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LIVING ARRANGEMENTS AND CONSUMPTION. PLEAD FOR LIFESTYLE ORIENTATED MARKET RESEARCH

NORBERT F. SCHNEIDER, DORIS ROSENKRANZ AND KERSTIN HARTMANN

1. Thesis

Families, sitting under an apple tree, are eating margarine and are looking forward to get their building society savings agreement. Singles, on the other hand, love chocolate light, sports and candlelight dinner. They are despairing because of non-shining glasses reducing their chances of finding a partner at the marriage market. Reality is as simple as that in advertisement – and partly also in market research, where private living arrangements often are treated undifferentiated. Clichés are surviving although social reality has changed. Family sociology has shown in the last years

- that there is a growing diversity of household types and
- that „the“ family household or „the“ single household never existed as a homogeneous group (see e.g. SCHNEIDER, ROSENKRANZ, LÄMMER 1998).

Looking at the present situation of private living arrangements in Germany, a “family” consisting of a couple and its children is still the most frequent household type. Every second person between age 25 and 55 lives in a family of this kind. Besides, other non-conventional household types emerged which is leading to a growing dynamic of living arrangements during the life course: Non-conventional living arrangements are chosen before, after and partly in place of marriage – often temporary but sometimes permanently. Non-marital unions, single households or single parenthood are now common options for the organisation of the individual life, not being stigmatised anymore.

The central question is: Does the change of household structures, demographic structures and living arrangements affect private consumption patterns? Do private living arrange-
ments have their own specific consumption patterns? Which factors are relevant in this context? These questions are to be answered in the following.

Our paper is an attempt to transfer knowledge of family sociology to approaches in market research. We want to show the potentials and limitations of an approach considering living arrangements in market and consumption research. From our point of view the idea of allowing for the effects of living arrangements is not an alternative but a supplement to other approaches, such as lifestyle orientation.

In our opinion, in market research up to now only little attention is given to the influence of living arrangements and the process of family formation on consumption and if this aspect is considered, often obsolete concepts are used. In our opinion it is possible to reach higher efficiency of the instruments in market research, i.e. better market segmentation and better specification of target groups by including characteristics of private living arrangements. Therefore this paper pleads for more interdisciplinary co-operation between marketing research and sociology.

In present research on consumption (see Rosenkranz 1998) private living arrangements are referred to only on a very rough and undifferentiated level. Moreover studies dealing with living arrangements are often including:

- obsolete approaches (e.g. the theoretical model of a very rigid family life cycle)
- undifferentiated operationalisations (e.g. description of household structures by using the number of household members) and
- insufficient inclusion of attributes (e.g. transitions in family life).

Therefore it is not possible to get a valid representation of the reality of living arrangements and analyse their influence on consumption sufficiently. Repeatedly reported results showing only little influence of living arrangements on private consumption are not due to their irrelevance but to the insufficient representation of these living arrangements.

Changes of family and household structures and – more general – in the way of living being observed in the FRG and in most of the other western industrialised societies are not taken into account, neither in regard to their expansion nor to their significance. This change is often referred to as pluralisation of living arrangements or as individualisation. We find three central aspects of these changes:

- The morphology of household structures has changed: Apart from family forms based on marriage other living arrangements like non-marital unions, singles, LAT (Living-apart-together) or voluntary childless couples have emerged. At the moment
more than every third person in younger age groups is living in a non-conventional living arrangement.

- The internal differentiation of living arrangements, having similar external structures, increased, leading to a reduction of the power of morphological attributes (e.g. marital status or number of household members) to tell something about the living conditions of people.

- The dynamic of life courses has changed: Living arrangements are considered less often on long-term perspectives but are more and more linked to a certain phase of life. This leads to new types of modern life course. It is typical for them that more different forms of living arrangements than in the past are following after each other and that more often changes occur between them. As a consequence the life span people are spending in a family has shortened.

In this regard lifestyle orientated consumption research should be based on the following assumptions and theses:

- Household context and the position in the process of family formation as well as changes of living arrangements do have a long lasting effect on consumption behaviour. In this context structural attributes of living arrangements are important in a more complex way than market and consumption research has assumed up to now. For example simple differentiation by marital status doesn’t yield to relevant results. There are other criteria having to be recorded more differentiated as well. When looking at the consumption behaviour for example, not only the total sum of the household income is important, also the number of people, who are earning this money have to be taken into consideration.

- As a consequence of their structural attributes, specific living arrangements are leading to specific patterns of consumption. Type and structure of these patterns are formed further by other attributes especially age, income and attitudes.

- Morphological attributes are loosing their significance: Equal external structures allow only little conclusions about the reality of a living arrangement. To get a adequate idea of a certain living arrangement, its internal structures and its position in the process of family formation are getting more and more important. For the private demand for technical household equipment is quite different for example, if a non marital union consists of two unmarried or two divorced partners. Furthermore it is important that "classical" structural categories like "singles" or "single parents" are hardly useful because they assume similarity of the living context where heterogeneity is dominating. For example one cannot assume that every person in a one-person
household is a single, i.e. doesn’t have a partner. According to latest results, every third person aged 25 to 45, is living alone, but has a partner living in a different household (see *SCHNEIDER* 1996).

- Life course perspective: Living arrangements not only have to be seen as structural categories but at the same time as phases of life – and this in two aspects: Living arrangements are not static but very dynamic and living arrangements are corresponding with the educational and professional career and the process of family formation. Another example: Non-marital unions differ in duration and in their position in the process of family formation: Young non-marital unions mostly have separate budgets, elderly non-marital unions do often have separate budgets and non-marital unions with the intention to get married and to have children mostly have a common budget (see *VASKOVICS, RUPP, HOFFMANN* 1997).

- Cross-household perspective: More and more living arrangements are existing independent of a household. This is especially true for partnerships ("living apart together") but also for families who are more and more often organised as ego-centered multilocal networks, with relevant intergenerational relationships (e.g. to grandparents).

- In many studies children are only included up to the age of 14 or 18, older children living in and/or outside the household being systematically neglected. Considering the numerous transfer benefits especially from parents and the increasing duration children are living at home with their parents, that procedure excludes a main part of reality.

- Apart from realised purchases it is also important to look at the decision making processes of buying in connexion with living arrangements. There is a lack of analyses which are examining more than decision-making processes of married couples. Do married couples without children have the same decision making-processes as childless non marital unions? How are single parents deciding what to buy?

To sum up, the potentials of a lifestyle orientated consumption research are as follows:

- **Possibilities:**
  - Better coverage of the diversity and heterogeneity of living arrangements and life courses
  - Differentiated consideration of attributes characterising living arrangements and therefore also the individual reality of life
Living arrangements and their relevant influence of consumption are seen in the context of societal structures and individual preferences and attributes.

- Potentials for market research:
  - Clearer specification of target groups by few additional and easily measurable attributes
  - Better segmentation of the market consisting of household and living arrangements
  - Improved possibilities for integrated concepts of marketing
  - Improved possibilities to forecast the development of future consumption in many of its spheres
  - Increase of explained variance by the means of a more valid and more differentiated representation of reality.

- This leads to three questions in analysing the GfK data:
  a. Are there differences between sociologically defined living arrangements in regard to the consumption of selected products?
  b. What influence do familial transitions (e.g. birth, separation, a new partnership) have on consumption?
  c. Are the available data of the consumer panel appropriate to answer these questions?

The first question is central for this article. Before going into detail we want to sum up some of our previous empirical results:

- Household income is important for the extent but not for the structure of consumption
- "Classical" determinants like age, number of persons in the household, age of the youngest child and employment status of household members which are usually being analysed do have an independent influence on consumption but its nature and extent depend on other specific attributes of the living arrangements (effect of interaction)
- Two attributes of living arrangements were especially appropriate for explanations:
  - The biographical position, i.e. the age context of living arrangements
  - The position in the life course or in the family formation process, i.e. in relation to the individual succession of different living arrangements.
2. The creation of types of living arrangements with the data of the consumption panel

By means of an explorative method it is to be tested to what extent consumption of certain goods can be explained by an effect of private living arrangements. Using the example of a chosen product, it has to be shown that its consumption in different – theoretical and empirical relevant – living arrangements differs significantly. In the following we will report on the formation of living arrangements, the selection of specific products and their application in the analysis.

We choose the data of ‘Panel 6’ of the GfK consumption panel, because it contains more information on household structures than ‘Panel 1’. The available data were only collected once in January 1st 1995, so information about changes of the household structure during 1995 is not available. The decision for Panel 6 leads us also to a restricted selection of consumer goods which can be used for the analysis. These consumption data on the other hand, are available for the whole year of 1995.

The data basis consists of 4638 households. To homogenise the household sample in regard to employment status we excluded households where the main income earner is not employed or without any profession, as well as old age pensioners, retirees, pupils, children, housewives, unemployed widows\(^1\) and persons older than 60\(^2\). Afterwards 2476 households are remaining.

Based on these 2476 households we defined living arrangements relevant in family sociology, using mainly the aspects of partnership and parenthood as indicators. Additionally we considered the degree of institutionalisation of the living arrangements, although only distinctions between „married“ and „not married“ were possible, because of small numbers. Finally only three variables were suited for modelling living arrangements, i.e. size of household, marital status of the head of the household and the number of children under 18 years. The consequence of this insufficient information leads to the fact that the assignment of the households to specific living arrangements often were made by reasons of plausibility. Although these assignments are valid in their results, there is no final security in having classified every single household in the right way. As an example the case of a married couple without children shall be explained. In this case, we assume that in a 2-person-household with no children the statement "the household leading person is

\(^1\) see var36.

\(^2\) Because of unspecific definitions household leading persons as well as heads of the household over 60 years are excluded.
married" can be completed to "the household leading person is married to the second person who lives in the household". Finally, the following living arrangements were defined:

- **Single households**: Persons living in a 1-person-household (n=324)
- **Non-marital unions without children**: 2-person-households where the household leading person is not married and where no children are living (n=134)
- **Married couples without children**: 2-person-households where the household leading person is married and where no children are living (n=442)
- **Married couples with children under 18**: Households where the household leading person is married and where – after subtraction of the number of children under 18 from the total number of persons in the household – a 2-person-household is left (n=968)
- **Non-marital unions with children under 18**: Households where the household leading person is not married and – after subtraction of the number of children under 18 from the total number of persons in the household – a 2-person-household is left (n=44)
- **Single parents with children under 18**: Households where – after subtraction of the number of children under 18 from the total number of persons in the household – one person is left (n=56)

It was possible to classify 1968 households according to these groups. The remaining 508 households are mainly consisting of two types of living arrangements: a) Households where couples with children under 18 and other persons are living (n=196). Even though it can be assumed that in these households couples with children under and over 18 years are living, it is not possible to prove that, so they have been excluded from the analysis. b) There is a similar situation with households where the main income earner is between 45 and 59 years old, the household leading person is married and is living in a 3 or 4-person household (n=267): In this case it is likely that the household consists of a couple with its children over 18 but it is also possible that it is a couple with its older parents. These examples show that no clear assignment is possible because of the restrictions of the data.

Summarising the construction of living arrangements we can state that the available data are only of limited use for our purpose. Important attributes of household structure have already been missing in the concept of the survey. It adds to this that relevant attributes which were collected in Panel 6, e.g. the exact age of the children and the gender of the
household leading person, were not available in the data ZUMA passed on, further restricting the possibilities of analysis. Another problem can be seen in the unclear definition of the variables “household leading person“ and “main income earner“. We cannot specify who is assigned in which case to which variable and in how many cases the same person is used for both variables. In addition to these difficulties, in most cases, relevant information is available only for one of these concepts. As an example, due to this, we had to use the information on the profession of the main income earner on the one side, and on the other side we had to use the information on the marital status of the household leading person to define different living arrangements. In spite of these difficulties we were able to come up with a differentiated representation of theoretical relevant living arrangements which most of the households could be clearly assigned to with high probability.

One problem that could not be solved in a satisfactory way with the data at hand was the specification of transitions between the different living arrangements. Although data from January 1996 were made available, single members of the household could not be identified, so only few events could be assigned uniquely. Because of the very small number of cases resulting of this approach this idea had to be cancelled.

As a conclusion of this step of the analysis we may note that it is possible to define relevant living arrangements with the panel data but that the differentiation of household structures could not be pursued to the level that would be concerned necessary on theoretical reasons.

With these living arrangements we wanted to explore, on the basis of a selected product, whether there was an independent influence of the living arrangements. As a consumer good with which to test our hypotheses in an exemplary way, we selected crispbread. This choice may be justified on theoretical grounds because of the fact that crispbread as a convenience product covers different aspects of positioning. For example personal scopes like health, fitness and diet, but also durability seem to play an important role for the buying decision. By the dimension of durability we not only mean to indicate the actual durability of that product but also dimensions like immediate and quick possibilities of consumption. These different aspects of positioning should lead to a different consumption of crispbread in the different living arrangements. Furthermore we selected crispbread because it is a very homogeneous product without any restrictions of availability in retail shops or of high prices. After the comparison with other products, leading largely to similar results, an analysis of crispbread is preferable because the results in this case were particularly significant and well interpretable, which adds to the exploratory character of this study.
The consumption of crispbread was aggregated for each household over the whole year 1995 and then we calculated the consumption per-capita of the household. Children under 6 years were weighted with 0.5 because we assume that crispbread is consumed rarely in that age.

3. Living arrangements and consumption: An empirical example

Before the presentation and comparative interpretation of our results, we are going to introduce the statistical method we choose. The analyses should answer the question, if the living arrangements do have an independent influence on the consumption of particular products. In other words: Do the different living arrangements, which have been constructed on the basis of theoretical considerations, yield significant differences in the consumption of crispbread? Considering the measurement scales of the selected variables, we note that the grouping variable is nominal and the independent variable is metric. Furthermore, there is only one dependent variable\[3\] so the method of choice is to perform a one-factorial analysis of variance (ANOVA). With the help of the ANOVA we are to find out, if there is a significant difference in the average per-capita-consumption of crispbread between the different living arrangements.

The ANOVA was carried out on different theoretical levels. It starts with two groups in each case, which differ in the status of partnership (yes/no) and parenthood (yes/no). In the following analyses with more than two groups we applied a Tamhane-T2 test after the ANOVA to test for differences between the subgroup-means. This test is based on a t-test and is a comparison in pairs of the means of subgroups. It is suited in our case because the groups to be compared may be of different sizes and it does not require further assumptions as to homoscedasticity between the groups\[4\].

This step is followed by a univariate analysis of variance with several factors together in one model, which does not only estimate main effects but additionally takes into account for interaction effects between the factors. We have chosen a factorial design with unequal cell frequencies, where the calculated sums of squares of one factor was corrected for all the other effects.

To test our hypotheses we have applied several steps of analysis. We started with comparing the levels of partnership and parenthood. Next we have extended our analysis to

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3 Which for example excludes a discrimination analysis.
4 The test was always done with a significance level of 0.05.
the classified living arrangements. Finally we added the variables age and occupational status to broaden further the context and validity of our findings.

The first two comparisons show, that persons living in a partnership consume less crispbread than those living alone\footnote{Level of significance: 0.05.}. This might be caused by the durability aspect we have already discussed, which is of particular importance for small households. As to the aspect of health and diet we cannot provide an interpretation at this point due to the missing information of the age of the consumer, as we assume that the diet aspect is especially important for younger people still being active at the marriage market, while older people are more concerned with their health.

Within the parent-level we compared households with and without children. People in households with children consume significantly less crispbread than those without children. Here again we can only speculate on the reasons. On the one side, one can say that in these households are no problems of durability, as in less time more food is consumed than in those without children, leading to a higher rate of „normal“ bread. An alternative could be, that families with children consume more cooked meals and have less small meals, which leads to a reduced demand for crispbread too.

After these coarse comparisons we combined the parenthood- and partnership-status and additionally took into consideration the degree of institutionalisation of the living arrangements, which lead to the above described groups. As a first result one can say, that there are differences between the subgroups. Graph 1 displays the means as well as the upper and lower values of the confidence intervals. It gives an impression on the significant differences. By the Tamhane-T2-Test we have checked them in more detail. First of all it is remarkable that singles and married couples without children consume substantially more crispbread than all the other groups. The differences between each of these two groups and the other living arrangements are all significant. This finding is not repeating the results of the parenthood analysis, because these would suggest a higher demand of non-marital unions without children.

The relatively big confidence-intervals for singles and the married couples without children - compared to those for single parents as well as non-marital unions without children - cannot be explained by a too small number of cases. Obviously these groups have a larger intra-group heterogeneity than for instance married couples with children. This can be taken as an indication for other relevant influences.

\footnote{Level of significance: 0.05.}
Graph 1: Mean crispbread demand by living arrangements

Source: ZUMA data of GfK consumer panel 1995, own calculations

The next question to be answered is: Does the effect of living arrangements persist after controlling for other variables and/or do these additional variables have a unique and perhaps an even greater influence on the differences in crispbread consumption? We included occupational status and age into our model, which are essential components of the "Lebensweltkonzept" of KLEINING and PRESTER (1998). Using the information on the occupation of the main income earner (the person who contributes the largest part to household income), a rough indicator of occupational status was created—distinguishing between lower and higher occupational status. In order to include age, all the cases were divided into two groups: households with a main income earner younger than 40 years and respectively those with a main income earner aged between 40 and 59. To get ade-

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7 Lower occupational status-group: farmer, lower/middle civil servants, instructed employees, semi-skilled workers, skilled workers, apprentices. Upper occupational status-group: Self-employed, civil servants in higher service, qualified and leading employees, qualified skilled workers.
quate group sizes – especially for the combination with living arrangements – we had to decide for such a rough differentiation.

Once more, the influence of occupational status and age was analysed separately at first. As a result no significant difference between the two status groups could be found. This confirms our assumption that crispbread is a product with almost no access-barriers. On the other hand results are different when comparing the age groups. We found significantly less crispbread consumption in households with a main income earner younger than 40 years than in households with older income earners. This might indicate a higher relevance of the health aspects in crispbread consumption than of aspects of diet. At the same time this finding implicitly refers to the position in the family life cycle and therefore stresses the importance of the living arrangement.

*Graph 2: Mean crispbread demand by living arrangements and age groups*

![Graph showing mean crispbread consumption per household member in g across different living arrangements and age groups.](image)

Source: ZUMA data of GfK consumer panel 1995, own calculations

To provide answers to this sort of questions, we now combined both variables with our concept of living arrangements. As a consequence both combinations, living arrangement - status group as well as living arrangement - age group show significant differences. In
Graph 3 the influence of age can be seen immediately. In living arrangements without children the demand for crispbread in households with an older main income earner is clearly higher than in households with younger income earners. The effects are disappearing in living arrangements with children. Moreover the result is still valid, that there are differences between living arrangements especially in regard to groups with and without children in the household. So age has an additional effect in special subgroups while the influence of living arrangements does not disappear.

Finally, looking on the influence of occupational-status in combination with living arrangements one gets very different results (see Graph 3): Differences between living arrangements are remaining unchanged, without any further effects of differentiation by addition of occupational status. Only when looking at married couples and non-marital unions with children small but not significant differences can be observed.

Graph 3:  Mean crispbread demand by living arrangements and occupational status

Source: ZUMA data of GfK consumer panel 1995, own calculations

8 To achieve a higher clarity of the presentation we skipped the borders of the confidence-intervals.
9 Significance levels are shown in the appendix.
The three largest groups – singles, married couples with and without children – finally have been subdivided by age as well as by status (see Graph 4). According to our former results, it is to be recorded that married couples with children show the lowest level of crispbread consumption of all three groups, without any further observable differentiation by age or status. Another confirmation of our findings presented above is the fact that age but not status has an effect in combination with singles and married couples without children.

*Graph 4: Mean crispbread demand by selected living arrangements and age- and status groups*

Source: ZUMA data of GfK consumer panel 1995, own calculations
In a last step an univariate analysis of variance with the three factors living arrangements, age and status together was carried out to explain the consumption of crispbread. Although the model explains only a very small part of the variance, it is to be recorded, that only the variable “living arrangements” provides a significant effect in the explanation of variance. Neither age nor status nor the different possible interaction effects have a significant influence on crispbread demand.

It is to be concluded that our hypothesis of a genuine influence of living arrangements on the demand of crispbread can be confirmed. Two considerations may help to explain the findings: The durability of crispbread is relevant because the demand is higher in smaller households with only few members. Secondly, the possibility of substituting cooked meals by foods easy to consume, seems to be relevant for the differences between living arrangements with and without children. With regard to the age effects the influence of the living arrangements is still present, but within some subgroups the crispbread demand was substantially higher in the upper age groups. This leads to the assumption that the aspect of healthiness, which is more relevant for older persons, is more important than the aspect of diet.

All in all this means:
- Living arrangements do have an influence on the demand for crispbread;
- Age does have an effect as a moderating variable;
- Occupational status doesn’t have any influence on crispbread consumption.

4. On the capacity of the data for an orientation on living arrangements in market-research

In connexion with the demands of a orientation on living arrangements in market research the ZUMA-file of the GfK-Consumer-Panel in its present form is only of limited use. On the one hand relevant variables, which have been collected, are missing in the available sample (e.g. gender), on the other hand important variables were not collected at all (e.g. children over 18 in the household). These limitations considerably prevent the specification of differentiated living arrangements.

An especially important restriction in the use of the sample is, that transitions in the family life cycle cannot be depicted at all or only very roughly. Birth, the moving of children out of the parental household, divorce resp. separation of partners and the emergence of new partnerships cannot be represented validly by the present data, although, in our conviction, the consequences are highly relevant for consumption. The same holds
true for the positioning in the family life cycle. While product demand as the variable to be explained is longitudinally recorded, longitudinal information on demographic household structures as the central explaining variable is missing.

Nevertheless our results show, that a differentiation by living arrangements is reflected in differentiated consumption styles. Private living arrangements constitute specific consumption styles – independent of other factors like age, occupational status and income.

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References


**Appendix**

*Table 1: Significant differences of crispbread demand between living arrangements with and without children*

<table>
<thead>
<tr>
<th></th>
<th>Single with children</th>
<th>Married couple with children</th>
<th>Non-marital union with children</th>
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</thead>
<tbody>
<tr>
<td>Single</td>
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<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Married couple without children</td>
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Level of Significance: 0.05, without empty rows and columns

*Table 2: Significant differences of crispbread demand between living arrangements and age*

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<th>Single, older than 40 years</th>
<th>Married couple without children, younger than 40</th>
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<tr>
<td>Non-marital union without children, younger than 40 years</td>
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<td>Single, younger than 40 years</td>
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<tr>
<td>Non-marital union with children, older than 40 years</td>
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Level of Significance: 0.05, without empty rows and columns
Table 3: Significant differences of crispbread demand between living arrangements by occupational status

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<th></th>
<th>Single, upper status group</th>
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<td>*</td>
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<tr>
<td>Married couple with children, upper status group</td>
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<tr>
<td>Non-marital union, lower status group</td>
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</tbody>
</table>

Level of Significance: 0.05, without empty rows and columns

Table 4: Significant differences of crispbread demand between selected living arrangements by age and occupational status

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<thead>
<tr>
<th></th>
<th>Single, upper status group, older than 40</th>
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<th>Married couple without children, upper status group, older than 40</th>
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</tr>
</tbody>
</table>

Level of Significance: 0.05, without empty rows and columns