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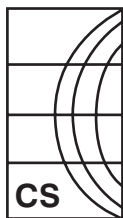**Additional services and information for *Current Sociology* can be found at:**

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Overlapping Social Networks

How Couples Manage Family Expenditure in Taiwan

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abstract: This study uses Burt's theory of structural holes and Lin, Fu and Hsung's theory of position-generated networks to examine a hypothesis about the overlap of couples' social networks and the degree of joint behaviour in conjugal role relationships. The authors devised five overlap types of couples' networks based on two-dimensional network characteristics: the diversity of ego's kin ties and the degree of cross-linkages through spouse's contacts. They measured the conjugal role by how couples manage their day-to-day expenditure and classified them into three categories: mainly managed by wife, mainly managed by husband and joint management. This study used the 2001 Taiwan Social Change Survey to test the hypothesis on the couples' networks and conjugal roles. After controlling for all other variables, the overlap types of the couples' social networks still had significant effects on their management of family expenditure. Specifically, the couples with high diversity of ego's kin ties and high cross-linkages through spouse practised the joint conjugal role pattern of family expenditure. The reason is that the high diversity of ego's kin ties provides plural patterns of conjugal roles to be identified and the high cross-linkages through the spouse provide the bargaining power from the spouse.

keywords: conjugal roles ✦ family expenditure management ✦ overlapping social networks ✦ position-generated networks ✦ structural holes

Introduction

The management of families' day-to-day expenditure has been traditionally seen as an issue of family decision-making power. Family sociologists in Taiwan have found that economic development, resource differences between husband and wife, cultural background and family life cycle may all explain the management power of family expenditure (Chen et al., 2000). Nevertheless, these authors have not examined how

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a couple's social networks affect the conjugal roles. Bott's (1957, 1971) hypothesis on the density of husband's and wife's personal networks and conjugal roles inspired many related studies. However, most empirical studies on Bott's hypothesis were based on anthropological case studies and some of their findings are inconsistent.

Burt (1992) used the theory of structural holes to reinterpret Bott's study on conjugal roles. Bott's study focused on the density of the husband's and wife's personal networks. Non-redundant ties and brokerage roles are two indicators of structural holes of social networks. Burt (1992) noted that segregated conjugal roles possess the following characteristics of couple's networks: the ties of husband's and wife's networks were highly connected and redundant, the mother had the highest hole signature in the wife's networks and the good friends had the highest hole signature in the husband's networks. Therefore, the wife's mother and the husband's good friends influence the segregated identity of conjugal roles. The joint conjugal role is associated with the following characteristics of couple's networks: wife and husband have fewer redundant ties and introduced more loose contacts with more structural holes. Therefore, both husband and wife tended to negotiate and build up the joint conjugal roles.

The theory of position-generated networks was devised by Lin and Dumin (1986) and modified in the 1996 Taiwan Social Change Survey (Lin et al., 2001). The diversity of position-generated networks has been considered as social capital for instrumental actions. The management of family expenditure is an important family economic action. This study used position generators to elicit the diversity of ego's ties and the cross-linkages through the spouse. We used these two-dimensional ties to classify the overlapping types of couples' networks. In sum, this study attempts to examine conjugal roles further by means of elaborating structural holes theory and refining the measurement of couples' social networks. Specifically, the major aim of this article is to examine the independent effect of overlapping types of couples' networks on family expenditure management after controlling for economic development, resources of husband and wife, cultural background and family life cycle variables.

Family Expenditure Management in Taiwan

The effect of the conjugal role on family expenditure management implies the division of labour and power relations between husband and wife. Using conjugal data from Taiwan, Yi and her associates explored conjugal resources and their possible effects on the wife's family status (Yi et al., 2000; Chen et al., 2000). Based on the social exchange framework, it was

shown that both traditional patriarchy and modern power rules produce dual effects on three types of family expenditure management in Taiwan: wife, joint and husband (Yi et al., 2000; Chen et al., 2000). The interplay between cultural norms and personal resources is thus suggested to be the key in understanding conjugal relations in Chinese society (Yi, 2001).

East Asian societies have fostered gender inequality in housework and family status because of the continuity of the patriarchal family structure (Brinton et al., 1995; Lee et al., 1994; Brinton, 1993). Even though the female labour participation rate is higher in Taiwan than in Korea, with a greater number of women joining the informal labour market of small businesses, they are exploited both at work and home; this situation then causes more serious inequality of family status (Lu, 2001). Chen et al. (2000) used marriage cohorts – couples – that had married in different periods (from before 1961 to the 1981–2001 period) to indicate different stages of economic development, and they did not find any significant effects of industrialization on the types of family expenditure management in Taiwan.

According to the resource theory, educational and employment differences between husband and wife have served as indicators of resource exchange between couples (Blood and Wolfe, 1960; Burr et al., 1977; Osmond, 1978; Blumberg and Coleman, 1989). Previous reports have shown that in a family in which the wife's educational level was equal to or higher than an undergraduate degree, there was a greater probability that husbands and wives would make joint family economic decisions. But no significant effect of couples' employment on family economic decisions was found (Chen et al., 2000).

Traditional Chinese patriarchy and gender ideology regulate the relationship between parent and child as well as between husband and wife. It has been documented that the traditional ideology of filial piety engenders specific family values such as bearing descendants and parental support (Yeh, 1997; Yi, 1999). Therefore, respondents with a stronger degree of filial piety are assumed to endorse the conventional segregated conjugal roles in family expenditure management.

Berk (1985) asserts that the family is a 'gender factory', in which the patriarchal structure continuously produces unequal gender lines in the family power structure. Husbands with a more modern gender ideology tend to organize the family expenditure by having wives make decisions or by employing joint decisions (Chen et al., 2000). The ethnic background of husband and wife also affects family power, with Hakka husbands playing a major role in making the family financial decisions while mainlander wives are more involved in family expenditure management (Chen et al., 2000).

Another important aspect to be considered in the conjugal role is the

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possible effect of the life cycle. Kalmijn (2003) found that the shared friend-ship and joint contacts of the couple increase along with the life stages, especially in the period with children in school. Similar findings in Taiwan indicate that for families with school-age children, joint management of family expenditure is more salient because, during this stage, both husband and wife need to decide on the schooling expenditure of children (Chen et al., 2000). Hence, couples in various life stages may exhibit differ-ent family expenditure management patterns, depending on the familial context.

The Overlap of Couples' Networks and Conjugal Roles

Family sociologists have examined the associations between a couple's social networks and conjugal roles (Bott, 1957; Chatterjee, 1977). The approaches changed from Bott's (1957) personal network density to cross-linkages with spouse's networks. Burt (1992) integrated the husband's and the wife's personal networks and the cross-linkages between them and used the theory of structural holes to explain the association between the couple's networks and conjugal roles.

Couple's Personal Network Density and Conjugal Roles

Bott (1957) investigated the association between the couple's network density and conjugal roles with the data of 20 families in London. The close-knit personal networks of both husband and wife were associated with segregated conjugal roles. Because the husband and wife could gain strong support from their own close-knit personal networks, they did not need to depend on each other to accomplish domestic activities. There-fore, their conjugal roles were learned and socialized in their own separate personal networks. In contrast, the joint conjugal roles were associated with loose-knit personal networks of both husband and wife. The loose-knit personal networks represented lack of personal support from their own networks, so husband and wife tended to depend on each other and to do domestic activities, including managing necessary expenditure in everyday life. Bott's later work (Bott, 1971) paid more attention to the analyses of a couple's extra-household activities, and she found that the degree of joint conjugal roles is stronger if husbands and wives often attend social gatherings together with their friends.

Later, Morris (1985) studied couples' networks and conjugal roles in both domestic and extra-household activities in a small English town. Morris (1985) classified family cases into three types of conjugal roles: collective, individual and dispersive. The collective type included those couples engaging in local homogeneous social groups with a strong collec-tive network density (or shared friends); therefore, their conjugal roles

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conformed to the homogeneous norm of the collective community. The individual type was the most isolated group, and couples in this group had no fixed pattern and the highest flexibility. The couples of the dispersive type joined diverse social groups, and they tended to practise joint domestic and extra-household activities.

Bott's hypotheses have not been widely supported by quantitative empirical studies (Aldous and Straus, 1966; Gordon and Downing, 1978). Aldous and Straus (1966) included 391 married female respondents in their study and did not find any association between loose-knit networks and the joint conjugal role. Gordon and Downing's (1978) study, which included 686 married Irish women, tested Bott's hypothesis and found that network connectedness had no explanatory power concerning marital integration or the joint conjugal role. Their study found that the overlap of personal networks with the husband was the key network variable affecting marital integration. Evidently, the overlap between the husband's and wife's networks cannot be ignored.

Cross-Linkage of Couple's Networks

In addition to network density, Kapferer (1973) incorporated range and cross-linkage of networks of husband and wife for married couples in the copper belt of central Africa. He found that high cross-linkage between the husband's and wife's personal networks facilitated joint conjugal roles, even though a couple's personal networks were dense. In contrast, low cross-linkage between the husband's and the wife's networks facilitated segregated conjugal roles even though the couple's personal networks were loosely knit. Kapferer (1973) advocated that cross-linkage of couples' networks was more important than density of personal networks in explaining the degree of joint conjugal role involved. A greater cross-linkage (overlap) between the husband's and the wife's personal networks facilitated opportunities for women to share the same work as men through learning each other's roles.

Kapferer (1973) proposed four combinations of structural features by two dimensions of networks: density and interconnectedness of a couple's networks. The first type, the couple's networks with high density and low interconnectedness, is associated with a segregated conjugal role. The second type, the couple's networks with low density and high interconnectedness, is associated with joint roles. The third type, high density and high interconnectedness, is associated with joint roles. The fourth type, low density and low interconnectedness, is not associated with a stable type of conjugal role. Rare cases belonged to the fourth type with low density and low overlap.

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Structural Holes and Conjugal Roles

In an industrial society, density is not a good indicator for social networks because most people have complex, diverse and loose networks. Aldous and Straus criticized Bott's (1957) density of personal networks, which, as the major feature of networks, could not indicate the network characteristics of an industrial society. Therefore, Bott's hypotheses on personal network density and conjugal roles have not been widely supported by quantitative data.

Burt's theory of structural holes stresses two structural characteristics of a couple's networks. One concept is the non-redundancy of ties and the other concept is the degree of brokerage. A greater number of non-redundant ties implies that a person can access more diversified information and resources and has fewer structural constraints; accordingly, a person will have a higher probability of achieving instrumental action and gaining better benefits. A greater degree of brokerage role in a network indicates that the position of a person in a network contains more structural holes so that more disconnected ties are bridged through this person. Then, a third person – that is, a person between two disconnected persons – can control the benefits through playing the negotiating and bargaining roles (Burt, 1992: 31).

Burt (1992) noted the effect of the network positions of husband and wife and significant others among network members on the conjugal role. In a family with segregated conjugal roles, the wife's mother constitutes the greatest structural constraint in the wife's social network. Because the wife's mother has strong relations with her and her friends, the mother has the strongest influence on her in terms of conjugal roles. In this kind of family, the husband has the fewest relations with the other members of his wife's networks, so his constraint (or influence) on his wife is small. In sum, husband and wife have their own separate and redundant (high-density) social networks. The information and beliefs provided by these networks are highly similar to each other and strongly influenced by the most constrained relations. Women learn traditional conjugal roles from their mothers and men learn them from their male friends (White, 1992). Neither spouse in a pre-existing, tightly bound social network has any room to control his or her own marriage or negotiate a new pattern of conjugal roles.

With industrialization and urbanization, new contacts are incorporated into social networks, so the couple's networks become more loosely connected. The structural positions of husband and wife in a loosely connected network are associated with the joint conjugal roles. The mother's constraint in this loose-knit network becomes the weakest. The mother has no relations with the wife's other network members, so there is no influence on the identification of the conjugal role of the wife. The

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wife and her husband have mutual friends, so husband and wife strongly constrain each other. The joint conjugal role is negotiated and constructed by both husband and wife. According to the theory of structural holes, the couple's loose-knit networks contain the following characteristics: the social ties are becoming non-redundant, and both husband and wife become the bridge to connect each other's friends. Therefore, they have more room to negotiate their own conjugal roles jointly in terms of division of household labour and family expenditure management.

Because society is becoming more diversified, network density or name-generated network measurements will not be an effective tool to indicate the complex structural characteristics of a couple's networks. Name-generated networks mainly measure the strong and redundant ties. Lin and Dumin's (1986) position-generated networks effectively measured the diversity of accessed non-redundant positions for a large-scale survey and also measured weak ties. Lin et al. (2001) designed 15 occupational positions that represent five classes of occupations in Taiwan for the 1997 Taiwan Social Change Survey on Social Networks. The position-generated networks have been widely used in the studies of goal attainment of instrumental actions, such as status and wage attainment. This study attempts to extend position-generated networks to measure two structural positions of a couple's network: the ego's non-redundant social ties and the spouse's degree of brokerage. A greater extent of accessed non-redundant positions for the ego provides fewer structural constraints, so ego keeps more structural holes in his or her social networks and more alternative conjugal roles. Similarly, when the more position-generated ties are bridged through the spouse, the degree of the brokerage role of the spouse is stronger. The degree of the brokerage role facilitates the bargaining power of the spouse and the joint conjugal roles.

Measurements and Data

This article was mainly based on the 1384 married respondents from the Taiwan Social Change Survey, conducted in the summer of 2001. Table 1 presents the descriptive data on types of family expenditure management by gender, economic development, couple's resources, cultural and family background, social networks and the overlap of a couple's networks for the total sample. Most of the previous research on family expenditure management focused only on three types of management: mainly managed by wife, mainly managed by husband, or joint management. Five types of family expenditure management were designed for the 2001 Taiwan Social Change Survey, and the two other types (no specific pattern and independent management) include 79 and 72 cases respectively. It is

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Table 1 *The Characteristics of Three Types of Management in Family Expenditure*

	Mainly wife's management (N = 589)	Mainly husband's management (N = 258)	Joint management (N = 328)
Gender			
Men (%)	48.8	25.7	25.5
Women (%)	53.3	18.9	27.8*
Marriage cohorts			
Before 1962 (%)	35.8	32.8	31.4**
1962–71 (%)	48.3	22.8	28.9
1972–81 (%)	52.3	20.1	27.6
1981–2001 (%)	52.8	20.2	27.0
Wife's education			
Elementary and below (%)	43.4	26.4	30.2**
Junior high (%)	51.6	20.7	27.6
Senior high (%)	54.4	21.6	24.0
College/university and above (%)	53.7	15.4	30.8
Educational difference			
Husband > wife (%)	50.7	23.2	26.1**
Husband = wife (%)	46.4	24.3	29.3
Husband < wife (%)	59.3	11.6	29.1
Couples' employment			
Unemployment of wife (%)	51.5	25.0	23.4*
Both in informal sector (%)	35.3	29.4	35.3
Both in formal sector (%)	50.3	18.1	31.6
Mixed (%)	46.6	21.0	32.4
Family income (NT$)	67,368	56,038	63,671**
Couples' ethnicity			
Both are Taiwanese (%)	50.8	21.1	28.1#
Both are Hakka (%)	42.0	22.2	35.8
Both are mainlander (%)	64.5	14.5	21.0
Mixed (%)	47.0	26.3	26.7
Female ideology	.03	–.13	.09*
Filial loyalty	.13	–.04	–.08**
Marriage arrangement			
Self-determined (%)	50.9	22.0	27.0
Family size	4.53	4.74	4.49#
The age of the youngest child			
>20 (%)	47.2	22.9	29.9
6–20 (%)	56.3	18.5	25.2
<6 (%)	44.6	24.9	30.4

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Table 1 *Continued*

	Mainly wife's management (N = 589)	Mainly husband's management (N = 258)	Joint management (N = 328)
Positional networks			
Number of accessed positions	2.28	1.87	2.13**
Accessed positions through ego's kin (%)	19.6	15.9	26.1***
Accessed positions through spouse's contacts (%)	26.8	25.1	21.7
Spouse's friends ego knows	2.5	2.5	2.4
Ego's friends spouse knows	2.2	2.3	2.3
Types of overlap in networks			
Low DEKT/low DCSC (%)	51.5	23.5	25.0***
High DEKT/low DCSC (%)	47.9	16.2	23.0
Low DEKT/high DCSC (%)	58.2	23.0	18.9
High DEKT/high DCSC (%)	51.3	13.2	35.5
Zero-accessed positions (%)	42.1	28.8	29.2

***$p < .001$, **$p < .01$, *$p < .05$, #$p < .10$.
DEKT: diversity of ego's kin ties.
DCSC: degree of cross-linkages through spouse's contacts.

difficult to analyse these two types of family expenditure management by multinomial logistic analyses with too few cases. Therefore, this study only focused on three types of family expenditure management: mainly managed by wife, mainly managed by husband, or joint management. Table 1 shows that both male and female respondents have the greatest percentage of family expenditure managed mainly by the wife (48.8 percent vs 53.3 percent, respectively). The percentages of joint family expenditure management for male and female respondents were 25.5 percent and 27.8 percent, respectively.

In order to compare these results with those of Chen et al.'s (2000) models for decision-making power in family expenditure and to identify the independent effects of the overlap of husbands' and wives' social networks on the management power in daily family expenditure, we included all significant variables of their models in our analyses. The dimensions of these variables included economic development, resources of husbands and wives, cultural background of husbands and wives, social networks of husbands and wives and the overlap types of a couple's networks.

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Economic Development

Marriage Cohort. Marriage cohort indicates the economic conditions during the different periods in which couples got married. This study classified the marriage cohorts into four cohorts following the classification of Chen et al.'s (2000) paper: before 1962, 1962–71, 1972–81 and 1981–2001. The percentage of wives managing the day-to-day family expenditure increased over the total time span studied. The percentage of husbands and those families jointly managing the day-to-day family expenditure declined along with the progress of economic development.

Couples' Resources

Wife's Educational Level. The level of the wife's education was considered as a bargaining resource in marital power. Respondents from families in which the wife had a college or university degree tended to indicate a greater percentage of management of family expenditure by the wife or joint management (53.7 percent and 30.8 percent, respectively).

Differences between Husband's and Wife's Educational Levels. The differences between the husband's and the wife's educational levels were significantly associated with types of family expenditure management. A greater percentage of husbands with less education than their wives indicated that their wives manage family expenditure (59.3 percent) rather than jointly managing family expenditure (29.1 percent).

The Types of Employment of Husband and Wife. There were four types of employment. The categories included: unemployed wife, husband and wife both employed in the informal sector, husband and wife both employed in the formal sector and a mixed type of employment. Employment in the informal sector included self-employment without hiring personnel, work at home without pay, work for different employers, subcontracting work at home and helping with the family business with pay. Employment in the formal sector included self-employment with the hiring of personnel, employment in private firms, employment in public firms and employment in government agencies.

There was a significant difference between types of employment and family expenditure management. The families with wife unemployed or both husband and wife employed in the formal sector had greater percentages of wives managing the family expenditure. The percentage of wives with management power over family expenditure in families with the wife unemployed was 51.5 percent and that of families with both husband and wife employed in the formal sector was 50.3 percent. Respondents in families with both husband and wife employed in the informal sector

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indicated the greatest percentage of joint management of their family expenditure (35.5 percent).

Family Income. Families in which wives managed the family expenditure had the highest monthly family income (NT$67,368), and families in which husbands managed the family expenditure had the lowest family income (NT$56,038). Families with joint management of their family expenditure had a median level of family income (NT$63,670).

Cultural and Family Background of Couples

Ethnicity of Wife and Husband. The association between the ethnicity of wife and husband and types of family expenditure was not significant. A high percentage of wives managed family expenditure in families in which the husband and wife were both mainlanders (64.5 percent). Whether or not these results imply the wife's higher status in the mainlander family structure needs to be examined further.

Gender Ideology. We used five items to measure this concept. Table A1 in the Appendix presents the factor-loading coefficients of these five items with two factors: female ideology and caring role. We used the first factor as the indicator of gender ideology that stresses the independence and work value of women. A higher score for this factor means a stronger female ideology. The difference in the pattern between men and women is very interesting. Respondents in the joint management of family expenditure group had the strongest female independence ideology. The respondents in the husband's management of family expenditure group had the lowest female ideology.

Family Values. There were 10 items to indicate family values (Table A2 in Appendix). The concept of family values includes three factors – filial piety, family background and liberal marriage values. The factor that explained the most variance was loaded onto the factor of filial loyalty. The respondents of families in which wives managed the family expenditure had the highest factor score of filial piety, and respondents in families with joint management of their family expenditure had the lowest degree of filial piety.

Marriage Arrangement. Marriage arrangement was classified into two types: self-determination and non-self-determination. There was no significant association between the types of marriage arrangement and the management of family expenditure.

Family Life Cycle. We classified family life cycle into three stages: families with the youngest child older than age 20, families with the

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youngest child age six to 20 and families with the youngest child under age six. There was no significant association between family life cycle and the management of family expenditure.

Family Size. There was no significant association between family size and types of management of family expenditure. The average family size for families with all types of family expenditure management was around 4.5.

Social Networks of Couples

The Number of Mutual Friends of the Husband and Wife. There were two items on the number of mutual friends the husband and wife had. These two questions were: 'How many of your spouse's friends do you know?' and 'How many of your own friends does your spouse know?' There were five possible responses: know almost all of them, know most of them, know half of them, don't know many of them and know almost none of them. The scores were ranked from 1 to 5. The greater the score, the fewer people the spouse knew. Table 1 indicates that there was no significant association between type of family expenditure management and the number of mutual friends the husband and wife had.

Diversity of Position-Generated Networks. The items on position-generated networks were modified from the position generators designed by Lin et al. (2001). We asked the following questions: 'Do you know any relative, friend or other acquaintance that is in one of the following occupations: doctor, middle school teacher, manager or owner of a small business, police officer and janitor/maid?', 'Do you know them through your spouse?', 'Is this person related to your wife?' and 'If yes, what is their relationship or if no, what is their relationship to you?'

We then totalled these five items of accessed occupational positions. The index ranged from 5 to 0. The highest score was that of the person who was able to access five occupational positions, and the lowest score that of the person who accessed none of these five occupations. The families with wives managing the day-to-day family expenditure had the highest diversity of accessed positions, and those families with husbands managing the family expenditure had the lowest diversity of accessed positions. The families with joint management of their family expenditure had a median level of accessed positions. In fact, the diversity of accessed positions was highly associated with social status. Therefore, the higher the family's social status, the greater the diversity of their accessed positions.

Percentage of Accessed Positions through Ego's Kin Ties. This index was computed by the following formula: the number of accessed

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positions through kin ties/the number of accessed positions*100. There was a significant association between the percentage of accessed positions through ego's kin ties and the management of family expenditure. Respondents who indicated joint management of family expenditure had greater percentages of accessed positions through ego's kin ties.

Percentage of Accessed Positions through Spouse's Contacts. This index was computed by the following formula: the number of accessed positions through spouse's contacts/the number of accessed positions*100. There was a significant difference between male and female respondents in the percentage of accessed positions through spouses. There was no significant association between the percentages of accessed positions through spouse's contacts.

Types of Overlap between Husband's and Wife's Position-Generated Networks. This study operationalized the overlap between the husband's and wife's social networks into five types by the percentage of accessed positions through ego's kin ties and percentage of accessed positions through spouse's contacts. The means of these two variables are the cutting points of each dimension. The rationale for these two dimensions is based on social capital theory. A high percentage of accessed positions through ego's kin ties indicated that respondents not only had more kin ties but also that these kin ties were distributed across more diversified occupational positions. A higher degree of cross-linkages through the spouse means that more contacts were bridged through the spouse, so the brokerage role of the spouse in the couple's networks was higher. The stronger the brokerage role of the spouse, the greater the bargaining power of the spouse. Therefore, we named the first dimension 'the diversity of ego's kin ties' and named the second dimension 'the degree of cross-linkages through spouse's contacts'.

This study classified each dimension into high and low categories, and there were four types of couple's overlap networks: low diversity of ego's kin ties and low degree of cross-linkages through the spouse's contacts, high diversity of ego's kin ties and low degree of cross-linkages through the spouse's contacts, low diversity of ego's kin ties and high degree of cross-linkages through the spouse's contacts, high diversity of ego's kin ties and high degree of cross-linkages through the spouse's contacts, and a fifth group representing zero-accessed positions.

There was a significant association between the overlap types of couples' networks and the management of family expenditure. The respondents with high diversity of ego's kin ties and high degree of cross-linkages through the spouse's contacts had the highest percentage (35.5 percent) of joint management of family expenditure.

The Factors Affecting the Types of Family Expenditure Management: The Importance of the Overlap Types of the Couple's Networks

This study used multinomial logistic regression to explain the probability of types of management of daily family expenditure. The husband's management of family expenditure was treated as the contrast group. The independent variables include the variables on economic development, resource bargaining, cultural background, family life cycle and social networks. This study included three models for total, male and female samples (Table 2).

For the total sample, the variables that significantly explain the probability of the wife's management of family expenditure are: marriage cohort, wife's education, educational difference between husband and wife, age of the youngest child, the log of income and overlap types of a couple's networks. The respondents of the most recent cohort of married people, with the wife having a higher educational level than the husband, with the youngest child six to 20 years old, with higher family income and with high diversity of ego's kin ties and low degree of cross-linkages through spouse's contacts tended to have the family expenditure mainly managed by wives.

The variables that significantly explain the probability of joint management of family expenditure for the total sample are: educational difference between husband and wife, couple's employment, the log of family size and the overlap of the couple's networks. Respondents with the wife having a higher educational level than the husband, with both husband and wife employed in the formal sector, with smaller household size, with high diversity of ego's kin ties and high degree of cross-linkages through spouse's contacts tended to have a greater probability of joint management of family expenditure.

The models for male and female respondents showed slightly different results. Generally speaking, the pattern was similar for both descriptive and explanatory analyses except for some inconsistent effects of some variables. The marriage cohort effect on wife's management of family expenditure was slightly more significant for male respondents than for female respondents. The effects of wife's educational level on management of family expenditure were quite inconsistent for male and female respondents. Male respondents tended to perceive that wife's or joint management of family expenditure increased along with the increase in the wife's educational level. However, female respondents had the reverse perception, that the probability of wife's or joint management of family expenditure decreased with the increase in the wife's educational level. These inconsistent results imply that male respondents with highly

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Table 2 *The Multinomial Logistic Regression Coefficients for Three Types of Management in Family Expenditure: Total, Male and Female Married Respondents*

Expenditure management (contrast to husband's management)	Total		Male respondents		Female respondents	
	Wife	Joint	Wife	Joint	Wife	Joint
Marriage cohorts						
Before 1962	ref.					
1962–1971	.72*	.46	.65	.22	1.06#	.85
1972–1981	.63	.35	.77	.40	.65	.41
1981–2001	.95*	.51	1.15#	.33	.96	.69
Gender (male = 1)	–.02	–.20	–	–	–	–
Wife's education						
Elementary and below	ref.					
Junior high	–.08	.09	.47	.56	–.85#	–.52
Senior high	–.11	–.22	.59	.42	–1.03*	–1.11*
College/university and above	–.03**	.06	1.23*	1.41*	–1.35*	–1.32*
Educational difference						
Husband > wife	ref.					
Husband = wife	–.10	.16	–.01	.21	–.20	.03
Husband < wife	.82**	.82**	.05	.20	1.63***	1.49**
Couples' employment						
Unemployment of wife	ref.					
Both in informal sector	–.48	.18	–1.67	.10	.08	.09
Both in formal sector	.001	.42#	–.13	.44	.11	.44
Mixed	–.06	.34	–.07	.68#	–.06	.06
The log of family income	.34*	.21	.22	.02	.44*	.41#
Couple's ethnicity						
Both are Taiwanese	ref.					
Both are Hakka	–.12	.20	–.17	.47	–.28	–.19
Both are mainlander	.48	.01	.89	.04	.19	–.06
Mixed	–.26	–.20	–.44	–.62*	–.03	.17
Female ideology	–.01	.10	.02	.21	–.01	–.0003
Filial loyalty	.07	–.14	–.06	–.21	.17	–1.00
The age of youngest child						
>20	ref.					
6–20	.78***	.27	1.11***	.14	.52	.32
<6	.71#	.26	1.43**	.41	–.07	–.09
Marriage arrangement						
Self-determined	–.19	–.15	–.001	–.08	–.36	–.28

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Table 2 *Continued*

Expenditure management (contrast to husband's management)	Total		Male respondents		Female respondents	
	Wife	Joint	Wife	Joint	Wife	Joint
Types of overlap in networks						
Low DEKT/low DCSC	.08	.08	−.39	.001	.63	.30
High DEKT/low DCSC	.51*	.71**	.27	.44	.83*	1.10**
Low DEKT/high DCSC	.25	−.27	−.10	−.55	.75*	.17
High DEKT/high DCSC	.69#	1.01*	.66	1.15#	.82	1.10#
Zero-accessed positions	ref.					
Constant	−3.77**	−2.03	−3.43#	−.120	−3.82#	−3.91
Likelihood χ^2	110.63***		90.58***		67.18*	
d.f.	52		50		50	
N	1066		549		517	
Pseudo R^2	.05***		.08***		.06*	

***$p < .001$, **$p < .01$, *$p < .05$, #$p < .10$.
DEKT: diversity of ego's kin ties.
DCSC: degree of cross-linkages through spouse's contacts.

educated wives tended to perceive that their spouses already had an equal conjugal role in the management of family expenditure; however, female respondents who were highly educated tended to feel that they did not have an equal conjugal role in the management of family expenditure.

Female respondents whose educational level was greater than that of their husbands were more likely to manage or jointly manage the family expenditure; however, male respondents with a similar educational gap did not express the same perception about the types of management of family expenditure. The wife's educational level was perceived as an advantageous bargaining resource by men rather than by women. However, where a wife had a higher educational level than the husband, women were more likely than men to see it as a strong bargaining resource. Highly educated women seem to have a stronger sense of deprivation, but men perceive that women have enough power in family decision-making and household division of labour.

After controlling all other variables, the types of employment did not significantly explain the types of management of family expenditure. The effects of family life cycle on management of family expenditure varied for both male and female respondents. Male respondents whose youngest child was age six to 20 tended to perceive wives as mainly managing family expenditure; however, female respondents did not perceive any significant effect of family life cycle on the management of family expenditure.

Our findings show some similarities with and differences from those of Chen et al. (2000). Both studies support the hypotheses of the wife's educational level, educational differences between husband and wife and family life cycle as having significant influences on power in managing family expenditure. The major difference is that our findings support the effect of the marriage cohort on management of family expenditure; Chen et al.'s study did not support this hypothesis. Our study does not support the effect of couples' ethnicity and sex-role attitudes on management of family expenditure.

Female ideology and self-determined marriage arrangements indicate the autonomy of individuals in modern gender-role attitudes and beliefs, while filial loyalty indicates one of the traditional Chinese family values. None of these normative variables successfully explained the conjugal role of family expenditure management.

The most important findings in this study are the examination of conjugal roles from Burt's (1992) theory of structural holes and Lin et al.'s (2001) modified position-generated network measurement for the overlapped networks of a couple. The overlap type of a couple's network, the high diversity of kin ties and the high degree of cross-linkages through the spouse's contacts facilitate the joint management of family expenditure. The diversity of ego's kin ties and the degree of cross-linkages through spouse's contacts determine the conjugal roles. The former has the function of identification, and the latter has the function of bargaining.

A high diversity of ego's kin ties implies that the ego's networks contain more kin ties, and these kin ties are distributed into more diversified occupational positions. The greater diversity of ego's kin ties contains two network characteristics: greater non-redundant positions accessed and greater percentage of kin ties. The access to greater non-redundant positions through kin ties provides less structural constraint or more structural autonomy for the choices of the types of conjugal roles in family expenditure management.

The higher degree of brokerage role through the spouse's contacts implied different meanings for male and female respondents. Male respondents with a greater degree of cross-linkages through spouse's

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contacts tend to depend more on their wives' social resources; therefore, their wives have more social capital by playing the brokerage role to bargain for the joint management of their family expenditure. In contrast, male respondents with a lower degree of cross-linkages through the spouse's contacts have less probability of joint management of family expenditure even though they have a high diversity of ego's ties. In these types of overlapping networks, the husband depends less on the wife's social resources, and so the wife has less bargaining power for the joint management of the family expenditure.

However, the female respondents with a high diversity of ego's kin ties and low degree of cross-linkages through spouse's contacts still have a greater probability of choosing joint management of family expenditure. The high diversity of ego's kin ties provides women with more non-redundant structural opportunities. The low degree of the brokerage role through the husband indicates that the husband has less power to control or bargain about the type of family expenditure management.

Conclusions and Discussion

The rapidly changing society in Taiwan has diversified and loosened the social networks of married couples. The theory and measurement of network diversity are more appropriate for profiling the characteristics of a couple's networks and their effects on the conjugal roles. This study uses Burt's (1992) structural holes theory and Lin et al.'s (2001) position-generated networks to indicate the ego's plural identification structures and the bargaining power of the brokerage role of the spouse. Theoretically, this study not only focused on the characteristics of loosely knit networks but also built up the typology model with the combinations of the diversity of ego's kin ties and the degree of cross-linkages through spouse's contacts. After controlling for all the related variables on the types of family expenditure management, the overlap types of couple's social networks still played a significant role in affecting the probability of types of family expenditure management. Both male and female respondents with high diversity of ego's kin ties and high degree of cross-linkages through spouse's contacts tended to have a high probability of joint management of family expenditure. The effect of cross-linkages through spouse's contacts was more pronounced among women than among men. Women who depend less on husbands' networks usually have greater autonomy and are less constrained by their husbands. Consequently, there is a higher probability that these couples will practise joint management of family expenditure.

The effect of patriarchal ideology on the conjugal roles of family management expenditure is relatively weak in Taiwan. Patriarchal

ideology was measured by two variables: female independence ideology and family filial loyalty value. The perception gap in the female independence ideology was significant. Men tend to have a significantly lower degree of female independence ideology than women. Though respondents having joint management of family expenditure had the strongest female independence ideology, the statistical effect of female independence ideology on conjugal roles was not significant in multinomial analyses. The respondents with a low degree of filial loyalty tended to practise joint management of their family expenditure, but this effect was not significant.

There were some limitations in this study. This research was based on data from the 2001 Taiwan Social Change Survey. This survey included only a few questions about the management power influencing expenditure in the family. In future surveys, different types of household task differentiation questions could be included. In order to evaluate the validity and reliability of the hypothesis on the overlap of position-generated networks for a couple and the conjugal role, we need to test the effect of position-generated networks of couples and different types of household task differentiation and family decision-making power in future studies.

Appendix

Table A1   *Factor Analysis of Items on Gender Role*

Items	Female ideology	Caring role
It's not good for preschool children if mother goes out to work	.029	.831
The family life will be disturbed if wife has a full-time job	.098	.818
It's more meaningful for women to go out to work than being a housewife	.756	.111
The best way of independence for women is to have a job	.810	−.069
The duty of the husband is to make money and of the wife is to take care of the family	.461	.084
Eigenvalue	1.589	1.242
Total explained variance (%)	56.631	

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Table A2 *Factor Analysis of Items on Family Values*

Items	Filial piety	Family background	Liberal marriage values
If the couple's family backgrounds are similar the marriage will be happy	.250	.714	−.177
Before getting married, people should date more partners, and then they can find the most ideal spouse	.102	−.378	.628
If a couple can't get along, they should divorce	.039	.175	.823
Marriage without children is incomplete	.601	.268	−.029
A couple with love may marry even though they don't have enough money	−.318	.627	.174
In order to continue the generations, a couple should have at least one son	.734	.026	.024
In order to fulfil parents' expectations, we should relinquish our own interests	.658	−.078	.025
Children should live with their parents when they've got married	.598	−.167	.132
Eigenvalue	1.882	1.299	1.022
Total explained variance (%)	52.543		

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