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Dinner in France: An Enduring Dietary Synchronism

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Dinner in France: an enduring dietary synchronism

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Abstract

In this paper we study the place dinner occupies in the evening in France and in particular its scheduling with respect to other activities. The analysis uses data from time-use surveys conducted by the French Institute for Statistics (Insee) in 1986 (N=9975) and 1998 (N=8251). In order to take advantage of the sequential nature of time-use data, we apply Optimal Matching Analysis, a method borrowed from molecular biology by Andrew Abbott. In conjunction with cluster analysis, this method allows us to distinguish between ten types of organization of evenings and to analyse how dinner is fitted in with other activities in the evening schedule. These different types are highly correlated with gender, age and social class. In contrast to arguments suggesting the end of traditional organization of mealtimes, the comparison between the results of 1986 and 1998 demonstrates a great stability of the dinner sequence and a continuing importance of mealtimes whatever the social group we consider in contemporary France.

Keywords: Time use, Food habits, Optimal Matching Analysis

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Introduction

Meals represent key moments in everyone's daily schedule, and a number of social practices have established themselves around the times when we eat. Decisions such as whether to eat an evening meal at home or to eat out, to eat alone or with a partner or friend, are influenced both by custom and the age of the individual concerned. The fact that we cannot survive without food means that every individual has to reserve a part of his daily temporal capital for eating; everyone has to fit this activity into their daily schedule. Whether we are grabbing a sandwich or sitting down to a formal banquet which may last several hours, every meal or snack we eat is influenced by the social, spatial and time constraints which frame it.

When the idea to investigate the organization of everyday activities was developed in around 1965, during a project led by Alexandre Szalai, the results of the research showed the attachment of the French to their three main meals, eaten at about the same time by a high proportion of individuals (Szalai, 1972). The vast majority of the French were shown to be particularly regular in their eating habits.

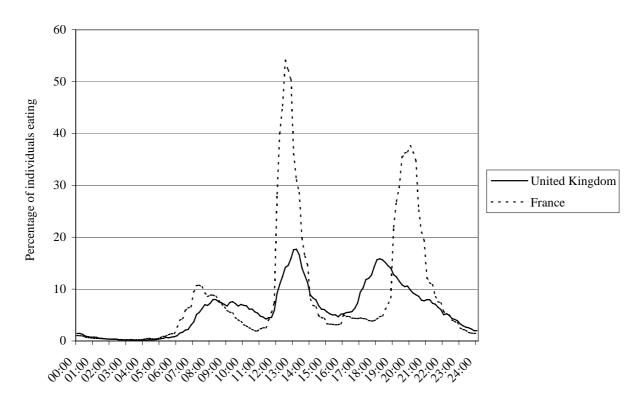
As early as the late nineteen seventies, C. Fischler had already noted a very different state of affairs in other countries such as the United States. He argued that in these countries meal times, as shared moments when the whole family would gather together, had virtually become a thing of the past; Fischler even coined a term to describe this new phenomenon: "gastro-anomie" (Fischler, 1979). This disappearance of the established structure of meal times applied not only to the sequence of courses and what was eaten, but also to the regularity of meals. Similar developments were being observed in Europe and it seemed to be only a matter of time before French dietary synchronism would become the next victim of this trend.

From the 1980s onward studies of diet and social time have examined what M. Aymard, C. Grignon and F. Sabban (1993) termed a "leitmotif of dietary modernity": the theory of the "crisis" of traditional meals and their "destructuring". According to these authors, the French dietary "model" is disappearing, a victim in particular of the increase in snacking between meals. However suggestive these arguments may be, they need to be qualified: it seems that, despite the fact that food no longer plays the same role as it did in the years following the Second World War, and that there was, during the 1980s, "a progressive devaluation of dietary practices" (Pynson, 1987), there is still support for the view that in France the daily schedule of main meals survives more or less intact (Grignon, 1987; Herpin, 1988; Grignon, 1998). Thus, as Larmet (2002) observed, the French 1986 and 1998 Time Use Surveys reveal a high degree of synchronization of French

dietary practices around three daily peaks. The traditional meal times, dinner time in particular, are when the vast majority of French people still do most of their eating.

Graph I:

Meal times in the UK and France



Key: at midnight, in the UK, 1.4% of individuals are eating. Source: UK 2000 Time Use Survey, ONS, and French 1998-1999 Time Use Survey, Insee

Dietary synchronism is important because it has implications for French people's health and body shape. The percentage of French people, particularly French women, who are overweight is the lowest in Europe (de Saint Pol, 2006). Moreover, as C. Fischler (1996) has noted, it is highly likely that the tendency to eat at "regular" times contributes not only to the fact that the French are slim, but also to the low incidence of heart disease in France. The term "regular" in this context indicates a dietary model where most food intake takes place during the three main daily meals; it is an important feature of the way French people organize their day. In the United Kingdom, for example, there is no such pattern (see graph 1). Although we can observe three peaks in the UK curve, they are relatively low; far fewer individuals eat at the same times and there is nothing which could be called

dietary synchronism. French people's daily schedules, on the other hand, while including a wide variety of different activities, reveal that the vast majority of individuals eat their meals during the same time slots. This idea of dietary regulation suggests that meal times are influenced by various social factors. These can be investigated by looking at the relationships between time and diet, and by identifying the constraints which influence the choice of meal times.

From this point of view, it is essential to locate each meal in the context of the activities which precede and succeed it. Individuals are obliged to fit eating into their daily schedule; in so doing they structure their day, dividing it into distinct time periods: morning, afternoon and evening. On the other hand, the timing of meals may also be determined by what we choose to do before and after eating (watching the 8 o'clock evening news, for example). So, in the light of the above, how can we explain the fact that most French people seem to eat their meals at the same times?

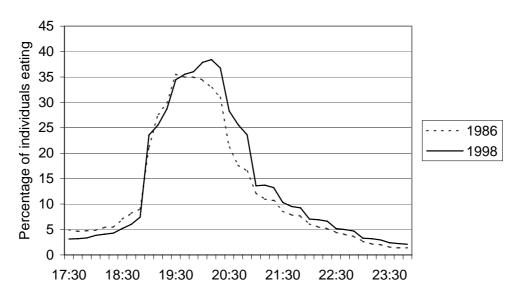
This synchronization is all the more important since, if we add the time spent on the household tasks associated with each meal (cooking, washing up, etc.) to the time actually spent eating, the task of feeding ourselves can certainly be considered one of our main daily activities. This question has two aspects: we must firstly understand how meals fit in with other daily activities and how individual constraints contribute to this synchronization, and secondly investigate the stability of these eating patterns. In order to answer these questions we need to study something which is often neglected when dietary rhythms are analysed: the series of activities that frame mealtimes. We propose to do this by focusing on the evening meal.

Dinner is rather different from the other daily meals (de Saint Pol, 2005). There are fewer objective constraints on its timing than on the choice of breakfast time, which has to be fitted in between the time we get up and the time we leave for work. When we have dinner is also less forced upon us than when we take our lunch break, which is generally a pause in the working day imposed by our employer or by daily work rhythms. Dinner is also one of the few remaining times when households have the opportunity to practice sociability as a family (Herpin, 1988). The 1986 and 1998 Time Use Surveys both revealed that most people ate dinner between 7 pm and 9 pm (see chart II). In 1998 the amount of the French population eating dinner peaked at 38%, at shortly after 8pm; this occurred a little later than the 1986 peak.

The fact that people's daily schedules are very similar is evidence of the social nature of the organization of meal times. Meals are fitted in between a number of social times. Deciding what time to eat does not only depend on the body's rhythms and the perception of hunger. Meals are fitted in between other activities which are themselves subject to time constraints. To properly understand French meal times we need to treat them as one in a series of activities. By focusing on the period during which individuals may eat dinner (6.50pm – 9.30pm), divided into sixteen ten minute segments, this study attempts to describe how dinner fits into the evenings of the participants in the 1998-1999 Time Use Survey. Then by comparing these results with data from the 1986 survey, we will analyse the evolution of practices during the period.

Graph II

The peak times for eating dinner



Key: In 1998, 3.1% of participants noted that they were eating at 5.30 pm. Source: French 1998-1999 Time Use Survey, Insee.

Data and methods

The Time Use Survey provides us with an unusually rich source of data for investigating the "destructuring" of meals. There is in France a lack of data available in this area of research, and what data there is tends to be too unreliable to use, in particular when researchers have asked individuals to recall and evaluate the amount of time they spent eating, or the number of times they ate the previous day. In the Time Use Survey, each individual polled recorded their activities over a twenty-four hour period, giving researchers access to a detailed record of exactly when participants ate. Each activity recorded in the daily diary can be considered as part of a sequence of

activities, which is more or less the way participants constructed and thought of their daily schedules .

The French 1998 Time Use Survey, conducted by the French National Institute for Statistics (Insee), involved the participation of 8,000 households. It was run along similar lines to earlier surveys carried out in 1966, 1974 and 1986 and required each participant to make regular entries in a diary. Throughout the day participants made a note of what they were doing, indicating the nature of each activity they were engaged in, and when they started and finished it. Each day, starting from midnight through to midnight the following day, is divided up in the diary into a series of ten minute slots. The participant must also indicate the following: where the activity is being performed; if it is being performed in transit, details of the journey being made; who if anyone is accompanying the participant; as well as the purpose of the activity (personal, professional, for another household, for the community).

The Time Use Survey was conducted over a year so that results would not be affected by seasonal variations, and so that every day of the week would be equally represented. The sample was selected from a group of 12,000 of the households covered by the 1990 census. All household members aged fifteen or over were asked to give details of their daily schedules. In this way INSEE obtained 15,400 diaries from the members of "complete households", namely households whose members had all participated in the survey. Our data contains a day in the life of each of these individuals. In order to be able to compare surveys and to optimize pairing, this survey was limited to residents of urban areas between the ages of 18 and 64 (N=8251 for 1998 and N=9975 for 1986).

The data collected presents us with a number of problems. The participants did not all fill in their diaries in the same way. Some provided a great deal of very detailed information; others just noted their main activities, which meant that although the data gathered constituted a valuable and detailed resource, the amount of information provided varies greatly from one diary to the next. This becomes apparent if we look at the total number of lines written in the diaries: the shortest diary contains 7 lines, the longest 63. The median length is 22 lines. We have therefore to be careful when comparing this data. Moreover, the variables corresponding to the duration of some of these activities are marked by the presence of a mode equal to 0. Indeed, few people go to mass or visit a cemetery, for example. This is not the case, however, for the activity that interests us here. Dinner is mentioned in practically all the diaries, along with the length of time spent on the meal, which is subject to a certain amount of variation. The number of individuals who failed to mention any mealtime as a main activity, 17, was negligible. Besides, the data available for each individual covers one twenty-four hour period. This means that it is difficult obtain an accurate picture of some of the activities, particularly an activity such as fishing, which is often an

occasional pursuit. How can we know whether the activity mentioned was practiced occasionally or on a daily basis? There is no way for us to be absolutely sure of this.

The Time Use Survey is particularly suited to being interpreted in terms of sequences. Because of the protocol used for collecting information from a daily diary, completed by each individual over a twenty-four hour period, the data provided by the survey is recorded in sequential form: in the 1998 survey each day is divided into 144 ten-minute intervals. These correspond to 144 variables which contain the code of the activity carried out by the survey during these ten minutes. In this way, the first of these variables inform us of the activity carried out between midnight and ten minutes past midnight (sleeping in the case of more than 85% of respondents). We have therefore, for each individual, a sequence of 144 component variables, which represents a day's schedule, as recorded in their daily diary. This is data of a new kind, since each of the 144 variables is implicitly linked chronologically with the others. The data requires us to reason in terms of qualitative variables as much as in temporal series.

Although, if we want to obtain an understanding of how dinner is organized, it is helpful to regard people's evenings as a process, it is not possible to observe regularities between individuals by just looking at the thousands of sequences contained in the daily diaries. Analysis of the dynamics of the daily schedules cannot be carried out using standard statistical tools. Models which look at duration, for example, which are often used in such cases, are not suited to solving our problem because they only consider past information, whereas our analysis of schedules, and the placement of meals within them, needs to take the influence of future activities into account. This led us to turn to Optimal Matching Analysis (OMA).

OMA is a technique used to identify empirically a typology of sequences. It was borrowed from molecular biology, where it was originally used to study DNA sequences. Andrew Abbott of Chicago University was the first sociologist to use OMA, in studies of the welfare state and musicians' careers (Abbott 1995, Abbott and Hrycak 1990). Optimal alignment methods enable researchers to assess similarities between thousands of sequences, which each correspond to an individual. From among the multitude of daily schedules it is possible to identify regularities and practices which are characteristic of certain social groups and so to study the temporal organization of their activities. Furthermore, this method compares sequences without attaching particular importance to any of their component elements. Consequently, in this particular study, sequential treatment does not focus on meals to the detriment of other activities, so preventing the establishment of classes being affected by bias in favour of the principal object of enquiry.

Nevertheless the main advantage of this method is that is takes every temporal dimension of the schedule into consideration. Approaches which compare time slot by time slot, although much simpler to set up, cannot give us a picture of the horizontal dimension of sequences: a time difference of ten minutes (ie. just one element) between two otherwise identical timetables leads them to appear to be totally different. The value of this technique is that it can take such time differences into account. For a detailed explanation of this method, see Lesnard & de Saint Pol (2006) or Lesnard (2006).

This study represents the peak times for eating dinner in two ways. The first is the mean sequence of the class, a sequence whose distance from other sequences in the group is minimal and which aims to bring out the differences between classes. In other words it is the sequence which is the closest to all the other sequences: it is at the centre of, and can thus said to be representative of, all the sequences of the group. This first tool is used not only to maintain a sequential chain of reasoning, but also to ensure that the description of the class is an accurate reflection of the actual situation: our database contains at least one individual who recorded the average sequence of activities in his diary. The second tool, aggregate tempograms, on the other hand, presents the behaviour of the all the individuals in the class in a chart representing the total numbers engaged in each activity. It shows the total number of individuals there are in each group.

Results

By applying optimal matching to the 1998-1999 Time Use Survey we divide up the sequences into ten groups. This was found to be the best way of classifying groups in order to ensure their relative homogeneity. Ten groups may seem excessive, but we wanted to identify particular behaviours even if some categories contain only a very few individuals. The size of the different groups varies considerably; some cover practices which are much less common than others (see table 1), so that the largest group (the ninth containing 2021 sequences) contains six and a half times as many sequences as the smallest (the tenth class which contains only 303).

Sequential treatment enables individuals to be regrouped according to similarities in daily schedules, with each group thus constituted displaying a particular way of organizing a given period. In the classification process meals were given no more special consideration than other activities, and it is possible to present each of these classes by looking at the place of dinner within the context of all the activities undertaken.

Table 1 Summary of the classification

Class	Total (%)	Brief description
1	5.8	A meal eaten between periods doing housework
2	12.0	A meal eaten early followed by a lot of different activities
3	7.5	A late meal eaten in a break from doing housework
4	20.8	An evening spent eating a meal and watching television
5	5.4	An evening spent watching television
6	9.4	Eating fitted in during work time
7	6.0	A preponderance of time spent eating
8	4.9	A meal fitted in between leisure activities outside the home
9	24.5	A late meal, eaten after 8 pm after a lot of different activities
10	3.7	Individuals who go to bed early

Striking patterns emerge from the way the groups have been constituted, with three mean sequences being dominated by a single activity extending throughout the period under consideration (see chart III). The mean sequence of class 6 contains only "Work-Study", class 7 "Meals", and class 8 "Going out". These results are a direct consequence of the sequence regrouping protocol and show that it worked well. The other groups display complex variations of the typical evening; the mean sequence, which represents overall trends, does not allow us to appreciate such variations.

The aggregate tempograms (see appendix B) show, on the other hand, the proportion of individuals engaged in an activity during each time slot. In this way, they show vertically the total numbers of all the individuals¹ surveyed and enable a picture of all the activities undertaken by the individuals in a class to be represented. It becomes immediately apparent that for all members of each class evenings are dominated by the same one or two activities. This indicates that the groups are homogenous. If there had been more variety within each group, all the activities would have featured significantly for each time slot. This is clearly not the case. The activity "sleep", for example, is largely absent from the table, except in the entry for class 10. In the mean sequence of this class "sleep" appears from 8:30pm onwards.

¹ For each time slot they are distributed between the following nine activity groups: sleep, meals, work/study, travel time, cooking/ washing/cleaning the house, house and family, leisure activities (other than television and going out), meeting people / entertainment outside the home / going for a walk, television. See appendix A for more detailed explanation of the nomenclature used.

Each temporal sequence of the sample corresponds to an individual whose main social characteristics are known. Using this information, and what we know about the various types of evening, correlations between certain practices and particular socio-demographic profiles appear. It also becomes possible to characterize each group of sequences using four main poles, which each constitute a division between different ways of life: gender, age, activity and the day of the week.

Graph III Mean sequences of the 1998 (1) groups

Class	18:50	19:00	19:10	19:20	19:30	19:40	19:50	20:00	20:10	20:20	20:30	20:40	20:50	21:00	21:10	21:20
1	Housework	Housework	Housework	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Television	Television	Television	Television	Television	Television
2	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Housework	Housework	Housework	Children	Children	Television	Television	Television	Television
3	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Housework	Housework	Housework						
4	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Television								
5	Television	Meal	Meal	Meal	Meal	Meal	Meal	Television	Television	Television						
6	Work															
7	Meal															
8	Meeting															
9	DIY	DIY	DIY	DIY	Meal	Television	Television	Television								
10	Meal	Television	Television	Television	Sleep	Sleep	Sleep	Sleep	Sleep	Sleep						

1. : nomenclature 25 categories of activity ("housework" : cooking, washing, cleaning; "DIY" : DIY, gardening, taking care of pets; "meeting": meeting people.)

Key: at 6:50pm, the individual in the middle of the first class noted an activity classifiable under "cooking-washing-cleaning".

Source: French 1998-1999 Time Use Survey. Insee.

Female ways of organizing still characterized by the place occupied by housework

Housework was one of the main activities in three of the groups produced by the optimal alignment process (see table 2). The majority of members of these groups are female, indicating the survival of traditional ways of organizing meal times. Those whose evenings were of the first and third types spend an average of 53 and 63 minutes respectively doing domestic chores over the period in question. Both groups are approximately

80% female (see table 3). The second class is 65% female. So housework is still a feature of female daily schedules.

Nevertheless the three typically female types of evening correspond to three completely different ways of life. The times when the vast majority of individuals belonging to the first class have their evening meal are highly concentrated in the middle of the period (79% of them are eating at 8:10 pm). Their meal also lasts longer than those of members of most of the other groups (48 min.). The distinctive characteristic of this group is the amount of time spent before and after the meal on household tasks, some of which are related to the meal (82% of members of this group noted an activity of the "cooking-washing-housework" kind at 7:10 pm, which is an hour before the peak time for eating dinner). 80% of this group are either eating or doing housework through every time slot from 7:10pm to 8:50pm, a figure which rises to 99% at 7:50pm. Dinner is clearly one of the main evening activities for members of this group.

Table 2
Activities between 6:50pm and 9:30pm in 1998

In minutes

		Average time spent on the following activities:													
			Average	time spen	t on the f	ollowing a	ctivities:								
<u>Class</u>	eating	cleaning		leisure (not including television and going out)	sleep	Work-study	Travel time	home and family	meeting people, cinema, theatre etc., walking						
1	48	53	46	3	0	0	2	7	1						
2	42	25	20	29	3	5	7	25	3						
3	40	63	9	13	3	3	5	19	3						
4	37	14	88	5	1	1	3	9	2						
5	43	14	84	5	3	2	3	6	2						
6	26	7	11	5	1	86	14	8	1						
7	113	8	11	6	0	1	7	10	4						
8	29	8	11	4	1	2	10	9	86						
9	36	13	21	18	4	7	15	31	16						
10	43	12	25	6	54	1	4	14	1						
Overall	42	19	37	12	4	11	8	17	10						

Key: Members of the first class spend an average of 48 minutes having a meal in the time period between 6:50pm and 9:30pm.

Source: French 1998-1999 Time Use Survey, Insee

Before 6:50pm most of the other activities are present in the daily record of members of this group. From then onwards, with the arrival of meal time, the incidence of these activities goes into a sharp decline, demonstrating the centrality of dinner in the group one evening schedule. In contrast, the period after dinner is more homogenous, being mainly given over to television, an activity which dominates the group one schedules from 8:30pm onwards, when group members start watching either a film or the first programme in the evening schedule. The number of group one television viewers rises to a peak of 99% after 9pm.

Most of the individuals in this group are women. They usually live with a partner, and often have one or more children. Housewives are overrepresented. The group also includes employees and service personnel (see table 4). The positioning and the duration of the meal are influenced by the fact that the person responsible for preparing the meal is often a spouse and mother. The other members of the household (their partner and any children) depend upon this person, whose contribution effectively reduces the time other family members spend on domestic chores.

The main difference between the members of classes one and two regards their age. The women in the second class are younger. The contrast between daily schedules reflects differences in generation as well as age: housework features less prominently in the evenings of the younger group (25 minutes as opposed to 53 for the older group); they also are less likely to live with a partner.

The individuals in this group eat in the early part of the evening. When the meal is over, at no later than 8pm, a wide variety of activities may then be undertaken. These individuals tend to devote the second half of this period to leisure activities, which range from television, music and reading to all manner of activities related to the family and the home (taking care of children, helping them with their homework, etc.). A lot of them also perform household tasks in the intervals between the end of the meal and 9pm. So, as regards the second half of the evening, the wide variety of activities undertaken by this group may be contrasted with the homogeneity of the first group, for whom the activity of watching television dominates. It seems that as people get older they engage in a less varied range of activities.

The third group may be distinguished from the two groups discussed above by the higher proportion of working women it contains (with the number of employees and service personnel being above average). It does, however, also include a significant number of housewives. Higher education graduates, people over the age of 44, and couples with one or two children also feature prominently in this group. This class reflects the kind of family set-up where women come home from their day job then do some housework.

Table 3

The socio-demographic characteristics of the individuals in the ten classes in 1998

											In %)
						Cl	ass					Overall
		1	2	3	4	5	6	7	8	9	10	Overan
Division of individuals by	Men	20	35	20	52	56	62	51	55	53	53	48
gender	Female	80	65	80	48	44	38	49	45	47	47	52
	18 –24 ans	7	17	9	13	21	10	13	20	18	14	15
Distribution of	25 –34 ans	17	24	24	18	15	25	24	26	26	19	22
individuals by age groups	35 –44 ans	29	27	26	24	17	30	28	20	23	25	25
marviduais by age groups	45 –54 ans	27	19	29	23	26	29	23	22	21	22	23
	55 –64 ans	20	13	13	23	22	7	13	12	12	20	15
Percentage of individuals	yes	78	68	73	70	67	72	73	57	65	66	69
cohabiting	no	22	32	27	30	33	28	27	43	35	34	31
Distribution of	0	54	49	48	59	67	54	55	64	55	53	55
individuals by number of	1	20	21	27	18	17	20	23	17	21	25	20
children (aged less than	2	17	19	17	15	10	17	14	11	17	14	16
18)	3 et plus	9	11	8	8	7	8	8	8	8	8	8
	2000 to 20,000 inhabitants	23	27	21	26	25	22	24	23	22	25	24
Distribution of individuals by population	20,000 to 100,000 inhabitants	17	17	18	20	18	14	19	18	15	17	17
of the village/ town/city	More than 100,000	39	41	38	37	32	40	36	39	36	43	38
where they live	suburbs of Paris	19	12	19	15	21	16	16	15	22	12	17
	Paris	2	3	4	2	4	8	4	5	6	3	4
	none	31	21	22	35	33	17	21	22	17	40	25
Distribution of	Technical school certificate	39	38	31	37	35	32	35	40	32	39	35
individuals by educational qualification	baccalaureate	15	16	16	13	17	15	18	15	19	12	16
educational quantication	Higher educational diploma	15	26	32	16	15	37	27	23	32	9	25
	In employment	55	57	63	54	49	98	66	61	65	64	63
	unemployed	10	10	8	11	9	1	10	10	8	8	9
D: 4 11 41 6	student	4	12	8	7	15	1	6	14	14	8	9
Distribution of individuals by activity	retired	9	7	5	13	10	0	5	6	5	8	7
murriduals by activity	housewife	18	11	10 8 11 9 1 10 10 8 8 12 8 7 15 1 6 14 14 8 7 5 13 10 0 5 6 5 8	8							
	Others not in active employment	4	3	2	6	7	0	4	2	3	6	4
	first quartile	26	25	22	30	27	13	17	23	19	30	23
Distribution of	second quartile	23	24	20	24	35	22	22	21	19	31	22
individuals by income	third quartile	25	24	23	23	22	25	24	26	25	21	24
	fourth quartile	26	28	35	23	25	41	37	30	37	18	31

Key: 20.3% of individuals in the first class are men Source: French 1998-1999 Time Use Survey, Insee. Members of the third class have their evening meal between 8pm and 9pm. The time before dinner is occupied doing domestic chores, in particular cooking. These activities continue to be recorded at a significant level throughout the rest of the evening. Leisure activities are also noted, though by fewer participants. In contrast with the schedule of the first group, housework often continues to be done after dinner. The domestic work done by a high proportion of the women who follow this type of evening schedule constitutes what Eric Maurin (1989) describes as "working women's second shift".

These three kinds of predominantly female evening schedules all include time spent doing housework. They reveal ways of organizing evenings which are quite different from those adopted within groups where men are in the majority. For individuals in these classes, dinner is inseparable from the domestic chores which accompany it, chores which are more often than not done by women rather than men. It is also particularly important when looking at evenings of a female type to consider their dinner times in the context of the activities which precede and follow the meal.

Typically male kinds of organisation in which television figures prominently

In contrast to housework, watching television appears to be a more male activity². Members of the fourth class, in which there is a slightly higher proportion of men than women, divide their evenings into two parts: the first part, spent having dinner, lasts from 7pm to 8pm. Here, the evening meal is eaten earlier than by members of other groups. Class four dinner times are highly synchronized (rising to a peak of 58% at 7:30pm) (see tempograms in Appendix B). The second part of the evening, lasting from 8pm to 9:30pm at the earliest, is generally spent watching television. At 8pm the number of individuals engaged in this activity rises sharply from 26% to 68%, continuing to increase until 8:50pm, when it peaks at 90%. These individuals finish their meal at around 8pm, when the evening news starts, then watch the news and one of the programmes which follow it in the evening television schedule.

The individuals in this group tend to be older and have fewer qualifications than the average for the whole sample (see table 3). The group includes a lot of pensioners, unemployed people and unskilled workers. They

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² This is also due to the fact that, as the related study of the schedules of couples shows, spouses frequently continue to record household tasks when their husbands have already begun noting television.

tend to be members of a low income childless household living in a small or medium-sized town. Watching television is a sedentary activity which people usually engage in at home, often in a habitat where what leisure activities are on offer are either limited in number or prohibitively expensive. For members of this group television is an inexpensive and accessible leisure option.

Table 4
Over-represented PSCs by group

Class	Professio	ns and socio-professional categories over-represented (1)
Class	Code	Title
1	54, 56	Private sector administrative staff, Service sector personnel working directly with the public
2		-
3	54, 56	Private sector administrative staff, Service sector personnel working directly with the public
4	67	Unskilled industrial workers
5		-
6	21, 22, 23, 31, 34	Craftsmen, Tradesmen, Shopkeepers, Company Directors, Professional people, Teachers, Scientists
7		-
8		-
9	37, 38	Administrative and Marketing managers, Engineers and Technical managers
10	64, 67, 68	Lorry, bus and taxi drivers, Unskilled workers and Craftsmen

1.: Nomenclature of Professions and Socio-professional Categories (PCS) by Insee. Professions whose contribution to the Chi2 total (1220) are greater than 15 are considered to be over-represented.

Key: Private sector administrative staff and Service sector personnel working directly with the public are the categories over-represented in the first class.

Source: French 1998-1999 Time Use Survey, Insee.

The pattern of a group four evening is quite similar to that followed by group five individuals, the difference being that the latter have their meal later and watch television before eating. Members of both groups watch television for about the same length of time: on average for just under an hour and a half each evening. Watching television is by far the most popular activity between 7pm and 8pm for group five individuals (98% of whom are watching television at 7.30pm). They eat between 8pm and 9pm, in the second part of the period under consideration, their meal times being concentrated in the time slots around 8:20pm, when the number of

individuals eating rises to a peak of 76%. After their meal the majority of these individuals go back to watching television. Other activities are scarcely present, with the exception of household chores which are often done in the transition period between the two main activities. In the schedules of these individuals meal time may appear to offer a break between two periods of watching television. In fact, it seems likely that the set is left on while the meal is being eaten, when television temporarily becomes a secondary activity.

Men are in the majority in this group. There is an over-representation of students, retired people, individuals with few educational qualifications, and people with a low income (see table 3). Group members tend to fall within the 18-24 and 55-64 age groups. For these individuals, dinner is a short activity to be fitted in between television commitments. Group five contains a high proportion of individuals who are not in active employment, in contrast with group six, most of whose members are working.

For members of class six, dinner is fitted into the middle of an extended period spent working. The times when group members eat are spread out through the evening. There is no time slot during which more than 25% of them are eating at the same time (see the graph of total numbers for 1998 in Appendix B). Average time spent eating is the lowest of all the groups (26 min.). On the other hand, work and study occupy an important place in the evenings of group six individuals. A certain amount of time spent travelling may be observed; this is presumably the record of journeys home. Watching television does not figure until late in the evening. The meal does not appear to have any influence on the structuring of the evening. In fact, it is meal times themselves which are determined by the demands of work.

Given the amount of time group six members spend on professional activities, it is not surprising to find that 98% have a job and that they are in a high income bracket. Group six members tend to be male, Parisian, aged between 35 and 54, with a tertiary education and a high income. Many of these individuals have jobs which require them to continue working into the early evening. This group therefore includes craftsmen, shopkeepers, company directors, and other professional people whose working days often extend into the evening. There are also a lot of teachers in this group. They too have long working days, and often spend their evenings marking homework or preparing the following day's classes³. What is described here is, of course, a typical weekday evening of a working week. The total absence of housework can be partly explained by the fact that a high proportion (72%) of group six members live with a spouse, who is often responsible for doing the household chores.

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³ For a more detailed description of teachers' schedules using the same data, see Alain Chenu's analysis (2002).

Table 5
The different types of evening are unevenly distributed over the seven days of the week

In %

Class			D	ay observed	l		
Class	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	11.8	17.4	15.2	16.4	14.7	11.0	13.5
2	11.4	16.8	16.2	20.7	14.9	10.0	10.1
3	10.7	14.3	18.2	17.5	14.6	14.1	10.7
4	11.0	17.9	16.4	16.7	13.5	11.0	13.5
5	10.6	14.2	15.5	13.3	13.3	16.2	17.1
6	13.0	19.3	17.7	20.8	15.4	8.2	5.5
7	5.2	11.3	6.6	11.1	17.3	32.0	16.5
8	7.5	10.0	11.2	16.0	14.0	25.4	16.0
9	8.7	15.7	16.6	18.2	15.6	13.6	11.6
10	12.2	16.5	13.5	15.5	17.2	9.9	15.2
Total	10.2	16.0	15.6	17.4	14.9	13.7	12.2

Key: 11.8% of class one sequences were recorded on a Monday evening. Source: French 1998-1999 Time Use Survey, Insee.

Dinner on Saturdays represents a special case

The groups produced by optimal matching are not evenly distributed over the seven days of the week (see table 5). Sunday schedules, for example, rarely include a class 6 type evening, which is hardly surprising given that work is the predominant class 6 activity, and few people work on a Sunday. Saturday evenings, on the hand, often follow a class seven or eight sequence. A third of type seven schedules and a quarter of type eight schedules are on a Saturday.

Class seven groups together individuals who spend a lot of time over dinner. During each ten minute slot between 7pm and 8pm at least 50% of these individuals are eating. This figure then rises to a peak of 98% between 8:10pm and 8:20pm. Few group members engage in any other activities until 8:30pm, when the number of individuals watching television rises significantly. This can be seen from mean sequence on the activities graph. This type of evening includes "special" meals, namely meals which last longer than an ordinary meal.

The amount of time spent eating by individuals in this group may well indicate that their meals not only provide them with nutrition, but also have a kind of social or leisure function, with the meal being "full of new meanings and really becoming a form of cultural consumption." (Fischler, 1990, 217).

This hypothesis is supported by the following data: the high average amount of time spent eating (113 min.) for individuals of this class over the period of 6:50pm – 9:30pm, and the fact that the richest individuals in the sample are members of this group. While it should be noted that men, people living with a partner, and working people are somewhat over-represented in this group, and that members of the 18-24 age group are under-represented, the outstanding characteristic of this group of individuals concerns their incomes, which are high.

The characteristic of class 8 individuals is that during the evening they are more nomadic than members of other groups. The category of "meeting people, going to the cinema/ theatre etc., going for a walk", which was absent in the other groups, is the dominant activity here. At 7:20pm, 66% of these individuals are engaged in this kind of activity. These activities require individuals to be mobile, as they usually take place outside the home. This is reflected in the significant presence of travel in the class 8 sequence. Television appears after 9pm, when some of these individuals get home. Members of this group have dinner at different times throughout the period under consideration, their dinner times rising to a low peak at 8:30pm.

In contrast to the seventh class, members of class eight are very young; students are strongly over-represented. Class eight individuals tend to be single and 64% of them do not have children. They go out a lot, and undertake a wider variety of evening activities than members of other groups. On an evening when they go to see a film, play or concert they may spend a very short time eating, whereas on an evening when they eat out with friends the meal will tend to last much longer. On average, however, they spend relatively little time on their evening meal (29 minutes).

Most evenings of this type are on a Saturday, the day before Sunday when few people go to work. A particular characteristic of dinner on a Saturday may be noted: it lasts on average twenty minutes longer than weekday dinners. The class seven sequence for Saturday evenings corresponds to a sedentary period for the oldest individuals, who often eat their Saturday dinner at home, and take more time eating their meal than on other days of the week. The class 8 sequence reflects the nomadic practices of the youngest group of individuals, who often eat out in the evening, and generally spend very little time over dinner. The contrast between the ways of life of class 7 and class 8 individuals reflects the differences between two very different life cycle stages.

Age is also a factor in the integration of the meal into the evening

Going out in the evening is an important part of youth culture; this has an impact on the evening schedules and meal times of the young. Of course going out to meet people, going to the cinema/theatre etc., or going out for a walk are not the preserve of the young; these activities are also recorded by individuals belonging to other age groups, in particular those who are well qualified and have a high salary. As A. Chenu and N. Herpin have noted (2002, p. 15) "going out for one's entertainment, participating in community life, reading, playing games or involvement in music are popular activities among well-qualified people. The proportion of television viewers who have few or no educational qualifications is even greater than in the past." Our typology gives an account of this differentiation of leisure activities. Class 4 and 5 individuals, who watch more television than members of other groups, tend to have very few educational qualifications whereas class 8 and even class 9 individuals are relatively well qualified.

The importance of going out in the evening to the youngest participants is not their only identifiable characteristic. They also have dinner relatively late, in the second part of the period, as do the richest individuals. In fact members of the ninth class, who typically have their dinner in the second half of the period, include many students and individuals aged between 18 and 24, living in Paris and its suburbs. This group also includes a significant number of managers and engineers, a majority of whom are single university graduates.

Class nine members have their dinner at different times throughout the period under consideration, with a high concentration of meals between 8pm and 9pm. All the other activities are present in this sequence; they all experience a slight decline during meal times. Most of these individuals stop their other activities at 8pm, when they have dinner. After 9pm, their sequence of activities is structured very differently. Television and other leisure activities occupy a prominent place whereas work, which was still present at 7pm, almost completely disappears. Dinner occupies a kind of watershed in the daily schedules of these individuals, separating the concluding part of the active day, spent attending to home and family and including travel time, and an evening spent relaxing. Dinner marks the end of the working day and the beginning of a period of time given over to relaxing pursuits. This is why at around 8pm, when they start their dinner, the incidence of several other activities goes into decline. A relation between the age of group members and the range of activities undertaken can also be observed: younger and richer individuals engage in a wider variety of activities than older and poorer individuals.

The way of organizing the second part of the period described above may be contrasted with that of older people, some of whom spend this time asleep. They are represented in the tenth class, which includes most people who go to bed before 9:30pm. Sleep, which is virtually absent from the schedules of members of other groups, is the dominant activity at the end of the group ten sequence. Dinner is generally eaten early in the evening; few class ten individuals have their meal after 8pm, none after 9pm. Other activities also experience a sharp decline after 8pm, with the exception of television which class ten individuals watch in significant numbers between 8pm and 9pm. Watching television, which is absent from their schedules before and after this one hour period, peaks at 8:20pm, when 37% of these individuals are engaged in this activity. They switch off their sets before 9pm, when sleep becomes the dominant activity. At 9 pm, 95% of class nine individuals are asleep, a figure which continues to rise during the following half hour.

The ages of individuals in this group are high; over 55s are over-represented, as are single people and those with a low income. They generally have few educational qualifications and live in towns or small to medium-sized cities. The way of life of many of these older people may be affected by their own physical limitations (vulnerability to fatigue, etc.) and social problems (higher probability of being attacked, lack of suitable leisure facilities etc.). It should be noted, however, that not all old people follow this way of life. Other types of evening may also include periods spent sleeping, notably class four and class five. Furthermore, sleeping during the evening is not an activity restricted to old people. Working people who have to get up early to go to work, such as lorry, bus and taxi drivers and some unskilled workers, may also spend their evenings in this way (see table 4).

Discussion

Analysis of the wide variety of evening schedules reveals correlations between the membership of certain social groups and the practice of certain activities. Each schedule represents a solution to the problem of fitting dinner in with other evening activities. When there is a change in meal time or when a meal disappears from a daily schedule, the reasons for the change may be identified by looking at modifications in the overall context of the activities which precede, accompany or follow the meal. If, for example, the evening film is moved to later in the television schedule, this could impact on the time when people eat dinner.

The schedules of almost every class are strongly influenced by television; the times spent on other activities are largely structured around the set times when television programmes start and finish. French dining habits are largely determined by the close relationship between food and television. For individuals who cook or eat with the television on, and for others who watch the evening news or the early evening film after their dinner, television schedules largely dictate evening schedules, and so are an important contributory factor in the shaping of French alimentary synchronism.

The ten classes can be divided into three groups according to when their members eat dinner: before 8 pm; after 8pm; and at any time throughout the period under consideration. These three categories correspond to three different social groups: those who have dinner early tend to have low incomes and few educational qualifications, (two characteristics which correlate closely); those who have dinner in the second half of the evening are usually high-income and have at least their baccalaureate. Couples with children and single people eat early and late in the evening respectively. Overall trends contain a variety of practices which can be segmented socially and spatially.

Although ways of life are too complex to be described fully by a timetable, individual schedules can be highly suggestive. The above analysis has brought out various practices which each constitute a common daily experience for individuals who also share certain social characteristics, such as age, sex or profession. Different organizational structures characteristic of certain social groups appear around the organization of the dinner sequence. It is tempting to suggest that each type of evening constitutes a habitus, a particular way of fitting dinner into a sequence of evening activities, which is at least partly determined by an observable alimentary synchronism. It is clear not only that dietary habits vary between milieux (Bourdieu, 1979), but that different social groups eat their evening meal in different contexts. Given that eating with others provides opportunities for exchange and sociability (Larmet, 2002), the synchronization of meals makes an important contribution to building the internal cohesion of groups, and on a smaller scale that of couples (Sobal et al., 2002). Dinner time is a time for not only sociability, but also socialization (Blum-Kulka, 1997), when parents pass on values to their children, and establish a certain number of rules. The fact that a high proportion of French people eat their meals at the same times can be interpreted as an indication of the ritualized nature of everyday life in France.

A high degree of stability in practices between 1986 and 1998

The sequential analysis of daily schedules gives us a clear picture of how evening activities were organized in 1998. By comparing these results with data from the 1986 survey we can see how practices have evolved. We have used the identical procedure for analysing the 1986 Time Use Survey as was used for the 1998 survey. The similarities between the 1986 and 1998 results are striking. (see appendix B).

While several of the 1986 mean sequences are closely correlated with classes identified in 1998, the most striking similarity between the two groups appears on examination of the charts showing activity totals. The fourth class from 1986 has an identical mean sequence and produces a very similar tempogram to its 1998 counterpart. This can also be said to be the case for the seventh class and the tenth class, despite minor modifications: in 1998 there is an earlier peak in dinner times for the former group, and earlier bedtimes for members of the latter. Close similarities may also be observed for groups three, six and nine; likewise between 1998 and 1986 groups one and two, albeit with minor variations between their mean sequences⁴.

In the 1986 results there is, however, no equivalent of either the fifth or eighth classes from 1998, classes which may be characterized by the prominence of television and activities outside the home, respectively. Individuals recording these kinds of behaviour in 1986 were incorporated into other classes. The emergence, in the 1998 typology, of a clearly identifiable class of individuals, for whom evening activities carried on outside the home dominate, reflects a dynamic operating within the daily schedules. The increasing number of individuals going out in the evening is one of the more important trends highlighted by our comparison of the two surveys; it can be seen as part of the general shift towards more nomadic kinds of behaviour, such as eating out, already noted by C. Fischler (1990, p.209) and J.-P. Poulain (2002, p.42).

Similarly, the appearance in 1998 of a class of individuals for whom watching television is their main evening activity indicates the increasing popularity of this practice and underlines the fact that television is an integral part of the French dietary "model". The influence of television on French meal times must not be overlooked. There is a close correlation between the time when dinner ends and certain times in the evening television schedule, in particular the beginning and end of the news. This is the case for almost all groups in the sample. When comparing the two surveys, a difference of a little over ten minutes in peak viewing times after

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⁴ In fact, it is not surprising that the sequences at the centre of the class are different in 1986 and 1998. So, we should not infer too much from the fact that the elements "Children" and "DIY/Gardening" do not appear in the mean sequences for 1986, since these activities may be incorporated in other sequences of the class. To find out whether this is the case we must refer to the graph of activity totals.

the meal may be observed. The activity charts show this change quite clearly. It can also be seen in the mean sequences: people in the later survey tend to start watching television at 9pm rather than 8.30pm. This change is in line with a parallel shift in the beginning of the evening film in France during the period in question.

As well as this similarity in the sequences recorded in the two surveys, we can also find parallels between various classes in terms of their sociodemographic make-up. So, for example, in 1986 as in 1998, individuals who go to bed early are old and have a low income. It is still mostly women who spend their evenings doing housework, and men who spend their evenings watching television. There is, therefore, a stability in the practices revealed by the two surveys. The resemblance between the class charts is so striking that they could be taken for two transversal studies rather than longitudinal ones. Despite the fact that the two surveys used two totally different samples, the results obtained were very close, indicating the reliability of these observations.

We can observe stability between the two surveys in terms of when individuals eat their evening meal. Predictions of the demise or destructuring of dinner seem premature. In both 1986 and 1998, dinner is a constant presence and occupies an important place in French people's evenings. For the two years in question, we can observe very similar feeding patterns, showing the continuing existence of the evening meal, rather than a multiplication of time slots given over to eating. There is no real evidence of the "destructuring" of dinner. As Aymard, Grignon and Sabban have noted (1993, 31), "if the custom establishes itself and survives, it is precisely because it is not a structure, and for it to be respected, it is sufficient that the custom be followed as far as possible, and sometimes from quite a distance". The OMA of the daily schedules has enabled us to regroup the various forms of just such a practice. The ten groups, which each correspond to a dinner environment shared by individuals whose social characteristics are often quite similar, constitute an attempt to describe the context and way of structuring the evening meal.

This paper cannot include any detailed discussion of claims that there has been an increase in snacking between meals. We can, however, conclude that, if there has been such an increase, it has not significantly impacted on French people's dinner, which can still be described as a "regular" meal and an obligatory part of French daily schedules. A similar conclusion was drawn by I. Metsdag (2005) with regard to the dining habits of the Flemish. This is reflected in the high degree of synchronization of meal times over this period of time in France. The examination of schedules has enabled us to have a clearer picture of the practices which take place around the peak in dinner times. There is a high level of continuity between 1986 and 1998, not only as regards these peaks, but also in the kinds of behaviour which accompany

them. Almost all of the 1986 classes correspond to a type of evening already present in the 1998 classification. Our types of evening therefore represent enduring patterns of behaviour among the French. There is a high level of stability in the practices present in the schedules around the peak in dinner times.

The methodology used is not only practical, in that it enables us to take a new approach to investigating this meal, but it also provides a new explanatory perspective on feeding habits. It is no longer just a matter of explaining a social phenomenon in relation to a certain number of variables, by using a regression for example, but also to have a more complete picture of feeding habits. Variations in dietary practices can be observed not only in relation to the sex or age of individuals, as is generally the case, but also in the context of different daily schedules and, in particular, sequences of daily activities⁵.

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${\bf Appendix}\; {\bf A} \; \vdots \; {\bf Nomenclature}$

Correspondence between nomenclatures

Nomenclature	Nomenclature
in 9 categories	in 25 categories (1)
Sleep	10. Sleep
Meal	11. Meal
Work/Study	12. Paid Work
, , , , , , , , , , , , , , , , , , ,	3. Studies
Travel	2. Journeys to and from work
	25. Journeys to and from leisure
	activities
Cooking/Washing/Housework	4. Cooking/washing/cleaning
Home and Family	5. Care and education of children
	6. Shopping
	7. DIY, gardening, taking care of pets
	8. Sewing
	9. Various domestic chores
	12. Washing and dressing
Leisure Activities	13. Religion, cemetery
(other than television	14. Associations
and going out)	20. Conversation
and going out/	22. Reading
	23. Listening to the radio, music
	24. Relaxation, breaks
Meeting people / Cinema, theatre	15. Cinema, theatre etc.,
etc./ Walking	16. Meeting people
6	17. Sport
	18 Walking, beach, fishing, hunting
Television	21. Television

^{(1):} the reader will find a more precise description of the 25 category nomenclature in Chenu and Herpin (2002).

Appendix B: The 1986 results

Class sizes in for the 10 1986 classes

		Percentage of
Class	<u>Total</u>	<u>total (%)</u>
1	1,010	10.1
2	1,347	13.5
3	741	7.4
4	1,719	17.2
5	1,152	11.5
6	721	7.2
7	405	4.1
8	1,798	18.0
9	368	3.7
10	714	7.2

Key: class 1 contains 1,010 sequences, namely 10.1% of the total population Source: 1985-1986 Time Use Survey, Insee.

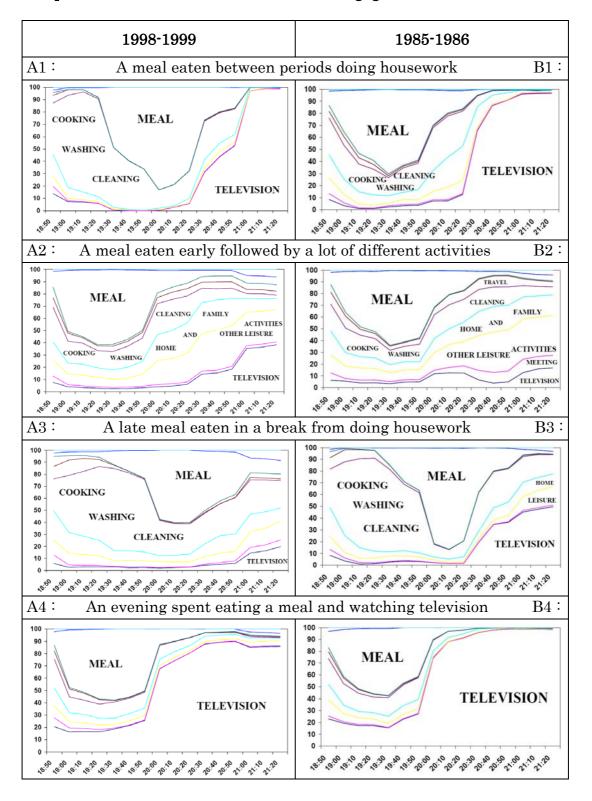
The 1986 average sequences

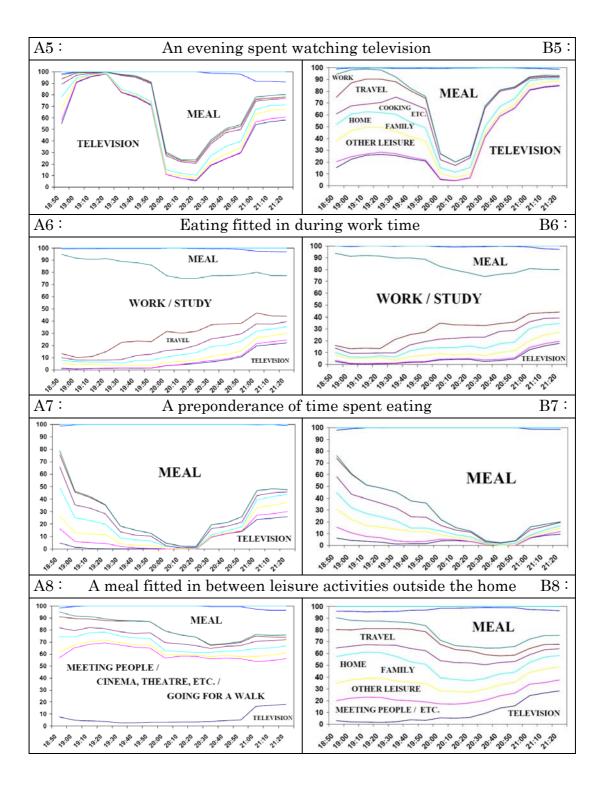
Class	18:50	19:00	19:10	19:20	19:30	19:40	19:50	20:00	20:10	20:20	20:30	20:40	20:50	21:00	21:10	21:20
1	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Housework	Housework	Housework	Television	Television	Television	Television	Television	Television
2	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Housework	Housework	Housework	Housework	Housework	Housework	Television	Television	Television
3	Housework	Housework	Housework	Housework	Housework	Housework	Housework	Meal	Meal	Meal	Housework	Television	Television	Television	Television	Television
4	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Television								
5	Work	Television	Television	Television	Television	Television	Television	Meal	Meal	Meal	Television	Television	Television	Television	Television	Television
6	Work	Work	Work	Work	Work	Work	Work	Work	Work	Work	Work	Work	Work	Work	Work	Work
7	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal	Meal
8	Leisure	Travel	Travel	Travel	Travel	Travel	Travel		Meal	Meal	Meal	Meal	Meal	Television	Television	Television
9	Housework	Children	Children	Children	Children	Children	Children	Housework	Meal	Meal	Meal	Television	Television	Television	Television	Television
10	Housework	Meal	Meal	Meal	Meal	Meal	Meal	Television	Television	Television	Television	Television	Television	Sleep	Sleep	Sleep

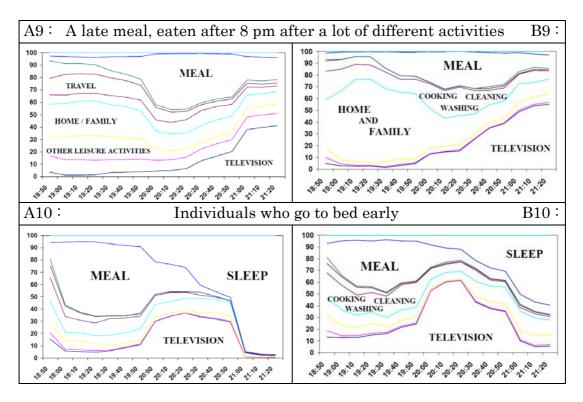
Key: at 6.50pm, the individual in the middle of the first class from 1986 was

doing a "cooking-washing-cleaning" type activity Source: French 1985-1986 Time Use Survey, Insee

Graphs of the total numbers of individuals engaged in various activities







Key: At 6.50pm, reading graph A10 from left the bottom to the top we find that in 1998 individuals noted the following activities: 15.3% "television"; 5.3% "meeting people, going to the cinema, theatre etc., going for a walk"; 7.8% "other indoor leisure activities"; 17.5% "home and family"; 19.7% "cooking-washing-cleaning"; 9.7% "travel"; 5.3% "work-study"; 13.8% "meal or similar activity" and 5.6% "sleep", making a total of 100%. (cf. nomenclature in appendix A).

Source: French 1985-1986 and 1998-1999 Time Use Surveys, Insee