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DOCUMENTS 274 DE TRAVAIL 274

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Complex households, a challenge for the study of families through census data

Principles for the construction of a typology, based on the case of French Polynesia.

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Key words

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Mots clé

Ménages complexes, Recensement, Typologie, Noyau familial, Polynésie française

Summary (en)

The study of household composition through census data relies on the identification of family nuclei: simple households are those containing one family nucleus or a single person, all other with combinations of those are complex households. In contemporary Western societies, where they only represent a minority of households, this category is not detailed. However, where such forms of coresidence are more common, arises the need for a detailed partition of this very heterogeneous category. This article aims at providing a method for the categorization of complex households.

After reviewing criteria from the UN guidelines and the Indian census typology, we decompose the household categories of French Polynesia's most recent census (2017). We then take into account the regional features of family organisation in order to produce homogeneous and robust subcategories. The resulting typology offers a detailed classification of households in French Polynesia and allows immediate comparison with the existing typology.

We here propose a data based procedure for producing a detailed taxonomy of family structures in territories where complex households represent a significant part of the population. We also highlighted the need to combine automatic clustering with local specificities to identify categories that are suitable for use in guiding public action.

Résumé (fr)

L'étude de la composition des ménages à partir des données de recensement repose sur l'identification des noyaux familiaux qui les composent : les ménages simples sont ceux qui contiennent un noyau familial ou une seule personne, tandis que toutes les autres configurations sont regroupées sous l'appellation « ménages complexes ». Dans les sociétés occidentales contemporaines, où ceux-ci ne représentent qu'une minorité des ménages, cette catégorie n'est pas détaillée. Cependant, dans des contextes où ces formes de co-résidence sont plus courantes, le besoin d'une partition détaillée de cette catégorie très hétérogène se fait sentir. Ce document de travail vise à fournir une méthode de catégorisation des ménages complexes.

Après avoir examiné les critères des lignes directrices des Nations Unies et la typologie du recensement indien, nous décomposons les catégories de ménages du dernier recensement de la Polynésie française (2017). Nous prenons ensuite en compte les caractéristiques régionales de l'organisation familiale afin de produire des sous-catégories homogènes et robustes. La typologie résultante offre une classification détaillée des ménages en Polynésie française et permet une comparaison immédiate avec la typologie existante.

Nous proposons ici une procédure basée sur les données, permettant de produire une taxonomie détaillée des structures familiales dans les territoires où les ménages complexes représentent une part significative de la population. Nous avons également mis en évidence la nécessité de combiner les classifications automatiques avec la prise en compte des spécificités locales afin d'identifier les catégories susceptibles d'être utilisées pour guider l'action publique.

Introduction

Family structures are shaped by a multiplicity of phenomena of various kinds. The dynamics involved may be sociocultural (social norms around conjugality, parenthood, or more generally intrafamily relations), demographic (age at marriage, life expectancy, migration), macroeconomic (specificities of the labour market and the household's place within the production system), microeconomic (availability of labour within the household, economic precarity), or care-related (responsibility for dependent older people or young children). Quantitative studies generally attempt to capture these forms of organization via the statistical unit known as the *household*. The household is the reference unit in censuses and statistical surveys throughout the world. Its harmonization is promoted in publications by United Nations bodies, under some version of the following definition:

A household is a small group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food.¹

Households are mainly studied using data from censuses, an exhaustive source that is widely available around the world. This approach involves establishing the distribution of households across *types*, corresponding in principle to the most common family structures. Here, the family is defined as all persons within the household who are related to each other. Demographers thus use the identification and analysis of *families* in the sense of the census to study family configurations in a given geographical area. In practice, this involves identifying and characterizing *family nuclei* within the household, consisting of a couple or a single person and their unmarried child(ren), if any. These data can then be used to establish typologies of families/households, again drawing on work towards harmonization by United Nations bodies.² The typologies used in national censuses are thus mainly based on identifying the types of co-resident families that constitute households.

Simple households are those that contain only one family nucleus or single person. All households that do not satisfy this definition are categorized as *complex households*. In contemporary Western societies, where the proportion of the population that lives in such households is very small, this heterogeneous category is not detailed. Where such forms of co-residence are more common, however, the grouping of all complex households into a single undifferentiated category is questionable. Importantly, the nuclear family,³ the main defining form of the simple household, is not a universal norm; and while today it is largely dominant in Western Europe, it did not become so until after the Industrial Revolution (Ketzer, 1991). In many countries the proportion of complex households is still substantial. Most of the typologies used to study household composition fail to precisely describe these forms of co-residence, and thus do not allow for the detailed study of the corresponding forms of family organization.

In order to characterize and analyse the diversity of family configurations in a given area, categories that capture all of the forms of cohabitation typical of a population must be constructed. In India, for example, according to the 2011 census a little under 40% of households are complex households,⁴ while in South Africa the proportion is a little over 35%.⁵ To study family and household structures in

¹ Source: United Nations, 2017

² In particular, by the United Nations Population Fund and the United Nations Statistics Division (UNFPA and UNSD respectively).

³ Formed by a couple and their children.

⁴ Source: 2011 Census of India – www.censusindia.gov.in

⁵ Source: 2018 General Household Survey, Statistical Release P0318 – www.statssa.gov.za

these countries, meaningful categories are needed, and this analytical category must therefore be deconstructed.

In practice, this means identifying subtypes of complex households. How, then, should we go about bringing out subcategories of complex households in a way that is at once generic and adaptable to local contexts? Rather than defining subcategories a priori, this article proposes a method for constructing a typology of complex households on the basis of census data, using a set of variables concerning household structure. Our objective is to enable a better identification of the forms of family organization that characterize complex households in territories where this is needed because they represent a substantial proportion of the population.

We begin with an overview of the factors used to define types of households. In doing so we examine two existing categorizations of complex households: the proposals of the United Nations and the Indian typology. We then discuss the principles we use to construct a partition of complex households. Next, based on data from the 2017 census of French Polynesia (which show that 42% of the population lives in complex households), we develop a classification of households in this category. We then propose a method for constructing a typology that can be stabilized on the basis of the cultural traits and specificities of a given population. Finally, we discuss both the contributions of the method and its limitations. It has the advantages of being reproducible and yielding categories that are adapted by construction to the structure of the households in a given context.

1. Context and methods

1.1. Households in the census: A harmonized concept, but interpretations influenced by social and institutional contexts

The primary objective of the census is to enumerate the entire population of a country while avoiding double counting. The resulting data are notably used to shape public policies and their implementation, to determine legal populations and the associated endowments, and as a sampling frame for statistical surveys. They are also used in secondary analyses, to study families, because the data they provide are exhaustive and homogenized. Thus, while the initial objective of the census is to count the population, the resulting data are also used to produce descriptions of family structures (Trabut et al., 2015), on which socioeconomic analyses are then based. Such analyses describe the family composition of households, and produce a typology of households that, ideally, should be adapted to the national context.

While United Nations directives provide a frame of reference that ensures a degree of comparability between the censuses of different countries, the instructions to census enumerators that are used to identify households are adapted by national statistical administrations. Households are identified on the basis of two dimensions, both mentioned in the United Nations guidelines: as a consumption unit, most often constituted around eating meals together; and as a group of individuals who live together in the same accommodation. These two dimensions provide a common foundation for different definitions of the household, while ensuring adaptability to national contexts (Randall, Coast, and Dial, 2013). The resulting information is thus dependent on the social and institutional context, as well as the material conditions of data collection.

1.2. Categories of households: Typologies constructed around family nuclei

The proposed methods for the elaboration of household categories are based on the construction of family nuclei, i.e. a married couple with or without children, or one parent and their children in the household. The United Nations recommendations also insist on the fact that mainly conjugal and filial ties are to be considered for the construction of household typologies. Simple households consist of a single person or family nucleus (indeed, another term is *single-family household*). Types of households that fall within this category are based on the type of family nucleus that they describe.

- 4.140. Household and family composition can be examined from different points of view, but for census purposes it is recommended that the primary aspect considered should be that of the family nucleus.
- 4.141. A family nucleus is of one of the following types (each of which must consist of persons living in the same household):
 - (a) A married couple without children;
 - (b) A married couple with one or more unmarried children;
 - (c) A father with one or more unmarried children;
 - (d) A mother with one or more unmarried children.

Couples living in consensual unions may, where appropriate, be regarded as constituting a family nucleus.

Source: United Nations, 2017

These international directives have largely been promoted by Western countries where, at least since the Industrial Revolution (Laslett, 1972), the dominant model has been that of the conjugal family. The publications of the United Nations Statistics Division (UNSD) concerning the 1970 round of censuses, for example, state that in practice most households consist of a nuclear family or a single person (United Nations, 1969). They thus minimize the variety of situations over time and around the world. However, these recommendations have been much more flexible since the late 1970s, affirming the importance of using categories that are adapted to the population where the census is being conducted (United Nations, 1980). They also propose some principles for the categorization of complex households.

According to these principles, the composition of a household should be studied on the basis of the family nuclei that constitute it, and a complex household is defined as one that includes more than one family nucleus. The category of complex households can thus encompass a wide variety of situations: they may be multigenerational or lineage households,⁷ households of age peers (such as groups of adult siblings), grandparents cohabiting with their grandchildren in the absence of the intermediate generation⁸ (known as *skip-generation households*), etc. To study family configurations in the many countries and regions where a substantial proportion of all households are complex, the diversity of these forms of cohabitation must be characterized, bringing out their typical structures.

1.3. Typologies of complex households: International recommendations and the example of the Indian typology

The subcategories of complex households proposed by the United Nations beginning in the 1980s provide some suggestions on how to better capture these forms of cohabitation (Table 1). In addition to single persons and nuclear families, they set out the categories of *extended households* and *composite households*. Extended households are complex households that include only related persons and family nuclei (regardless of generation). Composite households, on the other hand, contain persons and/or family nuclei who are not related to each other. The proposals also include subcategories based on whether the household includes either only single people, or one or more family nuclei. Finally, a residual category is also proposed: "Other" and "Unknown or not stated".

These distinctions thus focus on the number of nuclei, the question of whether or not they are related, and the presence of other (single) persons, and again whether or not they are related to one of the nuclei. No distinction is drawn depending on whether these relations are multigenerational or collateral (fraternal). These adjustments mentioned in the recommendations illustrate the possibility of adapting household typologies to national contexts and to the information collected by the census. While these generic categories cannot simply be directly transposed, depending on the context, some of the nuances they introduce can be used in typologies of households (United Nations, 1980).

Some countries have constructed their own detailed typologies of complex households. This is notably the case of India, which regularly publishes the results of its decennial censuses. A considerable proportion of Indian households are complex households. According to the 2011 census, approximately 17% of Indian households are "supplemented nuclear households", and 20% are "joint families" (see Table 2 below for the definitions of these categories). The latter even constitute the

6

⁶ That is, a couple with or without children.

⁷ Which include multiple generations from the same lineage.

⁸ Also called the pivotal generation.

modal category in certain states. The Indian statistical administration has thus developed a typology of households that is adapted to the national context. We will now examine its underlying principles.

Table 1: Categories of households in the recommendations of the United Nations 1

Household type	Subtype/definition	Type of household
One-person household	A single person	
Nuclear household	A household consisting entirely of a single family nucleus, i.e. 1. A couple without children 2. A couple with child(ren) 3. A lone parent with child(ren)	Simple households
Extended	A single family nucleus and other persons related to the nucleus Two or more family nuclei related to each other, without any other persons	
household	Two or more family nuclei related to each other plus other persons related to at least one of the nuclei Two or more persons related to each other, none of whom constitutes a family nucleus	
	A single family nucleus plus other persons, some of whom are related to the nucleus and some of whom are not	
	A single family nucleus plus other persons, none of whom is related to the nucleus	Complex households
Composite	Two or more family nuclei related to each other plus other persons, some of whom are related to at least one of the nuclei and some of whom are not related to any of the nuclei	
household	Two or more family nuclei related to each other plus other persons, none of whom is related to any of the nuclei	
	Two or more family nuclei not related to each other, with or without any other persons	
	Two or more persons related to each other but none of whom constitutes a family nucleus, plus other unrelated persons	
	Non-related persons only	

Source: United Nations, 1980

The Indian classification is based primarily on a distinction wherein the marital status of the "head" of the household – whether or not they are married – determines the nature of the family nucleus ("nuclear"/"broken nuclear"). Next, "supplemented nuclear households" include households whose characteristic trait is the cohabitation of a simple household ("nuclear"/"broken nuclear"/"single member") with single related persons.

In households of the "supplemented nuclear" subtype, a married couple with or without children (themselves not members of a married couple within the household) cohabit with single related persons. In "supplemented broken nuclear" households, a head of household without a cohabiting spouse lives with child(ren) (themselves not in a married couple within the household) or without

children,⁹ and with single related persons. In "broken extended nuclear households", a head of household without a cohabiting spouse cohabits with relatives (other than their children), of whom only one has a spouse who is also part of the household.

Table 2: Categories of households in the Indian census

Туре	Subtype	Definition	Type of household
Single Member		Single person	
Nuclear	Nuclear Pair	Head and spouse	Simple
IVaciear	Nuclear	Head and spouse with unmarried children	households
Broken	Nuclear	Head without spouse with unmarried children	
	Supplemented Nuclear	Head and spouse with or without unmarried children but with other relations who do not currently have spouses	
Supplemented	Supplemented Broken Nuclear	Head without spouse with unmarried children but with other unmarried/separated/divorced /widowed relations	
Nuclear		Head without spouse without unmarried children but with other unmarried/separated/divorced /widowed relations	
	Broken Extended Nuclear	Head without spouse but with other relations of whom only one has a spouse	
Joint Family	Lineally extended family	Head and spouse with married son(s)/daughter(s) and their spouses and parents with or without other not currently married relation(s) Head without spouse but with at least two married son(s)/daughter(s) and their spouses and/or parents with or without other not currently married relation(s)	Complex households
	Collaterally extended family	Head and spouse with married brother(s)/sister(s) and their spouses with or without other relation(s) [including married relation(s)] Head without spouse but with at least two married brother(s)/sister(s) and their spouses with or without other relation(s)	
Others		Other households not covered elsewhere	

Source: Chakravorty, Singh and Phil 1991; Niranjan, Nair and Roy 2005.

Finally, "joint families" consist of at least two family nuclei that extend either across multiple generations or collaterally (including multiple siblings with their spouses). The data collected on family ties in the Indian census allow a distinction to be drawn between "lineally extended

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⁹ Note that households where the head of household is without a partner (unmarried, according to Indian criteria) or children but co-resides with single relatives are considered households of related single persons.

households" – which are characterized by filial ties – and "collaterally extended households", where members of the cohabiting family nuclei are siblings rather than parents and children.

The difficulty in connecting this classification to the UN recommendations is, first, the fact that Indian census data distinguish collateral and filial relations, and second, the absence of any criteria based on the presence of unrelated persons in the household.

These examples of typologies of family nuclei and of households, and in particular their detailing of types of complex households, provide tools for studying the diversity of forms of cohabitation. We will now seek to draw out from them a set of criteria for classifying complex households, detailing and analysing them before testing them on the example of French Polynesia.

2. Methodology: Principles for the construction of categories of households

By comparing the classification drawn from the United Nations recommendations and the one used to describe Indian complex households, we can assess the adaptation of the structuring criteria to the mode of data collection, carried out via the "head of household", and to the dominant forms of coresidence in India. In summary, the criteria chosen as relevant in this case are the following: the number of conjugal families present in the household, the marital status that defines couples, the nature of the ties between the family nuclei or the number of generations present in the household, and, finally, characteristics of the reference person in the household. These criteria, applied to Indian census data, enable the construction of an adapted typology. However, the presence of non-relatives, which in the United Nations recommendations distinguishes composite households from extended households, is not included in the criteria of the Indian classification.

In this section we begin by reviewing the different ways of collecting data on the nature of the ties between household members. It is this information that allows the typical structures of complex households to be more or less precisely identified. We then briefly survey the associated classification criteria.

2.1. Collection of data on family ties: Direct ties or ties to the reference person

Historically, most censuses have required the identification of a head of household, on the basis of whom the household was described. This person was characterized by their economic power or their authority over the household. While this term is meaningful in ordinary use, it has different definitions, and its identifying criteria vary between national contexts. Generally, it has referred to the husband, and then the male partner, within a heterosexual couple, in conjugal families constituted around such a couple. This relatively conservative approach explains the emergence, beginning in the 1970s, of movements pushing for this notion to be redefined or abandoned, particularly among feminists (see Presser, 1998 for a history of this movement in the United States). However, not all opposition to the use of this notion in censuses was based on a political problem. Without a precise definition of what a "head of household" is for the census, and in a period when the male breadwinner/female homemaker model was under challenge, the vagueness of this notion can indeed lead to confusion.

The definitions and identifying criteria for the head of household have thus changed over time. The head of household is defined as the person who exercises authority over the household. The person can be self-designated, or the member of the household who holds the economic power (whether by earning the highest income, contributing the most to household expenses, or being the official tenant or owner of the dwelling). However, this status has generally been maintained for practical reasons in the form of the *reference person* – notably because it facilitates the declaration of ties within the household. The reference person is often the one who declares and describes the household for the census, but it can also be the oldest, the main economically active person, etc. (Budlender, 2003).

There is thus no unequivocal definition of the head of household or the reference person,¹⁰ and however this person is identified, the declaration of the ties of the members of the household specifically to this person always poses a problem for the description of complex households. For example, when a household extends beyond the nuclear family and includes more than one family nucleus, ties to the reference person alone are not enough to establish the family ties within the household.

In addition to the critiques of the notion of a head of household as archaic in the light of societal changes, then, there is also the issue that it tends to involve a reductive simplification of the full set of relationships within the household (Coast, Fanghanel, Lelièvre and Randall, 2016). Historical studies have shown that complex households are better described using the most immediate tie, rather than each person's tie to a single reference person (Laslett, 1974). The United Nations recommendations also emphasize that the use of the concept of a reference person assumes that a majority of households consist of single conjugal families — or, in other words, that there are few complex households. Furthermore, they highlight the problematic aspect of this notion in countries where women have significant economic independence (United Nations, 1969).

Four census bulletins that illustrate this diversity in data collection are presented in the appendix.

- 1. The oldest is the Housing form of the annual French census survey of 2011, which lists the permanent inhabitants of the dwelling (List A) and collects declared family tie or other relation with the person listed on the first line (without mentioning the reference person). In INSEE's processing of these forms, three quarters of ties are then reconstructed automatically, without reading the reported relationship (Trabut et al., 2015).
- 2. Since 2018,¹¹ the Housing form from the French census, and in particular the description of the ties between household members, has changed: INSEE now details them compulsorily with a focus on conjugal ties (in the broad sense) and the family ties between members of the household (see appendix).
- 3. In 2017, List A of permanent inhabitants of the household of the census of French Polynesia collected information on the most direct family tie, or other relation, with another member of the household.

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¹⁰ Indeed, Budlender (2003) concludes with the idea that it would be preferable to use multiple questions in order to be able to appropriately identify a reference person depending on the desired use of the census data in a given case.

¹¹ Source: Rénovation du questionnaire du recensement de la population sur les liens familiaux et les situations de multi-résidence: Impact sur les évolutions annuelles de population [Update of the population census questionnaire on family ties and situations of multiple residences: Impact on annual population change], 2019, INSEE, https://www.insee.fr/fr/statistiques/fichier/3692693/Recensement-changement-questionnaire_2018.pdf

4. Finally, for more than 10 years, the "Household questions" section of the census of England and Wales (ONS) collects each person's relationship with all the other members of the household at a level of detail that enables the reconstruction of blended families, multigenerational or collateral households, etc.

The use of direct ties, or of all ties present in the household, rather than ties to a reference person, is helpful for the study of complex households. The examples presented nevertheless highlight the importance of the selection of the types of ties that are collected, and the terminologies that are used, since the vocabulary of kinship varies between cultures and the declared relations can sometimes lead to confusion. For example, filial ties can be defined differently due to intra-family adoption: a boy entrusted to his aunt's care through the Polynesian social practice of $fa'a'amura'a^{12}$ (Sierra-Paycha et al., 2018) might be declared as his aunt's "child/son", "fa'a'amu child", or "nephew".

On the other hand, the nature of the ties collected between the different nuclei in a complex household can be central to its description, as seen in the distinction between lineally extended households, whose family nuclei are related through parentage, and collaterally extended households, whose nuclei are connected by collateral relations – i.e. sibling relations, in the Indian case. But the choice to consider only sibling relationships itself also depends on the context: in cases where co-residence with the wider family is commonplace, cousins can also be included in groups of co-resident collaterals.

2.2. Review of the most commonly used criteria

2.2.1. Type and number of family nuclei

The central criteria in typologies of households are the type and number of nuclei that households contain. The most commonly used types of nuclei are couples with children, couples without children, and lone-parent families. These types of family nuclei also constitute the types of simple households along with people living alone. Since complex households are combinations of family nuclei and single persons, typical forms of complex households can be described as such. Conjugal families within complex households can be distinguished from lone-parent families, as in the Indian typology, but with the increase in blended families, capturing these as well (as the British instrument allows) can also be important.

The determination of children's inclusion in their parent(s)' family nucleus within a household is itself based on a set of rules. For example, children who cohabit with their parents and have neither a cohabiting partner nor children are generally included in the family nucleus of their parent(s); but some countries set an age limit above which co-resident children are considered independent, and no longer included in that nucleus.¹⁴

2.2.2. The characteristics of the reference person

Similarly, when identifying couples, statistical administrations must decide whether or not to take into account their marital status. The Indian typology, for example, only recognizes married couples as

¹² "Fa'a'amura'a" (in Tahitian), the practice of informally entrusting a child to (typically) a relative to be raised, is common in Polynesian society ("fa'a" means "to have/make" and "'amu" means to eat). It is a form of customary adoption: contact must be maintained between fa'a'amu children and their birth parent(s).

¹³ Who form a lineage.

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¹⁴ This was the case of the French census until 1990. The age limit to be considered a child in a family was 25 years.

such. Censuses in Western Europe include all reported unions. Beyond its role in defining family nuclei, the marital status of single persons can also help to refine household typologies. For example, a typology proposed by Hammel and Laslett (1974) differentiates single persons depending on whether they are unmarried or widowed. In their study, lone-parent families are differentiated by the status of widow(er), because it is a work of historical anthropology on societies where this was the main reason for the presence of lone-parent families in Europe.

The sex of individuals can also be used to definite types of nuclei, differentiating between lone-parent families where it is either the father or the mother who is present. More generally, information on the sex of the members of a household can be useful in the constructing typologies of households. In particular, the sex of the head of household or the reference person is often used to identify households that are in a situation of economic vulnerability (Kabeer, 1996).

2.2.3. The accuracy of information on relations

Information on ties between household members is also a central element in typologies of forms of co-residence. The accuracy of this information strongly depends on how it is collected (section 2.1). While the identification of family nuclei depends on the definition and identification of filial and conjugal ties, the ties between the nuclei and single persons who make up complex households are also valuable tools in constructing a typology. In particular, they can be used to distinguish multigenerational, lineally extended households from collaterally extended households, as in the Indian typology. The fact that a household contains more than two generations can in itself constitute a criterion for its classification. Households that span three generations (from grandparents to grandchildren) can take multiple forms, depending on whether or not the middle generation is present. If not, the household is known as a skip-generation household.

In some cases, the distribution of family ties in the population of households in an area can replace a typology of households, as the United Nations recommendations indicate (United Nations, 2017). Some countries that are unable to publish a typology of households replace it with a frequency table for the reported ties (generally, to the reference person¹⁵). Many of the Pacific island states do this. Other information on households is then provided in order to produce a fairly detailed description despite the absence of a typology as such. The information used in this case is most often the size of the household along with sociodemographic variables concerning the head of household or reference person.

3. Complex households in French Polynesia: testing criteria for distinguishing complex households

We will now test the discriminant capacity of the criteria discussed above. To do so, we use data from the latest (2017) census of French Polynesia, a territory where 42% of the population lives in complex households. This census collected information on the most direct ties within the household, which can readily be used to reconstruct family nuclei and the relations between them. We begin by investigating the diversity of family configurations in complex households in French Polynesia using an unsupervised classification.

12

 $^{^{15}}$ For example, the "Republic of Nauru national report on population and housing: census 2011", Table 36, p. 116.

3.1. The Polynesian case: Some context

French Polynesia is an overseas collectivity of the French Republic situated in the Pacific Ocean. It consists of 121 islands, of which 72 are inhabited. The islands are spread out over an area of ocean as large as Europe. Due to its structure as an archipelago, its population and the families that constitute it are highly dispersed (Fardeau et al., 2021). The census of French Polynesia is conducted by the French National Institute of Statistics and Economic Studies (INSEE), in collaboration with the Statistical Institute of French Polynesia (ISPF). It uses the definitions and criteria developed by INSEE for metropolitan France. The online documentation for the Polynesian census thus presents the definition of the household used by the French statistical administration for the corresponding census (with some minor adjustments to facilitate data collection in Polynesia):

A household in the statistical sense of the word means all the occupants of the same dwelling, without these people necessarily being related (e. g. roommates). A household may consist of only one person. Note: Households do not include people living in mobile homes (or people living on boats, or the homeless), nor do they include the population of communal residences (workers' hostels, retirement homes, university residences, detention centres, etc.).¹⁷

This definition of the household has remained substantially the same in France, where it is defined as a residential unit, since the 1950s. Indeed, the equation of a household and a dwelling is reflected by the use of the phrase "ménage-logement" (dwelling-household) (Coast, Fanghanel, Lelièvre and Randall, 2016).

Ethnographic studies carried out in French Polynesia document the historical presence, and diversity, of complex households. Contrary to quantitative research, these studies frame the notion of household from a local perspective, based on detailed descriptions of observed forms of co-residence, rather than a priori categories. Thus, one study carried out in a neighbourhood in Papeete in the early 1960s described the household as a consumption unit, centred on eating meals together.¹⁸ This led to the identification of dwellings containing multiple households ("multi-household dwellings"), as well as complex households comprising more than two generations, and others consisting of a nuclear family residing with others who may or may not be relatives (Kay, 1963). Another study conducted not long afterward in two localities of the Windward Islands analysed the formation of multigenerational households: it found that although the norm of the nuclear family was valued, young couples tended to cohabit with the older generation early in their married life - the phenomenon underlying the majority of the extended families that the author identified (Finney, 1965). Finally, a study conducted a few years later in the Tuamotu-Gambier islands¹⁹ showed that multiple households, often linked by fraternal ties – or at least membership in the same generation (cousins) – would sometimes associate to form an economic unit to farm together on land in undivided co-ownership. The author also noted that almost three quarters of the households in the village she studied were complex households (Hatanaka, 1971).

¹⁶ The terms of the last census to date were set by article 1 of Decree no. 2017-805 of 5 May 2017, which implements articles 156 and 157 of Law no. 2002-276 of 27 February 2002 on local democracy. Article 157 specifies the legal terms for the censuses of New Caledonia, French Polynesia, Wallis and Futuna, and Mayotte, where the censuses are carried out jointly by INSEE "and, where applicable, the competent statistical institute".

¹⁷ Source: https://www.ispf.pf/bases/Recensements/2017/définitions/ménages-familles

¹⁸ Kay also noted that the members of the population themselves used this definition.

¹⁹ French Polynesia is structured into five administrative subdivisions, corresponding to five large and geographically distinct archipelagos.

3.2. The data: The 2017 census of French Polynesia

For our classification, we propose an approach based on data from List A of the Polynesian census (see Appendix A1). This list records all the usual residents of a dwelling. An individual census form is then distributed to each of them. The list records "the most direct family tie or [other] relationship". ²⁰ Data on 546,908 family ties are available for the 271,422 individuals who responded to the census within the 76,445 Polynesian households living in ordinary housing in 2017.

Such data offer many advantages for studying the diversity of forms of co-residence. They allow Polynesian households to be described in detail without reference to a reference person (see Appendix A1). Work on the basis of direct ties is all the more interesting in the Polynesian context, where complex households are very common and women are economically independent (Kay, 1963),²¹ following United Nations recommendations (United Nations, 1970).

3.3. Description of complex households in French Polynesia: filiation, collaterality and single persons

In 2017, 19,999 complex households – 26.6% of all households surveyed – were counted in the Polynesian census. Here we begin by exploring their characteristics in order to better understand this heterogeneous category and to identify determinants for our classification.

3.3.1. Complex households: Configuration and characterization of ties

Figure 1 presents the distribution of the types of family nuclei²² in simple and complex households. As simple households contain only one family nucleus or a single person, the percentages sum to 100. For complex households the proportions are higher, as by definition each contains more than one nucleus or single person. The difference between the proportions of simple and complex households that contain different types of family nuclei varies. Lone-parent families and single persons are relatively more represented in complex households, where they may also live together (by a factor of 2.91 and 2.62 respectively). There are smaller differences between the proportions of simple and complex households that contain couples with (and, to a lesser extent, without) children (by a factor of 1.39 and 1.68 respectively). Couples, whether or not they have children, are more likely live independently, while lone-parent families and single persons more often co-reside with an extended family.

²⁰ <u>Source</u>: Housing form of the 2017 census of French Polynesia, https://www.ispf.pf/docs/default-source/rp2017/specimen_print1-fl-n1-logement-p1355c-661c_22b81648E7C7648.pdf?sfvrsn=2

²¹ In his 1963 monograph on the neighbourhood of Manuhoe in Papeete, Tahiti, Paul Kay observed that in the early 1960s, many Tahitian women were in paid employment. And, he found, when both spouses earn money, they do not pool their wages, but each consider their earnings as their own.

²² This is the French typology of families for the purposes of the census. In this context, the different types of nuclei are defined as follows:

i) Couple with children;

ii) Couple without children;

iii) Lone-parent family

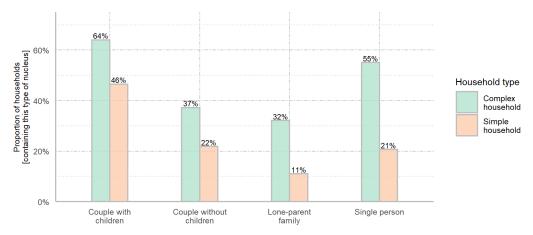


FIGURE 1 – CONFIGURATION OF SIMPLE AND COMPLEX HOUSEHOLDS1 (TYPES OF NUCLEI AND PRESENCE OF SINGLE PERSONS)

Source: 2017 census of French Polynesia

Interpretation: Among simple households (in orange), 46% consist of a couple with children, 22% of a couple without children, 11% of a lone-parent family, and 21% of a single person. Complex households (in green) include multiple nuclei, which is why the proportion of households containing each type of nucleus is systematically higher. Among these households, 64% include at least one couple with children, 22% a couple without children, 32% a lone-parent family and 21% a single person.

The distribution of direct ties in complex households (see Figure 2) shows how widespread the coresidence of collaterals is in French Polynesia: nearly 20% of complex households identified in 2017 included declared fraternal ties (in absence of parents in the household). The co-residence of collaterals or members of the same generation (whose members form a group called "' $\bar{o}p\bar{u}$ $h\bar{o}'\bar{e}''^{23}$ in Tahitian) is historically documented in the territory. It can include not only siblings but also other members of the same generation – cousins – as in 3.1% of the complex households surveyed. This form of co-residence is associated with the undivided co-ownership of land, but also with the sharing of agricultural labour (farming and fishing) in traditional societies (Randall, Coast, 2015). In the first case, the heirs must be present to assert their rights to the undivided land, which partly explains the persistence of these forms of cohabitation. However, siblings or groups of cousins may live together, particularly at the time of transition to adulthood, without occupying a dwelling held in co-ownership (for example, in areas where access to housing is limited). In very dense urban areas, such as the agglomeration of Papeete, this form of cohabitation can also be linked to an insufficient supply of housing, or high housing costs (Ringon, 1972). In this case, it can also be problematic, with overcrowding in urban dwellings whose form is poorly adapted to this family model.

_

 $^{^{23}}$ According to Claude Robineau, "the Polynesians of the Society Islands privilege not filiation, but generation; the descendants of the same ' $\bar{o}p\bar{u}$, womb, constitute the elementary kinship group of brothers and sisters, ' $\bar{o}p\bar{u}$ $h\bar{o}$ ' \bar{e} (one womb), and the relationship of filiation is established less between parents and children than between the ' $\bar{o}p\bar{u}$ $h\bar{o}$ ' \bar{e} of the parents and the ' $\bar{o}p\bar{u}$ $h\bar{o}$ ' \bar{e} of the children – that is between, groups of siblings in relations of filiation" (Robineau, 1989). He describes a dynamic that transforms households (*maisonnées*, or shared houses) of extended families into ' $\bar{o}p\bar{u}$ $h\bar{o}$ ' \bar{e} (a group of collaterals with or without a common ascendant present), divides households of ' $\bar{o}p\bar{u}$ $h\bar{o}$ ' \bar{e} into elementary families, and transforms households of elementary families into households of extended families.

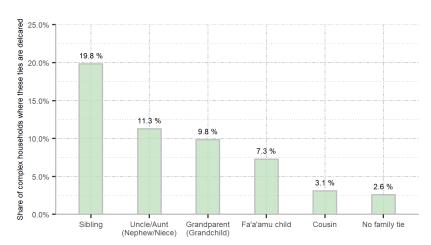


FIGURE 2 - CHARACTERIZATION OF TIES IN COMPLEX HOUSEHOLDS2

Source: 2017 census of French Polynesia

<u>Population</u>: Complex households identified in the 2017 census of French Polynesia Remarks:

- 1) The ties represented in this figure are types of ties outside the family nucleus (i.e. with the exception of marital and filial ties) that were declared in more than 2% of complex households. The categories of "Other family tie", "Undetermined", "Step parent/Parent-in-law" ("Beau parent"), "Child-in-law" ("Bel enfant") and "Stepbrother/Brother-in-law/Stepsister/Sister-in-law" ("Beau-frère/belle-sœur") were declared as the most direct family tie in less than 2% of complex households. Finally, we chose not to show the categories "Nephew/Niece" and "Grandchild", since the information they provide is redundant with that of their reciprocal counterparts, "Uncle/Aunt" and "Grandparent" (along with which they are indicated in parentheses).
- 2) Note that this is not a partition of complex households, but a count of the proportion of complex households where each type of tie was declared.

<u>Interpretation</u>: The relationship "Brother/Sister" was present in 19.8% of complex households (leftmost bar in the graph). The relationship "cousin" was only declared in 3.1% of complex households (rightmost bar in the diagram).

The prevalence of the categories of "grandparent" and "uncle/aunt" (and of their symmetrical counterparts, "grandchild" and "nephew/niece"), like that of the category "fa'a'amu child", is linked to common intra-familial adoption practices in French Polynesia. Parents entrusting their children to other adults, generally relatives, to be raised, an informal "adoption" practice known as "fa'a'amura'a" in Tahitian, is historically widespread in Polynesian society. It has remained remarkably stable despite declining fertility and considerable socioeconomic changes in French Polynesia in recent decades (Sierra-Paycha et al., 2018). In addition to traditional motivations of strengthening ties between family members, these practices may now be linked to more practical motivations (such as children's access to schooling). Most often, a child is "adopted" by uncles and aunts or grandparents. The reported tie on the census form may then be either "grandchild" or "fa'a'amu child" (the counterparts being "grandmother/grandfather" or "fa'a'amu mother"). This reporting of the biological or legal family tie to the adoptive parent, rather than the tie of adoptive fa'a'amu parentage, may be explained by a distance from the traditional norm of fa'a'amura'a, or by the lack of institutional recognition of this practice. Amore prosaically, the same reality may be declared in terms of two different ties (e.g.

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²⁴ Source: La spécificité des structures familiales en Polynésie, le cas des enfants Fa'a'amu, Temanava Bambridge, Conference: La Terre en Polynésie: La propriété foncière à l'épreuve des liens de parenté [Land in Polynesia: Ownership of land and kinship ties], Université de la Polynésie française, https://www.youtube.com/watch?v=OeAQcAn329U&list=PLIkb3z3tR8DTvFWNAieaF9jRfhrAQKfsz&index=8

"grandmother" and "fa'a'amu mother", in the case of a child entrusted via fa'a'amu to their grandmother).

While these practices are common in French Polynesia, they are not the only causes of the prevalence of such ties in complex households. Multiple generations of the same family may live together for other reasons: widow(er)hood, dependence of an elderly parent, descendants' difficulty finding housing, etc.

Note that fa'a'amu children, as well as grandchildren living with their grandparents not declared as such, are, like other children, included in the nucleus of their (foster) parents if they are neither living with a partner nor with their own children. This accords with United Nations directives on the subject.²⁵ These ties are thus observed in simple households as well: fa'a'amu children were declared in 2.8% of simple households, and the relation of "grandparent" (and its symmetrical counterpart "grandchild") in 7.2% of these households (vs. 7.3% and 9.8% of complex households respectively). Thus, while these ties are not constitutive of complex households, they seem at least to be more widely represented in them.

As we will see below, the presence of the "uncle/aunt" relation (and its reciprocal counterpart "nephew/niece") does not necessarily imply intergenerational cohabitation as such. In large sibships, age differences are large as well. In this context, it is common for uncles and aunts to be relatively close in age to their nephews and nieces. Cohabitation between these individuals can thus be likened to cohabitation between cousins.

Finally, nearly half of the complex households identified in 2017 in French Polynesia were multigenerational lineage households – 9,297 households, or 47% of all complex households, include at least three generations. ²⁶ Union formation and the birth of children thus do not necessarily coincide with the end of cohabitation with parents. The co-residence of a young couple with one of their parents can be explained by the need for economic support within an extended household, or the tightness of the housing market in the urbanized areas of French Polynesia. Similarly, an older person needing support may be driven to have their child(ren) live with them, even with a partner. This phenomenon may be accentuated if a parent is widowed. This type of cohabitation also allows for a reallocation of care work within the household, although this work can also be a source of conflict, which explains why couples often tend to move out quickly after becoming parents (Poland et al., 2007).

These initial descriptions based on data from the 2017 census bring out complex household configurations that can be distinguished depending on whether they are structured around ties that are either collateral or parental, a distinction suggested by anthropological research. But it should be kept in mind that as they are presented in the above figures, these ties do not constitute a partition of complex households: it is not uncommon for a household to simultaneously include multiple types of ties. For this reason, and because of the multiplicity of indicators of the structure of complex

are thus not included. These are identified by the declaration of "grandparent" and "grandchild" as direct ties.

²⁵ "4.142. The concept of family nucleus as defined above limits relationships between children and adults to direct (first-degree) relationships, that is to say, between parents and children. In some countries, numbers of skip-generation households, that is to say, households consisting of grandparent(s) and one or more

grandchildren with no parent of those grandchildren present, are considerable. Therefore, countries may include such skip-generation households in their family nucleus definition, and the census report should clearly state whether or not skip-generation households are included in the family nucleus definition" (United Nations, 2017). ²⁶ Here we count only households containing a pivotal generation: at least grandparents, parents and their children. Households where grandparents and grandchildren co-reside in the absence of the central generation

households, a classification must be used to obtain a partition that is suitable to describe the heterogeneity of the category of complex households in French Polynesia.

The idea of complex households is generally associated with the idea of large households. And Figure 3 shows that almost all households of more than seven people are in fact complex households. However, nearly 20% of complex households include four or fewer people, and half include fewer than seven people. Equal proportions of five-person households are simple households (e.g. a couple of parents and their three children) and complex households (e.g. a couple of grandparents, their daughter and her two children). Size thus does not seem to be a discriminant factor with respect to household composition.

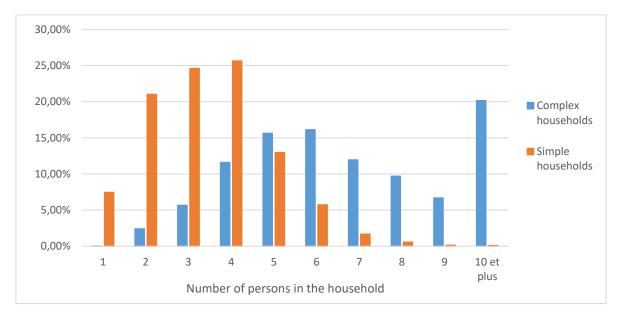


FIGURE 3: DISTRIBUTION OF HOUSEHOLD SIZE BY AGGREGATE TYPE

Source: 2017 census of French Polynesia

4. Ascending hierarchical classification: Examining the heterogeneity of complex households in French Polynesia

Here we investigate the heterogeneity of the category of complex households using an unsupervised classification, and more specifically an ascending hierarchical classification (AHC). Our aim is to build a typology that, using the data from the last census of French Polynesia, provides a detailed classification of the heterogeneous category of complex households.

4.1. Method and criteria used for the partition

An AHC produces clusters that are at once as homogeneous as possible and the most distinct from each other as possible based on a number of relevant criteria. Let us begin by presenting the criteria used for this classification.

In light of the descriptive statistics presented in section 3, we chose:

- The number of nuclei of each type ("couple without children", "couple with children" and "lone-parent family") in the household;
- The number of single persons in the household;
- Indicators of the following particular ties: "grandparent", "fa'a'amu child", "uncle/aunt", "cousin", "no family ties", each of which constitutes more than 2% of all of the declared ties within complex households;
- An indicator of the presence of at least three generations in the household.

We thus propose to partition the category of complex households on the basis of a set of variables, some of which are quantitative (the number of nuclei of each type, the number of single persons) and others categorical (indicators of the declaration of particular types of ties in the household). To do so, we use Ward's method with the matrix of Gower distances between households. In Ward's method, the clusters are grouped in such a way as to maximize the increase in interclass inertia (and thus minimize intraclass inertia) at each iteration (Ward, 1963).

After examining how inertia changed with the number of clusters (cf. Appendix Figure A2), we chose to use a seven-cluster partition, which allows the heterogeneity of Polynesian complex households to be analysed at a satisfactory level of detail.

4.2. Results of the AHC: Highly heterogeneous complex households

The categories that emerge from this classification allow us to understand the composition of complex households in their diversity, and thus to better understand the forms of cohabitation seen in French Polynesia. The statistics allowing the description of these clusters are presented in Appendix A3. Here we describe their salient features, along with graphical representations of examples of household composition for each cluster. It is important to note that all complex households consist of a combination of one or more family nuclei and/or single persons.

4.2.1. Multigenerational lineage households (Cluster 1 in Appendix A3)

7,008 households, i.e. 35.6% of complex households

All the households in this cluster are lineally extended households and include three generations (grandparents, parents, children) (Fig. 4, 6, 7) or more (with grandchildren) (Fig. 5). Moreover, none features the declaration of a non-standard tie²⁷ as the most direct tie ("grandparent", "fa'a'amu child", "uncle/aunt", "cousin", "no family tie"). More than three quarters of these households contain multiple families, and a majority (65%) do not include any single persons.

They most often consist of a lone parent (Fig. 7) or a couple of parents (Fig. 4, 5, 6) living with one or more of their children (81%) who are also parents. These children may themselves have a partner; if not, they are included in their parents' nucleus (Fig. 5), or else live without a partner and form a lone-parent family nucleus (Fig. 6).

-

²⁷ Neither parental nor fraternal.

About a third of households in this cluster contain one or more couples without children, and just under half contain lone-parent families. Single persons are present in just over a third of households in the cluster, most often only one (Fig. 7).

Examples of lineally extended households

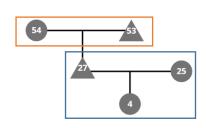


FIGURE 4: COUPLE OF PARENTS AND3
FAMILY NUCLEUS OF ONE CHILD

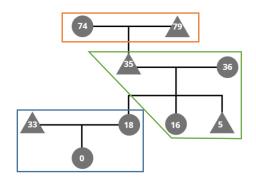


FIGURE 5: THREE NUCLEI AND FOUR-GENERATION HOUSEHOLD4

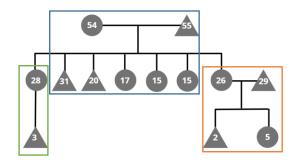


FIGURE 6: PARENTS WITH MULTIPLE CHILDREN, SOME INCLUDED IN THEIR NUCLEUS AND SOME FORMING DISTINCT NUCLEI5

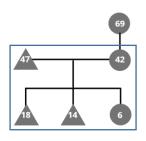


FIGURE 7: PARENT AS A SINGLE PERSON, RESIDING WITH THE FAMILY NUCLEUS6
OF ONE OF HER CHILDREN

4.2.2. "Couples with relations" households (Cluster 2 in Appendix A3)

4,058 households, i.e. 20.6% of complex households

This is a highly heterogeneous cluster of two-generation households (parents with children), which are equally likely to include couples without children (44%) and couples with children (40%), or, more rarely, lone-parent families (15%). This cluster includes very few non-standard ties declared as the most direct tie, apart from the 12.5% including someone "without family ties" (Fig. 12), and contains virtually no households of three or more generations (less than 1%).

Single persons are present in a little over half of these households (33% contain only one, Figs. 9 and 11; 22% more than one, Fig. 12). Most households in this cluster contain multiple nuclei (Fig. 8 and 10)

and no single persons (45%), or else one single person and one nucleus (30%). Just under a fifth are households consisting only of single persons (18%).

These households (Fig. 8 and 10) often consist of a couple with their children, one or more of whom have a partner but no children. They can also consist of a couple with an older parent (Fig. 9), or with a single person with no declared family tie (Fig. 11).

Examples of "couples with relations" households

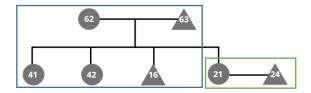




FIGURE 8: COUPLE WITH CHILDREN, ONE CHILD LIVES WITH A PARTNER7

FIGURE 10: COUPLE LIVING WITH A PARENT AS A SINGLE PERSON8

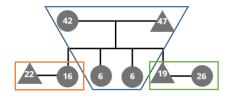


FIGURE 9: COUPLE WITH CHILDREN, TWO LIVING WITH A PARTNER







FIGURE 11: SINGLE PERSON WITH NO DECLARED FAMILY TIE TO THE NUCLEUS9

FIGURE 12: HOUSEHOLD OF SINGLE PERSONS 10 WITH NO FAMILY TIE

These are followed by five clusters (in decreasing order of proportion) identified by the presence of one of the specific types of ties introduced as classification criteria because of their Polynesian specificity:

- siblings living together (18% of complex households),
- uncles/aunts living with their nephews/nieces (8%),
- grandparents living with grandchildren (skip-generation households, 8%),
- households with one or more fa'a'amu child(ren) (7%), and
- households of cohabiting cousins (3%).

Recall that neither the "grandparent" nor "fa'a'amu child" ties constitute a complex household, since grandchildren in the care of their grandparents are part of their family nucleus (like fa'a'amu children). Complex households in these clusters thus include multiple nuclei (are complex) for other reasons.

A quicker examination of these clusters reveals similarities that suggest the possibility of merging some into a single category.

4.2.3. Sibling households (Cluster 3 in Appendix A3)

3,413 households, i.e. 17.3% of complex households

All households in this cluster include siblings declared as the most direct tie, and 10% also include "uncle/aunt" relationships. A large majority (about 85%) of households in this class include single persons; half contain only one, half more than one. A little under 20% consist exclusively of single persons. Note that a little under a third of these households consist of a family nucleus and a single person.

They may consist of a family nucleus along with single collaterals (Fig. 13), multiple nuclei (Fig. 15 and 16), or only single persons (Fig. 14). These are thus households of collaterals, sibships, sometimes living with ascendants or descendants; hence the fact that 15% are multigenerational households and the presence of couples with children and lone-parent families.

Examples of sibling households





FIGURE 13: THREE BROTHERS, A FAMILY NUCLEUS AND SINGLE PERSONS11

FIGURE 14: HOUSEHOLD OF SINGLE SIBLINGS12





FIGURE 15: HOUSEHOLD WITH TWO NUCLEI.
TWO BROTHERS IN A COUPLE LIVING
TOGETHER

FIGURE 16: HOUSEHOLD WITH TWO NUCLEI AND A SINGLE PERSON13

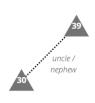
4.2.4. Uncle/aunt households (Cluster 4 in Appendix A3)

1,615 households, or 8.2% of complex households

Households in this cluster all feature the declaration of the "uncle/aunt" tie (and its symmetrical counterpart "nephew/niece"). Ninety percent of households in this cluster contain single persons (Fig. 17, 18 and 19), and a third contain more than one (Fig. 17, 18).

As in sibling households, a majority of these households consist of a nucleus and a single person (Fig. 19). Very few do not include any single persons. When the single person is a minor, it can be assumed that it is a case of fosterage (fa'a'amura'a or not) (Fig. 19).

Examples of uncle/aunt households



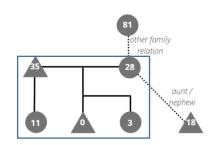


FIGURE 17: HOUSEHOLD OF SINGLE PERSONS.

ONE UNCLE AND HIS NEPHEW14

FIGURE 18: SINGLE PERSONS AND A FAMILY NUCLEUS15

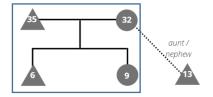


FIGURE 19: FOSTERED YOUNG NEPHEW AS A SINGLE PERSON LIVING WITH A FAMILY NUCLEUS 16

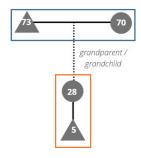
4.2.5. Skip-generation complex households (Cluster 5 in Appendix A3)

1,630 households, or 8% of complex households

Households in this cluster all contain grandparents co-residing with their grandchildren.

These are often (43%) multigenerational households (Fig. 20, 23), or households of parents living with children who themselves have a partner but no children (Fig. 21). These may also be their grandchildren rather than their children. Finally, this cluster also contains more complex households, including collaterals (Fig. 22). Note that the configuration of the households in this cluster is quite similar to the results obtained for Cluster 6, except that the tie declared here is "grandparent" rather than "fa'a'amu parent". Since these two ties are likely to be indicators of the same phenomenon, it is unsurprising to observe similar household structures in the two cases.

Examples of skip-generation complex households



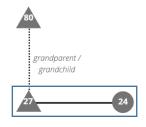
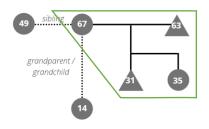


FIGURE 20: COUPLE OF GRANDPARENTS AND A LONE-PARENT FAMILY17

FIGURE 21: GRANDFATHER AS A SINGLE PERSON 18



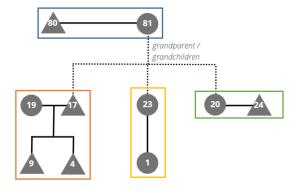


FIGURE 22: YOUNG GRANDDAUGHTER (PRESENCE OF COLLATERALS)

FIGURE 23: MULTIGENERATIONAL SKIP GENERATION HOUSEHOLD WITH MULTIPLE NUCLEI19

4.2.6. Complex households containing children declared as *fa'a'amu* (Cluster 6 in Appendix A3): 1,404 households, or 7% of complex households

This cluster consists of multigenerational households (Fig. 24 and 25) and households of parents residing with children who live with a partner, all of which include fa'a'amu children (declared as such).

Graphical representation of households

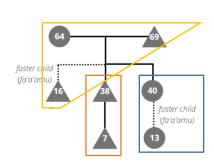


FIGURE 24: MULTIGENERATIONAL HOUSEHOLD20

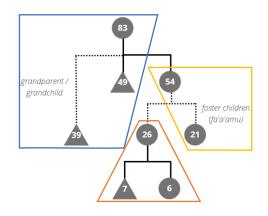


FIGURE 25: MULTIPLE GENERATIONS OF FA'A'AMURA'A21

4.2.7. Groups of cousins (Cluster 7 in Appendix A3)

562 households, or 3% of complex households

The tie "cousin" was declared in all of the households in this final cluster.

Its characteristics are strikingly reminiscent of those of the cluster of sibling households. The distribution of nuclei in the two is fairly similar: the "cousin" relationship thus seems to be associated with households whose configuration is similar to that of sibling households. These are again households of collaterals (Fig. 26, 27), sometimes residing with ascendants or descendants (Fig. 26).

Graphical representation of households (by cluster)

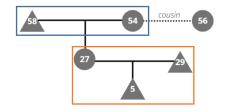




FIGURE 26: MULTIGENERATIONAL HOUSEHOLD INCLUDING A COUSIN AS A SINGLE PERSON22

FIGURE 27: HOUSEHOLD OF SINGLE PERSONS

5. Synthesis: Principles for a typology of households in French Polynesia

Here, based on the description of the different clusters and the examination of the representations of some households within them, we will now seek to establish a suitable taxonomy of households in French Polynesia.

5.1. From AHC to the categorization of complex households

The categorization of complex households in a population where they are common must be based on knowledge of the relevant society (briefly reviewed in Section 3.1 above),²⁸ the results of a classification, and the need to identify types that are relevant for public action.

The largest cluster in the French Polynesian case consists of multigenerational households, which are distinguished first and foremost by the number of generations they contain.

An intermediate cluster (Appendix 3, Cluster 2, along with a minority of the previous cluster) consists of complex two-generation households, most often containing multiple nuclei, or more rarely a nucleus and a single person. There are many households in this group, and a portion of them, two-generation adult lineal households, are likely to form a category in their own right.

The majority of multigenerational households include at least three generations, a form of coresidence wherein members of a family from grandparents to grandchildren live together. They correspond to the extended families (joint family, lineally extended in the Indian typology, table 2). In this context, proximity facilitates intergenerational exchanges: childcare, housing migrants, the division of labour, support for the elderly, etc. However, depending on the housing conditions, crowding may create difficult conditions for cohabitation. It makes sense to divide this large group of households into multiple types based on other characteristics (detailed in Appendix 3, Cluster 1). We can, for example, differentiate them according to the number of family nuclei that they include. We

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²⁸ More in-depth material can be found in Sierra-Paycha et al. (2022).

would thus distinguish households where one or both older parent(s) live(s) with their child(ren), exactly one of whom has formed their own family nucleus (with either a partner, or children, or both – Fig. 4 and 5) from households where one or more older parents live with multiple family nuclei formed by their children (Fig. 6). It seems judicious to further specify the composition of the pivotal generation (parents living both with their children and with their own parents), on which economic activity, care and reproduction depend.

The clusters of collaterals (sibships, groups of cousins) and diagonal kin (uncles/aunts²⁹) – Appendix 3, Clusters 3, 7 and 4) are highly typical, revealing a particular characteristic of co-residence between age peers in French Polynesia. These clusters represent modes of co-residence that are documented in the literature: either the collective cohabitation of an age group during certain periods of life (the end of adolescence), or the co-residence of collaterals resulting from the undivided co-ownership of land, where access depends on continuing presence (Robineau, 1989). More than 80% of households in each of these three clusters contain single persons. It thus seems appropriate to distinguish households of collaterally relatived singles in the proposed categorization.

Two other results emerge from the classification: one is the existence of some households combining grandparents and their grandchild(ren) without the presence of the parents (Appendix 3, Cluster 5). The other is that of households where fa'a'amu children are present (Appendix 3, Cluster 6), along with part of Cluster 4 where nephews/nieces are in the care of an aunt. Each represents situations where a child is being raised by non-parent relatives. According to the United Nations recommendations, such ties should be treated as equivalent to a filial tie, as is already the case (in the census of French Polynesia) for single grandchildren living with a grandparent and fa'a'amu children. This suggests that here we should homogenize the codification, rather than creating a category. This homogenization is detailed in the next section.

5.2. Homogenizing the position of child within a family

The issue of fostering and the variable ways it is reported in the census of French Polynesia is discussed above. Both the descriptive statistics and the results of the classification show that while the practice is often reported as "fa'a'amu child" ("enfant fa'a'amu"), in some cases the original family tie with the foster parent (usually a grandparent, aunt or uncle) is indicated instead. As only persons who usually reside in the housing unit are declared on list A, it can be assumed that minor children without filial ties within the household (and declared as a nephew, cousin, etc.) have been entrusted to the adult to whom their direct tie is declared.

Consequently, following the examples of fa'a'amu children and of grandchildren, who are already automatically classified as having a filial tie with their fa'a'amu parents or their grandparents, we will classify these nephews, young cousins, etc. as part of the family nucleus of the adult to whom their relation was declared. We apply this logic up to the age of 18, at which time the delegation of parental authority no longer applies. Using this age limit, all such situations can be unequivocally classified. Beyond the age of 18, census data do not allow us to determine whether an adult who lives, for example, with an aunt lived there already as a child, or joined the household as an adult.

 $^{^{29}}$ As seen in the presentation of the quantitative results, households where uncles and aunts co-reside with nephews and/or nieces present characteristics of both collateral households and lineage households (because they sometimes involve fa'a'amu adoption). Recall, however, that with large sibships and significant age differences, uncles or aunts can also often be in the same age group as their nephews or nieces.

These changes result in some complex households being reclassified as simple households. A situation where a couple lives with their nephew who is a minor (previously classified as a complex household comprising a family nucleus and a single related person) will now be classified as a simple household (a couple with child[ren] including an adopted child, in the same way as a couple declaring a fa'a'amu child or grandchild).

Conversely, as a result of this principle, children declared as fa'a'amu, those living with their grandparents in a household where there parents are not present, and single biological children are only included in the family nucleus until they are 18 years old. These changes have the effect of creating a category of complex two-generation households consisting of one or two parents living with one (or more) child(ren) over the age of 18 who are unmarried.

Adding the age criterion to the set of criteria that determine whether children are included in their parents' family nucleus reshapes and rebalances the distribution of families with children (Table 3). For example, couples with one or more adult children (who are single and childless) constitute a significant proportion of Polynesian households (16.8%). The large category of nuclear households is now more precisely divided with parent(s) coresiding with or without adult children. This results in a category "couples with underage children" (24%) and "couples with at least an 18 years old" (12%); and throws a new light on the lone parent families: 62% contain a parent with at least an adult child, 46% with a parent and adult child(ren)³⁰.

Table 3: Distribution of nuclear family types once applied the age criterion

Туре		Distribution
Childless couple		15,95%
Couple with one	All underaged	23,68%
or more children	At least one over 18 years old	11,94%
Lone-parent family	All underaged	3,29%
Lone-parent family	At least one over 18 years old	5,37%

5.3. A categorization of complex households

The proposed new typology offers a detailed classification of households in French Polynesia and allows various relevant categories to be distinguished. In the place of a single, hitherto residual category of so-called "complex" households, this new categorization proposes a balanced partition of households, where the residual category now includes less than 4% of households of which less than 1% remain unidentified (Table 4).

We have retained the distinction – observed in both the descriptive statistics and the results of the ascending hierarchical classification – that divides joint families into lineally extended households,

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³⁰ The sum of the distribution proportions equals the initial ISPF percentages with the slight difference due to the foster children homogenization.

which are structured around multigenerational filial ties, and collaterally extended households, found in the Indian classification.

<u>Table 4:</u> Typology of Polynesian households

Household type	Household subtype	Distribution (type)	Distribution (subtype)	
Single person	Single person	15,14%	15,14%	
Childless couple	Childless couple	15,95%	15,95%	
Couple with one or more	Couple with one or more children (all underaged)	35,62%	23,68%	
children	Couple with one or more children (at least one over 18 years old)	33,0270	11,94%	
Long parent family	Lone-parent family with underaged children	9.660/	3,29%	
Lone-parent family	Lone parent family with at least one child over 18 years old	8,66%	5,37%	
	A parent or a couple of parents with one or more children, including at least one living with a partner and without children		3,03%	
Lineage households: households containing at least two generations of adults	Households of three or more generations, with at most one family nucleus in the middle generation	14,94%	9,84%	
	Households of three or more generations, with more than one family nuclei in the middle generation		2,07%	
	Household of collaterally related single persons		1,42%	
Households of collaterals	One family nucleus and collaterals (singlepersons)	5,58%	2,95%	
	Two or more family nuclei, linked by collateral ties, and possibly other collaterals (single persons)		1,21%	
	Unrelated single persons		2,16%	
Other households	Lineage households with presence of collaterals 4,11%		1,35%	
	Unidentified households	0,		
	100,	00%		

Within these types, subtypes provide for further distinctions. Lineage households and collateral households are distinguished from each other depending on their structure. Within lineage households, the distinction is based, first, on the number of generations present in the household, and, among those including three or more generations (from grandparents to grandchildren), on whether the intermediate (parental) generation is represented by a single family nucleus or by more. Among

collateral households, single persons households are distinguished of extended households containing only one family nucleus and of households comprising several families linked by collateral ties, as in the Indian typology. Finally in the residual category, single persons households are distinguished from lineage households (with at least one family nucleus) with presence of collaterals. This leaves only 0,6% of "unidentified households".

Conclusion

In this article, after a detailed examination of United Nations recommendations and existing classifications, we have proposed a procedure for producing a detailed categorization of households in territories where complex households represent a significant part of the population, and applied it to census data from French Polynesia. To produce this taxonomy of complex households, we started with an automatic classification based on criteria chosen with reference to the international recommendations of the United Nations. After establishing this typology, we combined knowledge of the society with the clusters obtained from the typology to identify categories (types and subtypes) that are suitable for use in guiding public action.

Following United Nations recommendations, we broke down the category of complex households into homogeneous subcategories. We thereby obtained a partition of complex households in French Polynesia that, like the Indian categorization, omits the UN distinction between extended and composite households based on the presence of unrelated single persons. In the partition of households based on the census of French Polynesia, this did not seem to be a determinant distinction. The United Nations recommendations, did, on the other hand, motivate our choices in dealing with the widespread informal adoption practice of fa'a'amu and its declaration on the census. Minor children in this situation (whether explicitly identified as "fa'a'amu children" or designated by their relationship to an adult in the household: grandchild, nephew, cousin, etc.) are included in the family nucleus of their adoptive or foster parent(s).

Furthermore, we chose to retain the distinction in the Indian taxonomy between collateral households and lineage households, albeit in an adapted form. Both the descriptive statistics and the classification highlighted the importance of this distinction in characterizing typical forms of cohabitation in French Polynesia. The anthropological literature on the forms of cohabitation historically present in French Polynesia also supports this point. But while the Indian typology exclusively identifies collateral households formed around a group of siblings, this is not the case in French Polynesia, where the $'\bar{o}p\bar{u}h\bar{o}'\bar{e}$ is made up of the more extended family (cousins for example), as the results of the classification also show.

The typology of complex households in French Polynesia is thus similar to the Indian typology, but differs from it in several respects. Apart from the elimination of the notion of the head of household, made possible by the collection of direct ties in the census of French Polynesia, the main difference between the typology proposed here and the Indian typology lies in the definition of nuclei and the ties that constitute the group of collaterals. First, marriage is not a defining criterion for couples. Second, the set of collateral relations includes the wider family. Finally, to take into account Polynesian fosterage practices, the treatment of filial ties and their integration into the typology of households – and, a fortiori, into the definition of family nuclei – had to be homogenized.

The methodology proved effective, and the resulting distribution is a balanced one (Table 4). Our upcoming studies will seek to identify how the emergent categories effectively identify living situations whose functioning is relevant to better understanding modern Polynesian society³¹. We will also seek to use the same methodology in other contexts and assess its reproducibility. This categorization should then allow the determinants of these modes of family organization to be identified, help guide public action, and facilitate the analysis of households' living conditions.

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³¹ This work was presented to ISPF in march 2022 at the eve of the 2022 census collection; an institution with which Ined has formed a partnership collaboration. It addresses their initial demand about a finer identification of the large proportion of complex households. The collaboration and production of statistics along these lines is now planned for their next census data (2022).

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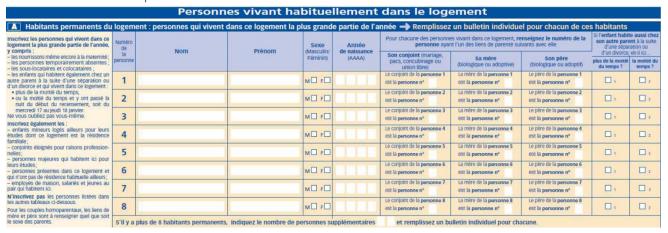
Appendices

A1 – Census forms from metropolitan France (2017 and 2018), French Polynesia, and England and Wales (UK) (2021)

A1.1 – List A in metropolitan France in 2017



A1.2 – List A in metropolitan France in 2018



The instructions for declaring children living in each dwelling can lead to biases, as with the declaration of children in shared custody, a type of situation where inaccuracies in census responses have been observed in metropolitan France (Trabut, Lelièvre, and Bailly, 2015). According to the housing form, persons declared should include "minor children who are housed elsewhere for their studies (in French Polynesia, metropolitan France, the French overseas territories or elsewhere) and for whom this accommodation is the family residence," but responses should exclude "minor children (...) who live in this dwelling for their studies and whose parents live in another municipality of French Polynesia." The latter are described in List C ("Other inhabitants of the dwelling", for whom individual forms are not completed).

A1.3 – List A of the census of French Polynesia

Description

Below are the recommendations that accompanied List A of the 2017 Polynesian census, as well as an excerpt from this list featuring in the census housing form.

You should record in List A:

- persons who live in this dwelling most of the year, including:
 - persons who are temporarily absent (on holidays, a business trip, hospitalization of less than one month, fisher who is at sea, copra farmer, etc.);
 - infants, even if they are still in the maternity clinic;
 - sub-tenants and co-tenants occupying part of the dwelling.

You should also record in List A:

- minor children who are housed elsewhere for their studies (in French Polynesia, metropolitan France, French overseas territories or elsewhere) and for whom this accommodation is the family residence.
- spouses who have another home for work reasons and who return to live in this dwelling on weekends, holidays, etc.
- persons above the age of majority who live in this dwelling for their studies.
- domestic workers, employees and au pairs who live in this dwelling.

		Personnes habitant dans le lo	gement			
Habitants permanents du logement >>> Remplir un bulletin individuel pour chacun						
N° d	e BI	Nom ou nom de jeune fille (pour les femmes mariées)	Prénom, surnom	Lien de parenté le plus direct ou relation	N°	de B
	1					1
	2					2
	3					3
	4					4
	5					5
	6					6
	7					7
	8					8
	9					9
1	0				1	0
1	1				1	1
1	2				1	2
1	3				1	3
1	4				1	4
1	5				1	5
1	6				1	6
1	7				1	7
1	8				1	8
1	9				1	9
2	0				2	0

Ties from List A (after recoding by census interviewers)

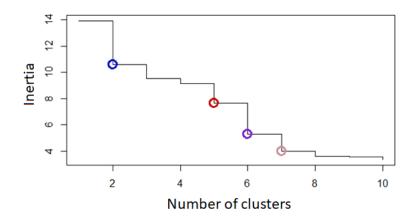
Tie (raw data)	Recoded tie	Type of tie	Family nucleus
Brother	Brother/Sister	Collateral	No
Sister	Brother/Sister	Collateral	No
Grandfather	Grandparent	Lineage	Filiation
Grandmother	Grandparent	Lineage	Filiation
Grandson/Granddaughter	Grandchild	Lineage	No
Son-in-		<u> </u>	
law/Stepson/Daughter-in-	Child-in-law (<i>Bel-enfant</i>)		
law/Stepdaughter		Lineage	No
Father-in-law/Stepfather	Parent-in-law/Stepparent		
(Beau-père)	(Beau-parent)	Lineage	No
Mother-in-	Parent-in-law/Stepparent		
law/Stepmother (<i>Belle-</i>	(Beau-parent)		
mère)		Lineage	No
Brother-in-law/Step-	Brother-in-law/Step- brother/Sister-in-		
brother/Sister-in- law/Step-sister (<i>Beau</i>	law/Step-sister (<i>Beau</i>		
frère/Belle sœur)	frère/Belle sœur)	Collateral	No
Uncle	Uncle/Aunt	Collateral (or Lineage)	Filiation
Aunt	Uncle/Aunt	Collateral (or Lineage)	Filiation
Nephew/Niece	Nephew/Niece	Collateral	No
Cousin	Cousin	Collateral	No
Father	Parent	Lineage	Filiation
Mother	Parent	Lineage	Filiation
Son/Daughter	Child	Lineage	Filiation
Fa'a'amu father	Fa'a'amu parent	Lineage	Filiation
Fa'a'amu mother	Fa'a'amu parent	Lineage	Filiation
Fa'a'amu child	Fa'a'amu child	Lineage	Filiation
Fa'a'amu grandmother	Fa'a'amu parent	Lineage	Filiation
Fa'a'amu grandfather	Fa'a'amu parent	Lineage	Filiation
Fa'a'amu grandchild	Fa'a'amu child	Lineage	Filiation
		_	
Spouse Partner	Spouse	Conjugal	Conjugal
(Compagnon/Compagne)	Spouse	Conjugal	Conjugal
Ascendant	Other family tie	Other	No
Descendant	Other family tie	Other	No
Friend	Unrelated	Other	No
Co-tenant	Unrelated	Other	No
Nanny	Unrelated	Other	No
Boarder/Lodger		Other	110
(Pensionnaire)	Unrelated	Other	No
Undetermined	Undetermined	Other	No
			-

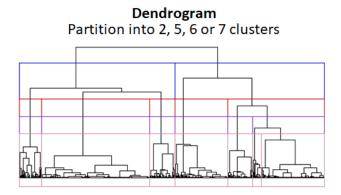
A1.4 – Declaration of ties within the household in the 2021 census of England and Wales

Household questions - continued H6 How are members of this household related to each other? If members are not related, tick the "Unrelated" box. Using the same order you used in question H3 (page 3), write the name of everyone who usually lives here at the top of each column. Remember to include children, babies and people who have requested an Individual Questionnaire Tick a box to show the relationship of each person to each of the other members of this household ⊋ If no one usually lives here and there are no visitors staying overnight here on 21 March 2021 → GO TO H7 Name of Person 1 Name of Person 2 **Example:** First name First name This shows how a MARY ROBERT household with 2 parents Last name Last name and 3 children are SMITH SMITH related to each other How is Person 2 1 related to Person: **DO NOT write** Husband or wife 1 in this section Legally registered civil partner Provide details Partner of members of the Son or daughter household Stepchild in the section Brother or sister (including BELOW **J** half-brother or half-sister)

Name of Person 1	Name of Person 2		Name of Person 3	
First name	First name		First name	
ast name	Last name		Last name	
ENTER MANE OF	How is Person 2 related to Person:	1	How is Person 3 related to Person:	1 2
ENTER NAME OF PERSON 1 HERE AS	Husband or wife		Husband or wife	
IN QUESTION H3	Legally registered civil partner		Legally registered civil partner	
	Partner		Partner	
IF YOU LIVE ALONE	Son or daughter		Son or daughter	
GO TO H7	Stepchild		Stepchild	
	Brother or sister (including half-brother or half-sister)		Brother or sister (including half-brother or half-sister)	
	Stepbrother or stepsister		Stepbrother or stepsister	
	Mother or father		Mother or father	
	Stepmother or stepfather		Stepmother or stepfather	
	Grandchild		Grandchild	
	Grandparent		Grandparent	
	Relation – other		Relation – other	
	Unrelated (including foster child)		Unrelated (including foster child)	

A2 - Choice of the number of clusters: inertia and dendrogram

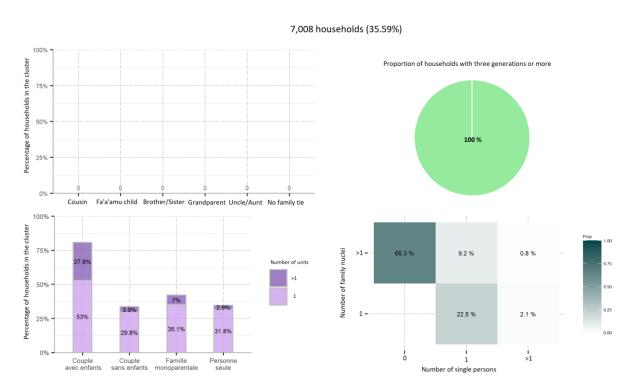




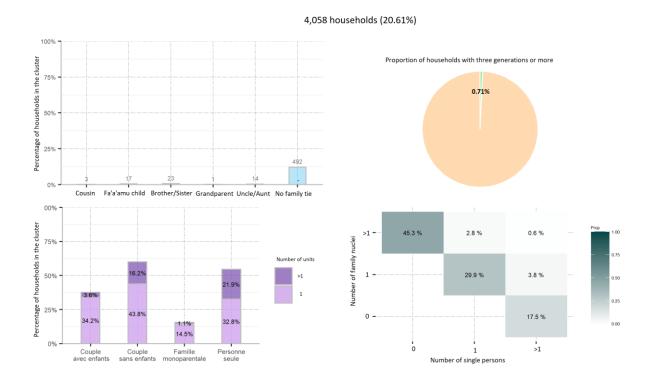
A3 – Description of clusters

Interpretive notes		
Fig. 1. Bar graph representing the percentage of	Fig. 2. Pie chart showing the proportion of	
households in the cluster that contain each type	multigenerational households (spanning 3	
of tie.	generations or more) in the cluster that include	
	the middle generation.	
Fig. 3. Bar graph representing the proportion of	Fig. 4. Households containing no/one/multiple	
households in the cluster that contain each type	family nuclei as a function of the presence of	
of family nucleus and single persons (in the	no/one/multiple single persons (percentage).	
lighter colour, those that contain only one; in		
the darker colour, those that include more than		
one).		

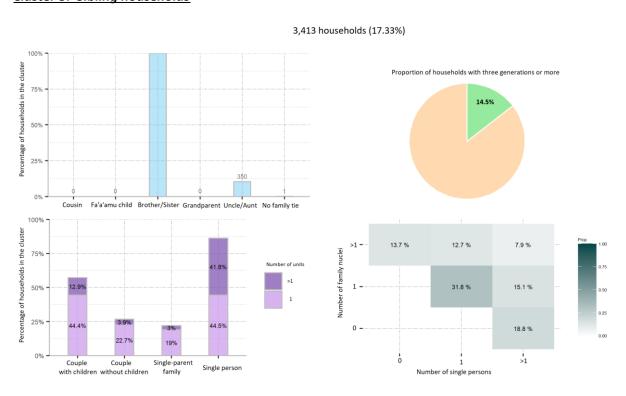
Cluster 1: Multigenerational households



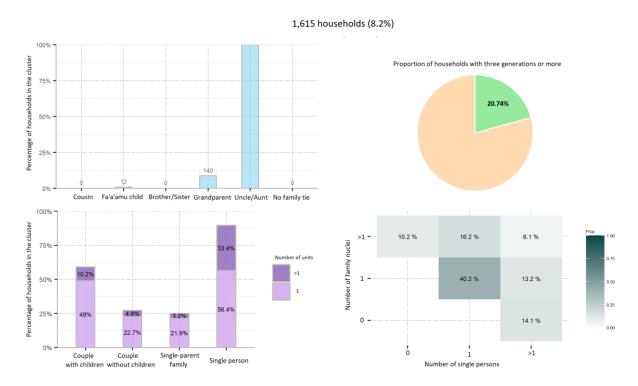
Cluster 2: "Couples with relations" households



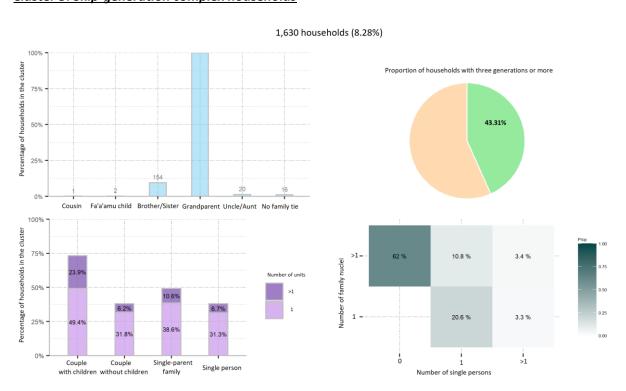
Cluster 3: Sibling households



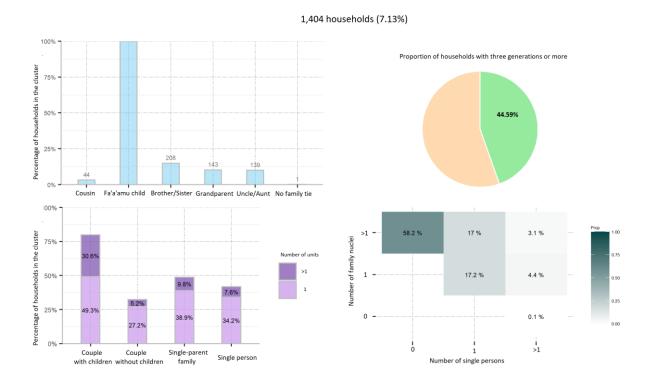
Cluster 4: Uncle/aunt households



Cluster 5: Skip-generation complex households



Cluster 6: Complex households including declared Fa'a'amu children



Cluster 7: Cousin households

