Complex Households: A Typology of Census Data Based on the Case of French Polynesia

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Abstract

The study of household composition through census data relies on the identification of family nuclei. Simple households are defined as those containing one family nucleus or a single person; all others with combinations are defined as complex households. In contemporary Western societies, where complex households only represent a minority of households, this category is not detailed. However, where such forms of coresidence are more common, the need arises for a detailed partition of this very heterogeneous category. This paper aims to provide a method for the categorisation of complex households.

After reviewing criteria from the United Nations recommendations 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 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 highlight the need to combine automatic clustering with local specificities to identify categories that are suitable for use in guiding public action.

Keywords: complex households, census, typology, family nucleus, French Polynesia

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Whakarāpopotonga

E whakawhirinaki ana te mātai i te hanganga o ngā kāinga tūtahi mā ngā raraunga tatauranga ki te tautohunga o ngā whānau whaiaro: ko ngā kāinga tūtata māmā ko ērā me te whānau whaiaro kotahi, tētahi tangata takitahi rānei, ā, ko ērā atu me ngā kōwhiringa whānau he kāinga tūtahi matatini. I ngā porihanga o nāianei o te rātō, e iti ai ngā kāinga tūtahi kei reira ngā whānau matatini e noho ana, kāore taua kāwai e āta tohua ana. Heoi, i ngā wāhi e kitea nuitia ana ngā momo noho tahi pērā, ka puta mai te hiahia kia āta wāwāhia āmikihia taua kāwai tino kanorau. Ko tā tēnei tuhinga he whakarato i tētahi tikanga mō te whakarōpūtanga o ngā kāinga tūtahi matatini. I muri i te arotake paerewa mai i ngā aratohu UN me te whakarōpūtanga tatauranga o Īnia, ka whakawehe mātou i ngā kāwai kāinga tūtahi o te tatauranga tino hou rawa (2017) o te Porinihia Wīwī. Kātahi ka arohia ngā āhuahira ā-rohe o te whakahaere ā-whānau kia puta ai ngā kāwairoto kanorau me te pakari. Ka whakarato te whakarōpūtanga e whai ake nei i te whakakāwaitanga āmiki o ngā kāinga tūtahi o Porinihia Wīwī, ā, ka tuku i te whakatauritenga inamata ki te whakarōpūtanga o nāianei. E marohi ana mātou i konei i tētahi tikanga whai pūtake raraunga mō te whakaputa i te pūnaha whakarōpū āmiki o ngā hanganga whānau e noho ai te whānau matatini hei wāhanga nui o te taupori. I miramiratia anō hoki te hiahia ki te whiri tahi i te whakakāhui aunoa ki ngā āhuatanga whāiti paetata ki te tautohu kāwai he pai te whakamahi ki te ārahi i ngā mahi tūmatanui.

Nga kupu matua: kāinga tūtahi matatini, whakarōpūtanga tatauranga, whānau whaiaro kotahi. Porinihia Wīwī

ensus data are accessible worldwide on a broad scale and often serve as the sole quantitative data source for population counts, although they are also used for constructing descriptions of family structures (Coast et al., 2016; Randall & Coast, 2015; Trabut et al., 2015). The resultant data, foundational for socioeconomic analyses, play pivotal roles in shaping and implementing public policies, determining populations for legal purposes, allocating resources and benefits, and in serving as sampling frames for statistical surveys.

While United Nations recommendations establish a framework that ensures comparability across different countries' censuses, the instructions provided to census enumerators for household identification are tailored by national statistical administrations. Consequently, census information tends to be intricately linked to the social and institutional context, in addition to the material conditions of data collection.

The distribution of household types derived from census data should reflect the most common family structures. In practice, this involves identifying and characterising family nuclei within the household, which comprise either a couple or a single adult along with their unmarried child(ren), if any. Simple households consist of either a lone family nucleus or a single individual. Any households not meeting this definition are categorised as complex households. Although the detailed categorisation of this type is infrequent, in many countries the proportion of complex households remains substantial. For instance, in India, the 2011 Census indicated that just under 40 per cent of households were complex, while more than 35 per cent of households in the 2018 General Household Survey in South Africa were reported to be complex. Complex households are also prevalent in Oceanian societies. In South Auckland, New Zealand, a recent study shows that among children born with at least one Pacific ethnicity parent:

Half of the members in the sample live in a nuclear family and the other half live in an extended family household. Of those who reported living with extended family members, 61 per cent live in a household in which at least one of the child's grandparents are present compared to 39 per cent living in an extended family household in which none of the child's grandparents are present. (Poland et al., 2007)

To comprehensively study family and household structures in these contexts, it is imperative to establish meaningful categories. This paper addresses the need for a detailed analysis of the analytical category of complex households. Rather than predefining subcategories, we propose a method for constructing a typology of complex households based on census data. This approach results in a classification that is both generic and adaptable to local contexts. Our objective is to facilitate the identification of the diverse forms of family organisation characterising complex households in regions where they constitute a substantial portion of the population. We initiate the discussion with an overview of the factors used to define household types, United Nations recommendations for categorising complex households, typologies used by statistical institutions for census data in Oceania, and the detailed complex households' subtypes identified by the Census Division of the India Ministry of Home Affairs. Subsequently, we delve into the principles guiding the construction of a partition of complex households. Drawing on data from the 2017 Census of French Polynesia, where 42 per cent of the population resides in complex households, we present a method for developing a typology. This typology is then stabilised

based on the cultural traits and specificities of the population. Finally, we examine both the contributions and limitations of this method.

Context and methods

Households in the census: A harmonised concept, with interpretations influenced by social and institutional contexts

Households are identified based on two dimensions, both outlined in the United Nations recommendations, as a *consumption unit*, often formed around shared meals, and as a *group of individuals cohabiting* in the same accommodation. These dimensions establish a common foundation for diverse household definitions, ensuring adaptability to national contexts (Randall et al., 2013; Randall et al., 2015).

Harmonisation is advocated in publications by United Nations bodies.³ Their recommendations emphasise that the "primary aspect considered should be that of the family nucleus" (United Nations, 2017) and they underscore the consideration of mainly conjugal and filial ties in constructing household typologies.

These international recommendations have primarily championed by Western countries, where the dominant model, at least since the Industrial Revolution (Laslett, 1972), has been that of the nuclear family. Notably, the main defining form of the simple household is not a universal norm. While it is currently predominant in Western Europe, it only achieved this status after the Industrial Revolution (Kertzer, 1991). The recommended classification tends to minimise the diversity of situations over time and worldwide. However, since the late 1970s, a shift towards greater adaptability has underscored the importance of using categories that are adapted to the population being surveyed in censuses (United Nations, 1980). These recommendations also offer some principles for the categorisation of complex households. In addition to individuals living alone, couples and nuclear families, the recommended classification includes extended households, which encompass only relatives and family nuclei (regardless of generation). On the other hand, a composite household encompasses diverse arrangements involving non-relatives: possibly one or more family nuclei – whether related or not – along with the potential for additional individuals, be they relatives or non-relatives; or unrelated individuals cohabiting. This category includes every possible configuration

of scenario in which unrelated individuals or family nuclei reside in the household.

The recommendations also encompass subcategories dependent on the number of family nuclei and whether the household solely comprises non-relatives.

Some examples from Oceania

Censuses conducted in Oceanian states showcase diverse approaches to categorising household types.⁵ Nearly all Oceanian countries document the relationship with the household's reference person/household head/householder. Most present distributions of these ties rather than a formal typology. This prevalent approach is observed in Kiribati, the Kingdom of Tonga, Vanuatu, Tuvalu, Nauru and the Solomon Islands. This information is often supplemented by other characteristics such as household size and the age and gender of the reference person. Some countries go further by providing information on the composition of households, including nuclear family members, complex households or the proportion of multigenerational households. While offering descriptive insights into household structures, a formal typology is not always employed.

Palau stands out as an interesting case, offering a more detailed description of households by distinguishing between family and non-family households, single-parent families and couples households. Palau also considers sex of the parent and the presence of children over 18.

The Cook Islands census is a unique exception. In both 2016 and 2021, respondents were asked about family members living with them, as well as their self-identification as the head of household. The census results present a distribution of household heads' responses to this question.

Australia and New Zealand distinguish themselves with more elaborate typologies of cohabitation patterns. Notably, these typologies are also based on ties to the household's reference person. Initially, households are classified according to the number of family nuclei present, with a specific category for those comprising several non-relatives. Additionally, a residual category is designated for unclassifiable households. Consistent with the United Nations recommendations, household types are further subdivided based on the presence or absence of non-relatives.

The New Zealand classification goes even further by distinguishing households according to the type(s) of family nuclei they contain, especially in cases where households comprise two family nuclei. In this scenario, they are classified differently based on the presence of two-family nuclei with children or just one of these and a couple with no child(ren).

Finally, American Samoa, Guam and the Northern Mariana Islands are island territories of the United States. Consequently, their censuses adhere to the American typology of households. In addition to data on family relationships, they categorise conjugal family households based on whether the couple is married or in a consensual union, as well as whether either partner has children. Households where the reference person is not in a cohabiting relationship are differentiated according to their gender and the composition of the household: whether it is a person living alone, a single-parent family or a complex household. The proportion of multigenerational households is also provided.

The Indian classification principles for complex households

A notable proportion of Indian households are categorised as complex households. According to the 2011 Census, approximately 17 per cent of Indian households are "supplemented nuclear households", and 20 per cent are "joint family households". The Indian statistical office has, therefore, developed an original and detailed typology that is regularly published with the census results.

The Indian classification primarily relies on distinguishing the marital status of the "head" of the household, determining the nature of the family nucleus as either "nuclear" or "broken nuclear" (if they are unmarried, widowed, separated, etc.). The identification of the household head is thus a crucial concept that we elaborate on later in this paper.

Subsequently, the category "supplemented nuclear households" encompasses households characterised by a family nucleus cohabiting with single individuals related to the household head. Finally, there are two subcategories of "joint families" households. The first one comprises at least two family nuclei that extend across multiple generations into "lineally extended family" households, characterised by filial ties. The second subcategory includes multiple siblings with their spouses as "collaterally extended family" households, where members of the cohabiting family nuclei

are siblings rather than parents and their children (Chakravorty et al., 1991; Niranjan et al., 2005).

The primary deviations from the United Nations recommendations in Indian census data are twofold. First, a distinction is made between collateral and filial relations. Second, there are no criteria for establishing the presence of non-relatives in the household. The Indian classification relies on the ties to the head of the household. The elaboration of a detailed classification thus depends on the nature of the family ties collected in the census.

Methodology: Principles for the construction of household categories

Let us explore the various methods of collecting data on the nature of ties between household members. This information is crucial for identifying the typical structures of complex households more or less precisely. We will then briefly examine the associated classification criteria.

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

Historically, most censuses have required describing a household by identifying the head of household. This person was characterised by their economic power or authority over the domestic group. While this term holds meaning in everyday use, it carries different definitions across national contexts, which vary in terms of their identifying criteria. Generally speaking, the concept of a conjugal family initially centred around a heterosexual couple, and the head of household referred either to the husband or, following the rise in proportion of unmarried couples, to the male partner. This relatively conservative approach led to movements, particularly among feminists (see Presser, 1998, for a history of this movement in the United States) who, starting in the 1970s, advocated the redefinition or abandonment of this notion. Importantly, opposition to the use of this notion in censuses was not solely based on political motivations. Without a precise definition of the head of household for the census, and during a period when the male breadwinner/female homemaker model was being challenged, the ambiguity of this notion could lead to confusion.

The definitions and criteria for identifying the head of household have evolved over time. This person can either self-designate or be the household member with economic authority, as determined by factors such as earning the highest income, contributing the most to household expenses, or holding the official tenancy or ownership of the dwelling. Typically, they are the individual who declares and describes the household for the census, but the role can also be attributed to the oldest member or the primary economically active person (Budlender, 2003).

Thus, no unequivocal definition exists for describing the head of household. However, this status is generally maintained in the form of the *reference person*, primarily because it facilitates the declaration of household ties. United Nations recommendations also emphasise that the use of the concept of a reference person assumes that a majority of households consist of single conjugal families – implying a prevalence of less complex households. Furthermore, these recommendations underscore the problematic nature of this notion in countries where women possess significant economic independence (United Nations, 1969).

In addition to critiques that the notion of a head of household is archaic in the light of societal changes, another issue persists of it reductively oversimplifying the complex web of relationships within the household (Coast et al., 2016). Historical studies have indicated that describing complex households is better achieved by considering the most immediate ties rather than each person's connection to a single reference person (Laslett, 1972). Moreover, declaring the ties of household members specifically to this reference person consistently presents a challenge for describing complex households. In instances where a household extends beyond the nuclear family and includes more than one family nucleus, relying solely on ties to the reference person is insufficient for establishing the family relationships within the household.

Three census forms that exemplify this diversity in data collection are presented in Appendix A.1.

1. Appendix A.1.1 is the 2011 "Housing form" of the annual French census, which enumerates the permanent inhabitants of the dwelling (List A) and captures declared family ties or other relationships with the person listed on the first line, without specifically mentioning the reference person. When the Institute of Statistics and Economic Studies (INSEE) processes these forms,

- three-quarters of ties are then automatically reconstructed, without reading the reported relationship (Trabut et al., 2015).
- 2. Appendix A.1.2 is the housing form of the 2017 French Polynesia Cenus. List A of permanent inhabitants of the household in the census of French Polynesia collected information on the most direct family tie or other relation with another member of the household. All ties were then coded by the interviewers.
- 3. Appendix A.1.3 is an extract of the "Household questions" section of the census of England and Wales. The UK Office for National Statistics ONS) has gathered each person's relationship with all other members of the household in detail, enabling the reconstruction of blended families, multigenerational or collateral households, etc. for over a decade.

The utilisation of direct ties or all ties within the household, as opposed to ties to a reference person, proves beneficial for the examination of complex households. Indeed, the nature of the ties between different nuclei within a complex household becomes pivotal for its accurate portrayal. As illustrated in the Indian typology, this approach facilitates the differentiation between lineally extended households, where family nuclei are related to each other through parentage, and collaterally extended households, where nuclei are connected by collateral relations, such as sibling connections. However, the decision to exclusively consider only sibling relationships also relies on the context; for example, in situations where co-residence with the extended family is prevalent, the inclusion of cousins within groups of co-resident collaterals could be warranted.

Review of the most commonly used criteria

Type and number of family nuclei

The central criteria in typologies of households encompass the type and number of nuclei within households. The most commonly used types of nuclei include couples with children, couples without children and single-parent families. These family nuclei also constitute the types of simple households, along with individuals living alone. Since complex households comprise combinations of family nuclei and non-relatives, typical forms of complex households can be described accordingly. Conjugal families within complex households can be distinguished from single-parent families, as

demonstrated in the Indian typology. Additionally, with the rise in blended families, capturing these (as permitted by the British form) can also be crucial.

The inclusion of children in the family nucleus of their parent(s) within a household is determined by a set of rules. For instance, children who cohabit with their parents and have neither a cohabiting partner nor children of their own are typically included in the family nucleus of their parent(s). However, some countries establish an age limit, beyond which coresident children are considered independent and are no longer included in that nucleus.⁸

Characteristics of household members

Similarly, when identifying couples, statistical administrations must decide whether or not to consider their marital status. The United Nations recommendations define a couple as a married couple but also state that "couples living in consensual unions may, where appropriate, be regarded as constituting a family nucleus" (United Nations, 2017). The Indian typology, for example, only recognises married couples as such. Censuses in Western Europe include all reported unions. Beyond its role in defining family nuclei, the marital status of people living alone can also help to refine household typologies; for instance, by differentiating widowers and divorcees.

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

Accuracy of information on relations

Information on ties between household members also plays a central role in determining the typologies of various forms of co-residence. The accuracy of this information strongly depends on how it is collected. Although identifying family nuclei depends on defining and identifying filial and conjugal ties, the construction of a typology is greatly served by determining the ties between the nuclei and non-relatives who constitute complex households. 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 itself constitute a criterion for its classification. Households that span three generations (from grandparents to grandchildren) can take multiple forms, depending on whether the middle generation is present. If not, the household is known as a *skip-generation household*.

The importance of accurate descriptions of the documented family ties must also be highlighted. Because the vocabulary of kinship varies between cultures, 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 (Sierra-Paycha et al., 2018, 2022) might be declared as his aunt's "child/son", "fa'a'amu child" or "nephew". Additionally, some kinship terms may be used for respect, such as "uncle" or "grandmother". In these cases, the role played by interviewers is paramount.

Complex households in French Polynesia

To test the discriminant capacity of the criteria discussed above, we utilised data from the 2017 Census of French Polynesia, a territory where 42 per cent 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. The census forms are completed through face-to-face interviews. The enumerators are locally hired, and during their training, they are encouraged to translate the questions if necessary. The family tie (or relation) between household members is recorded in plain text and coded later (see the table in Appendix A1.2).

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 A1.2). This list records all the usual residents of a dwelling, including children living elsewhere while pursuing their studies. An individual census form is then completed for each of them. The list records "the most direct family tie or [other] relationship". Our data were gathered in 2017, and comprises 546,908 family ties from the responses of 271,422 individuals who participated in the census,

representing 76,445 Polynesian households residing in conventional housing.

Such data offer many advantages for studying the diverse forms of co-residence. They allow Polynesian households to be described in detail without designating a reference person (see Appendix A1.2). Working on the basis of direct ties is thus all the more interesting in the Polynesian context, as complex households are highly common, and women are economically independent (Bodet, 2022).

The Polynesian case: Some context

French Polynesia, an overseas collectivity of the French Republic nestled in the Pacific Ocean, comprises 121 islands, of which 72 are inhabited. Spanning an expanse as vast as Europe, its archipelagic structure results in a widely dispersed population of various family configurations (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). The definitions and criteria align with those developed by INSEE for metropolitan France. The online documentation for the Polynesian census elucidates the household definition used by the French statistical administration for the corresponding census, 11 with minor adjustments to streamline data collection. This definition, remaining substantially unchanged in France since the 1950s, equates a household with a residential unit, underscored by the term *ménage-logement* (dwelling-household) (Coast et al., 2016). Intriguingly, when applied in the Polynesian context, no explicit mention is made of the *utuāfare*; instead, interviewer training emphasises that "one household = one dwelling with an independent door and cooking facilities".

In the 2017 Census of French Polynesia, a total of 19,999 complex households, constituting 26.6 per cent of all surveyed households, were recorded. Let us initiate our exploration by delving into the characteristics of these households. This examination aims to enhance our comprehension of this diverse category and pinpoint determinants for our clustering analysis.

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

We aim to construct a detailed classification of the heterogeneous category of complex households using census data in a world region where complex households constitute over a quarter of all households. We will apply the principles and criteria detailed above. From this empirical application, we will devise a procedure that can be replicated elsewhere.

To begin, we will explore the heterogeneity of complex households using clustering techniques, specifically an *ascending hierarchical classification* (AHC) applied to the data from the most recent census of French Polynesia.

Method and criteria for partitioning

An AHC aims to generate clusters that are both as homogeneous as possible and as distinct from each other as possible, based on several relevant criteria. In our case, these criteria are:

- The number of family nuclei for each type in the household, including "couple without children", "couple with children" and "single-parent family".
- The number of unpartnered and childless adults in the household.
- Indicators for specific ties: "grandparent", "fa'a'amu child", "uncle/aunt", "cousin", "no family ties", each constituting more than 2 per cent of all declared ties within complex households.
- An indicator for the presence of at least three generations in the household.

We propose partitioning the complex households category based on this set of variables, which encompass both quantitative (such as the numbers of nuclei by type and unpartnered and childless adults) and categorical elements (indicators for specific types of ties). To achieve this, we will employ Ward's method with the Gower distance matrix between households. In *Ward's method*, clusters are formed to maximise the increase in interclass inertia (thus minimising intraclass inertia) at each iteration (Ward, 1963).

After analysing how inertia changed with the number of clusters (see Appendix A2), we opted for a seven-cluster partition. This choice

enables analysis of the heterogeneity of Polynesian complex households at a satisfactory level of detail. Note that confidentiality concerns might arise given the small population size.

Results of the AHC: Highly heterogeneous complex households

The categories derived from this classification offer insights into the diverse composition of complex households, facilitating a deeper understanding of co-residence patterns in French Polynesia. Detailed statistics describing these clusters are presented in Appendix A3. In this section, we delineate the distinctive features of each cluster, accompanied by graphical representations that illustrate examples of household composition. It is crucial to emphasise that all complex households comprise a combination of one or more family nuclei and/or unrelated other people.

Multigenerational lineage households (Cluster 1 in Appendix A3)

Out of the complex households analysed, 7008 (35.6 per cent) fall into the category of multigenerational lineage households. All households within this cluster feature lineal extension and encompass three generations – grandparents, parents and children (Figures 1, 3 and 4) – or even more, including grandchildren (Figure 2). Notably, none of these households features a non-standard tie as the primary connection (i.e., grandparent, fa'a'amu child, uncle/aunt, cousin, no family tie). ¹⁴ More than three-quarters of these households contain multiple families, while a majority (65 per cent) do not include any other unrelated individuals.

Within this cluster, households primarily comprise a lone parent (Figure 4) or a pair of parents (Figures 1, 2 and 3) cohabiting with one or more of their children who are also parents, accounting for 81 per cent of cases. Remarkably, these children may themselves have a partner; if not, they are included within their parents' nucleus (Figure 2) or, alternatively, they may live independently without a partner, forming a single-parent family nucleus (Figure 3).

Around one-third of households in this cluster include one or more childless couples, while just under half consist of single-parent families. Non-relatives are present in slightly over a third of households in the cluster, with the majority having only one such individual (Figure 4).

Figure 1: Two parents and a family nucleus of one child/grandchild

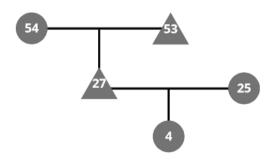


Figure 2: Three nuclei forming a four-generation household

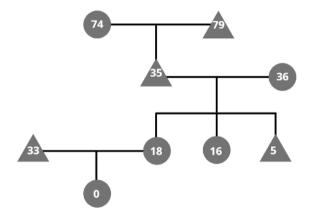


Figure 3: Parents with multiple children, some within the primary nucleus and others forming distinct nuclei

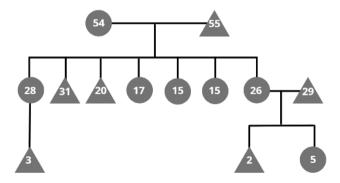
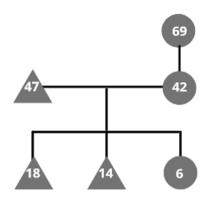


Figure 4: A single parent residing with one of her children's family nucleus



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

This cluster, comprising 4058 households or 20.6 per cent of complex households, features two-generation households; that is, parents with children. There is a high degree of heterogeneity within this cluster, with households equally likely to include couples without children (44 per cent) and couples with children (40 per cent), with single-parent families being a less frequent composition (15 per cent). Notably, this cluster exhibits minimal instances of non-standard ties declared as the most direct connection, except for 12.5 per cent that include someone "without family ties" (Figure 9), and it almost entirely lacks households with three or more generations (less than 1 per cent).

Non-relatives are present in just over half of these households, with 33 per cent containing only one non-relative (Figures 7 and 8) and 22 per cent featuring more than one (Figure 9). Most households in this cluster contain multiple nuclei (Figures 5 and 6) and either no non-relatives (45 per cent) or one non-relative residing with one nucleus (30 per cent). Just under a fifth are households consisting solely of adult non-relatives (18 per cent).

Couples with relations households often comprise a couple with their children, among whom one or more have a partner but no children (Figures 5 and 6). Alternatively, these households can consist of a couple residing either with an older parent (Figure 7) or with an individual who has no declared family tie (Figure 8).

Figure 5: Couple residing with children, including one child's partner

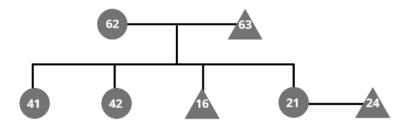


Figure 6: Couple residing with children and two of the children's partners

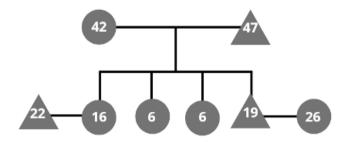


Figure 7: Couple residing with a single parent

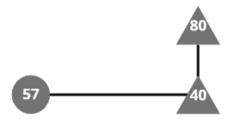


Figure 8: Single person with no declared family tie to the nucleus



Figure 9: Household of single persons with no family ties



These two clusters of household types are followed by five further clusters, presented in decreasing order of proportion, and distinguished by the presence of specific types of ties introduced as classification criteria due to their Polynesian specificity:

- 1. Siblings living together (18 per cent of complex households).
- 2. Uncles/aunts cohabiting with their nephews/nieces (8 per cent).
- 3. Grandparents cohabiting with grandchildren (skip-generation households, 8 per cent).
- 4. Households with one or more fa'a'amu child(ren) (7 per cent).
- 5. Households of co-residing cousins (3 per cent).

Note that neither the grandparent nor fa'a'amu child ties constitute a complex household, as grandchildren under the care of their grandparents form part of their family nucleus (similar to fa'a'amu children). Complex households in these clusters therefore include multiple nuclei for other reasons, rendering them truly complex.

Upon closer inspection of these clusters, similarities emerge, suggesting the potential for merging some into a single category.

Sibling households (Cluster 3 in Appendix A3)

This cluster, comprising 3413 households or 17.3 per cent of complex households, features siblings identified as the primary connection. Ten per cent also encompass uncle/aunt relationships. Approximately 85 per cent of households in this category include individuals without partners, while just under 20% consist exclusively of single persons. Notably, slightly less than a third of these households consist of a family nucleus and an unpartnered individual.

Sibling households may consist of a family nucleus with unpartnered collaterals (Figure 10), multiple nuclei (Figures 12 and 13), or exclusively unpartnered individuals (Figure 11). Therefore, Cluster 3 represents households of collaterals and sibships, sometimes cohabiting with

ascendants or descendants, and 15 per cent of them are multigenerational households that contain couples with children and single-parent families.

Figure 10: Three brothers = a family nucleus, and two single persons



Figure 11: Household of single siblings



Figure 12: Household with two nuclei: Two brothers and their partners living together



Figure 13:

Household with two nuclei and a single person



Uncle/aunt households (Cluster 4 in Appendix A3)

This cluster, comprising 1615 households or 8.2 per cent of complex households, features households declaring an uncle/aunt tie, along with its symmetrical counterpart: "nephew/niece". Ninety per cent of these households comprise unpartnered individuals (Figures 14, 15 and 16), with a third containing more than one unpartnered individual (Figures 14 and 15).

Similar to sibling households, a majority of these households consist of a nucleus and an unpartnered person (Figure 16). Very few households in this category exclude single persons. In cases where the single person is a minor, it can be inferred as a situation of fosterage (fa'a'amura'a or other) (Figure 16).

Figure 14: Household of single persons: One uncle and his nephew

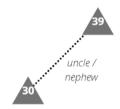


Figure 15: Single persons and a family nucleus

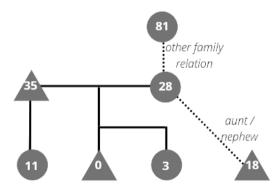
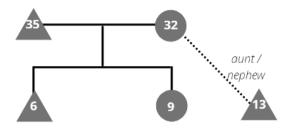


Figure 16: Fostered young nephew as a single person living with a family nucleus



Skip-generation households (Cluster 5 in Appendix A3)

This cluster, comprising 1630 households or 8 per cent of complex households), features grandparents co-residing with their grandchildren. A substantial portion (43 per cent) of these households are multigenerational (Figures 17 and 20) or they are households of grandparents living with grandchildren who themselves have a partner but no children (Figure 18). Additionally, this cluster encompasses more complex households, including collaterals (Figure 19). Notably, the configuration of the households in this cluster closely resembles the findings for Cluster 6, with the distinction that the declared tie here is grandparent instead of fa'a'amu parent. Given the likely connection between these two ties, the resemblance in household structures between the two cases is unsurprising.

Figure 17: Grandparent couple living with a single-parent family

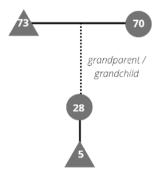


Figure 18: Single grandfather and grandchild in a couple

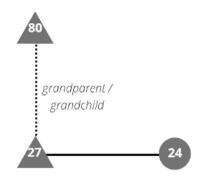


Figure 19: Young granddaughter (presence of collaterals)

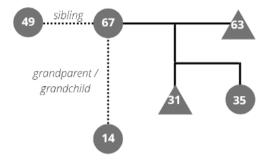
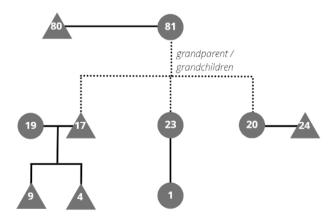


Figure 20: Multigenerational skip-generation household with multiple nuclei



Complex households containing children declared as fa'a'amu (Cluster 6 in Appendix A3)

This cluster, comprising 1404 households or 7 per cent of complex households, features multigenerational households (Figures 21 and 22) of parents residing with children who, in turn, live with a partner. All these households include *fa'a'amu* children (declared as such).

Figure 21: Multigenerational household

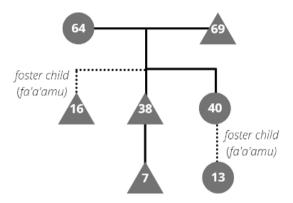
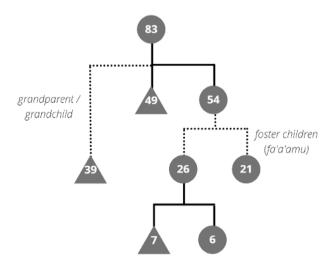


Figure 22: Multiple generations with fa'a'amu children



Groups of cousins (Cluster 7 in Appendix A3)

This final cluster, comprising 562 households or 3 per cent of complex households, features households declaring a cousin tie. The characteristics of this cluster bear a striking resemblance to those of the sibling households. The distribution of nuclei in both clusters is fairly similar, suggesting that the cousin relationship is associated with households whose configuration is akin to that of sibling households. Once again, these are households of collaterals (Figures 23 and 24), sometimes cohabiting with ascendants or descendants (Figure 23).

Figure 23: Multigenerational household including a cousin as a single person

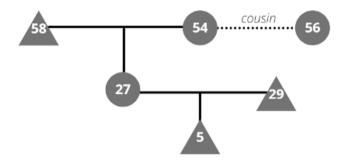


Figure 24: Household of single persons



Synthesis: Principles for a typology of households in French Polynesia

Our next objective is to formulate an appropriate taxonomy for Polynesian households, drawing upon the detailed descriptions of the various clusters.

From an ascending hierarchical classification to the categorisation of complex households

The categorisation of complex households in a population where they are prevalent should be grounded in a comprehensive understanding of the respective society (for in-depth material, refer to Sierra-Paycha et al., 2022), the outcomes of such a classification, and the imperative to identify types relevant for public initiatives.

In the case of French Polynesia, the predominant cluster comprises multigenerational households, distinguished primarily by the number of generations they contain.

An intermediary cluster (Appendix 3, Cluster 2) consists of complex two-generation households. These households often feature multiple nuclei or, less frequently, a nucleus and an unpartnered person. This group comprises a substantial number of households, and a subset of them, specifically the two-generation adult lineal households, is likely to form a category in their own right.

The majority of multigenerational households in French Polynesia feature a co-residential arrangement of at least three generations, spanning from grandparents to grandchildren. These households align with the concept of extended family households, akin to the joint family or lineally extended family in the Indian typology. In this context, proximity fosters intergenerational exchanges, including childcare, housing for migrants, labour division and care for the elderly. However, depending on housing conditions, crowding may create difficult residential conditions.

To address the diversity within this extensive group of households, it is prudent to categorise them into various types based on additional characteristics (as detailed in Appendix 3, Cluster 1). One approach is to differentiate them according to the number of family nuclei they include. We would thus distinguish households where one or both older parents live with one or more of their children, with exactly one child having formed their own family nucleus (with either a partner, children or both; see Figures 4 and 5). This is distinct from households where one or more older parents live with multiple family nuclei formed by their children (Figure 6). It is advisable to provide further specification regarding the composition of the pivotal generation; that is, those parents living with both their children and their own parents. This composition plays a crucial role in economic activity, caregiving responsibilities and the reproductive dynamics of the household.

Some highly typical clusters are those involving collateral relationships (sibships, groups of cousins) and diagonal relationships (uncles/aunts) (refer to Appendix 3, Clusters 3, 7 and 4, respectively). This highlights a particular characteristic of co-residence among age peers in

French Polynesia (Grepin, 2001). These clusters embody documented modes of co-residence: either the collective cohabitation of an age group during specific life stages (such as the end of adolescence), or the co-residence of collaterals resulting from undivided co-ownership of land, where access depends on continuous presence (Robineau, 1989). In each of these three clusters, more than 80 per cent of households contain unpartnered individuals. Therefore, it seems appropriate to distinguish households of collaterally single relatives in the proposed categorisation.

Two additional outcomes emerge from this classification. First, some households combine grandparents and their grandchildren without the presence of the parents; that is, skip-generation households (Appendix 3, Cluster 5). Second, some households have fa'a'amu children present (Appendix 3, Cluster 6), along with a portion of Cluster 4, where nephews/nieces are in the care of an aunt. Both cases represent situations where a child is being raised by non-parent relatives. According to United Nations recommendations, such ties should be treated as equivalent to a filial tie, a practice that the census of French Polynesia already employs for unpartnered grandchildren living with a grandparent and fa'a'amu children. This implies a need to homogenise the codification rather than introducing a new category. The process of this homogenisation is detailed in the following section.

Homogenising the position of child within a family

The preceding discussion has delved into the intricacies of fostering and the diverse reporting methods in the census data of French Polynesia. Both the descriptive statistics and the outcomes of the classification reveal that the common designation for this practice is fa'a'amu child (enfant fa'a'amu). However, in certain instances, the original family connection with the foster parent – typically a grandparent, aunt or uncle – is explicitly noted. Since only individuals who usually reside in the housing unit are enumerated in list A, it can be inferred that minor children lacking direct filial ties within the household (and identified as nephews, cousins, etc.) have been entrusted to the adult to whom their direct relationship is declared.

In line with the categorisation of *fa'a'amu* children and grandchildren, who are already automatically classified as having filial ties with their *fa'a'amu* parents or grandparents, we propose classifying nephews, young cousins, etc. as integral components of the family nucleus

of the adult to whom their relation was declared. We extend this rationale up to the age of 18, beyond which time the delegation of parental authority no longer applies. By applying this age threshold, all such scenarios can be definitively classified. Beyond the age of 18, census data do not provide the means to ascertain whether an adult residing with an aunt, for instance, was already part of the household as a child or joined as an adult.

These modifications lead to the reclassification of certain complex households as simple households. For instance, a scenario where a couple lives with their minor nephew, previously categorised as a complex household comprising a family nucleus and a single relative, will now be classified as a simple household – specifically, a couple with one or more children, including an adopted child. This aligns with the classification of couples declaring a *fa'a'amu* child or grandchild.

Conversely, under this principle, children declared as fa'a'amu, those residing with their grandparents in households where their parents are absent, and unpartnered biological children are considered part of the family nucleus only until they reach 18 years of age. Consequently, these changes result in the establishment of a category of complex two-generation households, comprising one or two parents living with one or more unpartnered children over the age of 18.

The inclusion of the age criterion among the set of criteria determining the incorporation of children into their parents' family nucleus brings about a reshaping and rebalancing of the distribution of families with children, as illustrated in Table 1. Notably, couples with one or more adult children (who are unpartnered and childless) constitute a substantial proportion (17.3 per cent) of Polynesian households. The previously broad category of nuclear households is now more precisely delineated, with parent(s) co-residing with or without adult children. Consequently, two distinct categories emerge: "couples with all underage children" (24 per cent) and "couples with at least one adult child" (defined as 18 years or older) (12 per cent). This nuanced categorisation also sheds new light on single-parent families, revealing that 46 per cent feature only adults; that is, a parent and adult child(ren). 16

Table 1: Distribution of nuclear family types after applying the age criterion

Туре		Distribution
Childless couple		15.94%
Couple with one or more children	All children underage	23.66%
	At least one child over 18	11.94%
Single-parent family	All children underage	3.29%
	At least one child over 18	5.36%

Note: The remainder comprises single person households and complex households.

A categorisation of complex households

The proposed typology provides a comprehensive classification of households in French Polynesia, enabling the differentiation of various relevant categories. Rather than maintaining a single, previously residual category termed "complex" households, this new categorisation suggests a well-balanced partitioning of households. The revised residual category now encompasses less than 3 per cent of households, with fewer than 1 per cent remaining unidentified (Table 2).

As observed in the results of the ascending hierarchical classification, we have retained the distinction that separates joint families into collaterally extended households and lineally extended households structured around filial ties, which is akin to the Indian classification.

Within these types, subtypes allow for further distinctions. Lineage households and collateral households differ in their structure. In lineage households, the distinction is primarily based on the number of generations present in the household. Among those with three or more generations (from grandparents to grandchildren), the differentiation depends on whether the intermediate (parental) generation is represented by a single family nucleus or by multiple nuclei. Finally, a minority of lineage households contain collateral ties at the first generation.

Table 2: Typology of Polynesian households¹

Household type	Household subtype	Distribution (type) (%)	Distribution (subtype) (%)
Single person ²	Single person	15.26	15.26
Childless couple	Childless couple	15.94	15.94
Couple with one or more children	Couple with one or more children (all underage)	35.59	23.66
	Couple with at least one aged 18 or older	50.09	11.93
Single-parent family	Single-parent family with underage children		3.29
	Single-parent family with at least one child aged 18 or older	8.65	5.36
Lineage households: households containing at least two generations of adults	Parent(s) with child(ren), including at least one partnered adult without children		3.02
	Multigenerational households with one middle-generation family nucleus	16.23	9.83
	Multigenerational households with more than one middle- generation family nucleus		2.79
	Multigenerational households with collaterally related people/nuclei at the upper generation		0.59
Households of collaterals	Household of collaterally related singles*		1.42
	Single-person collaterally related household with one family nucleus	5.58	2.95
	Multiple family nuclei linked by collateral ties, potentially other single collaterals		1.21
Other households	Unrelated single persons	9.77	2.14
	Unidentified households	2.77	0.63

Notes: 1. Total survey size: 75,544 households.

^{2. &}quot;Single" in this context means "unpartnered".

Among collaterally extended households, those comprising unpartnered adults are distinguished from extended households containing a single family nucleus and households comprising several nuclei linked by collateral ties, as seen in the Indian typology. Finally, in the residual category, the households of unpartnered adults are differentiated from lineage households (with at least one family nucleus) that also have the presence of collaterals. This leaves only 0.6 per cent of "unidentified households".

Conclusion

In this article, after having conducted an initial examination of United Nations recommendations and existing classifications, we have proposed a procedure for creating a detailed categorisation of households in territories where complex households represent a significant portion of the population. We applied this methodology to census data from French Polynesia. To construct this taxonomy of complex households, we initiated an automatic clustering process based on criteria aligned with international recommendations from the United Nations. After partitioning these households into clusters, we leveraged our understanding of this Oceanian society to seamlessly incorporate insights into the identified clusters, thus delineating suitable categories, including both types and subtypes.

Following United Nations recommendations, we disaggregated the category of complex households into homogeneous subcategories. This resulted in a partition of complex households in French Polynesia that, like the Indian categorisation, excludes the United Nations distinction based on the presence of non-relatives in the household, which did not appear to be determinant. However, the United Nations recommendations did influence our decision-making process, particularly in addressing the widespread informal adoption practice of *fa'a'amura'a* and its declaration in the census. In this scenario, individuals classified as *fa'a'amu* children or recognised based on their familial connection to an adult in the household (grandchild, nephew, cousin, etc.) are considered minor children and are incorporated into the family nucleus of their adoptive or foster parent(s).

Furthermore, we opted to maintain the distinction in the Indian taxonomy between collateral households and lineage households, albeit in an adapted form. The classification underscores the importance of this distinction in characterising typical forms of cohabitation in French Polynesia. This point is also supported by the anthropological literature documenting the historically present forms of cohabitation in French Polynesia. While the Indian typology exclusively identifies collateral households formed around a group of siblings, this is not the case in French Polynesia, where the $\overleftarrow{o}p\overline{u}$ $h\overline{o}\overleftarrow{e}$ is comprised of a more extended family (cousins, for example), 17 as indicated by the results of the classification.

The typology of complex households in French Polynesia differs from the Indian typology in several respects. Apart from eliminating the notion of the head of the household, facilitated by the various direct ties compiled in the census of French Polynesia, the primary distinction between the proposed typology presented here and the Indian typology lies in the definition of nuclei and the relationships that form the collateral group. First, marriage is not a defining criterion for couples. Second, the set of collateral relations encompasses the broader family. Finally, to account for Polynesian fosterage practices, it was necessary to homogenise the treatment of filial ties and their integration into the typology of households – and, a fortiori, into the definition of family nuclei.

The methodology demonstrated its effectiveness, yielding the well-balanced distribution depicted in Table 2. Our forthcoming studies aim to delve into how the emergent categories aptly capture the living situations of contemporary Polynesian society, 18 thus offering insights crucial for a nuanced comprehension of its societal dynamics. Additionally, we intend to apply this methodology in diverse contexts to evaluate its reproducibility. This categorisation is anticipated to unveil the determinants of various family organisational modes, thereby providing valuable guidance for public initiatives and streamlining the analysis of household living conditions.

Notes

- 1 2011 Census of India. www.censusindia.gov.in
- 2 2018 General Household Survey, Statistical Release P0318. www.statssa.gov.za
- 3 Especially by the United Nations Population Fund and the United Nations Statistics Division (UNFPA and UNSD, respectively).
- 4 Consisting of a couple and their child(ren).

- The countries included in this comparison are New Zealand, Australia, the Cook Islands, Kiribati, American Samoa, the Kingdom of Tonga, the Republic of Fiji, Vanuatu, Niue, Tuvalu, Nauru, the Solomon Islands, Palau, the Northern Mariana Islands and Guam.
- Budlender (2003) concluded that employing multiple questions would be preferable for accurately identifying a reference person, contingent upon the intended use of the census data.
- Who form a lineage.
- 8 This was the case with the French census until 1990. The age limit to be considered a child in a family was 25 years.
- 9 Fa'a'amura'a (in Tahitian) describes when a child is informally entrusted to (typically) a relative to be raised, a common practice in Polynesian society (fa'a means "to have/make" and amu means to eat). It is a form of customary adoption in which contact must be maintained between fa'a'amu children and their birth parent(s).
- The census forms are available in both the French and Tahitian languages. However, due to the variety of languages in French Polynesia (Charpentier and François, 2015, count seven languages and dialect groups within the territory), interviewers are responsible for translating questions into the language of the respondents, if necessary.
- 11 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
- 12 <u>https://www.ispf.pf/bases/Recensements/2017/définitions/ménages-familles</u>
- 13 Utuāfare translates as the family house or the household in Tahitian.
- 14 Neither parental nor fraternal.
- Households where uncles and aunts co-reside with nephews and/or nieces may exhibit characteristics of both collateral households and lineage households, given the potential involvement of fa'a'amu adoption. Note, however, that in cases of large sibships and considerable age differences, uncles or aunts can frequently belong to the same age group as their nephews or nieces.

- The sum of the distribution proportions equals the initial ISPF percentages, with the slight difference attributed to the homogenisation of foster children.
- This Tahitian term designates the group of collaterals as descendants of the same womb over one or two generations. Traditionally, it seemed to be the group where family solidarity was organised (Robineau, 1989).
- This work was presented to ISPF in March 2022 on the eve of the 2022 Census collection, as part of a collaborative partnership with INED. It responds to their initial request for a more detailed identification of the large proportion of complex households. The collaboration and statistical production in line with these findings are now scheduled for incorporation into their upcoming census data in 2022.

Acknowledgement

This research was supported by funding from the Agence Nationale de la Recherche (ANR) project ATOLLs – Archipels, Territoires et mObilités famiLiaLes. (https://polynesie.site.ined.fr/fr/ANR-ATOLLs/)

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Appendix A1: Census forms: Metropolitan France (2017 and 2018), French Polynesia, England and Wales (2021)

A1.1 – List A in metropolitan France in 2017

The housing form is designed to capture information about the regular occupants of the dwelling.

Register in List A

Persons who live in this dwelling most of the year, including:

- temporarily absent persons (on holiday, business trip, hospitalisation of less than one month, etc.)
- infants, even if they are still in the maternity clinic, and/or
- sub-tenants and co-tenants occupying part of the dwelling.

Also register in List A

- minor children living elsewhere for their studies and for whom this dwelling is the family residence
- spouses who have another residence for professional reasons and who return to live in this dwelling for the weekend, holidays, etc.
- adults who live in this dwelling for their studies
- persons present in this dwelling who have no usual residence elsewhere, and/or
- household employees, employees and au pairs who live in this dwelling.



A1.2 – List A of the census in French Polynesia

The following presents the recommendations accompanying List A of the 2017 French Polynesia Census, along with an excerpt from this list featured in the census housing form.

Register in List A:

Persons who live in this dwelling most of the year, including:

- temporarily absent persons (on holiday, business trip, hospitalisation of less than one month, fishermen at sea, copra farmers, etc.)
- infants, even if they are still in the maternity clinic, and/or
- sub-tenants and co-tenants occupying part of the dwelling.

Also register in List A:

- minor children living elsewhere for their studies (in French Polynesia, metropolitan France, French overseas territories, or elsewhere) and for whom this dwelling is the family residence
- spouses who have another residence for professional reasons and who return to live in this dwelling for the weekend, holidays, etc.
- adults who live in this dwelling for their studies, and/or
- household employees, employees and au pairs who live in this dwelling.

		Personnes habitant dans le lo				
		Habitants permanents du logement >>> Remplir un	n bulletin individuel pour	chacun		
V° d∈	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)

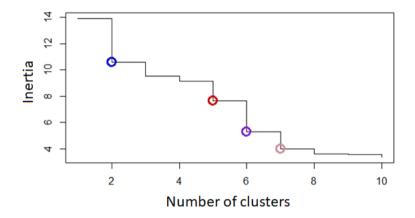
Tie (raw data)	Recoded tie	Type of tie	Family nucleus
Brother	Brother/Sister	Collateral	No
Sister	Brother/Sister	Collateral	No
Grandfather	Grandparent	Lineage	Filiation
Grandmother	Grandparent	Lineage	Filiation
Grandson/	Grandchild	Lineage	No
Granddaughter Son-in-law/ Stepson/ Daughter-in-law/ Stepdaughter	Child-in-law (Bel-enfant)	Lineage	No
Father-in-law/ Stepfather (Beau-père)	Parent-in-law/ Stepparent (Beau-parent)	Lineage	No
Mother-in-law/ Stepmother (<i>Belle-mère</i>)	Parent-in-law/ Stepparent (Beau-parent)	Lineage	No
Brother-in-law/ Stepbrother/ Sister-in-law/ Stepsister (Beau frère/Belle sœur)	Brother-in-law/ Stepbrother/ Sister-in-law/ Stepsister (Beau 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
Faʻaʻamu father	Fa'a'amu parent	Lineage	Filiation
Fa'a'amu mother	Fa'a'amu parent	Lineage	Filiation
Faʻaʻamu child	Faʻaʻamu child	Lineage	Filiation
Fa'a'amu grandmother	Faʻaʻamu parent	Lineage	Filiation
Faʻaʻamu grandfather	Faʻaʻamu parent	Lineage	Filiation
Faʻaʻamu grandchild	Faʻaʻamu child	Lineage	Filiation
Spouse	Spouse	Conjugal	Conjugal
Partner (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

Tie (raw data)	Recoded tie	Type of tie	Family nucleus
Nanny	Unrelated	Other	No
Boarder/Lodger (Pensionnaire)	Unrelated	Other	No
Undetermined	Undetermined	Other	No

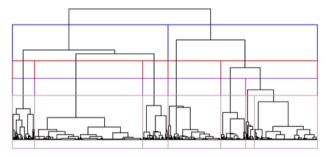
A1.3 – Household ties in the 2021 Census of England and Wales

How are members of this hous	ehold related to each other?	If members	are not related, tick the "Unre	lated" box.	
Using the same order you used in each column. Remember to inclu					
				alle	
Tick a box to show the relationsh					
If no one usually lives here and the	here are no visitors staying over	night here o	n 21 March 2021 → GO TO H/		
Example:	Name	of Person	1 Name of Person	n 2	
	First nam	ie	First name	ROBERT Last name	
This shows how a household with 2 pare	MAR				
and 3 children are	Last nam		Last name SMITH		
related to each other	SMI	ın			
DO NOT write			How is Person 2 related to Person:	1	
in this section -			Husband or wife	Z	
Provide details			Legally registered civil partner		
of members of the			Partner		
household			Son or daughter		
in the section			Stepchild		
BELOW ↓			Brother or sister (inc half-brother or half		
65	(0.00		(2)		
me of Person 1	Name of Person 2		Name of Person 3		
name	Last name		Last name		
: name					
ENTER NAME OF PERSON 1 HERE AS IN QUESTION H3	How is Person 2 related to Person:	1	How is Person 3 related to Person:	1 2	
	Husband or wife		Husband or wife		
	Legally registered civil partr		Legally registered civil partner		
	Legally registered civil parti		3 , 3		
·	Partner		Partner		
	Partner Son or daughter		Partner Son or daughter		
IF YOU LIVE ALONE	Son or daughter		Son or daughter		
IF YOU LIVE ALONE GO TO H7	Son or daughter Stepchild Brother or sister (including		Son or daughter Stepchild Brother or sister (including		
	Son or daughter Stepchild		Son or daughter Stepchild		
	Son or daughter Stepchild Brother or sister (including half-brother or half-sister)		Son or daughter Stepchild Brother or sister (including half-brother or half-sister)		
	Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister Mother or father		Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister Mother or father		
	Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister		Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister		
	Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister Mother or father Stepmother or stepfather Grandchild		Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister Mother or father Stepmother or stepfather Grandchild		
	Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister Mother or father Stepmother or stepfather		Son or daughter Stepchild Brother or sister (including half-brother or half-sister) Stepbrother or stepsister Mother or father Stepmother or stepfather		

Appendix A2: Cluster number selection: Inertia and dendrogram



DendrogramPartition into 2, 5, 6 or 7 clusters



Appendix A3: Cluster descriptions

Interpretive notes for each graphic

Top left panel

The percentage of households in the cluster for each type of tie.

Bottom left panel

The proportion of households in the cluster containing each type of family nucleus and single persons.

Note: The lighter colour indicates households with only one nucleus; the darker colour represents households with more than one nucleus.

Top right panel

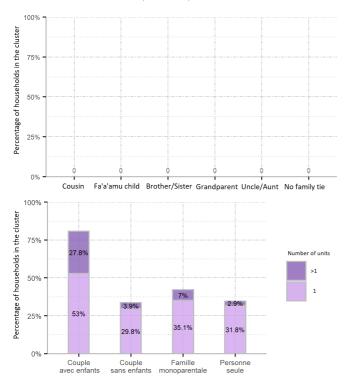
The proportion of multigenerational households (spanning three generations or more) in the cluster, including the middle generation.

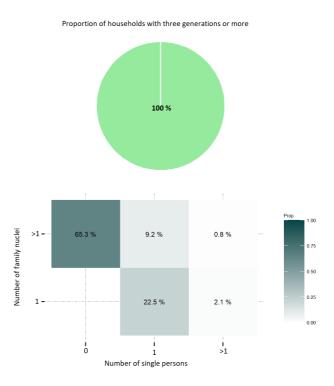
Bottom right panel

The relationship between households containing no/one/multiple family nuclei and the presence of no/one/multiple single persons (percentage).

Cluster 1: Multigenerational lineage households

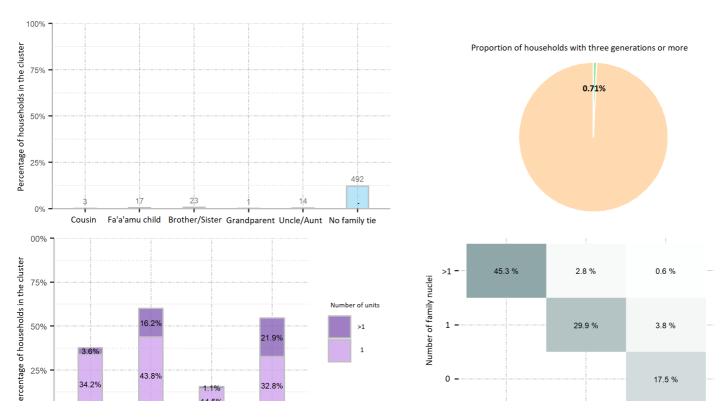
N = 7008 households (35.59%)





Cluster 2: "Couples with relations" households

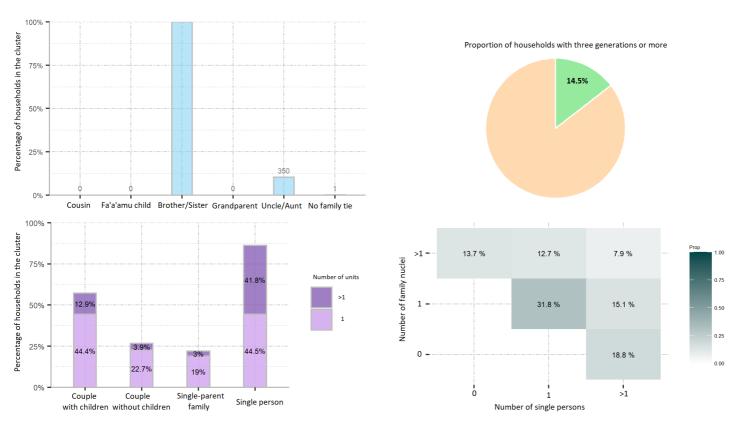
N = 4058 households (20.61%)



NZPR Vol 49 (2023): Fardeau, Lelièvre and Trabut

Cluster 3: Sibling households

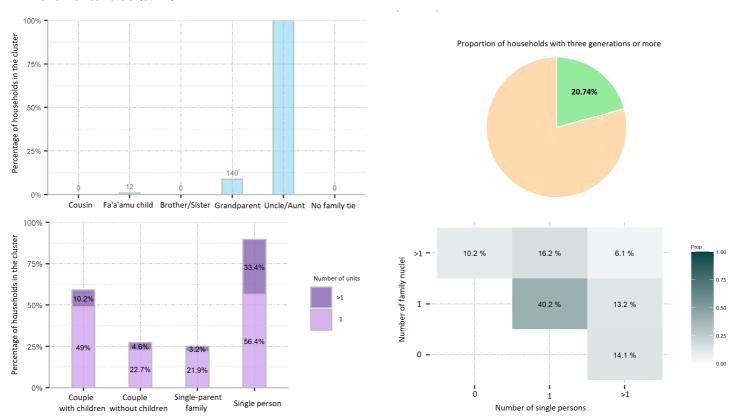
N = 3413 households (17.33%)



NZPR Vol 49 (2023): Fardeau, Lelièvre and Trabut

Cluster 4: Uncle/aunt households

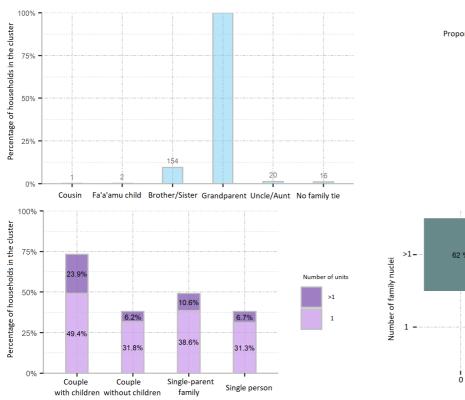
N = 1615 households (8.2%)

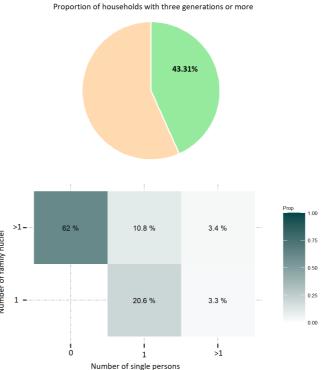


NZPR Vol 49 (2023): Fardeau, Lelièvre and Trabut

Cluster 5: Skip-generation complex households

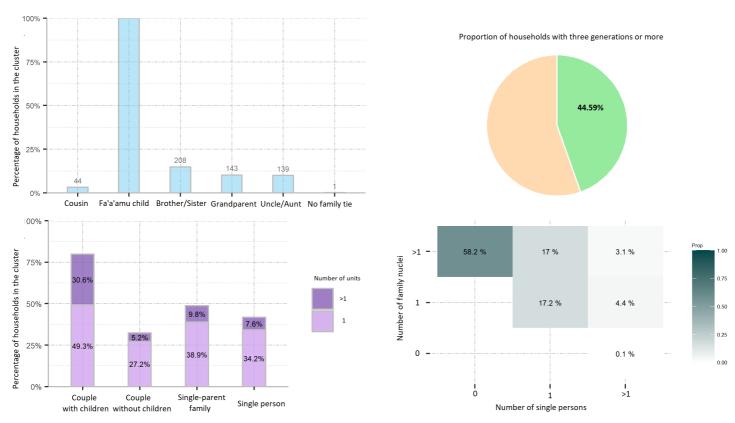
N = 1630 households (8.28%)





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

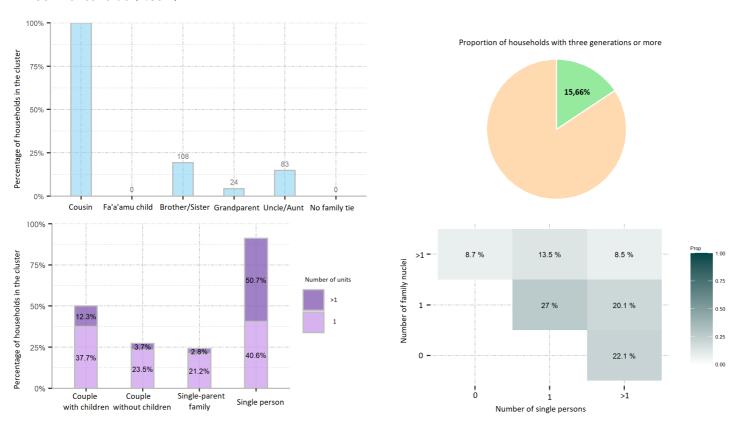
N = 1404 households (7.13%)



NZPR Vol 49 (2023): Fardeau, Lelièvre and Trabut

Cluster 7: Cousin households

N = 562 households (2.85%)



NZPR Vol 49 (2023): Fardeau, Lelièvre and Trabut