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**Migrants in their Family Contexts:
Application of a Methodology**

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The University of Waikato
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HAMILTON : NEW ZEALAND

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Application of a Methodology**

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PREFACE

The composition of immigrant families is a topic which has attracted considerable public and political attention in recent years. In the late 1980s concern was expressed over the size of some households of Pacific Island peoples in New Zealand. In the 1990s a more persistent concern has been with the incidence of what have been called ‘astronaut’ families – families where one of the partners is persistently absent overseas. The ‘astronaut’ family phenomenon has been most commonly associated with Chinese immigrants from Hong Kong and Taiwan.

This report uses a novel methodology to examine the incidence of ‘astronaut’ families in New Zealand at the time of the 1991 and 1996 censuses. The methodology is described in some detail in the first section, and it is hoped that the careful attention to the procedures used to examine migrants, who have been identified in the census, in their family contexts will stimulate further research in this area.

The second part of the report presents the findings of an initial exploration of 1991 and 1996 census data using the methodology outlined in the first section. It is clear from results of this inquiry that the ‘astronaut’ family phenomenon is well-established amongst some components of New Zealand’s Asian community. However, it is not as widespread as media comment in 1995 and 1996, before the 1996 election, suggested.

It is important to develop ways of assessing characteristics of immigrant family structures in order to counter unsubstantiated assertions which promote negative stereotypes of immigrant communities. This research, which builds on a project supported by the Marsden Fund in 1997, suggest one fruitful avenue for making more extensive use of census data on immigrants in New Zealand to provide more objective assessment of “migrants in social context”.

The research on both the methodology and astronaut families was carried out by Dr Elsie Ho, a specialist in the analysis of adaptation of immigrant communities in New Zealand. Copies of this report and others prepared by the Migration Research Group, can be obtained from the Administrative Secretary, Population Studies Centre, University of Waikato, Private Bag 3105, Hamilton. There is no charge of these publications.

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ABSTRACT

This paper reports on a research project which is a continuation of an experiment conducted in 1997. The experiment involved the development of a research methodology for situating migrants in their family and household contexts, and the use of this methodology identifying 'astronaut' families among the recent Hong Kong Chinese immigrants as recorded in the 1991 Census of Population and Dwellings (Ho, Bedford and Goodwin, 1997a). This study extends the previous analysis of 'astronaut' families to the 1996 Census and to three other migrant groups from northeast Asia – China, Taiwan, and Korea. The results illustrate that the research methodology can be applied to the 1996 Census. Among the four migrant groups from northeast Asia, Taiwan had the highest incidence of 'astronaut' families, followed by Hong Kong. Some factors likely to contribute to the use of the 'astronaut' strategy amongst these migrant groups are discussed. The paper concludes with some suggestions for application of the research methodology in the analysis of migrants in the wider social context of family and household.

AN INNOVATIVE APPROACH TO THE USE OF CENSUS DATA

At the 1997 Population Association of New Zealand (PANZ) Conference, Ho, Bedford and Goodwin (1997a) reported on the development of a research methodology for linking migrants into their family and household contexts, using data derived from the New Zealand Census of Population and Dwellings. An experiment using the methodology to identify 'astronaut' families among the recent Hong Kong Chinese immigrants as recorded in the 1991 Census was also described.

The 'astronaut' family was chosen as the migrant context of this research because of its topical interest. The term 'astronaut family' is popularly used to refer to families which contain members who return to their country of origin to work, often leaving their spouses and children in the country of destination (Boyer, 1996; Ho, Bedford and Goodwin, 1997b; Lidgard, 1996; Pe-Pua et al., 1996; Skeldon, 1994). 'Parachute kids' refers to the children being left with one or no parents in the country of destination. In the early 1990s media reports on immigrant children being left alone in New Zealand while their parents remained in Hong Kong and Taiwan had drawn considerable public and political attention to this type of migrant family. Yet the number of 'astronauts' and 'astronaut households' in New Zealand has been difficult to estimate (Ho, Bedford and Goodwin, 1997b).

The Census of Population and Dwellings holds an enormous amount of information on immigrant populations in New Zealand, but this database had been under-utilised for a long time (Bedford, 1989; Bedford and Lowe, 1993). A common approach to the use of census data for the analysis of immigrant populations has been to identify the migrants on the basis of their place of birth and/or residence five years ago, and examine their individual characteristics such as age, occupation, education level, and so on. In this type of research, the information that can be used to identify the 'astronauts' who make more than one trip to and from New Zealand between two censuses is extremely limited. Indeed, their presence is not even counted if the 'astronauts' are not residing in New Zealand on census night.

With financial support from the Marsden Fund, an experiment was conducted in 1997 which involved the development of a research methodology for identifying the 'astronaut' families and their associated 'parachute kids' among recent Hong Kong Chinese immigrants as recorded in the 1991 Census of Population and Dwellings (Ho, Bedford and Goodwin, 1997a). The present study is a continuation of this experiment. It extends the analysis of the 'astronaut' phenomenon to the 1996 Census and to three other migrant groups from northeast Asia – China, Taiwan and Korea. Before presenting the results of this investigation, the research

methodology is outlined below.

A METHODOLOGY FOR LINKING MIGRANTS INTO THEIR FAMILY CONTEXTS

The development of the research methodology for linking migrants into their family and household contexts requires the creation of a series of census tables using *Supercross* (upgraded to *SuperSTAR* in 1999), the standard census tabulation package used by Statistics New Zealand, and an attached unit record synthetic database which replicates exactly the form of census records in the master file (Ho, Bedford and Goodwin, 1997a). Both the *Supercross* package and the synthetic database have been leased to the researchers by Statistics New Zealand.

The census database for *Supercross* is composed of three types of records: personal, family and household (Statistics New Zealand, 1994). Personal records may be grouped into families, and these families may be further grouped into households (dwellings). Under each type of record in the *Supercross* database, a wide range of predefined fields are available for manipulation. If the tabulation is based on personal records, age, sex, birthplace, marital status and employment status are some of the fields available in the database.

Figure 1 gives an example of a cross tabulation using three predefined fields available from the personal records – birthplace, years since arrival in New Zealand and sex. Such a table is the primary output of *Supercross*. To create a new table, the user needs to select the fields for cross tabulation and specify the record type from the Fields box. When a cross tabulation is run, *Supercross* counts the number of records that meet the cross tabulation criteria and displays the results in the form of a table (Figure 1). In this example, there are 4,689 males and 5,394 females who were born in the People's Republic of China and had lived in New Zealand for less than five years at the time of the 1996 Census of Population and Dwellings.

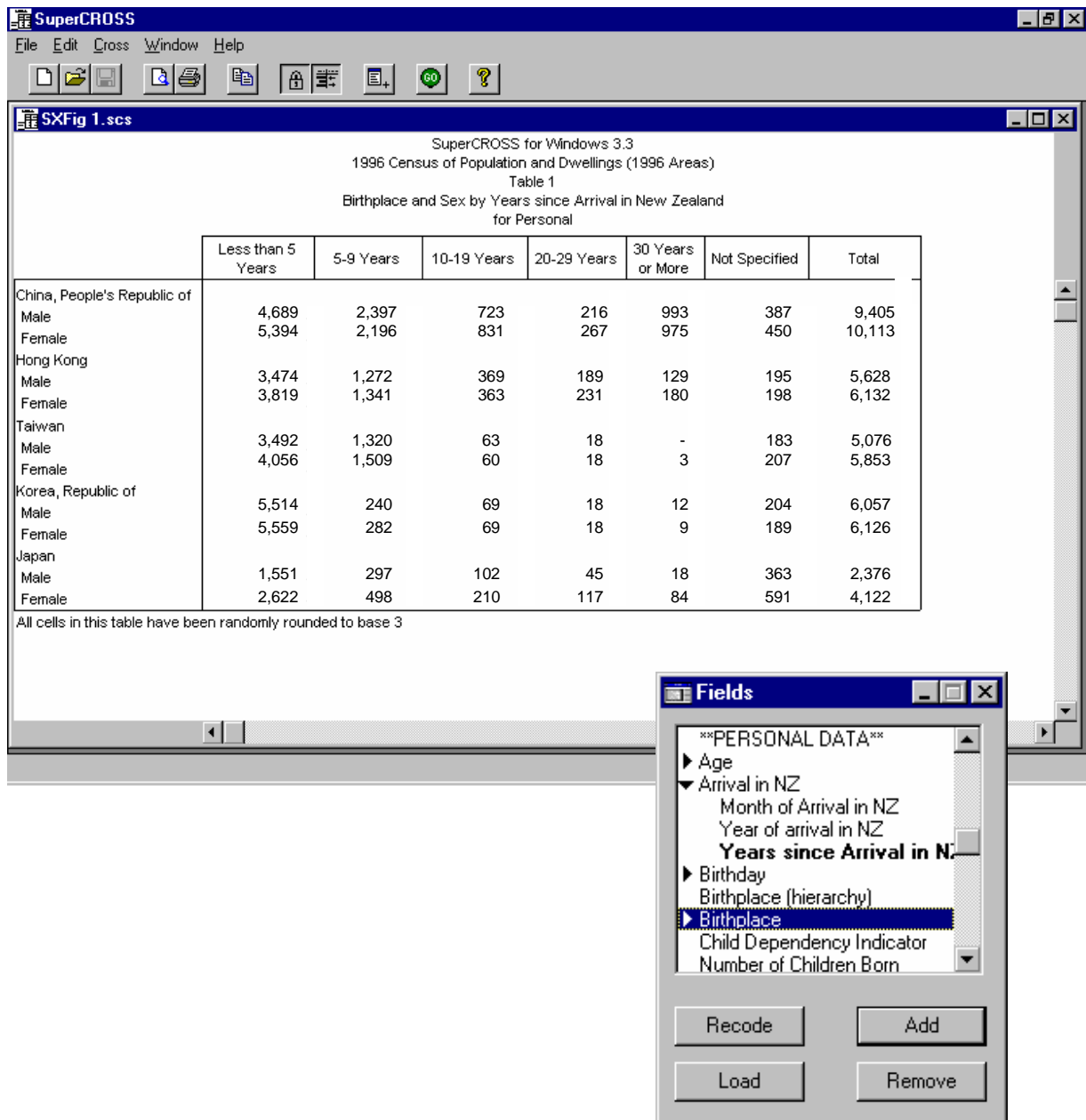


Figure 1 A cross tabulation using fields available from the personal records

Different fields are available if the tabulation is based on families or households. Figure 2 gives an example of a cross tabulation using fields available from the family records. The table shows the number of One Parent Families and Two Parent Families that have one child, two children, and three or more children. The table also shows the number of Couple Only Families that have no child.

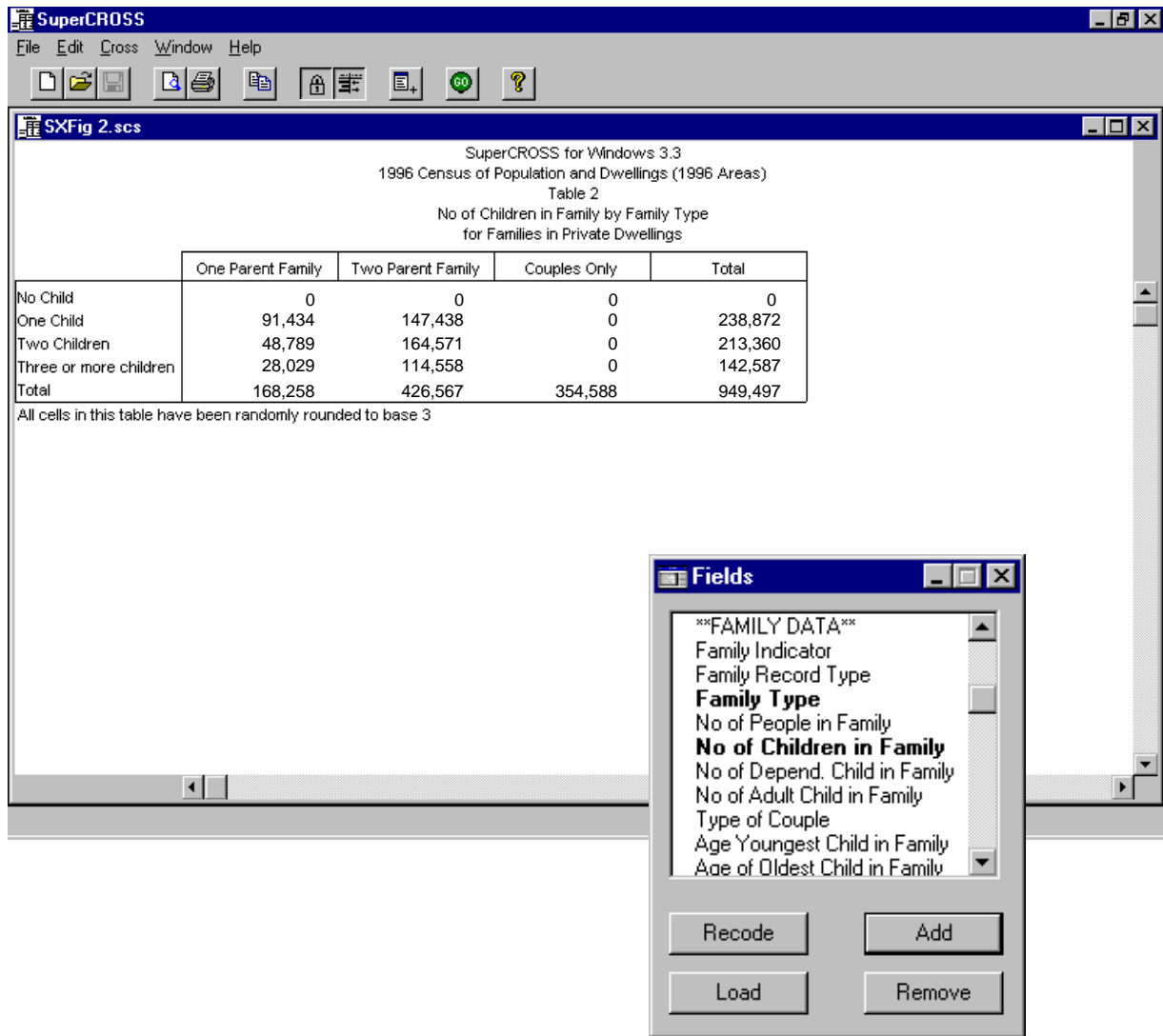


Figure 2 A cross tabulation using fields available from the family records

An example of a cross tabulation using fields from the dwelling records is given in Figure 3. This table shows the number of private and non-private dwellings that are separate houses, two flats/houses joined together, three or more flats/houses joined together and so on.

Other than selecting predefined fields that are available in the database, new user-defined fields can be created from one or more existing fields in the database. The new fields can be created for individuals, families and households, or they can be created across record types.

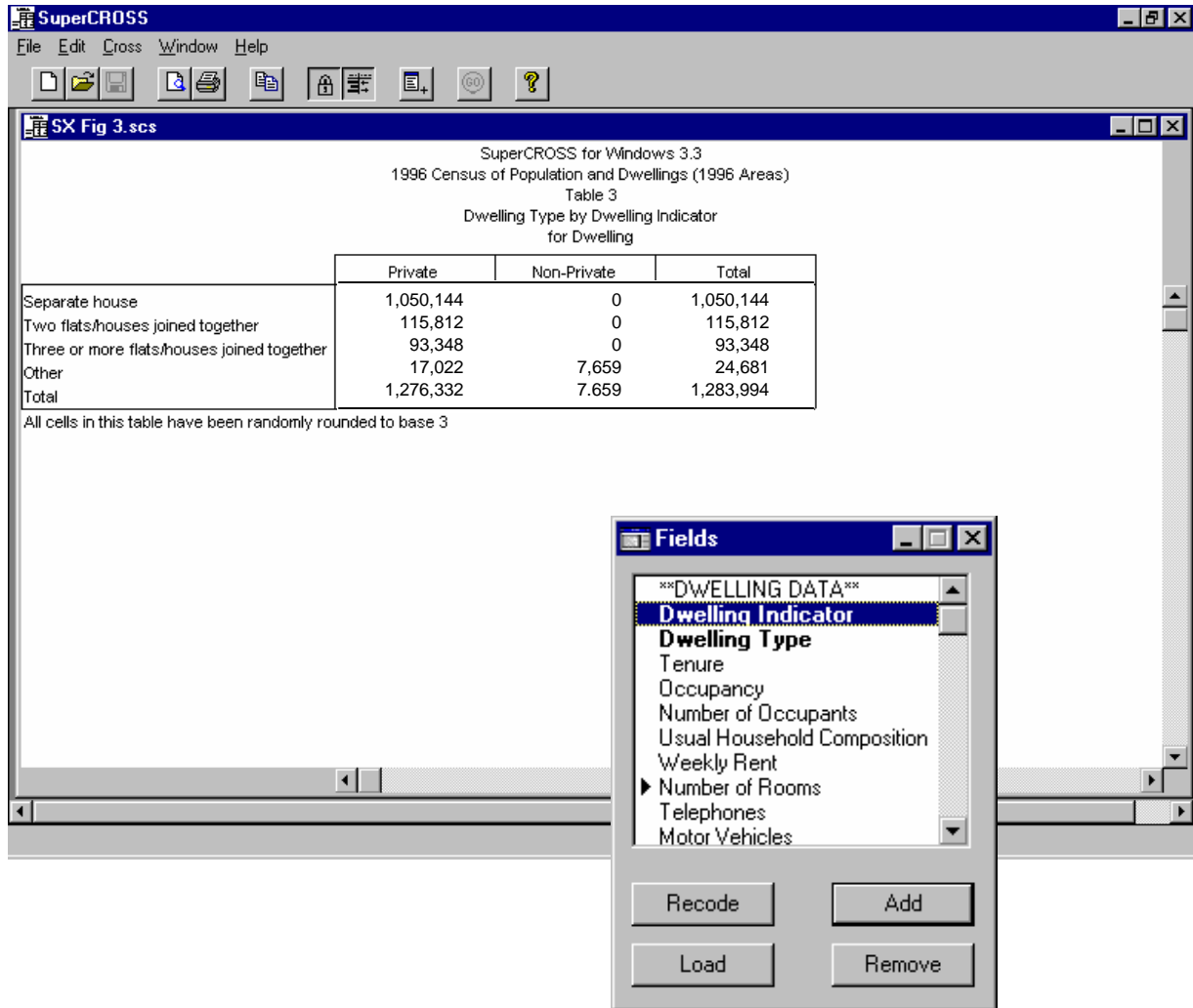


Figure 3 A cross tabulation using fields available from the household records

When a new field is created across record types, the Multi-Level User-Defined Field box is selected. An example is given in Figure 4. In this example, a new field is created to count the number of older people living in a family. To create this field, it is necessary to select from the Grouping Level boxes those groups of records required to create the new field, to define the conditions for older people in the Define Condition area, and to specify the ceiling of the output numbers in the Ceiling box.

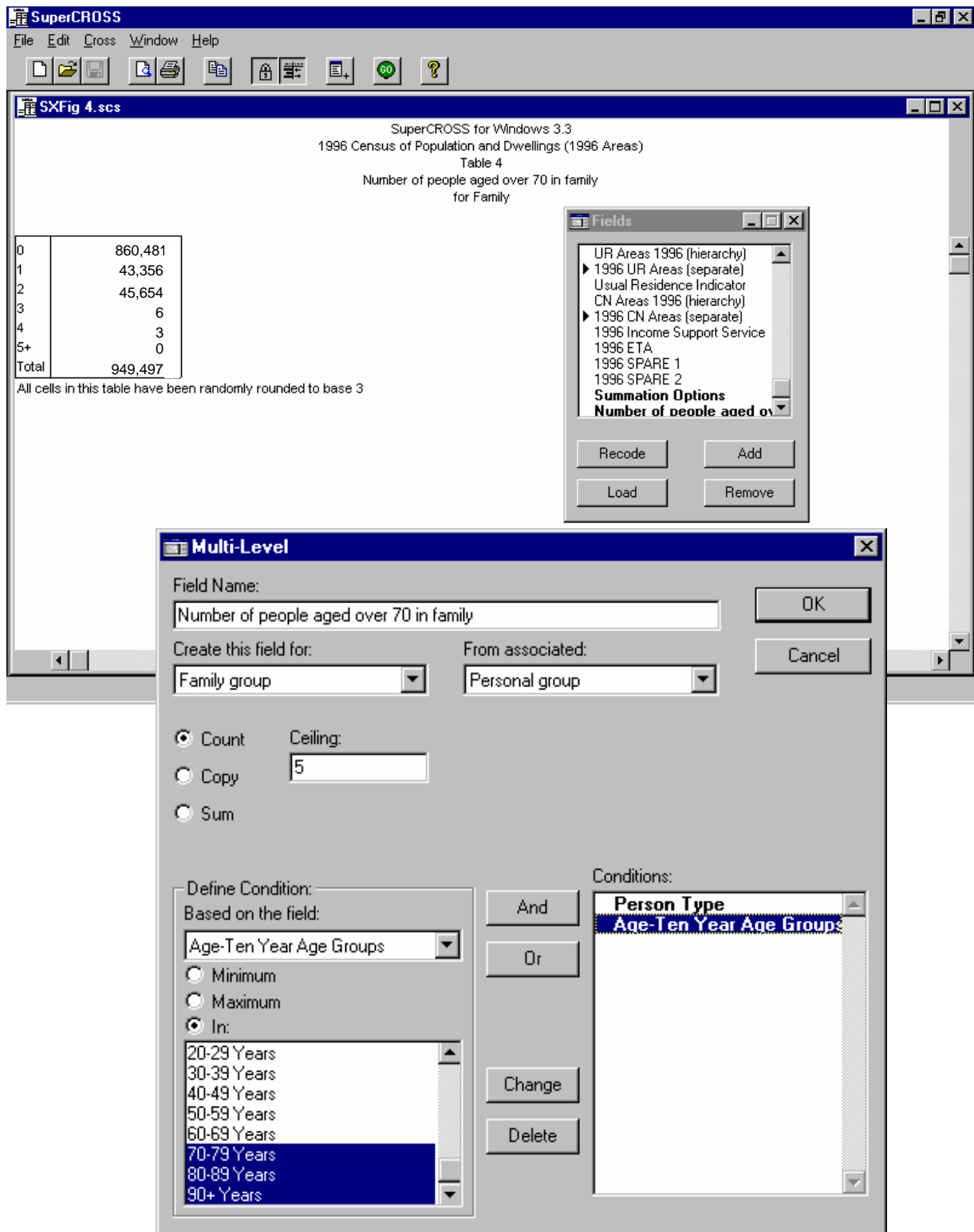


Figure 4 A cross tabulation using a multi-level user-defined field linking the individual records with the family records

In this case, the field is created for Family groups from associated Personal records. The condition for 'older' people is defined as people aged over 70 years. A ceiling of five is specified because it is unlikely that there will be many families with more than five people aged over 70 years. To run this query, *Supercross* will access the personal records to find the older people, and the family records to find the families. There are 860,481 families with no older people, 43,356 families with one older person, 45,654 families with two older people, six families with three older people, three families with four older people and no families with five or more older people (Figure 4).

It is important to note that when a table is created the record type must be specified. The cross tabulation shown in Figure 4 is based on family records. This means that the results displayed in the table are the number of families that have no people aged over 70, and families that have one, two, three, four, and five or more older people. However if the record type was to change from Family to Person the results would change. The number of people instead of the number of families would be counted if the record type was changed to Person.

The objective of this research project was to explore new approaches to the use of census data for linking individual migrants into their family and household contexts. Needless to say, the most demanding and time consuming aspect of this exploration was to understand and manipulate various fields available in the *Supercross* database, and to create new fields to make the desired linkages between individual, family and dwelling records.

Our exploration has shown that in order to investigate the 'astronaut' phenomenon, three levels of census data have to be generated from *Supercross* to identify the individual migrants, link them with their families and establish who the members are in these families in terms of their relationships with the children. How each level of data is generated is explained below.

Identify the individual migrants

The first level of data generated identified the core migrant groups. In this research project, the core migrant groups were children from Hong Kong, China, Taiwan or Korea who were under 20 years of age and had been resident in New Zealand for less than five years. After the core migrant groups were identified, their living arrangements could be studied in order to identify those who were living with their parents and those not living with their parents. The people who were not living with their parents might be defined as the ‘parachute kids’. To provide these data, three cross tabulations based on personal records were required.

In the case of the migrant children from Hong Kong, a new field called “Hong Kong Children” was created with the following conditions: (1) Hong Kong-born and resident in Hong Kong in 1991, (2) Hong Kong-born and resident overseas in 1991, (3) Hong Kong-born after 1991, or (4) overseas-born and resident in Hong Kong in 1991. Other fields required to identify the core migrant group included: Age (0-19 years), Sex (males and females), Ethnicity (Chinese), Marital Status (never married), Personal Type (New Zealand resident)¹ and Usual Residence Indicator (same as census night address). Once the conditions for Hong Kong children were defined, *Supercross* could count the number of individual records which matched these criteria (Figure 5). There were 3,531 people who matched our criteria of Hong Kong Children at the 1996 Census of Population and Dwellings.

After the Hong Kong children were identified, the living arrangements of these children were then examined. First of all, a cross tabulation was performed counting the number of Hong Kong Children who lived with their mother, father, both parents, neither parents, and those whose living arrangements were not specified (Figure 6). This cross tabulation used an existing field called “Live with Parents” that was available in the database.

The children who did not live with their parents might be defined as the ‘parachute kids’. It can be seen in Figure 6 that there were 591 Hong Kong Children who did not live with their parents. To find out if these children lived with someone else or lived totally on their own, a new field called “Not Live with Parents” was created. This field was created using several existing fields available from the personal records and counted the number of individuals who lived with their siblings only, lived with relatives, lived with other people, or lived alone (Figure 7). This cross tabulation allowed us to look into the diverse living arrangements these migrant children have.

¹ This condition excludes fee-paying students who are not immigrants.

SuperCROSS

File Edit Cross Window Help

SX Fig 5.scs

SuperCROSS for Windows 3.3
 1996 Census of Population and Dwellings (1996 Areas)
 Table 5
 HK Children and Sex by Age-Standard Five Year Groups
 for Chinese, NZ Resident, Never Married, Same as Census Night Address, Personal

	Less than 5 Years	5-9 Years	10-14 Years	15-19 Years	Total, 0-19 years
HK-born, resident HK 1991					
Male	0	279	489	849	1,614
Female	0	249	498	702	1,449
Total	0	528	984	1,551	3,063
HK-born, resident overseas 1991					
Male	0	9	9	24	45
Female	0	3	15	33	51
Total	0	15	27	57	96
HK-born after 1991					
Male	78	0	0	0	78
Female	99	0	0	0	99
Total	177	0	0	0	174
Overseas-born resident HK 1991					
Male	0	12	36	48	96
Female	0	21	33	42	96
Total	0	33	66	93	195
Total, HK Children					
Male	78	303	531	921	1,833
Female	99	273	546	777	1,698
Total	174	576	1,077	1,701	3,531

All cells in this table have been randomly rounded to base 3

Single Level

Field Name: HK Children

Create this field for: Personal group

Result Name: HK-born, resident HK 1991

Define Condition: Require the Field: Area Unit 5 years ago

To be one of: China, People's Republic of, Hong Kong, Japan, Korea, Democratic People's R, Korea, Republic of, Macau, Mongolia

Result Values:

- HK-born, resident HK 1991
- HK-born, resident oversea
- HK-born after 1991
- Overseas-born resident HI

HK-born, resident HK 1991
 Birthplace - 4 digits
 Area Unit 5 years ago
 HK-born, resident oversea
 Birthplace - 4 digits
 Area Unit 5 years ago
 HK-born after 1991 :
 Birthplace - 4 digits
 Age-Single Year
 Overseas-born resident HI
 Birthplace - 4 digits
 Area Unit 5 years ago

Figure 5 Level One table identifying the Hong Kong Children

SuperCROSS

File Edit Cross Window Help

SX Fig 6.scs

SuperCROSS for Windows 3.3
1996 Census of Population and Dwellings (1996 Areas)
Table 6
Live with parents and Sex by Age-Standard Five Year Groups
for Hong Kong Children, Chinese, NZ Resident, Never Married, Same as Census Night Address, Personal

	Less than 5 Years	5-9 Years	10-14 Years	15-19 Years	Total (0-19 years)
Mother					
Male	18	51	114	153	336
Female	12	60	93	138	306
Total	30	108	210	294	639
Father					
Male	0	3	12	24	42
Female	3	3	9	18	33
Total	3	6	24	42	72
Both of These					
Male	60	243	351	468	1,122
Female	81	210	402	393	1,083
Total	141	453	756	861	2,208
Neither of These					
Male	0	3	54	267	327
Female	0	6	36	225	264
Total	0	9	90	495	591
Not Specified					
Male	0	0	3	6	9
Female	0	0	3	6	12
Total	3	0	6	12	21

All cells in this table have been randomly rounded to base 3

Fields

- ▶ Iwi
- ▶ Job Search Methods
 - Number of Jobs
- ▶ Language
- ▼ Living Arrangements
 - Live with parents**
 - Live with spouse/partner
 - Live with children
 - Live with siblings
 - Live with other relatives
 - Live with other persons

Recode Add
Load Remove

Figure 6 Level One table showing the living arrangements of Hong Kong Children

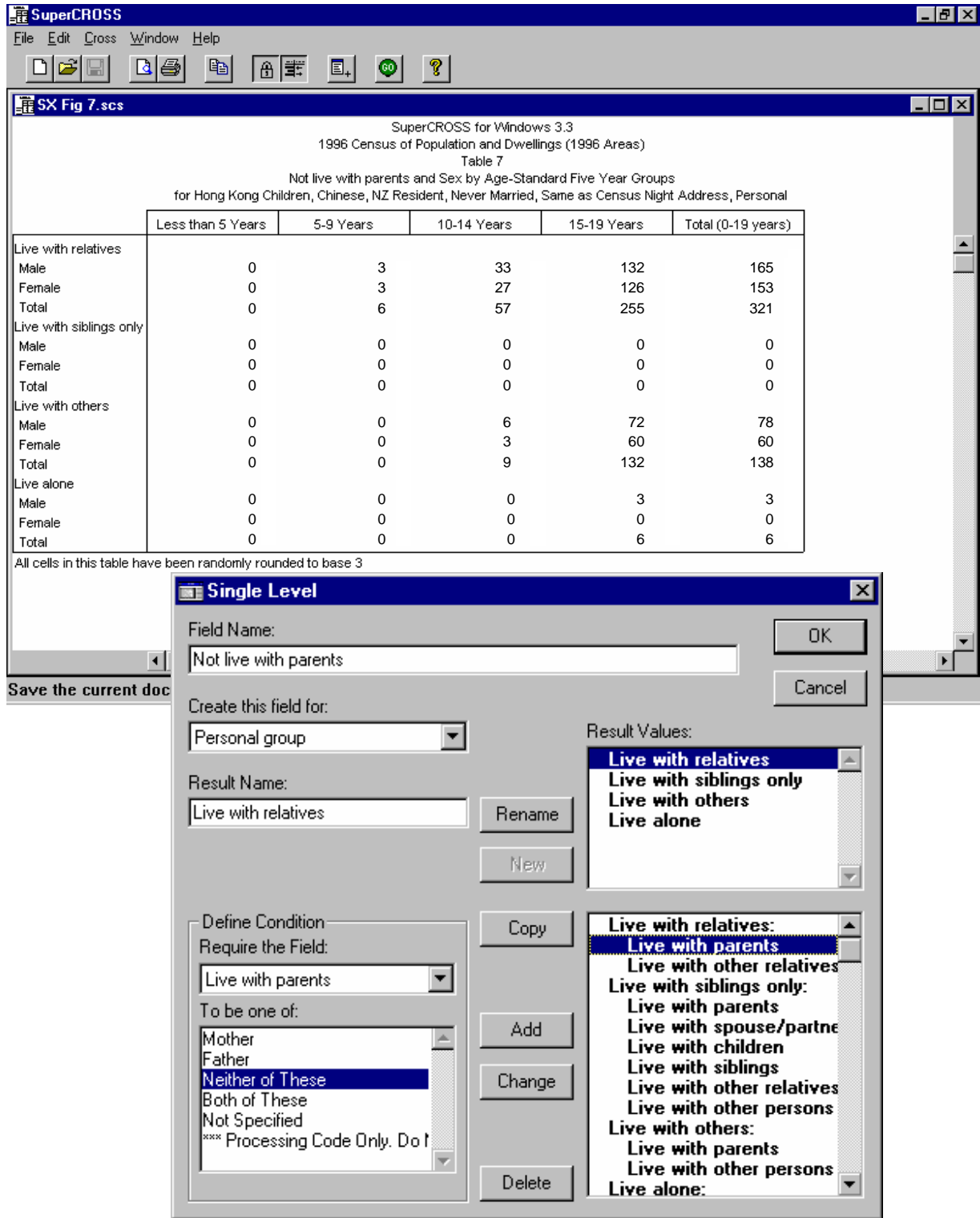


Figure 7 Level One table showing the living arrangements of Hong Kong Children not living with parents

Link the individual migrants with their families

The second level of data generated linked the personal records of the migrant children with their family records. A linkage methodology was developed to find the number of families in which were located the migrant children identified in the first level. The methodology was also applied to find the number of families with children who lived with their mother, father, or both parents.

To find the Hong Kong children in families, a multi-level user-defined field called “Families with Hong Kong Children” was created (Figure 8). The conditions for Hong Kong Children were defined in the same way they were identified in the first level. The ceiling of the output numbers for the table was set to 1 because we simply wished to know whether or not a family contained any Hong Kong children. The families counted could have one or more Hong Kong Children.

The linkage between the individual and family record was achieved by specifying in the Grouping Level boxes that this field was to be created for family records from associated personal records (Figure 8). This allowed *Supercross* to access the personal records to find the Hong Kong Children, and grouped the results into families. From the results displayed in Figure 8, there were 2,025 families which contained the Hong Kong Children identified in the first level.

At this point it must be noted that according to the Census definition provided by Statistics New Zealand, “a family consists of either a couple (from a legal or de facto marriage) with or without a child (or children), or one parent with a child (or children) usually resident in the household” (Department of Statistics, 1991, p.31). On the basis of this definition, not all the 3,531 Hong Kong Children identified in the first level (see Figure 5) could be found in families. For example, a brother and a sister living together is not considered to be a “family”. When a person lives alone, it is also not appropriate to talk of a ‘family’!

However, it is possible to locate those children who live with one or both parents in families. To find the families with Hong Kong children who lived with their mother, father, or both parents, three cross tabulations were required. Each cross tabulation used a multi-level user-defined field similar to the one described above, which made the desired linkages between the individual and family records. To define the conditions for Hong Kong children who lived with their mother, father, or both parents, the appropriate living arrangement was selected from the “Live with Parents” field and added to those conditions for Hong Kong Children already specified in the previous example.

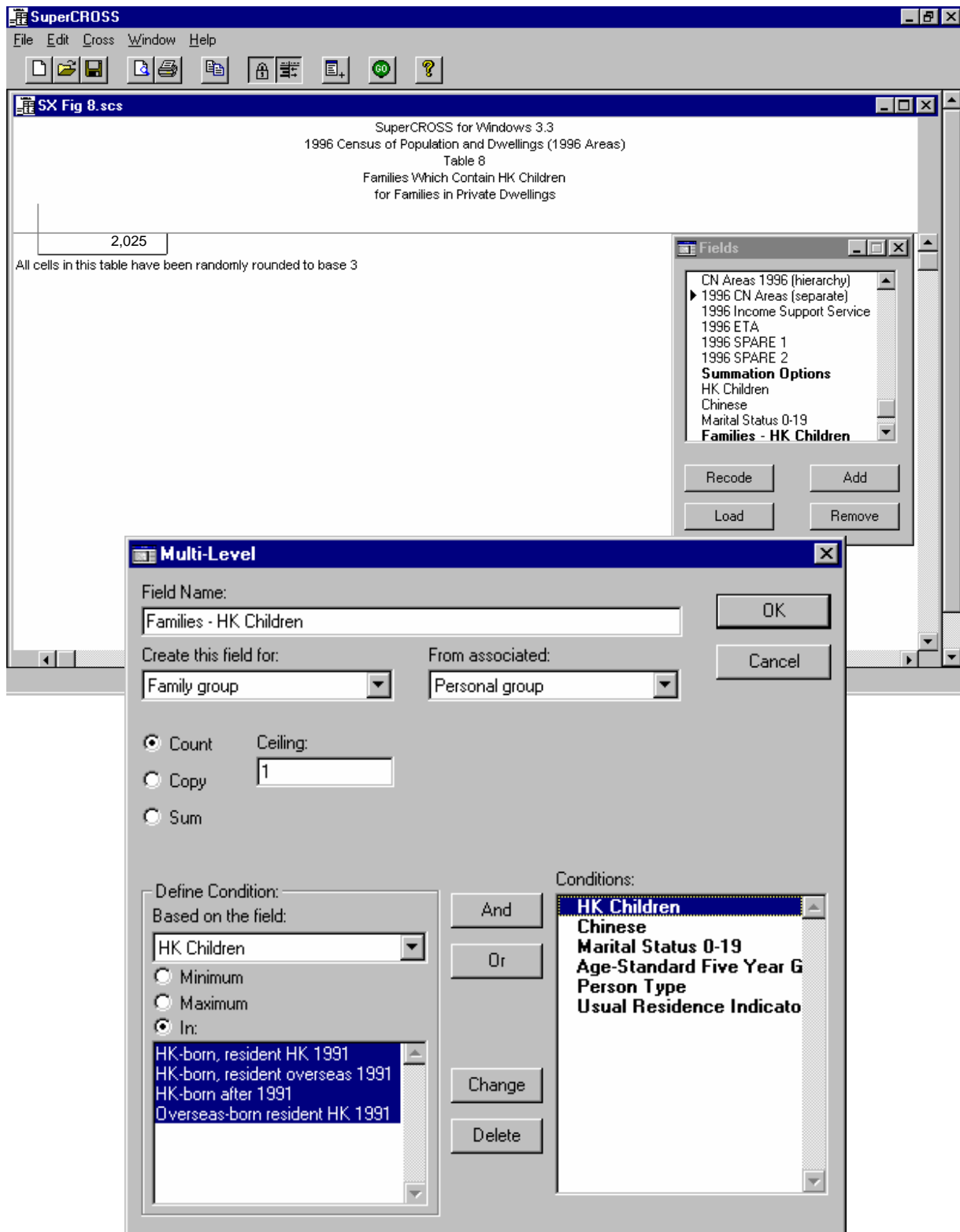


Figure 8 Level Two table using a multi-level user-defined field linking Hong Kong Children with their families

Figure 9 gives the results of the cross tabulation created to find the number of families with Hong Kong children who lived with their mother. At the 1996 Census, there were 405 families in which were located the 639 Hong Kong children who lived with their mother (Figures 6 and 9).

Using the linkage methodology, it was also found that there were 45 families with Hong Kong children who lived with their father, and 1,356 families with children who lived with both parents. In this research project, the families where the migrant children lived with either their father or mother are called One Parent Families, and families where children live with both parents are Two Parent Families. Using this classification, there were 450 One Parent Families and 1,356 Two Parent Families in which were located the Hong Kong children.

All the fields created to link the migrant children with their families were saved so that they could be used at the next level.

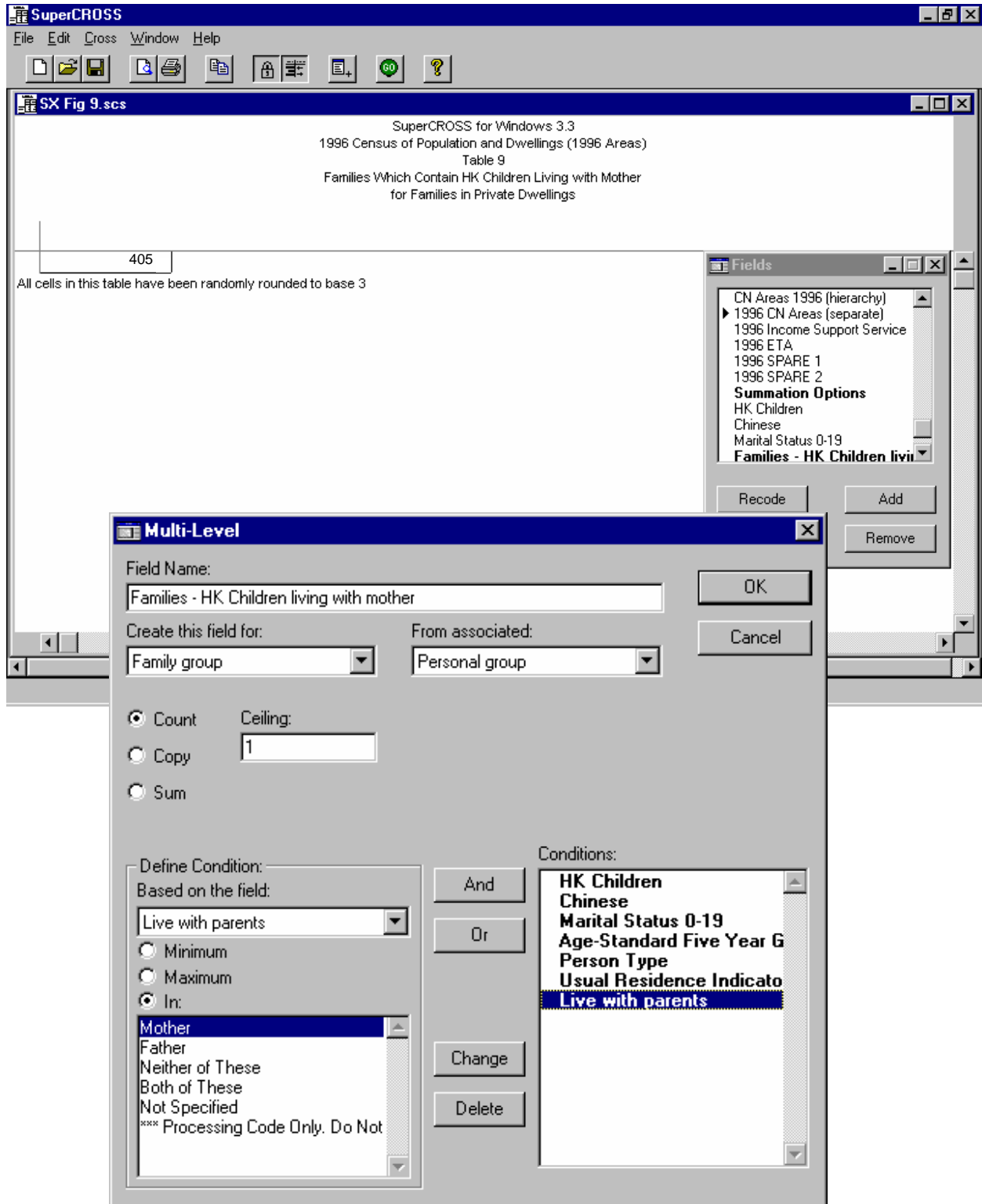


Figure 9 Level Two table showing the number of families which contain Hong Kong children living with their mother

Establish who are the people living in the families

The final level of data generated, linked the families identified at the second level with their personal records to establish who were the members in these families. The characteristics of these people could then be examined to provide insights into the family and social contexts within which the migrant children were situated. All the tables generated at this level were based on personal records.

To find the number of people who lived in families which contained Hong Kong children, a multi-level user-defined field was created (Figure 10). This field was created to count the personal records from associated Hong Kong families identified at the second level. The conditions for “Families with Hong Kong Children” had already been defined (see p.13); that field was loaded into the Define Condition area of the new field (Figure 10). Because personal group was specified as the record type, the individual records that were associated with these families were counted. The results displayed in Figure 10 showed the age-sex distribution of the people identified. They suggested that the personal records counted at this level included the migrant children identified at the first level, as well as all other people who lived with these children.

It was also possible to use this linkage methodology to examine the characteristics of those people who lived with Hong Kong children in One Parent or Two Parent Families. At the previous level we have already created the fields which define the conditions for families with Hong Kong Children living with father, mother and both parents. To count the number of people who lived in Two Parent Families, select the field which counts families with Hong Kong children living with both parents and link these records with their personal records as described in the example given in Figure 10. Figure 11 gives the results of a cross tabulation examining the work status of those people aged 15 years and over living in Two Parent Families.

To look at the work status of people living in One Parent Families, two cross tabulations were required; one for people in families with Hong Kong children living with their father and one for those in families with children living with their mother. The results obtained from these tables were then added to provide the information desired.

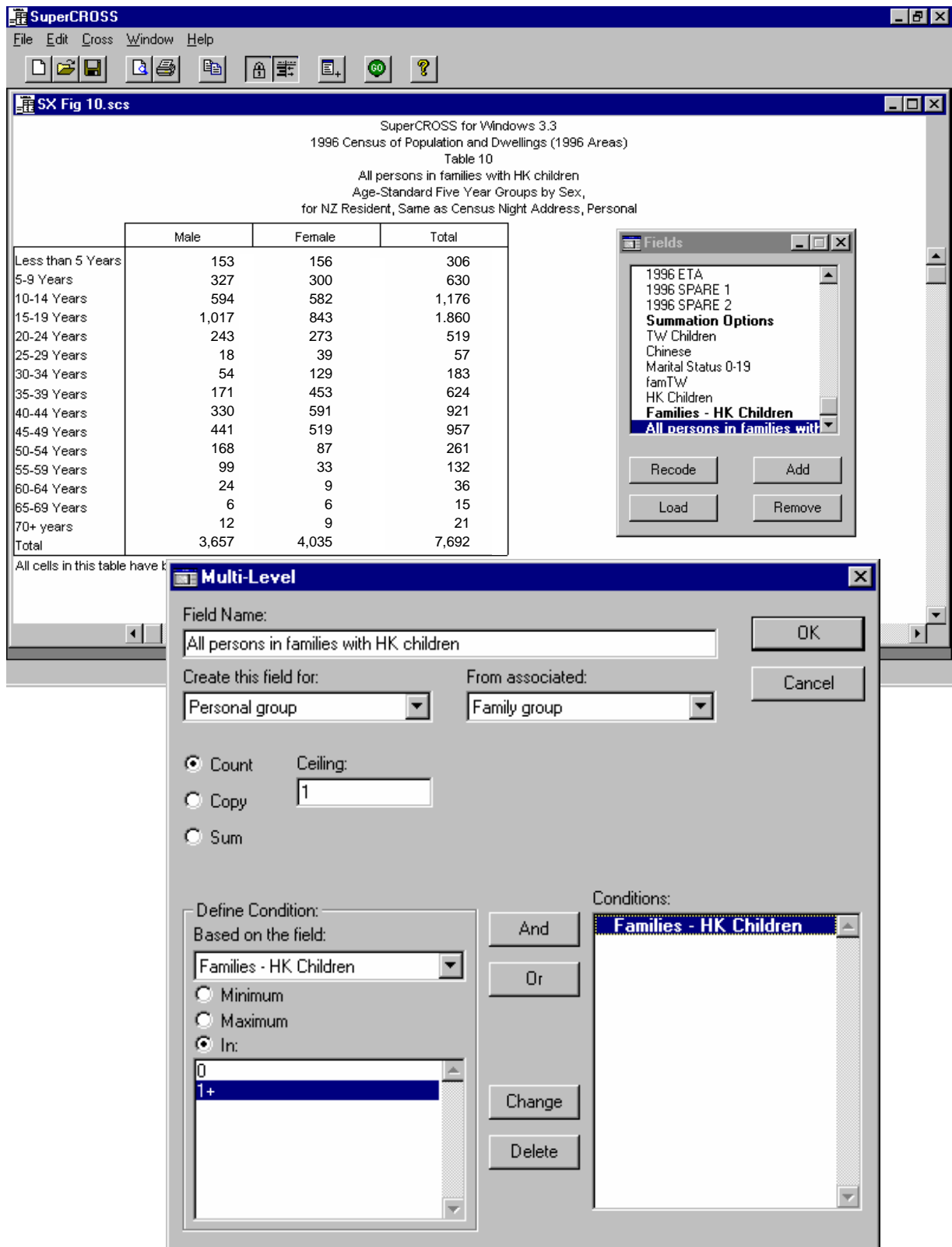


Figure 10 Level Three table showing the number of persons in Hong Kong families

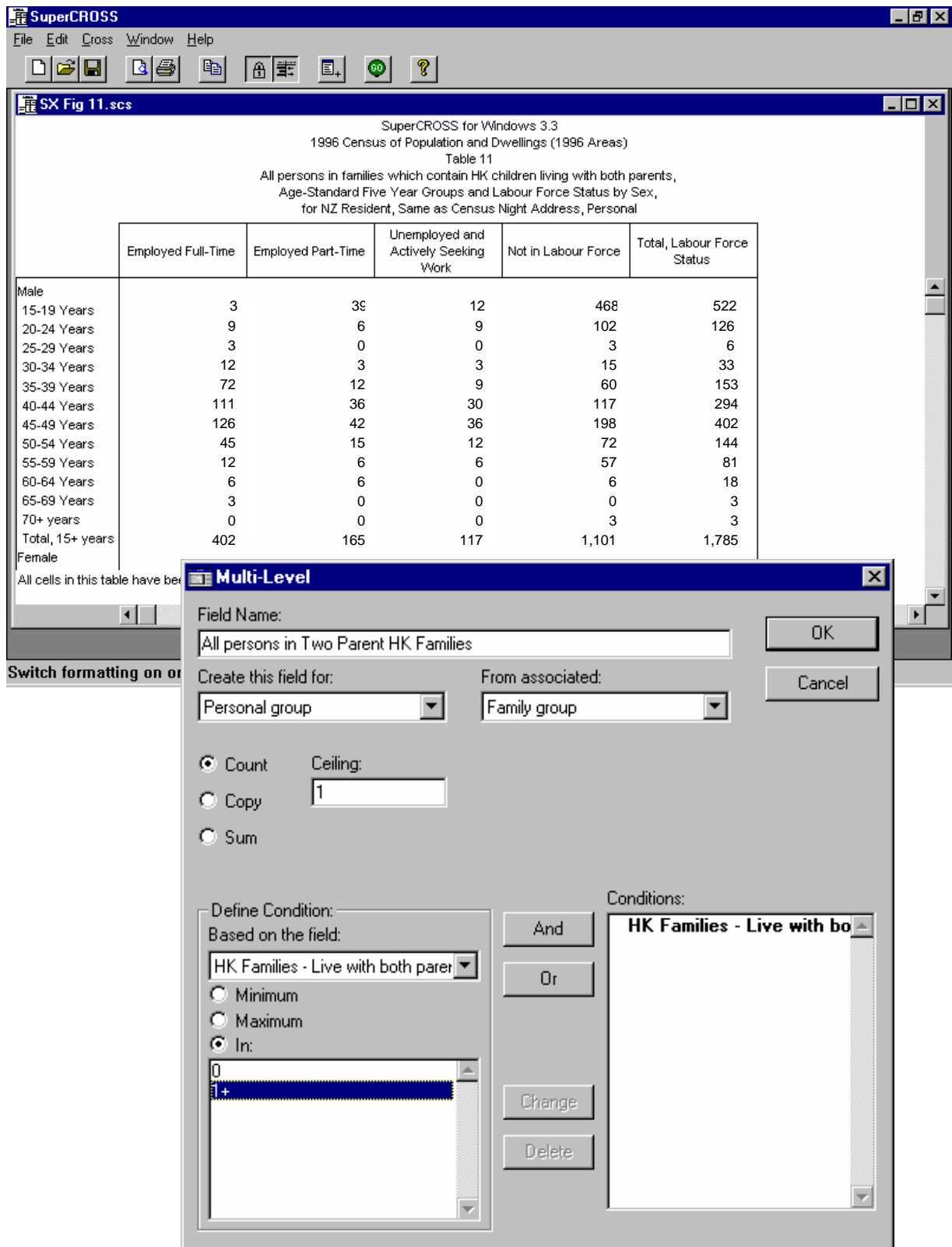


Figure 11 Level Three table showing the labour force status of persons aged 15 years and over in Two Parent Hong Kong Families

In this research project, a series of cross tabulations had been generated at this level to provide information on the age-sex composition, marital status and labour force characteristics of people living in One Parent or Two Parent families. The results are presented and discussed in the next section.

APPLYING THE METHODOLOGY TO IDENTIFY ‘ASTRONAUT’ FAMILIES

The research methodology outlined in the previous section has been applied to identify ‘astronaut’ families and ‘parachute kids’ from Hong Kong, China, Taiwan and Korea at the 1996 Census of Population and Dwellings. Some findings are presented in this section. Discussions on the ‘astronaut’ phenomenon in New Zealand in the 1990s also draw on data provided in our previous experiment, which were derived from the 1991 Census and were focused on families from Hong Kong .

Living arrangements of migrant children from Hong Kong, China, Taiwan and Korea

In 1991 the number of people who matched the criteria of Hong Kong children who had been resident in New Zealand for less than five years was 1,620. By 1996 it was 3,480 – twice as large as it had been five years ago. Despite the substantial increase in the number of Hong Kong children living in New Zealand between 1991 and 1996, the living patterns of these children as recorded in the two censuses were very similar.

In both 1991 and 1996, 83 percent of these children lived with their parents (Figures 12a and 12b). Because there were much richer data on family available in the 1996 census, Figure 12b also gave information about the number of children who lived only with their father or their mother, or with both parents. Overall, a majority of the Hong Kong migrant children who were not living with their parents lived with relatives or with other people. Less than 0.5 percent lived on their own.

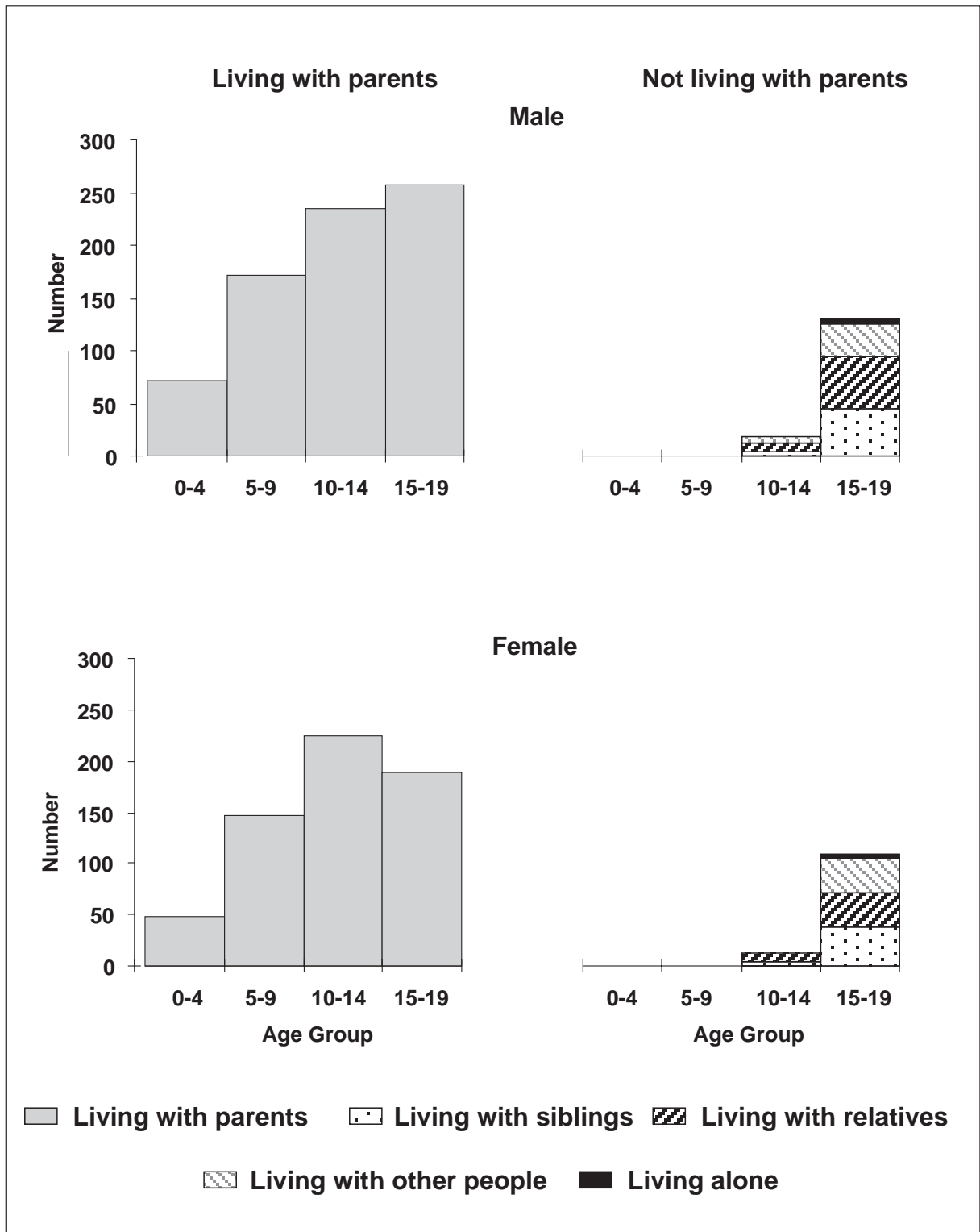


Figure 12a Living arrangements of Hong Kong children by five-year age group and sex, 1991 census

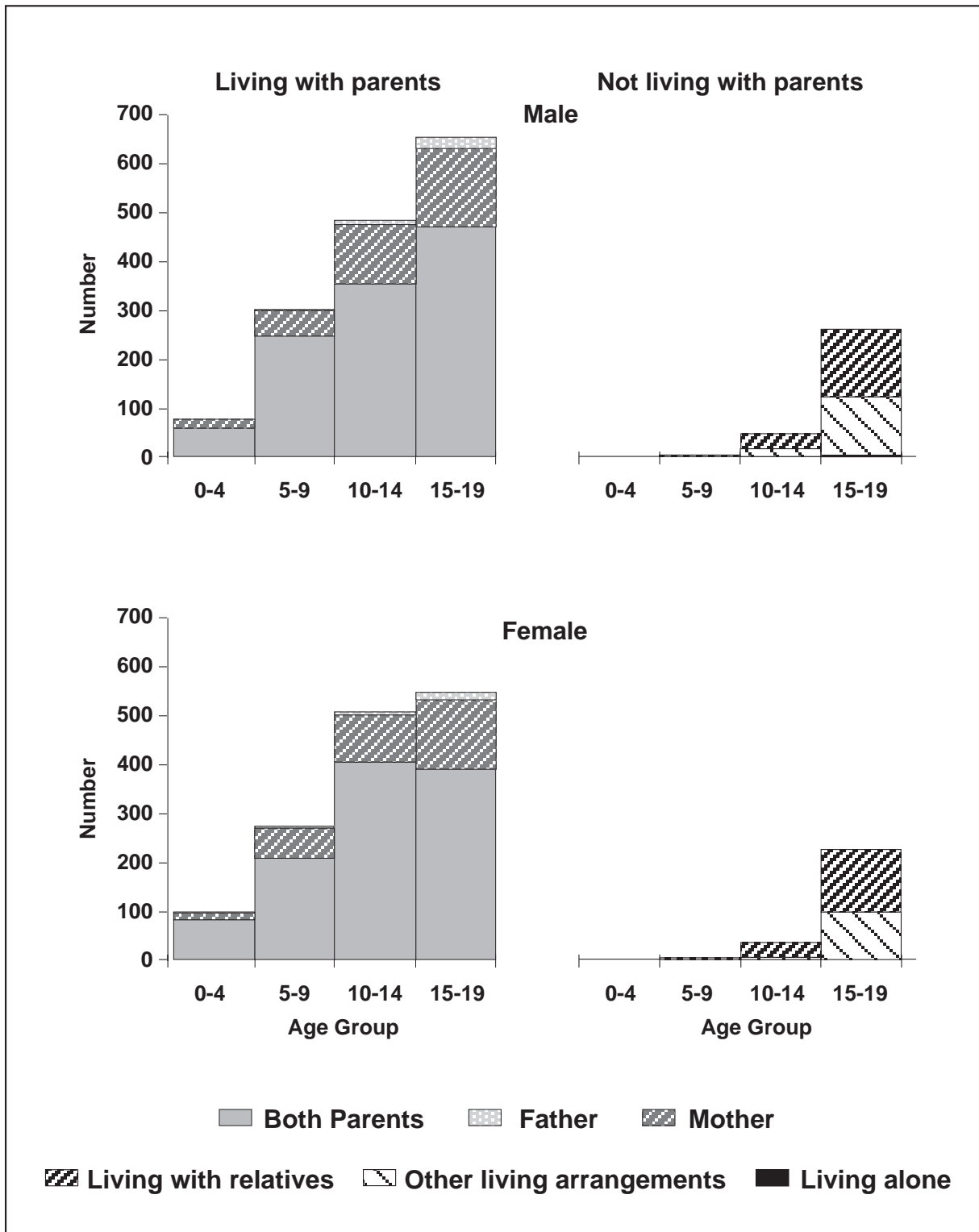


Figure 12b Living arrangements of Hong Kong children by five-year age group and sex, 1996 census

The numbers of children from Korea (4,440) and Taiwan (4,000) who were under 20 years of age and who had been resident in New Zealand for less than five years at the 1996 census were higher than those from Hong Kong (3,480) and China (1,890). The age and gender characteristics of the four groups of northeast Asian children are presented in Table 1. Half of the children from China and one-third of those from Korea were less than 10 years of age, while 80 percent of the Taiwanese and Hong Kong children were in the 10-19 age groups.

Table 1 Number of northeast Asian children by five-year age group and sex, 1996 census

Age group	Migrant Group							
	Hong Kong		Taiwan		China		Korea	
	M	F	M	F	M	F	M	F
0 – 4 years	75	96	147	120	153	123	276	264
5 – 9 years	303	273	372	273	342	339	504	453
10 – 14 years	528	537	714	648	288	240	729	672
15 – 19 years	900	765	930	804	207	198	789	756
Total, 0-19 years	1,806	1,671	2,163	1,845	990	900	2,298	2,145

The living arrangements of the four groups of northeast Asian children in the 1996 census were presented in Figure 13. The data clearly showed that nearly all of those children under 10 years of age lived with their parents. The proportion of those not living with parents increased with age, with the largest proportion of migrant children not living with parents (41%) found among Taiwanese children aged 15-19 years. Contrary to popular belief, our study found that only very few northeast Asian children lived totally on their own (Figure 13). The majority of children who were not living with their parents lived with either relatives or with other people.

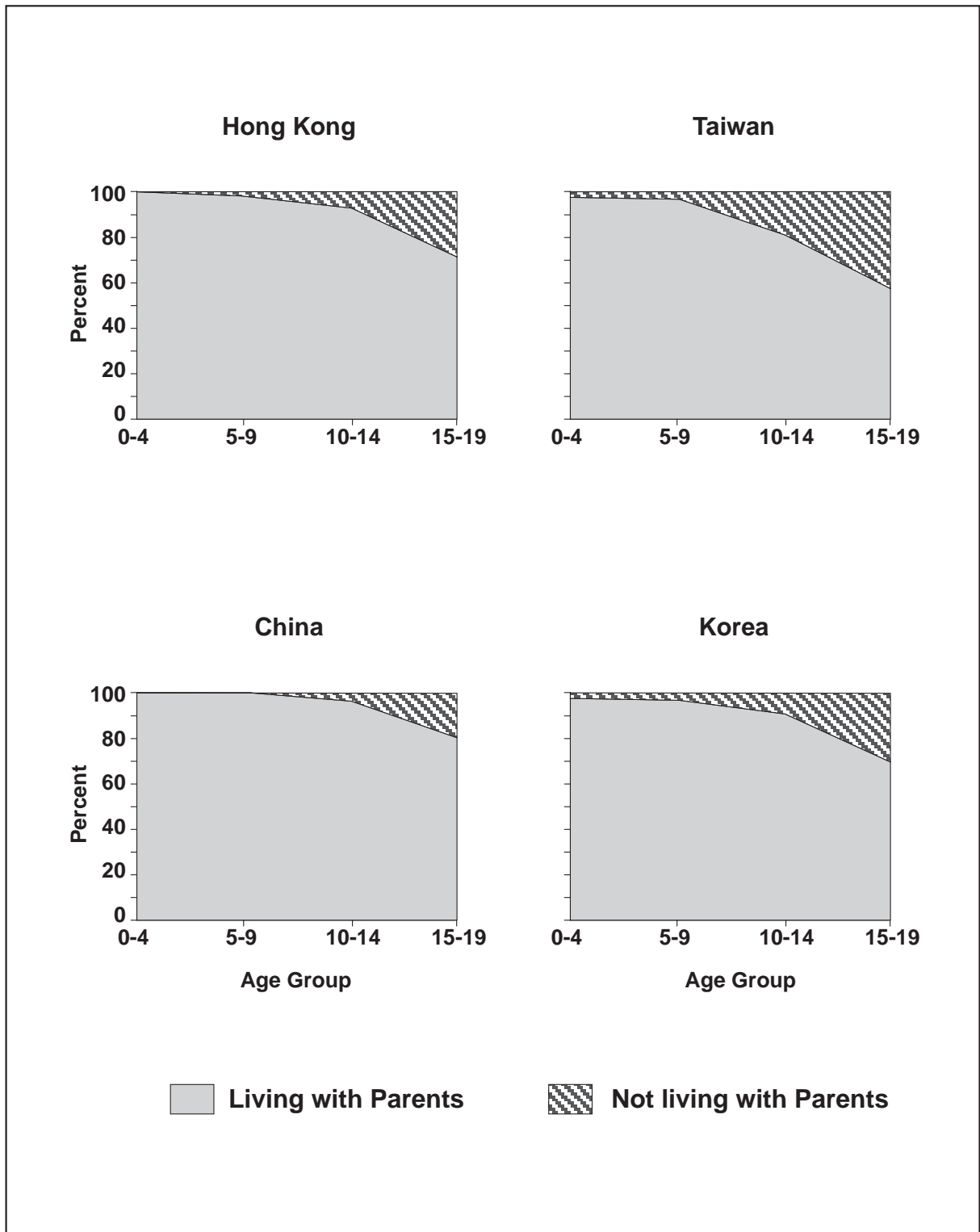


Figure 13 Living arrangements of northeast Asian children by five-year age group and sex, 1996 census

Family types of migrant children living with parents

Although the proportion of Hong Kong children who lived with their parents remained the same between 1991 and 1996 censuses, higher proportions were living in one-parent families in 1996.

In 1991, there were 1,344 children from Hong Kong who lived with their parents. These children were located in 708 families; 15 percent of these families were one-parent families and 85 percent were two-parent families (Table 2). In 1996, the number of Hong Kong children who lived with their parents increased to 2,910. They were located in 1,806 families; 25 percent of these families were one-parent families and 75 percent were two-parent families (Table 2).

Table 2 Family types of Hong Kong children living with parents, 1991 and 1996 censuses

Family type	Census			
	1991		1996	
	Number	Percent	Number	Percent
One Parent Family	108	15	450	25
Two Parent Family	600	85	1,356	75
Total, family type	708	100	1,806	100

Among the four groups of northeast Asian children, the Taiwanese children had the highest percentage (40%) living in one-parent families in 1996 (Figure 14). The percentages of Chinese and Korean children lived in one-parent families were much lower (17% and 15% respectively). Across the four groups, a majority of children living in one-parent families lived with their mother.

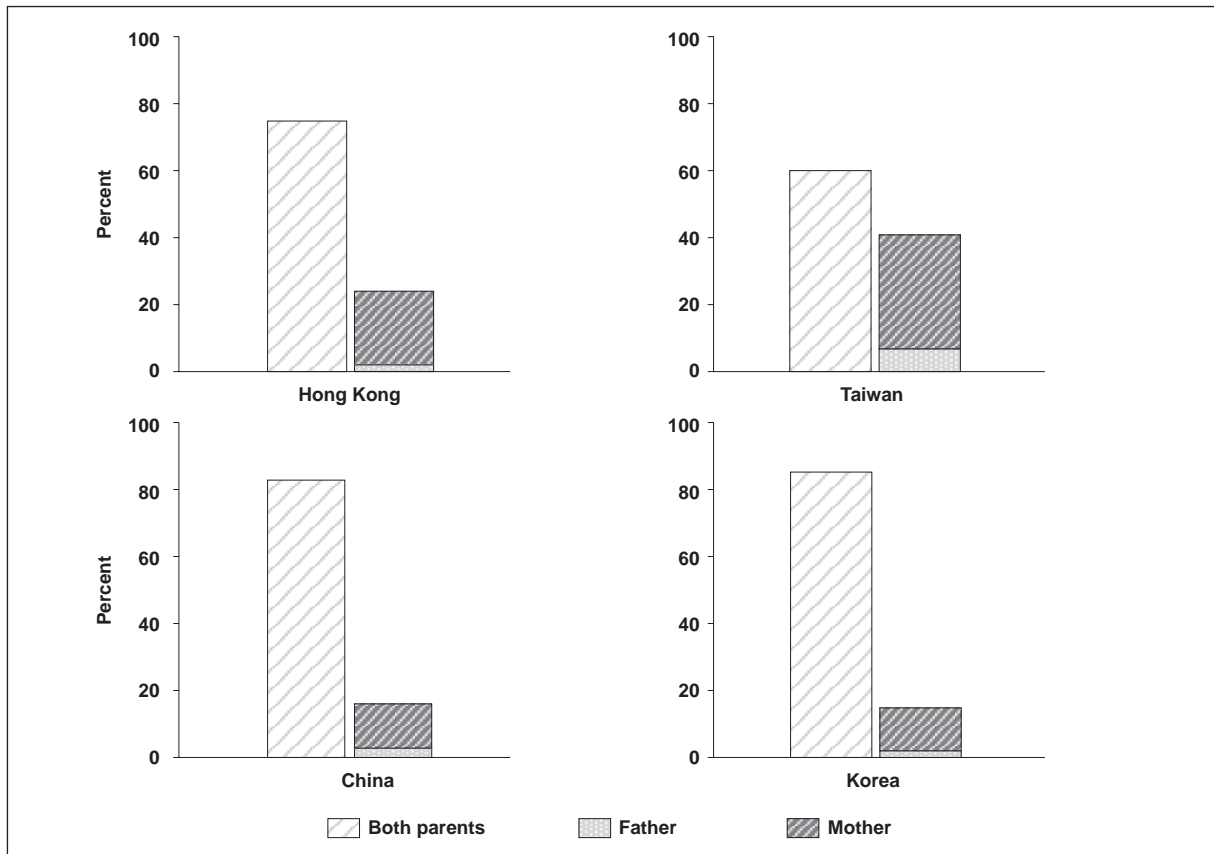


Figure 14 Family types of northeast Asian children living with parents, 1996 census

Age and gender characteristics of people living in northeast Asian families

Figures 15 to 20 give the demographic characteristics of all the people living in northeast Asian families. As mentioned in p.17 above, data generated by linking families with their personal records allowed the researchers to examine the characteristics of the people living with the northeast Asian children and provide insights into the family and social contexts within which these migrant children lived.

Figure 15 gives the age and gender distribution of all the people living in families with Hong Kong children in the 1991 and 1996 censuses. Comparing the two population pyramids (Figure 15a and Figure 15b), it is clear that a larger proportion of the Hong Kong children in 1996 were in the older age groups (10-19 years). Also clear in both graphs is the strong dominance of females in the 20-49 age groups: a total of 2,000 females compared to 1,260 males in these age cohorts in 1996.

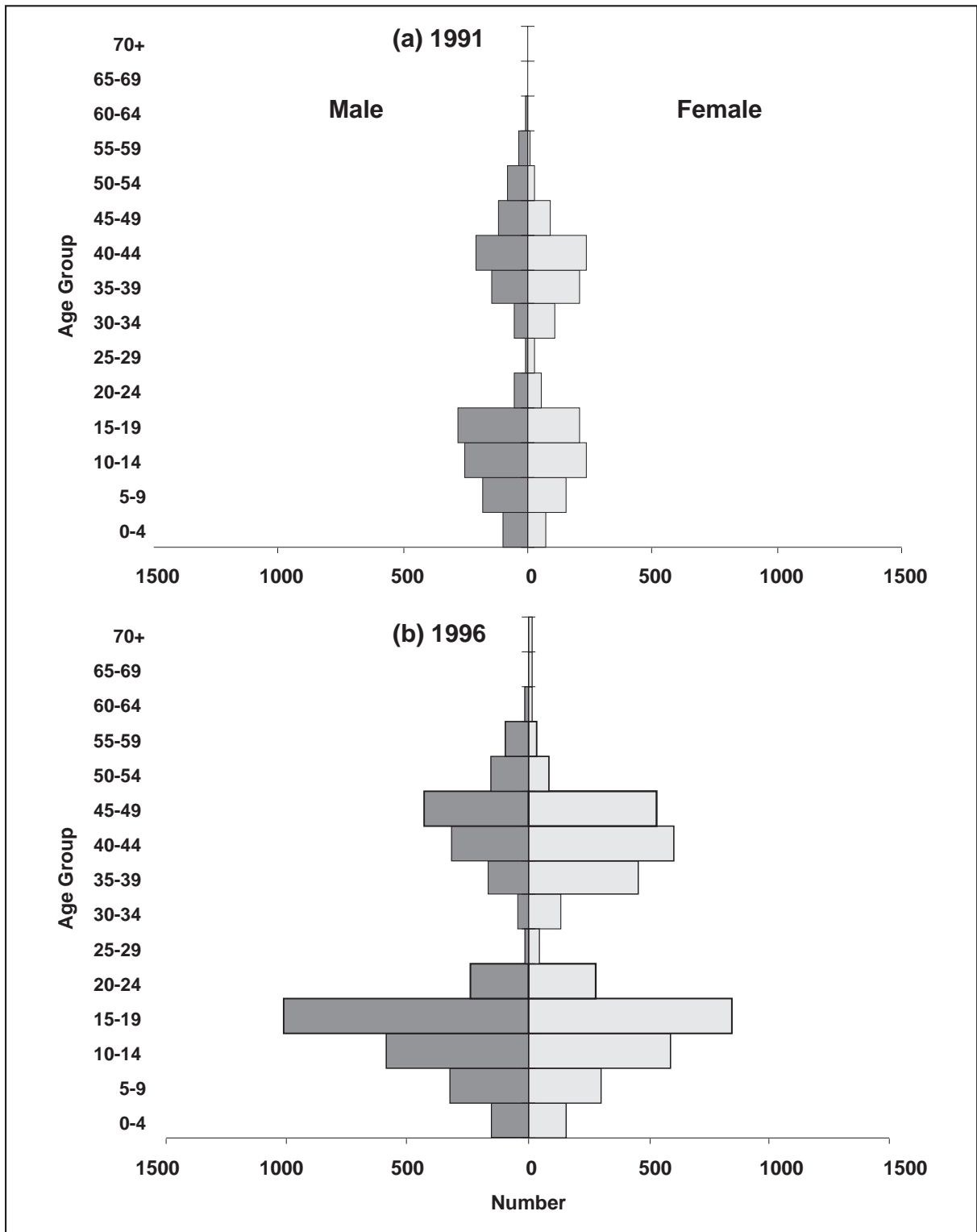


Figure 15 Persons in families with Hong Kong children by five-year age group and sex, 1991 and 1996 censuses

Figure 16 gives the age and gender characteristics of all the people living in the four groups of northeast Asian families. Consistent with Table 1, this diagram shows that families from Taiwan, Hong Kong and Korea had more children in the 15-19 years age group than in the younger age groups. In the case of the families from China, there were more children in the 5-9 years age group than in the older age groups.

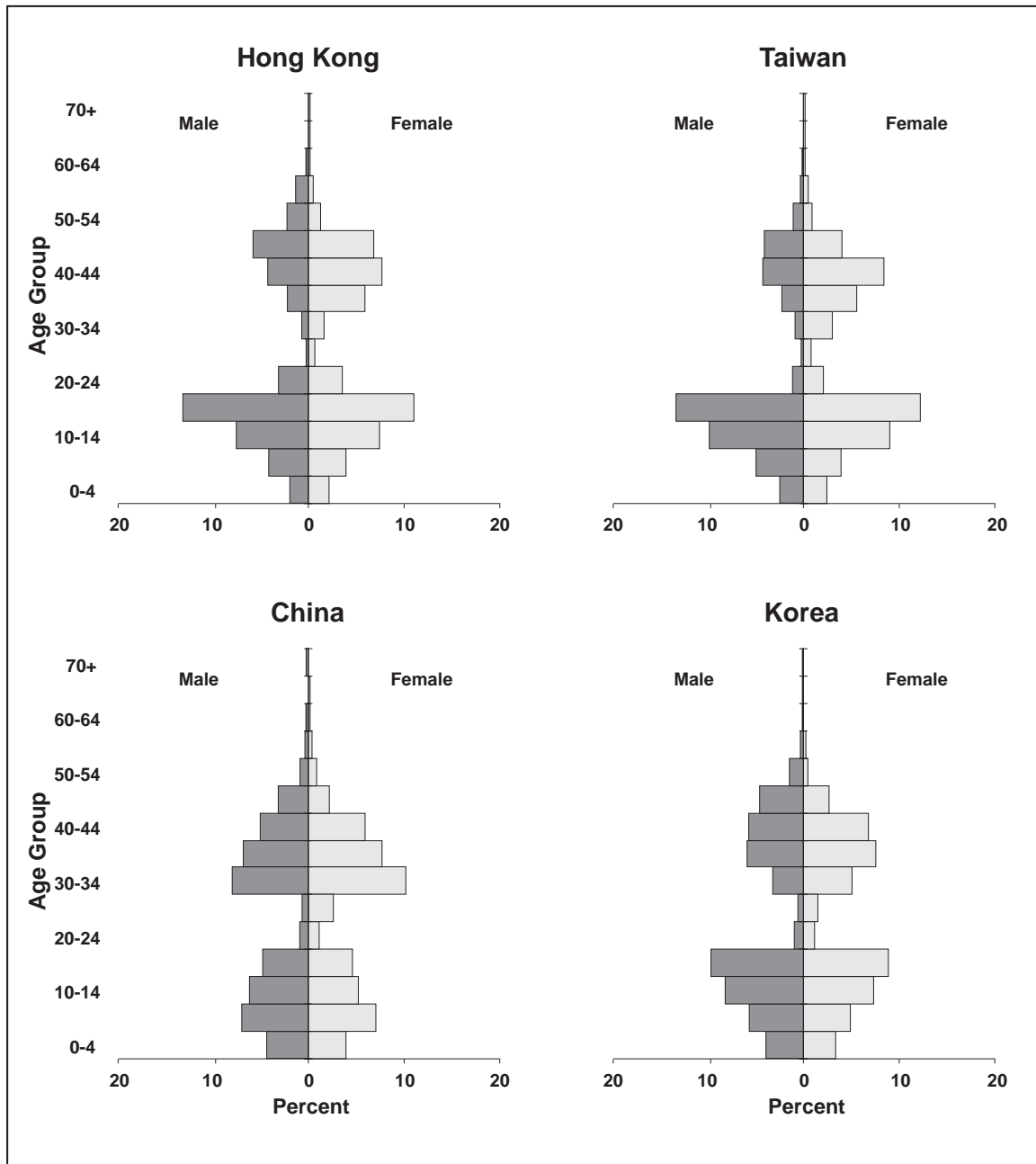


Figure 16 Age and sex characteristics of northeast Asian families, 1996 census

Marital status of adult family members in one-parent families

The large proportion of children, from Hong Kong and Taiwan especially, who lived in one-parent families suggested that these children might be living in 'astronaut' families. The linkage methodology developed in this research project has enabled us to examine the marital status and labour force characteristics of those family members aged 20 years and over living with these children. This information gives evidence of the existence of the astronaut type of family.

In both 1991 and 1996, only about 10 percent of the adult members in Hong Kong one-parent families reported themselves as separated, divorced or widowed (Figures 17a and 17b). Over 60 percent reported themselves as married. Figure 17 also showed that a majority of those married people living in one-parent families were females. On the other hand, over 80 percent of the adult members in Hong Kong two-parent families were married.

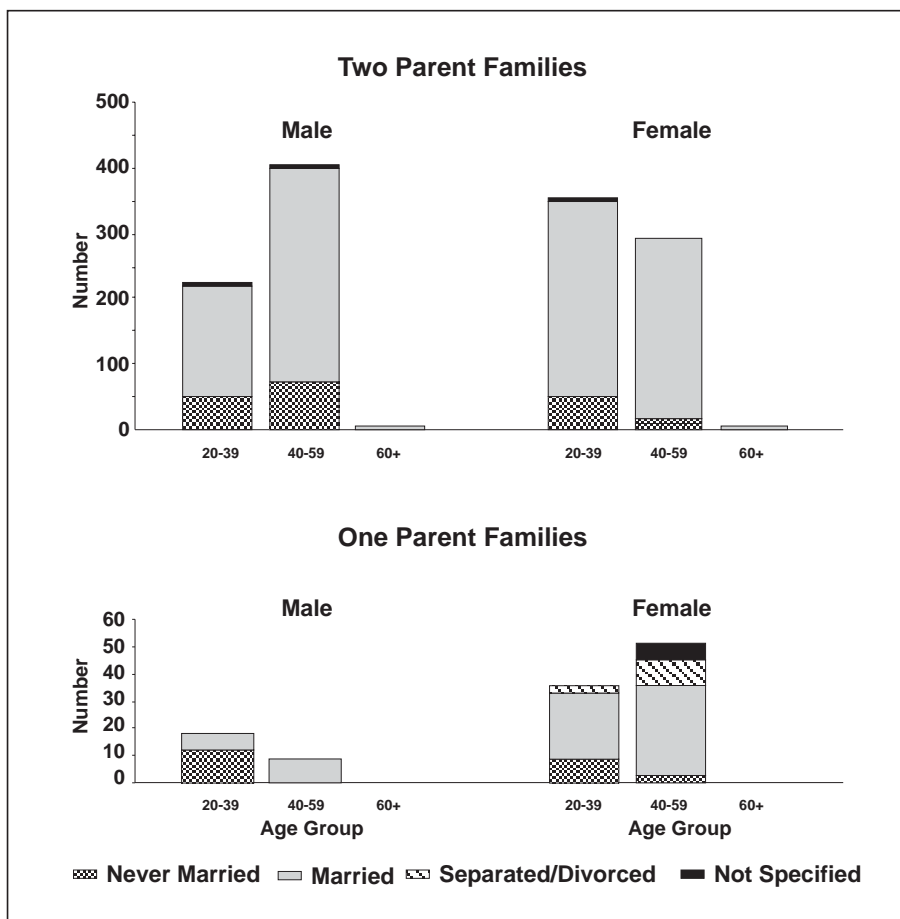


Figure 17a Marital status of persons aged 20 years and over in Hong Kong families, 1991 census

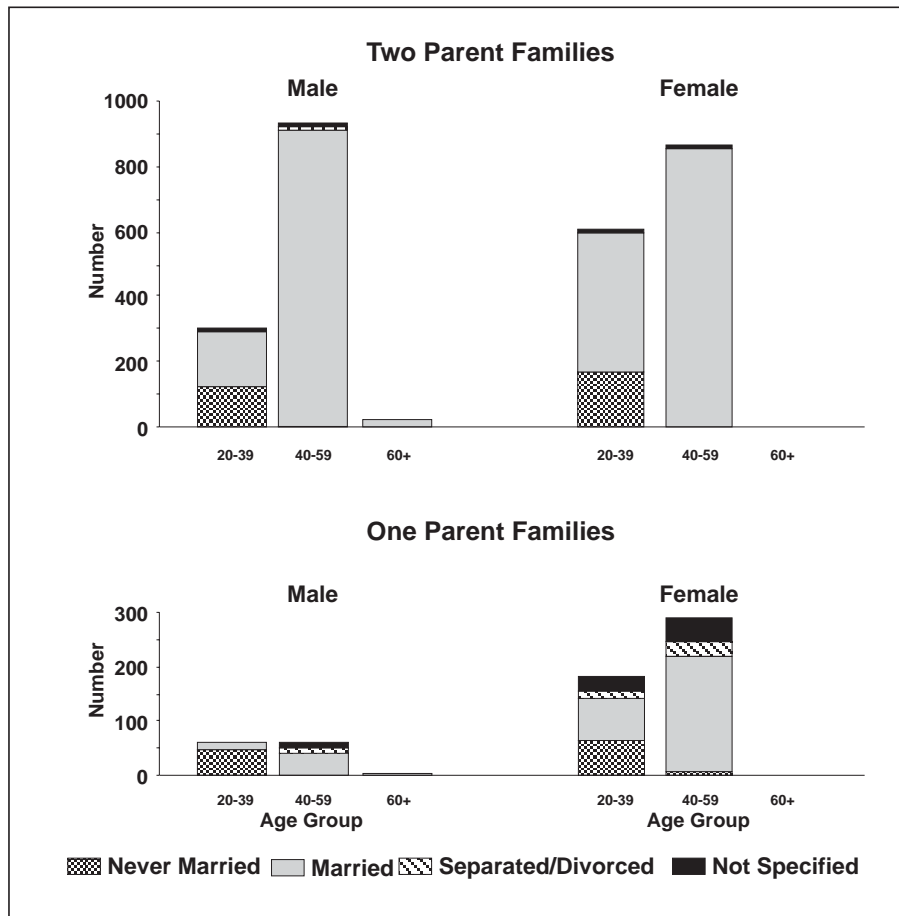


Figure 17b Marital status of persons aged 20 years and over in Hong Kong families, 1996 census

The Taiwanese and Korean one-parent families showed similar characteristics, with very small proportions (3 to 10 percent) of its adult members reported as separated, divorced or widowed (Figure 18). In the case of the Chinese one-parent families, the percentages in the separated, divorced or widowed category were much higher (23 to 31 percent). The large proportions of married persons living in one-parent families gave indirect evidence for the presence of ‘astronaut’ households.

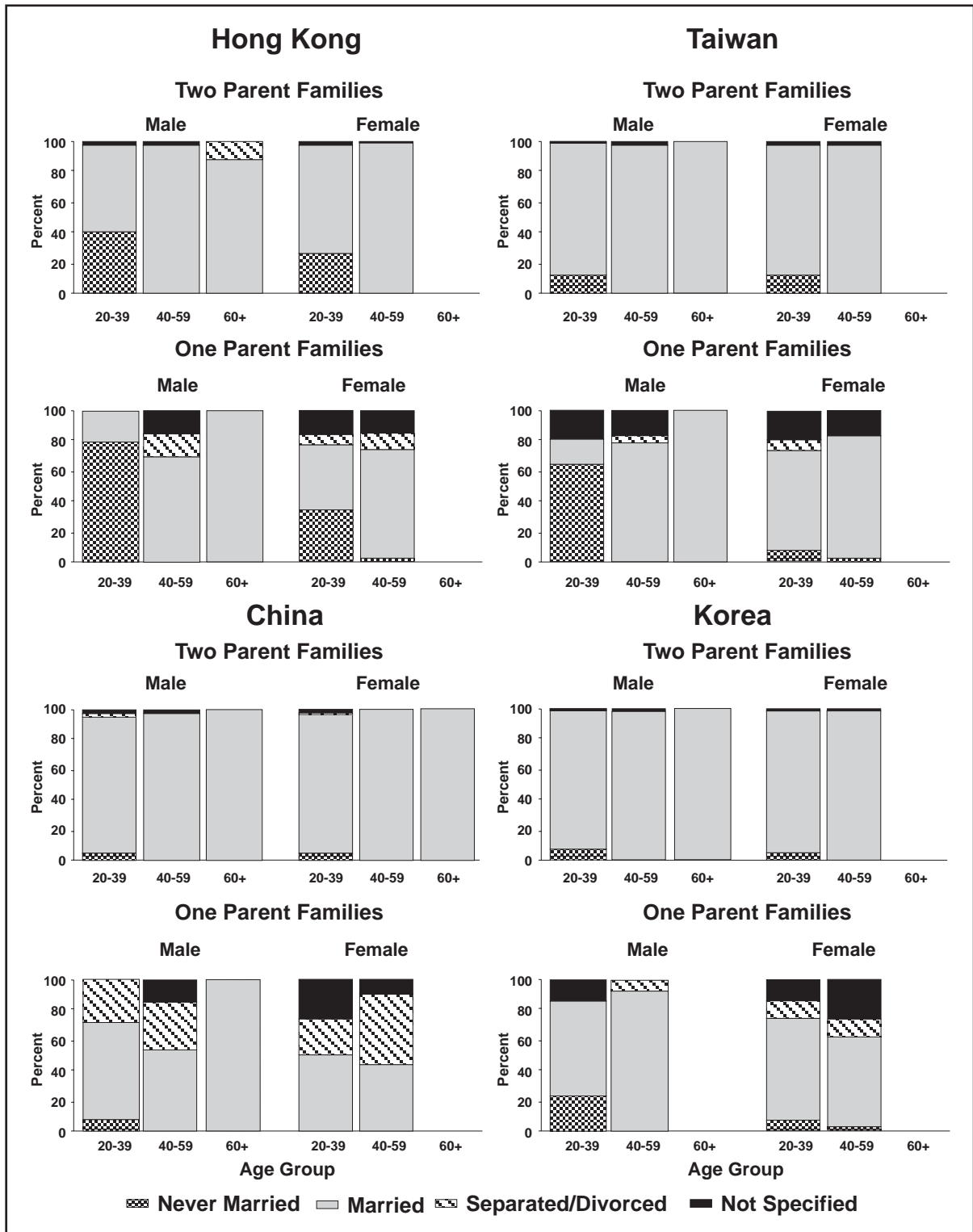


Figure 18 Marital status of persons aged 20 years and over in northeast Asian families, 1996 census

Labour force characteristics

In both one-parent and two-parent families which contained Hong Kong children, the proportions of people not in the labour force and those who were unemployed and seeking employment increased substantially between 1991 (Figure 19a) and 1996 (Figure 19b). These findings were consistent with the findings of research reported elsewhere – that is, the problems for new immigrants finding appropriate employment in New Zealand had gone from bad to worse between 1991 and 1996 (see, for example, Ho, Bedford and Goodwin, 1999; Ho et al., 1998). When the labour force characteristics of people in one-parent and two-parent families were compared, smaller proportions of the males and females in one-parent families were in full time employment and larger proportions were not in the labour force.

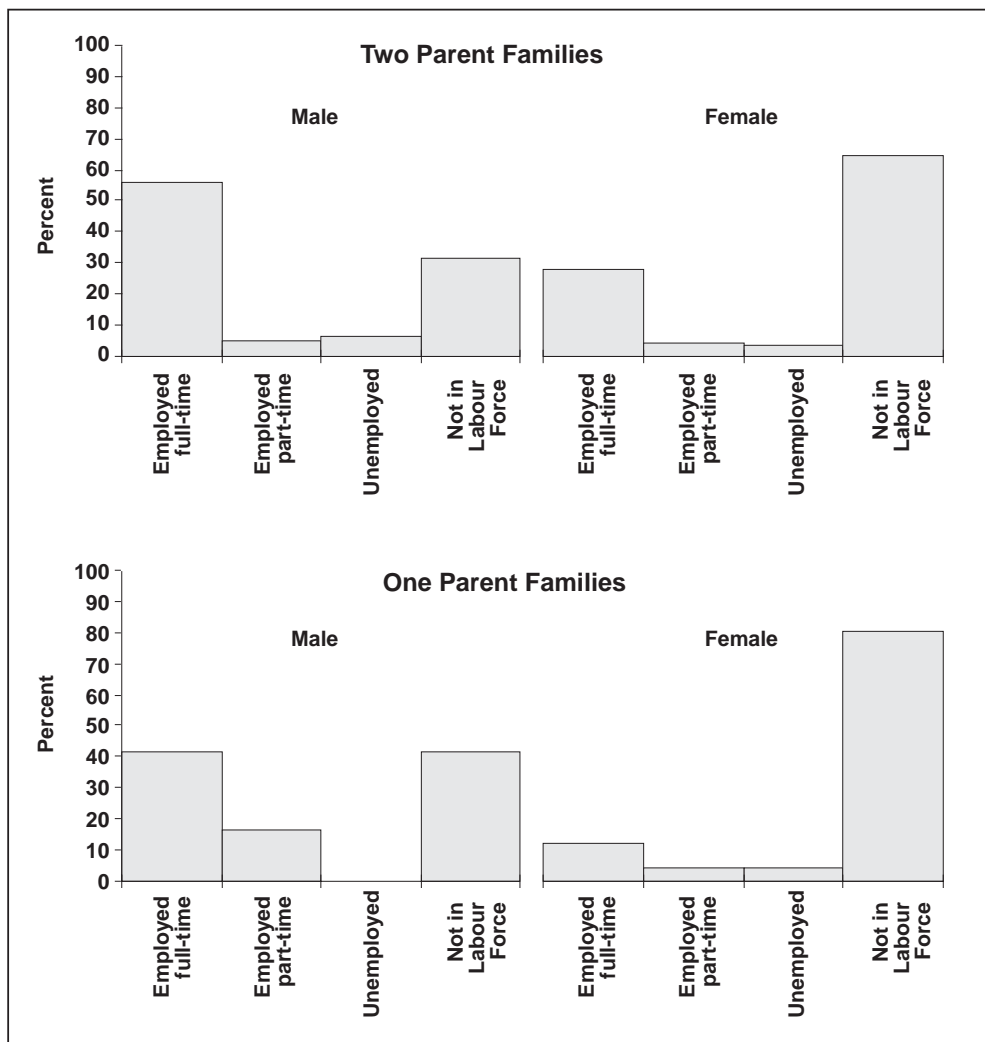


Figure 19a Labour force status of persons aged 20 years and over in Hong Kong families, 1991 census

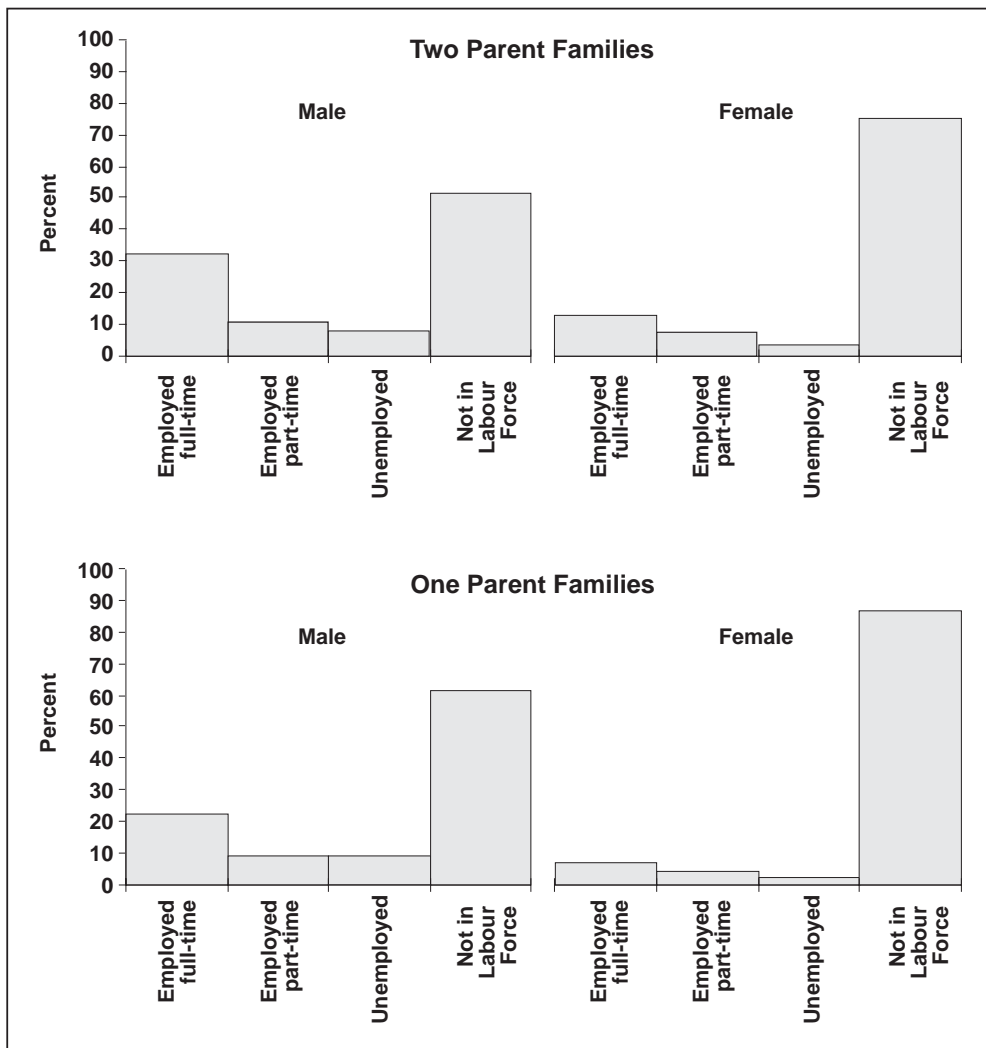


Figure 19b Labour force status of persons aged 20 years and over in Hong Kong families, 1996 census

The labour force status of the other northeast Asian migrant groups is presented in Figure 20. Even higher unemployment rates were found in these families. For example, the highest unemployment rates were found in two-parent families from China - one in five people in this group were unemployed and seeking employment. These percentages were much higher than the national average for these age groups.

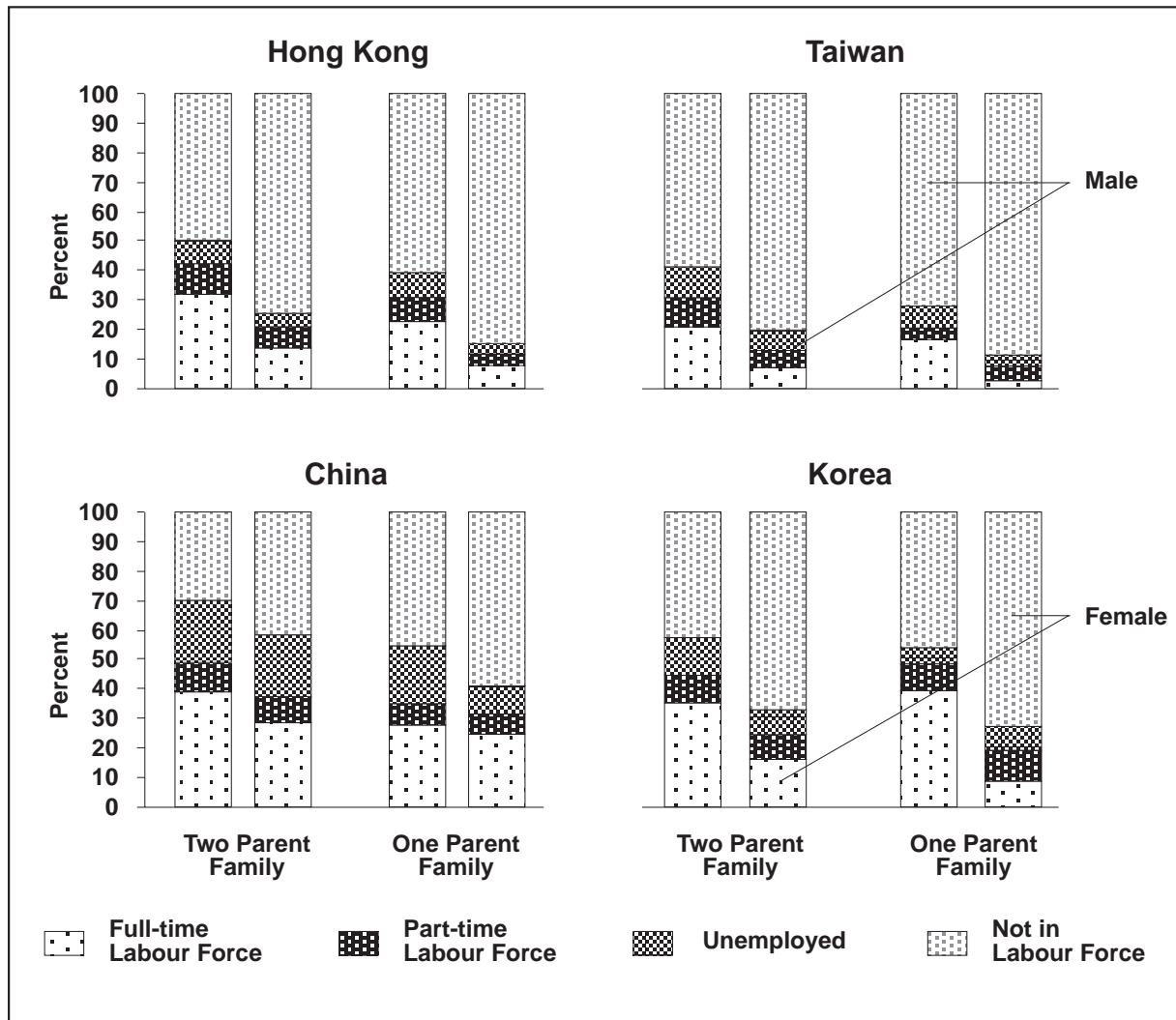


Figure 20 Labour force status of persons aged 20 years and over in northeast Asian families, 1996 census

Close to 90 percent of the women in Taiwanese and Hong Kong one-parent families were not in the labour force; much higher percentages than their counterparts in the Chinese and Korean families (Figure 20). The low labour force participation amongst the women in one-parent families is perhaps another indicator of the existence of 'astronaut' households: female-headed households being established in New Zealand that live on the remittances from their 'astronaut' husbands/fathers who continues to work or run a business in the country of origin.

THE 'ASTRONAUT' PHENOMENON: A DISCUSSION

In New Zealand, as well as in Canada and Australia, previous surveys of 'astronaut' families were mainly conducted among Chinese immigrants from Taiwan and Hong Kong (Boyer, 1996; Lam, 1994; Pe-Pua et al, 1996). While these surveys provide invaluable information on the profile of this type of family and the experiences of the members in it, it is not possible to estimate the number of 'astronauts' and 'astronaut' households using the survey method. A novel approach to analysing migrants in their family contexts, presented in this report, has allowed researchers to access the New Zealand census data to explore the magnitude of the 'astronaut' phenomenon among four northeast Asian migrant groups arriving in New Zealand between 1991 and 1996.

The study found that the incidence of 'astronaut' families is high among recent Chinese immigrants from Taiwan and Hong Kong, but low among those immigrants from China and Korea. There are two types of 'astronaut' family arrangements. The first involves those families where children and one parent reside in New Zealand, while the other parent is persistently absent overseas. The second type contains only children living in New Zealand while both of their parents are absent. These children are popularly referred to as the 'parachute' children.

Not surprisingly, our findings show that within the one-parent 'astronaut' family households, there is a dominance of women in the adult age groups, suggesting that the 'astronaut' spouse who is living in New Zealand is usually a female. Other main findings of this research demystify popular beliefs about the 'astronaut' phenomenon. For example, it was found that only an extremely small number of 'parachute' children live totally on their own. A majority of 'parachute' children either live with their relatives, or live with other people (as boarders or in a hostel). Besides, it is also uncommon for children under ten years of age to be found living in 'astronaut' families.

Under the immigration policies in the 1990s, the majority of the primary migrants who migrated to New Zealand from the four countries of origin have been highly skilled and well educated, and some also have considerable capital resources. However, finding appropriate employment in New Zealand has not been easy for any of these groups (Ho and Bliss, 1999; Migration Research Group, 1999). The structural barriers to employment, such as non-recognition of overseas qualifications and experiences, have forced the newcomers to use a variety of methods to cope with their unemployment problems in the new country (Friesen and Ip, 1997; Ho, Bedford and Goodwin, 1999; Lidgard and Yoon, 1999).

Some migrants return to school for English language training or skill upgrading; some enter into self-employment and establish their own business; some opt for early retirement; and some are prepared to take up just any job to establish themselves in the new society. In addition to these, some migrants choose to settle their families in New Zealand while they themselves return to their country of origin to work or to continue with their business. This 'astronaut' strategy differs from the other options in that members of one family are "split" in two or more locations. Many migrants who adopt the 'astronaut' strategy do not regard the "split" family arrangement as a preferred option, but consider this as a better alternative than not working and being forced to live in welfare benefits (Lidgard, 1996).

Clearly, there are individual differences influencing which option a particular newcomer may take up to deal with the problem of finding employment in New Zealand. At the group level, our study found that the 'astronaut' strategy is a more popular option among contemporary immigrant families from Taiwan and Hong Kong than amongst those families from China and Korea. Some possible reasons for these differences are discussed below.

Firstly, eighty percent of the children in families from Taiwan and Hong Kong in the 1996 census were in the older age groups (10-19 years), whereas large proportions of the children from China and Korea were younger (Table 1, p.23). When considering whether or not to adopt an 'astronaut' strategy, the age of children is a crucial concern. When the children are still young, many parents are reluctant to separate because it is very hard for one parent to shoulder the entire responsibilities in child care in a new society and culture, while the other parent continues to earn a living overseas. The option seems more viable if the children are older and can take care of themselves. Often, teenage children living in one-parent 'astronaut' families might also be expected to assist their parents in doing household chores, looking after young siblings, managing family finance and contributing to family decision making (Ho, Bedford and Goodwin, 1997b).

Secondly, about half of the adult migrants from Hong Kong and Taiwan in the 1996 census were over 40 years of age, whereas on average, the migrants from China and Korea were younger (Ho et al, 1998b; Lidgard et al, 1998). Older migrants are more likely than those who are younger in age to choose the 'astronaut' strategy, or opt for early retirement upon immigration to New Zealand, because they might consider that their chances of finding a job in New Zealand are slim. However, even among younger migrants in the 20 to 39 age groups, unemployment rates are high (Ho et al, 1998b). For the younger migrants, returning to school for further training is a popular option, because a local qualification is considered to have the advantages in facilitating job hunting and

career change (Friesen and Ip, 1997; Lidgard and Yoon, 1999).

Thirdly, there is the issue of employment expectations. Migrants from China are likely to be looking for paid employment in New Zealand, because most have gained entry under the points system on the basis of their qualifications and skills. However, if they are unable to find comparable employment, many are prepared to take up any jobs to establish themselves in the new country (Ho et al, 1998).

By comparison, the employment expectations of the migrants from Hong Kong and Taiwan are much higher. Most migrants from Taiwan and Hong Kong are highly-qualified professionals or successful business people in their country of origin. It is not surprising that they are unwilling to take just any job. However, in a survey of new Chinese immigrants in Auckland conducted in 1997, Friesen and Ip (1997) found that the migrants from Taiwan and Hong Kong suffered a significant drop in income and in status after migrating to New Zealand, whereas their counterparts from China had an average rise in income levels.

In the early 1990s, emigration from Hong Kong and Taiwan was stimulated by anxieties about the uncertain political situation in the region after the resumption of Chinese sovereignty over Hong Kong in 1997. For the future security of the family and its assets, the desire for many emigrants was a move to a politically stable country, despite uncertain employment prospects in the destination. However, not all emigrants were willing to give up their well-paid jobs or business ventures in their home country. An alternative was to establish the family members in a country of perceived stability, while they themselves continued to work or to do business in the country of origin. In New Zealand, the Taiwanese and Hong Kong Chinese migrants who adopt this strategy include many entrepreneurs who are doing business both in New Zealand and in their country of origin, thereby reducing the political and economic risks associated with being based in only one location (Beal and Sos, 1999; Ho and Bedford, 1998a; Skeldon, 1994).

Political factors were not a main reason for Koreans moving to New Zealand in the 1990s. Their migration is explained more by a desire for a change to a more relaxed and less stressful lifestyle, and better education opportunities for their children (Lidgard, 1996). It is therefore not surprising that the 'astronaut' family arrangement is rare amongst Korean immigrants.

In common with the migrants from Hong Kong and Taiwan, the Korean immigrants are from middle-class backgrounds with considerable education, skills and capital resources. However they too have difficulties finding employment that can fully utilise their skills and abilities in the new country (Lidgard and Yoon, 1998). Lack of competence in English is a significant employment barrier

confronting many Korean migrants. In an effort to stay together as a family unit in New Zealand, many Koreans have become self-employed; operating small ethnic businesses which require long hours of work but little knowledge of English (Ho et al, 1998b; Lidgard and Yoon, 1999).

Although most Koreans do not emigrate with the intention of returning to their home country immediately after leaving their family members overseas, some families have adopted an 'astronaut' structure after living in New Zealand for a few years. Disappointment at failing to find appropriate employment, or an inability to set up a profitable business in the new country, has driven these Koreans to return to their country of origin to earn a living, while their families remain in New Zealand (Lidgard et al, 1998).

The movements of the Chinese people from Taiwan and Hong Kong are even more volatile. In the case of Taiwan, 'astronaut' households continue to be an integral part of the Taiwanese migration flows to New Zealand in the late 1990s (Beal and Sos, 1999; Lidgard et al, 1998). For many years, Taiwan people have felt threatened by China, but more recently, many also see a threat to the country's stability from inside. This has come from political uncertainty created through growing tensions between Taiwan's main political parties over the question of reunification or independence (Perrin, 2000; Weng, 1997). This political uncertainty is a partial reason for the adoption of an 'astronaut' family arrangement among many Taiwanese migrants.

The situation in Hong Kong is somewhat different. By the mid-1990s, the political uncertainty associated with Hong Kong's 1997 transition has lessened. Emigration from Hong Kong is slowing down, and many migrants who left Hong Kong in the late 1980s and early 1990s are returning (Skeldon, 1995; *Mingpao*, February 26, 1999). Among the returnees from New Zealand, there are large numbers of young university graduates returning to work in Hong Kong, while maintaining ties with New Zealand (Lidgard et al, 1998). This new type of 'astronaut' family system presents some interesting analytical challenges to scholars attempting to understand contemporary Chinese migrations in an age of globalisation.

WIDER IMPLICATIONS

The 'astronaut' phenomenon has been the subject of considerable comment both in the public domain as well as in the research literature, especially in Australia, Canada and New Zealand. The public comment has tended to highlight negative aspects of the social and economic tensions and pressures generated by 'split' family structures. A key concern has been the extent to which migrants practicing

the 'astronaut' strategy might be attempting to evade paying taxes in the country where their families are taking advantage of publicly funded facilities and opportunities. This issue featured large, for example, in the debate about immigration before the 1996 elections in New Zealand. It has surfaced in assessments of the volatility in movement behaviour of certain groups of migrants in Canada, and this issue will be a focus of attention at the Fifth International Metropolis Conference in Vancouver in November 2000.

The issue of the economic difficulties faced by immigrants, and their choice of an 'astronaut' strategy as an act of desperation, rather than preference, has received much less attention. Yet it is clear from the micro-level research carried out in New Zealand by Friesen and Ip (1997) and Ho et al (1997b) that this is a much more important rationalisation for the strategy of 'astronauting' than a conscious desire to take advantage of privileges of residence in a country, while avoiding the responsibilities of contributing to the tax base.

In a sense, 'astronaut' families are part of a much larger long-established phenomenon of transnationalism in the economic and social behaviour of many migrant groups. There is nothing particularly novel about the 'astronaut' phenomenon, especially when it is put into the wider context of the extensive population circulation between countries that was fostered by the expansion of capitalism from the seventeenth century. The specific conditions under which population circulation in the early twenty-first century is occurring in the Asia Pacific region are very different from those of seventeenth and eighteenth century exchanges between Europe and North America, for example, but the underlying processes are similar. It is important to appreciate this continuity in a form of movement as well as the novelty of a particular response to conditions in migrant source and destination countries in the late twentieth century. Continuity through change, rather than the emergence of a new pattern of behaviour, seems to be a more appropriate way of contextualising the 'astronaut' family phenomenon.

The Migration Research Group at the University of Waikato intends developing further the methodology used to identify 'astronaut' families in the 1991 and 1996 census data. The linking of migrants into their family context offers opportunities for enriching the study of migration as this process is defined in census enumerations. This applies as much to the process of internal migration as international migration. Further studies using the methodology outlined in this paper will be produced over the next 18 months.

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