence of parent-child conflict in the family, and thus result in different outcomes of children.

Perceived adolescent autonomy reflects the parenting practices will be assessed in this study. Many different approaches to the conceptualization of adolescent autonomy exist (NOOM, DEKOVIC, and MEEUS 2001). Noom et al. (2001:578-581) noted that adolescent autonomy can be categorized according to the extent to which they are refer to cognitive, affective, or regulatory processes and distinguished as attitudinal autonomy, emotional autonomy, and functional autonomy. Attitudinal autonomy is defined as "the ability to specify several options, to make decision, and to define goal," and it is related to the concepts of beliefs about one's capabilities, attitudinal independence, goal setting, decision, and personal goals. Emotional autonomy refers to a feeling of confidence in one's own choices and goals. It involves the perception of emotional independence from parents and peers. The functional autonomy is the regulatory dimension of adolescent autonomy and it is the perception of control which refers to the ability to develop a specific strategy to achieve one's goals. Functional autonomy is more related to the concepts of functional independence, independence, and personal control. In this study, we concentrated on the regulatory dimension of adolescent autonomy, functional autonomy due to the data available.

Adolescent autonomy is a similar concept of "parental independence giving" mentioned by Bulcroft el al. (1996).

It can be viewed as the relinquishment of direct control over adolescent behaviors,

both inside and outside the home. In general, there are two aspects of adolescent behaviors over which parents may control—intrafamilial behavior and extrafamilial behaviors (Bulcroft et al. 1996:867). Intrafamilial controls are parenting behaviors that attempt to limit the behavior of adolescents in the home or that reflect a concern with maintaining direct supervision over the adolescent in the home. Extrafamilial controls are parenting behaviors that attempt to limit the behaviors of adolescents outside the home or that limit the adolescent's ability to interact outside the home without direct adult supervision. But for Taiwan's context, extrafamilial controls are more often parenting behaviors that intend to limit adolescent's networking interactions, including screening the friends and making calls with friends. Thus, extramilial controls can be named *networking controls*. There are two main reasons for parents to adopt networking controls to adolescent: first, parents try to avoid adolescent to involve deviance behaviors due to making friends with peer adolescents with problem behaviors because of the vulnerability of youths. Second, parents ask adolescent not to spend too much time to talk with friends so that they don't be disturbed to devote themselves to studying or doing homework.

Besides, the main purpose for parent's intrafamilial controls is to expect adolescents to have much time to study or to keep them in a usual daily schedule so that the adolescent's health will not be hurt by the overload of school work. The interfamilial controls may include limiting to watch TV, restricting to participate outdoor activities and enjoy leisure time, regulating adolescent's daily time such as wake up time, bed time, and/or cram school schedule, and limiting to hook up network and play games through computer networks, etc. Thus, parent's interfamilial controls can be named *activity control*.

The Taiwanese Context

Most researches on adolescent-parent relationships are based on Western children and adolescents, as well as their parents. Only few researches examined Chinese samples, Hong Kong in particular, to understand if adolescent-parent relationships in Chinese families are culture-specific (CHANG and CHANG 1998). It is essential to understand what adolescent autonomy is among Taiwan Youths.

Adolescents and parents tend to differ in their perceptions of parenting style within Western families. Adolescent tend to view their parents are more permissive and more authoritarian, whereas parents tend to view themselves as more authoritative than their children do (Chang and Chang 1998:422).

Adolescent-parent relationship among Chinese families or Taiwanese families is complex. In Chinese culture, parental control, parental care, and parental concern are virtually synonymous from parent's point of view. The perception to parental control from the adolescent's point of view may not be equated to parent's purpose.

Taiwanese parents always ask children should perform well in school at any level of education so that children can find a good position in the labor market in the future because the value of education is a high-level norm and the entrance examination each educational level is so competitive in Taiwanese society. As Chao (1994) found that Chinese mothers, compared with European American mothers, placed much more emphasis on the importance of education and on direct intervention in their children's academic learning, Taiwanese parents extremely emphasize on academic achievement of children.

Although Taiwanese parents highly care children educational performance, they are vigilant about homework and regulate their children's intrafamilial and extrafamilial activities to concentrate on academically valued activities. However, it does not mean

that Taiwanese parents also intensively involved in their children's schoolwork. Steinberg et al. found that Asian parents in the U.S. were the least involved in their children's schoolwork.

That entering the junior high school claims the ending of a happy childhood depicts the common growth experience of adolescents and parents' experience in many Taiwanese families. When the children graduate from primary school, Taiwanese parents start to prepare with their children to succeed in entrance examination of senior high school by reducing children's extra-activities outside the home to increase their time for schoolwork. Parental controls induce to the child either by networking control or by activity control. In general, the more parent controls, the less adolescent autonomy. Besides, parent controls influence the perceptions of adolescent about their autonomy. Three-year preparation for entrance examination is a long-term battle to parents and their children. However, at the beginning parent may adopt certain behavior control pattern based on the children's academic achievement performance at primary school. Then, parent may adjust their control patterns according to the up-date information of both children achievement at school and behaviors inside the home or outside the home. Some parents, however, may adopt persistent control patterns during three-year period of adolescent. It is worth finding out how Taiwanese parents regulate their adolescent to accomplish their educational goals. And, how these parents regulate patterns change across junior high period of adolescent will also be examined.

CONCEPTUAL MODEL AND HYPOTHESES

Conceptual Model

Figure 1 shows an overall research framework of adolescent autonomy. Basically, adolescent autonomy at grade 7 is affected by the region of residence, gender of adolescent, and school achievement at primary school (grade 6). Except for the impact of region of residence and gender of adolescent, adolescent autonomy at grade 8 and grade 9 are influenced by the adolescent autonomy and school achievement in the previous year, as well as current educational expectation at grade 7 and grade 9, respectively. Further, in order to purify the effect of region of residence and gender on adolescent autonomy, we controls parent's education, father's age, number of siblings, and first child in the study because past research on adolescent autonomy have showed that those variables are likely to have impacts on adolescent autonomy.

(Figure 1 about here)

Specific Hypotheses

Educational success is a main goal in Taiwanese families and is a common social value in the marketplaces. All adolescents are expected by the family and by the society to pursue a good performance in junior high school so that they are able to succeed in entrance examination of high school wherever they live in the city or in the countryside. The pressure from the examination is much higher for adolescents who live in the city than that in the countryside because of more serious educational competition. The parents of adolescent are in the same pressure pool as adolescents. Thus, in the urban area, Taipei City in particular, parents percept more pressure from

educational competition, they are expected to be more likely to adopt different controls behaviors either in networking controls or in activity controls toward their adolescents. Adolescents in turn perceive less behavior autonomy at home. In contrast, parents in rural area may experience less pressure from child's education. Thus, they may utilize less control behavior toward their adolescents in order that they can concentrate on the studying, and leads to more behavior autonomy at home perceived by adolescents.

Hypothesis 1. Adolescents in urban area perceive less autonomy at home than rural counterparts.

In Taiwanese society, parents may have different parenting behavior toward adolescent boy or adolescent girl. In general, different socialization, family obligation, and educational expectation are given to male child from parents in the family. With respect to in-home behaviors, however, strong norms of patriarchy in Taiwanese families should result in adolescent boys receiving more autonomy than girls.

Hypothesis 2. Female adolescent will perceive less autonomy at home than male adolescent.

DATA, MEASURE, AND STRATEGY OF ANALYSIS

Data and Measures

We analyze data from the Taiwan Youth Project (hereafter, TYP), a panel study that began in 2000 conducted by Research Group of Family and Life Course in Academia Sinica, Taiwan, with a random sample of 2696 seven graders of 40 junior high schools

in Taipei City, Taipei County, and Yi-Lan County. The annual survey was administered in school from 2000 until 2002, with mail questionnaires or telephone interviews used from 2003 until now. This data set contains the valuable and comprehensive information of adolescents and their parents regarding family life and school life. We only use the first three waves data of TYS, when respondents were 12-14 years old for the specific purpose of this research. Due to incomplete response and sample attrition, we have restricted our sample to adolescents with complete information on all variables used in the study, which resulted in a sample of 1918.

Adolescent autonomy. Adolescent autonomy in this study only refers to one of the three dimensions of concept, which is the regulatory process of developing parents expected behavior to achieve good performance in entrance examination of senior high school. The TYP survey includes a number of questions pertaining to the perceptions of adolescents toward their parent's control behaviors. Thus, the regulatory dimension of adolescent autonomy is measured by the two aspects of parenting practices or controls toward youth, namely, networking controls and activity control controls, and they are perceived by the adolescents in the family. Networking controls refers to the extent to which parents intentionally screen the adolescent's interaction with friends and constrain him or her making calls at home. Activity controls is a measure of parent's control behaviors to adolescent activities inside the home or outside the home, including limiting to watch TV, restricting outdoor activities and leisure time, regulating daily schedule, and limiting to hook up network and play games through computer networks. Detail measured items of parent's control behaviors in each wave survey are listed on Table 1. Due to the different measurement items in different waves, slightly different items can be used to represent the measures of activity controls which parents intend to arrange for their children. In sum, we

measure adolescent autonomy with 6 or 7 dichotomous parent's control behaviors (indicators), including two items for measuring networking control and four items for measuring activity controls at grade 7 and grade 9 (wave 1 & wave 3), and five items at grade 8 (wave 2) . Research on adolescent-child relationships showed that there is different perception existing between parent and adolescent (Demo et al. 1987). Thus, in this study, adolescent's self-reports regarding parent's control behaviors at home are adopted to reflect youth's actual feeling.

(Table 1 about here)

Region of Residence. Region of residence refers to the place in which the adolescent lives and studies. We have grouped region of residence into eight categories by urbanization and industrial characteristics: (1) old center area of Taipei City, (2) new center area of Taipei City, (3) suburban area of Taipei City, (4) Industrial Area of Taipei County, (5) rural area of Taipei County (6) satellite city of Taipei County, (7) urban area of Yi-Lan County, and (8) rural area of Yi-Lan County. Category 2 is served as reference group.

Gender of Adolescent. Gender of adolescent is coded 1 if adolescent is female and is coded 0 if male.

School Achievement. School Achievement at primary school (grade 6) was measured by having adolescent response an question regarding what rank of school achievement was when he/she gradated from primary school. Rating range from 1 = within rank 5 in the class to 4 = beyond rank 21 in the class. Ratings were reverse coded for the purpose of analyses and presentation; therefore, high scores reflect a better school

achievement at primary school and low scores reflect a poorer school achievement.

School Achievement at grade 7 and grade 8 were assessed by the response to a question, respectively, in regard to how well of school achievement performance was in the last semester when it presented the same school year under analysis.

Current educational expectation at grade 7 and grade 9 measures the extent to which educational expectation of adolescent according to the status of his/her current environment and ability, respectively. The state of family economic situation and the status of adolescent's own school achievement performance will influence the up-date expectation of education of adolescent or from parents. Response range from 1 = junior high school to 6 = Ph. D with high scores represent high educational expectation.

Control Variables. Because we want to estimate the effect of rural/urban difference and gender difference, the characteristics of parents that related to adolescent autonomy were controlled. Prior research suggests that several variables affect adolescent autonomy: parent's education, parent's age, number of siblings, and oldest (or first) child. Parent's education is measured by the higher education of father or of mother. Adolescents indicating parents with no education were scored as 0, and adolescent indicating parents with primary school education were scored as 1, and so on. Adolescents indicating parents with graduate school education were scored as 7. Father's age is presented by a dummy variable with coding 1 if father's age is older and equal to 45. Number of siblings is the actual number of siblings, including adolescence himself or herself. If the adolescent is the oldest child of parents, a dummy variable with coding 1 is applied.

Strategy of Analysis

We will first present descriptive statistics of all variables used in the analysis. Analyzing these variables individually could obscure important information about studying samples. To characterize the pattern and distribution of adolescent autonomy, we use a latent class model (CLOGG and GOODMAN 1985;CLOGG 1994;GOODMAN 1974a;GOODMAN 1974b) to examine these parent's control indicators in combination and to name the common pattern of adolescent autonomy. Latent class models are especially appropriate in this context which all measured items are dichotomous. This method tests whether the covariation between each of the parent's control indicators is due to their mutual relationship to an unobserved or latent adolescent autonomy construct. If so, then specification of the latent adolescent autonomy variable should reduce this covariation among parent's control indicators to the level of chance variation. Latent class models also allow us to establish whether there are distinct types or patterns of adolescent autonomy among Taiwanese Youth. The advantage of latent class models is that it effectively reduces the complex set of parent's control indictors to several distinct types of adolescent autonomy without any priori assumptions about the distribution of measured indicators. All latent class models are estimated using M-plus program.

The different number of types of adolescent autonomy is allowed for identifying and analyzing the latent classes separate for each year. Then, the types of adolescent autonomy in each year are named based on the conditional probability to response the parent's control indicator given that the respondent belongs to a certain types of adolescent autonomy.

In addition, structural equation models are utilized to assess the effect of region of residence and gender of adolescent on adolescent autonomy. According to the

research framework on Figure 1, three-wave data are integrated to analysis system to examine the pure effect on adolescent autonomy, holding all control variables constant simultaneously.

RESULTS

Descriptive Statistics of Variables

Table 2 provides basic descriptive information about variables used in the analysis. Around forty percent of sampled adolescents live in the Taipei City, another forty percent from Taipei County, and others from Li-lan County where it is relatively less urbanized area. Over half of adolescent's parent have junior high or senior high school education, and nearly one fourth of parents have college and above education. About one third of adolescent's parents are younger than 45, and more eighty-five percent of families have less than three children. Around twenty percent of adolescents' achievements are quite well (within top 5 ranks) each year in junior high school, and less than ten percent are performed as the bottom group. At grade 7, over fifty percent of adolescents indicated that they want to have at least university or technological college in their future, and increase to over sixty percent with the same educational expectation at grade 9. However, seven percent of adolescent reported that they only want to have senior high school education, and it reduced to less than two percent in grade 9. It is noted that adolescent's educational expectation has shown to increase as adolescent grows older in junior high period in Taiwan.

(Table 2 about here)

Parent's Control Behaviors toward Adolescents

Table 3 presents the percentages of parent's control behaviors toward adolescent at home. Half parents screen adolescent's interaction with friends at his grade 7, and this likelihood has reduced to less than forty percent at grade 9. However, the proportion of constraining to make telephone calls with friends reaches to nearly forty percent at grade 9 from about thirty percent at grade 7. Even facing the pressure of entrance examination, parents still loose their control to adolescent child to watch TV at home, from 55 % at grade 7 drop to 35 % at grade 9. Both restricting outdoor activities and leisure time and regulating daily schedule are also decrease with the same rhythm to the similar level of limiting to watch TV. In general, Taiwanese parents loosen both networking controls and activity controls toward adolescent at home as the child is getting older. That is, ever though the adolescent faces more and more examination pressure during his junior high period, Taiwanese parents still give him/her higher behavior autonomy at home. In addition, over 60 % of adolescents' parents limit them hooking up network and play games through computer networks at grade 8. Nearly 80 % of adolescents indicated that they are asked to do housework at home.

(Table 3 about here)

Types of Adolescent Autonomy

With regard to perceived adolescent autonomy, it is necessary to fit latent class models separately each year to the combined parent's control behaviors and to characterize its types based on the estimates latent proportions and corresponding

conditional probabilities of answering observed parent's control behaviors. From the results presented in Table 4, we take note that five-class, four-class, and four class model are the better fit model for the cross-tables of parent's control behaviors at grade 7, grade 8, and grade 9, respectively. Those models are separately selected by the integrate considerations of all fit statistics, such as p-value, BIC, and L^2/df.

(Table 4 about here)

Having determined, from the results presented in Table 4, how many latent classes are needed to obtain a latent class model that provides an accepted fit to the data on parent's control behaviors at different year, the maximum-likelihood estimates of the selected latent class model are reported in Table 5. Given that adolescent has been identified to certain latent class, their conditional probabilities of answering each category of parent's control behavior item are presented on the main center of the table, with latent class proportions are shown at the bottom of the table.

(Table 5 about here)

The estimated parameters show that latent class 1 characterizes parents who adopt behavior controls on all items, including all networking control and all activity control toward adolescents at home. Latent class 2 describes parents who only control adolescent's networking freedom at home, but do not control various activity freedom in the home. On the contrary, those who merely control adolescent activity freedom at home, but do not control his/her network interactions are categorized by the latent class 3. Additional type of parents who are perceived to be the least control on adolescent behaviors both networking and activity at home can be identified by

the latent class 4. Those four types of parental control behaviors on adolescent are shown in a similar manner during adolescent's junior high period. However, an additional type of parent's control behavior has been found at grade 7, the latent class 5, which indicates that some parents only control both partial networking and partial activity toward adolescent. We name these five latent classes the low-autonomy-type latent class, activity-autonomy-type latent class, networking-autonomy-type latent class, high-autonomy-type latent class, and partial-autonomy-type latent class, respectively. The approach for naming these latent classes is based on the criteria on Table 6. Generally speaking, from the point of view of adolescent, the less parent control, the higher regulated autonomy.

(Table 5 about here)

(Table 6 about here)

The Transition of Adolescent Autonomy

Table 7 presents the distribution of adolescent autonomy at home from grade 7 to grade 9. Among Taiwanese adolescents, the proportion of perceived low autonomy decreases 8 percentage points, from 25% at grade 7 to 17 % at grade 9. In contrast, the adolescents perceived activity autonomy increase dramatically, from 11% to 30 % over the same period. With regard to networking autonomy, the proportion increase to 34% at grade 8, from 22% in the first year, but significantly drop to 20% in the entrance examination preparation year. Over one fourth of adolescents perceived high autonomy at his grade 7 and nearly reach the level of one third. The analysis reported in this section clearly shows that meaningful distinctions can be extracted from the patterns of adolescent answering how parents control his/her

networking or activity at home. It is worth noting that even though under the serious pressure from the entrance examination, Taiwanese parents still give more and more behavior freedom to adolescent at home when he/she is more biologically and behaviorally mature.

(Table 7 about here)

It is worth noting that how the adolescent autonomy changes perceived by the same adolescent needs to be further explored. In other words, whether a parent changes his or her control behavior toward adolescent at home during junior high period is necessary to clarified. To this purpose, we further analyze separately the transition probabilities of adolescent autonomy for grade 7 to grade 8 and for grade 8 to grade 9 by using the predicted types of adolescent autonomy. As shown on Table 8, the transition probabilities indicate that there is no high degree of persistent adolescent autonomy. It reflects high probabilities of changing to another type of adolescent autonomy from the original type. We can find that Taiwanese parents do change their control behaviors according to children's growth and give them more action freedom at home. The transition of adolescent autonomy shows that parents of adolescent may not have a persistent parenting control behavior.

(Table 8 about here)

Rural-Urban Difference and Gender Difference in Adolescent Autonomy

Having drawn findings on the transition of adolescent autonomy, it should further examine whether the type of adolescent autonomy differs by the region of residence

and by the gender of adolescent, when taking all effects of control variables into account. From the results presented in Table 9 pertaining the estimates of structural equation models of adolescent autonomy, we see that region of residence, indicating the extent which the competition of entrance examination leads to different pressure to both adolescent and his/her parent, has a significant effect on the type of adolescent autonomy at grade 7, holding all other effects constants. It, however, has no influence on adolescent autonomy at grade 8, and so does at grade 9. It should be noted that the effect of region of residence on adolescent autonomy is diminished when the types of adolescent autonomy at previous year are added to the consideration. It shows that adolescent autonomy of the previous year is an intervening variable between the region of residence and adolescent autonomy.

Surprisingly, because only three parameters of gender of adolescent are significant in Table 9, we conclude that gender of adolescent only has a slight effect on regulated autonomy perceived at home. The failure to find the gender difference in perceived autonomy may be partly result of the nature of competitive educational environment in Taiwan. This means that, on one hand, parents concern the arrangement to enhance competition ability of adolescent regardless of adolescent's gender. On the other hand, adolescents are particularly vulnerable member of current Taiwan, parents avoid adolescent involving in deviance behavior by giving them more equally controls through networking or activity limiting.

(Table 9 about here)

Effects of Control Variables

Although, the effect of control variables on the types of adolescent autonomy is not the main interest in the study, it is worth noting the findings briefly here. The effects of parent's education on adolescent autonomy, including quadratic term, show that the influence is not linear, as U-shaped. The appropriate conclusion would be that parents with lower education and higher education tend to give their children more behavior freedom at home while parents with mediate education are more likely to control adolescent behaviors at home. Also, with other factors controlled, adolescent with older father (aged over 45) are more likely to perceive low autonomy at home at grade 8, but is not so in another two years. In addition, it is also showed that the higher the school achievement at previous year, the higher educational expectation at the later year.

Conclusions

This study explores the types of parents control behaviors at home in terms of perceived adolescent autonomy among youths of junior high school in Taiwan. In particular, we assess the structure of adolescent autonomy and its transition during junior high school period. We also investigate the rural-urban difference and gender-difference in perceived autonomy at home among Taiwanese adolescents. We find that Taiwanese parents have very degree of control behaviors to their adolescents at home, with over 55% taking activity control and slight lower proportion screening interaction with friends, and only 30% constraining to talk with friends by telephone when their adolescents enter the junior high school. And, Taiwanese parents with adolescents in the senior high school began to loosen their controls on adolescent behaviors at home when their children get older and older even though their adolescents meet more and more serious examination pressure. That is, the entrance

examination syndrome of Taiwanese parents is gradually released during their adolescents in the junior high school.

There are five disparate types of parent's control behaviors perceived by adolescent, including low-autonomy-type, activity-autonomy-type, networking-autonomy-type, high-autonomy-type, and partial-autonomy-type. In addition, regulated autonomy received by adolescent at home changes dramatically over three years of junior high school. In other words, Taiwanese parents do not use a consistent control method to their children at home. It seems that parents take different control behaviors to their child at home according to some latent factors, such as child's behavior at home and their performances in school, etc.

Adolescents in different regions do receive different parent's control behaviors, and it shows that adolescents in non-urban areas generally experience more autonomy either in activity autonomy or in networking autonomy or both. However, girl adolescents realize a little more autonomy than boy counterparts. The second hypothesis does not get support in the study. Taiwanese culture emphasizing on familism and patriarchy norms seems not to alter parent's control behaviors in a great magnitude.

Researchers, however, pointed out that although there are gender differences in the development of autonomy, there are few differences in the activities of sons and daughters with their parents, or in the extent of disagreements on rules for sons and daughters (HILL and HOLMBECK 1987;MONTEMAYOR and BROWNLEE 1987). Detailed analyses on differentiating autonomy perceived from mother-daughter, mother-son, father-daughter, and father-son relationships are important in the future.

Psychoanalysis perspective view adolescent rebellion against parental control as both normative and desirable and the struggle of the adolescent for autonomy makes parent-adolescent conflict inevitable (DORNBUSCH 1989:236-237). Low autonomy perceived by adolescent at home does not necessary to be viewed as an indicator of

adolescent conflict with and detachment from parents. Nevertheless, the process of disequilibration between controls intension of parents and justification from adolescent may result in tension in parent-adolescent relationship, and in turn influence adolescent adjustment or development outcome. Thus, more researches should be formulated to further examine how this disequilibration influence adolescent development outcomes, such as peer friendship, deviance behavior, and depression, etc.

Dornbusch et al. (DORNBUSCH et al. 1987) found that adolescents from families in which parents exhibited mixed or inconsistent child rearing styles had lower grades than did adolescents whose parents emphasized a single parenting style. This implied that inconsistency in parental control behaviors at home may create adolescent's anxiety, and that anxiety may lead to low school achievement or high depression. In this study, we do not distinguish perceived adolescent autonomy from mother or from father. Further research on the effect of inconsistent parenting control behaviors at home on adolescent outcomes should be considered.

This study has shed lights on the parent's control behaviors toward adolescent at home in Taiwanese society. It also provides a new insight on how adolescents percept their autonomy at home and how it changes across junior high school years. That Taiwanese parents give more freedom to adolescents at home to promote real autonomy of adolescent should more effort in the future.

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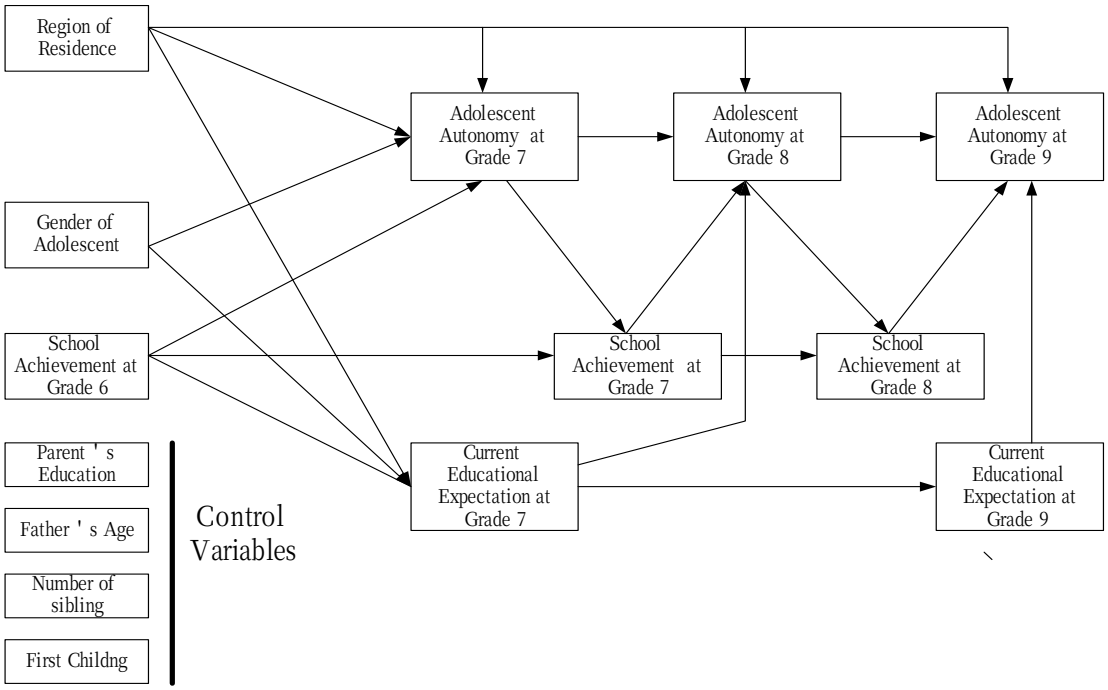

Figure 1: Research Framework

Table 1. Measured Items of Parent's Control Behaviors Toward Adolescents from Grade 7 to Grade 9

Aspects of Parent's Control Behaviors	**Grade 7 (Wave 1) (Response: Yes/No)**	**Grade 8 (Wave 2) (Response: Yes/No)**	**Grade 9 (Wave 3) (Response: Change/No Change) (Mother's and Father's Answers)**
Networking Controls	1. Screening interaction with friends 2. Constraining to make telephone calls	1. Screening interaction with friends 2. Constraining to make telephone calls	1. Screening interaction with friends 2. Constraining to make telephone calls
Activity Controls	3. Limiting to watch TV 4. Restricting outdoor activities and leisure time 5. Regulating daily schedule	3. Limiting to watch TV 4. Restricting outdoor activities and leisure time 5. Regulating daily schedule 6. Limiting to hook up network and play games 7. Assigning to do housework	3. Limiting to watch TV 4. Restricting outdoor activities and leisure time 5. Regulating daily schedule

Table 2 Descriptive Characteristics of Variables Used in This Study

Variable	Frequency	%
Total	1918	100.00
Region of Residence		
Old Center Area, Taipei City	142	7.40
New Center Area, Taipei City	341	17.78
Suburban Area, Taipei City	276	14.39
Industrial Area, Taipei Country	309	16.11
Rural Area, Taipei Country	128	6.67
Satellite City, Taipei Country	309	16.11
Urban Area, Yi Lan Country	220	11.47
Rural Area, Yi Lan Country	193	10.06
Parent's education		
0 No	3	0.16
1 Primary School	162	8.45
2 Junior High School	464	24.19
3 Senior High School	588	30.66
4 Vocational High School	224	11.68
5 College	150	7.82
6 University	252	13.14
7 Graduate School	75	3.91
Age of Father		
Younger (<45)	623	32.48
Older (>=45)	1295	67.52
Number of siblings (M=2.62, SD=.86)		
1	87	4.54
2	860	44.84
3	723	37.70
4	195	10.17
5	40	2.09
6	13	0.68
Gender of Adolescent		
Boy	969	50.52
Girl	949	49.48
First Child		
No	1087	56.67
Yea	831	43.33
School Achievement at Grade 6 (M=2.58, SD=1.01)		
1 With rank 5 in the class	365	19.03
2 Rank 6-10 in the class	455	23.72
3 Rank 11-20 in the class	727	37.90
4 Beyond rank 21 in the class	371	19.34
School Achievement at Grade 7 (M=2.88, SD=1.17)		
1 Excellence (Within rank 5)	304	15.85
2 Above average (Rank 6-15)	368	19.19
3 Average (Rank 16-25)	642	33.47
4 Below average	455	23.72
5 Bottom	149	7.77
School Achievement at Grade 8 (M=2.61, SD=1.16)		
1 Excellence (Within rank 5)	308	16.06
2 Above average (Rank 6-15)	702	36.60
3 Average (Rank 16-25)	522	27.22
4 Below average	201	10.48
5 Bottom	185	9.65

Variable		Frequency	%
Current Educational Expectation at Grade 7 (M=3.19, SD=1.24)			
1	Junior High	125	6.52
2	Senior High (or Vocational High School)	597	31.13
3	Vocational College	259	13.50
4	University or Technological College	753	39.26
5	Master	103	5.37
6	Ph. D	81	4.22
Current Educational Expectation at Grade 9 (M=3.51, SD=1.14)			
1	Junior High	32	1.67
2	Senior High (or Vocational High School)	504	26.28
3	Vocational College	158	8.24
4	University or Technological College	1002	52.24
5	Master	126	6.57
6	Ph. D	96	5.01

Table 3. Percent Reporting Parent's Control Behaviors from Grade 7 to Grade 9

	Grade 7		Grade 8		Grade 9	
Items of Parent's Control Behaviors	f	% of Yes	f	% of Yes	f	% of Yes
Screening interaction with friends	961	50.10	843	43.95	712	37.12
Constraining to make telephone calls	588	30.66	678	35.35	735	38.32
Limiting to watch TV	1057	55.11	1105	57.61	668	34.83
Restricting outdoor activities and leisure time	1134	59.12	1173	61.16	738	38.48
Regulating daily schedule	1107	57.72	915	47.71	718	37.43
Providing (better) studying space	1432	74.66	--	--	992	51.72
Limiting to hook up network and play games	--	--	1165	60.74	--	--
Assigning to do housework	--	--	1532	79.87	--	--

Table 4: Fit Statistics for Latent Class Models

	Statistic	One-class	Two-class	Three-class	Four-class	Five-class	Six-class
Grade 7							
	L^2	1823.35	349.02	198.78	107.95	47.95	35.85
	df	57	50	43	36	29	22
	p	0.000	0.000	0.000	0.000	0.015	0.032
	BIC	19618.99	18199.38	18103.86	18067.75	18062.47	18105.09
	L^2/df	31.99	6.98	4.62	3.00	1.65	1.63
Grade 8							
	L^2	2742.37	573.52	330.86	160.35	133.09	
	df	120	112	104	96	88	
	p	0.000	0.000	0.000	0.000	0.001	
	BIC	22750.95	20644.65	20464.54	20356.58	20391.87	
	L^2/df	22.85	5.12	3.18	1.67	1.51	
Grade 9							
	L^2	297.35	104.12	51.92	42.35	34.45	
	df	57	50	43	36	29	
	p	0.000	0.000	0.165	0.216	0.223	
	BIC	17241.21	17101.69	17103.20	17147.34	17193.15	
	L^2/df	5.22	2.08	1.21	1.18	1.19	

Table 5: Estimates from Latent Class Models for Parent's Control Behaviors among Taiwanese Adolescents from Grade 7 to Grade 9

Parent's Control Behaviors	Grade 7					Grade 8				Grade 9			
	Latent Class					Latent Class				Latent Class			
	1	2	3	4	5	1	2	3	4	1	2	3	4
Screening interaction with friends													
No	0.000	0.218	0.877	0.862	0.339	0.155	0.120	0.833	0.875	0.475	0.492	0.729	0.766
Yes	1.000	0.782	0.123	0.138	0.661	0.845	0.880	0.167	0.125	0.525	0.508	0.271	0.234
Constraining to make telephone calls													
No	0.327	0.460	0.720	0.967	0.893	0.226	0.496	0.771	0.945	0.126	0.362	1.000	0.870
Yes	0.673	0.540	0.280	0.033	0.107	0.774	0.504	0.229	0.055	0.874	0.638	0.000	0.130
Limiting to watch TV													
No	0.054	0.634	0.093	0.885	0.778	0.000	0.768	0.236	0.909	0.001	0.988	0.308	0.883
Yes	0.946	0.366	0.907	0.115	0.222	1.000	0.232	0.764	0.091	0.999	0.012	0.692	0.117
Restricting outdoor activities and leisure time													
No	0.029	0.317	0.159	0.841	0.732	0.017	0.310	0.329	0.883	0.405	0.558	0.441	0.888
Yes	0.971	0.638	0.841	0.159	0.268	0.983	0.690	0.671	0.117	0.595	0.442	0.559	0.112
Regulating daily schedule													
No	0.153	0.660	0.357	0.743	0.240	0.195	0.574	0.525	0.802	0.552	0.597	0.554	0.716
Yes	0.847	0.340	0.643	0.257	0.760	0.805	0.426	0.475	0.198	0.448	0.403	0.446	0.284
Providing (better) studying space													
No	0.117	0.446	0.292	0.438	0.052					0.446	0.517	0.395	0.508
Yes	0.883	0.554	0.708	0.562	0.948					0.554	0.483	0.605	0.492
Limiting to hook up network and play games													
No						0.054	0.501	0.231	0.901				
Yes						0.946	0.499	0.769	0.099				
Assigning to do housework													
No						0.058	0.193	0.194	0.342				
Yes						0.942	0.807	0.806	0.658				
Proportion of Latent Class	0.246	0.107	0.219	0.264	0.165	0.242	0.164	0.335	0.260	0.172	0.301	0.204	0.323

For Grade 7, Latent class 1: **Low Autonomy**; latent class 2: **Activity Autonomy**;
Latent class 3: **Networking Autonomy**; latent class 4: **High Autonomy**;
Latent class 5: **Partial Autonomy** (partial activity and partial Networking autonomy).
For Grade 8 and Grade 9, Latent class 1: **Low Autonomy**; latent class 2: **Activity Autonomy**;
Latent class 3: **Networking Autonomy**; latent class 4: **High Autonomy**.

Table 6. Naming Adolescent Autonomy from the Results of Latent Class Models of Parent's Control Behaviors

		Activity Controls	
		Yes	No
Networking Controls	Yes	**Low Autonomy**	**Activity Autonomy**
	No	**Networking Autonomy**	**High Autonomy**

Table 7: Summary of Proportions of Adolescent's Autonomy from Grade 7 to Grade 9

Types of Adolescent Autonomy	Grade 7	Grade 8	Grade 9
Low Autonomy	0.246	0.242	0.172
Activity Autonomy	0.107	0.164	0.301
Networking Autonomy	0.219	0.335	0.204
High Autonomy	0.264	0.260	0.323
Partial Autonomy	0.165	--	--
Total	1.000	1.000	1.000

Table 8: Transition Probability of Adolescent Autonomy

		Grade 8				Grade 9			
		Low Autonomy	Activity Autonomy	Networking Autonomy	High Autonomy	Low Autonomy	Activity Autonomy	Networking Autonomy	High Autonomy
Grade 7									
	Low Autonomy	.2849	.2302	.2302	.2547				
	Activity Autonomy	.0893	.4809	.1560	.2739				
	Networking Autonomy	.1245	.3072	.4825	.0859				
	High Autonomy	.2241	.2835	.2763	.2162				
	Partial Autonomy	.1627	.2596	.0894	.4882				
Grade 8									
	Low Autonomy					.3679	.2776	.2006	.1538
	Activity Autonomy					.3610	.2974	.2075	.1341
	Networking Autonomy					.1749	.1832	.4548	.1871
	High Autonomy					.2245	.1630	.4549	.1575

Table 9: Estimates of Structural Equation Models of Adolescent Autonomy from Grade 7 to Grade 9 (n=1918)

	Grade 7										Grade 8								Grade 9							
	Current Educational Expectation at Grade 7		Activity Autonomy/ Low Autonomy		Networking Autonomy/ Low Autonomy		High Autonomy/ Low Autonomy		Partial Autonomy/ Low Autonomy		School Achievement at Grade 7		Activity Autonomy/ Low Autonomy		Networking Autonomy/ Low Autonomy		High Autonomy/ Low Autonomy		School Achievement at Grade 8		Current Educational Expectation at Grade 9		Activity Autonomy/ Low Autonomy		Networking Autonomy/ Low Autonomy		High Autonomy/ Low Autonomy	
	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.	est.	s.e.
Old Area of Taipei City	-.25*	.11	-.19	.42	-.07	.30	-.10	.27	.42	.32			.07	.34	-.09	.26	-.07	.30			-.20	.10	-.23	.32	-.44	.34	-.15	.30
Suburban Area of Taipei City	-.26**	.09	.06	.33	.34	.23	.37	.21	.23	.28			.06	.29	-.32	.22	-.31	.26			-.10	.07	.13	.27	.23	.28	.16	.26
Industrial Area of Taipei County	-.16	.08	.69*	.32	.50*	.24	.69**	.22	.54	.28			.46	.27	-.07	.22	-.14	.26			-.19*	.07	.27	.26	.03	.28	.02	.25
Rural Area of Taipei County	-.45***	.12	.77	.42	.23	.37	.73*	.30	.99**	.35			.54	.36	.13	.32	-.08	.35			-.39***	.10	-.32	.35	-.12	.36	-.20	.34
Satellite City of Taipei County	-.07	.08	-.31	.37	.57*	.22	.36	.21	.41	.27			.41	.27	-.16	.21	-.02	.25			-.07	.07	-.10	.25	-.08	.26	-.09	.24
Urban Area of Yi Lan County	-.01	.09	.23	.38	.64*	.26	.47	.24	.84***	.29			.37	.29	-.12	.23	-.12	.27			-.24**	.07	.22	.30	.44	.30	.07	.29
Rural Area of Yi Lan County	-.18	.10	.59	.36	.50	.28	.37	.26	.52	.31			.36	.33	.24	.27	.17	.31			-.24**	.09	.06	.31	.16	.33	.03	.30
Gneder of Adolescent (female=1)	.08	.05	.55**	.19	-.12	.14	.18	.13	-.04	.15	.03	.04	.44**	.15	-.01	.13	.33*	.14	.08**	.03	.11**	.04	.20	.15	.14	.16	.29*	.15
Grade 7																												
School Achievement at Grade 6	.51***	.03	-.02	.10	.07	.08	.16*	.07	-.07	.09	.80***	.02																
Activity Autonomy											.10	.07	1.04***	.25	.46	.25	1.45***	.28										
Networking Autonomy											.07	.06	-.04	.24	1.21***	.16	1.17***	.23										
High Autonomy											.12*	.05	1.38***	.23	1.87***	.20	3.42***	.23										
Partial Autonomy											-.03	.06	1.06***	.23	.88***	.21	1.91***	.24										
School Achievement at Grade 7													.08	.07	.04	.06	-.11	.07	.79***	.01								
Current Educational Expectation at Grade 7																					.49***	.02	-.21**	.08	-.22**	.08	-.11	.08
Grade 8																												
Activity Autonomy																			-.03	.05			.52*	.23	.55*	.25	-.80***	.24
Networking Autonomy																			-.01	.04			.63**	.19	.74***	.21	-.64***	.19
High Autonomy																			.04	.04			-.42	.22	-.08	.22	-.18	.19
School Achievement of Grade 8																							.19*	.08	.20*	.08	.16*	.07
Current Educational Expectation at Grade 9																							-.21**	.08	-.22**	.08	-.11	.08
Control Variables																												
Parents' Education	.05	.07	-.66*	.26	.04	.22	-.68***	.19	-.27	.23	.05	.05	-.23	.24	-.32	.19	-.53*	.21	.03	.05	.14*	.06	.22	.21	.00	.22	.01	.20
Parents' Education**2	.01	.01	.07*	.03	-.01	.03	.07**	.02	.02	.03	-.00	.01	.01	.03	.04	.02	.05	.03	-.00	.01	-.01	.01	-.02	.03	.01	.03	.00	.03
Father's Age (>= 45 eq 1)	.10	.05	.12	.20	.24	.15	.20	.14	.19	.17	.10*	.04	-.44**	.17	-.06	.14	-.40*	.16	.02	.03	.03	.05	.15	.16	.25	.17	.24	.16
Number of Siblings	-.05	.03	.03	.12	.03	.09	.13	.08	-.02	.10	.01	.02	-.07	.10	.06	.09	-.01	.10	.02	.02	.01	.03	.19	.10	.13	.10	.13	.09
First Child	.10	.05	-.14	.20	.13	.15	-.01	.14	.08	.17	.17***	.04	-.17	.17	.02	.14	-.11	.16	.12***	.03	.13**	.05	.19	.16	.17	.17	.32*	.16

Loglikelihood H0 Value	-17238.836
Number of Free Parameters	235
Akaike (AIC)	34947.672
Bayesian (BIC)	36254.046
Sample-Size Adjusted BIC (n* = (n + 2) / 24)	35507.448