



Research report

Eating fruits and vegetables. An ethnographic study of American and French family dinners [☆]



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ABSTRACT

The French eat more fruits and vegetables than Americans and have lower rates of childhood obesity. This ethnographic study compares various aspects of meal environment in sixteen households in LA, California and Paris, France, and offers insights on the relationship between local practices and preferences and children's consumption of fruits and vegetables. Our analysis of video-recorded naturalist data reveals that the consumption of fruits and vegetables is linked to the cultural organization of dinner – what, when and how food is served – and to local beliefs about children's eating practices. We also found that the French model for dinnertime prioritizes the eating of fruits and vegetables more than the American model does. We propose that local eating models should be taken into account in research on childhood obesity and in prevention programs.

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Introduction

Studies funded by the World Health Organization (WHO), the World Cancer Research Fund and other organizations have demonstrated repeatedly that dietary patterns, and the consumption of fruits and vegetables in particular, are critical for the prevention of cancer, heart disease, childhood and adult diabetes and obesity, and are essential for good overall health (Lock, Polmearu, Causer, & McKee, 2004; Pomerleau, Lock, Knai, & McKee, 2005; Tamers, Agurs-Collins, Dodd, & Nebeling, 2009; Vecchia, 2004; World Cancer Research Fund, 1997). For the last several decades there have been numerous international public health initiatives to increase the consumption of fruits and vegetables (CDC, 2007; NIH, 1992; PNNS, 2007; USDA & USDHHS, 2010). These intervention programs have focused mostly on educating children through school curricula and adults through health care settings. Reviews of these programs reveal that none of the initiatives show significant positive effect on consumption of fruits and vegetables; a few studies show short-term

benefits, and others even show a decrease in consumption (CDC, 2013; NFVA, 2010; Pomerleau et al., 2005).

In their WHO review of the various international prevention programs, Pomerleau and colleagues (2005) noted that parents and family play an important part in the effectiveness of intervention, yet very few programs include a parental component. Indeed, the recent Centers for Disease Control and Prevention (2011) Guide to Strategies to Increase Consumption of Fruits and Vegetables (2011) promotes the presence of and access to fruits and vegetables in institutions such as workplaces and schools, but does not address homes and families as sites of change.

Pomerleau et al. (2005) have proposed that, in light of the difficulty in modifying individuals' behavior through the current campaigns, it is critical to understand the factors that play a role in individuals' food choices and intake. A similar approach was taken by Rozin, Kabnick, Pete, Fischler, and Shields (2003) who emphasized the ecology of eating as an important aspect of food choices, noting that much attention has been given to individuals' eating behaviors, but not to the context within which eating takes place. Boutelle, Birnbaum, Lytle, Murray, and Story (2003), who also noted the limited research on the relationship between mealtime environment and food intake, found in an adult survey-based study that the family meal environment (e.g. frequency of eating together, TV watching during the meal, planning meals in advance) are associated with adult eating patterns of fruits and vegetables and with fat consumption.

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The present study compares various aspects of meal environment in dual-earner households in Los Angeles, California and Paris, France, in order to better understand the relationship between local practices and preferences and children's consumption of fruits and vegetables. Meal environment refers to the context within which a meal takes place and to the interaction between the different elements of a meal (e.g. portion size, meal organization into courses, eating the same dish, talk about food, etc.). A number of studies have compared French and American diet and eating habits. The comparison between the two countries is often intriguing because of the French "paradox" – the fact that a typical French meal can be rich in fat (e.g. cheese, butter, cured meat), yet on average the French are thinner and healthier than Americans (Drewnowski et al., 1996; Rozin, 2005; Rozin et al., 2003; Tamers et al., 2009). Comparing mealtime organization in the two countries is also interesting in light of the fact that national surveys indicate that the French tend to eat more fruits and vegetables than Americans (Tamers et al., 2009).

While most studies of food consumption rely on self-reports, recall data and questionnaires, our ethnographic observations afford access to actual eating practices as they occur in our families' homes. Geertz (1973) has argued that the analysis of cultural practices is achieved through an ethnographic investigation that affords the uncovering of the meaning these practices carry for members of the community. Indeed, systematic ethnographic observations offer a detailed description of particular social practices and their organization, but they also provide information on settings and contexts, which matter profoundly to the understanding of the meaning that certain practices carry (D'Andrade & Strauss, 1992; Duranti, 1997). Weisner (2002) explains that routine activities, like meals, are useful for studying culture and family life because (a) they are meaningful to its members, (b) they crystallize culture because they include values and goals, and (c) they are easy to observe and discuss in interviews. Focusing our ethnographic lens on the same routine activity, namely, weekday dinner, in the French and American households, we offer insights into the local organization of mealtime and the meanings that are attached to it. The analysis of the video-recorded dinners highlights the particular practices of each site and the distinct preferences for serving certain foods in certain manners. These differences, we argue, are culturally rooted and carry a critical effect on children's consumption of fruits and vegetables.

Specifically, the analysis of the ethnographic observations in this study enhances our understanding of the participating families' culinary habits as culturally organized activities; it sheds light on what family members *perceive* as a meal (e.g. what foods, including fruits and vegetables, count and are included in the meal) and how it should be structured and coordinated. Because eating, like many other family activities, is adult run and controlled – typically parents decide when eating will take place, what food is going to be served, how it is going to be served (e.g. on a platter, on plates, in separate courses), who will be participating in the meal (e.g. will the baby be fed separately; will the kids be eating alone or with the adults?) – our observations also afford insights into parents' beliefs about what children should eat, and into parents' talk and behavior patterns that socialize children into certain eating habits. In many households, dinner is often the only meal at which family members get to eat together during the working week. As such, it offers an important opportunity for parents to monitor the foods that their children consume.

A good number of ethnographic studies have explored mealtime as a site for the socialization of children into cultural values and norms and into becoming competent members of their community (e.g. Aronsson & Gottzén, 2011; Blum-Kulka, 1997; Ochs & Taylor, 1992; Paugh, 2005; Pontecorvo, Fasulo, & Sterponi, 2001; Sterponi, 2003). Mealtime has been shown to be an activity that exposes families' worldviews on food and eating, and as such it constitutes a primary locus where children learn food habits that may

shape their attitudes and behaviors toward food (e.g. De Geer, 2004; Laurier & Wiggins, 2011; Ochs & Beck, 2013; Ochs, Pontecorvo, & Fasulo, 1996; Ochs & Shohet, 2006). While these studies have explored the processes of children's socialization into commensality and food morality, only a few ethnographic studies have examined how eating practices and attitudes present in family meals socialize children into healthy habits (cf. Aronsson & Gottzén, 2011; Kaufman & Karpati, 2007; Laurier & Wiggins, 2011; Wiggins, 2004). Our study, by focusing on the availability, serving of, and talk about fruits and vegetables in family dinners, will further our understanding of how parental practices socialize children into fruit and vegetable consumption.

Similarly to the ethnographies mentioned above, this study draws on language socialization perspective in analyzing parent-child interaction around and about food. The language socialization paradigm argues that through the language used around them and through the way they are expected to use language, children (and other novices) learn how to act, feel and talk like members in their society (Ochs & Schieffelin, 1984). Specifically for this study, the way parents talk to their children about certain foods and about eating (e.g. demanding that they eat certain items), we argue, socializes them to certain attitudes toward mealtime and food consumption (e.g. viewing certain foods as more important than others; tasting or trying food is important).

Finally, examining family dinner in dual-earner families offers particular insights. Dual-earner families are the norm today, representing the majority of families in the U.S. (U.S. Census Bureau, 2011) and in France (Mainguéné, 2011). The fact that both parents in our families were employed and returned home in the late afternoon meant that they had a limited time to get dinner on the table every weeknight (Beshara, Hutchinson, & Wilson, 2010; Devine, Connors, Sobal, & Bisogni, 2003; Jabs et al., 2007). Examination of the video-recordings of weekday dinners affords access to the food choices our American and French parents made that allowed them to manage their time constraints, providing a realistic picture of the presence of fruits and vegetables in their daily menu.

Materials and methods

The study draws on data from two ethnographic research endeavors on dual-earner, middle-class family life in Los Angeles, California and in Paris, France. The LA data come from a large interdisciplinary, multi-method research project conducted by the Center on Everyday Lives of Families (CELFL) at UCLA that documented the private worlds of 32 families through video recordings of daily activities and family interactions during two full weekdays and a weekend (for a full description of all the CELFL methods see Ochs & Kremer-Sadlik, 2013). Of the 32 families, 8 were selected for the present study. The French data come from a study of family dinner and food preparation in 8 Parisian dual-earner middle-class families who were video-recorded during two weekdays from the moment they got back from school and work until the children went to bed. All the families consisted of two parents who worked outside the home at least 30 hours per week. They had 2 or 3 children with at least one child between the ages of 7 and 11.

Ascription to middle-class may be difficult, given the different possible definitions (income, education, profession). In our study, families counted as middle-class if they owned their home and depended on their income to pay a monthly mortgage. Participants held a variety of professions from clerical and technical to high management and academic positions. Parents' education ranged from high school to graduate degrees with the majority holding a bachelor's degree. It is valuable to note that since this study focuses on the middle-class, we do not address the matter of access to and affordability of fruits and vegetables, a critical issue when studying families of lower SES.

For this study we analyzed 2 video-recorded weekday dinners in the households of the 8 French families and 8 U.S. families for a total of 16 meals in each site and 32 dinners in all. The 8 U.S. families were selected from the larger CELF study based on two criteria: (a) each U.S. family matched a French family in the number and age of children, (b) each of the 2 weekday U.S. dinners, like the French dinners, were eaten at home. This criterion was necessary as a number of the CELF U.S. families ate dinner out. In each site there were 19 children in all. Three of the U.S. and French families had three children each and five of the U.S. and French families had two children each. The age of the children ranged from 18 months to 17 years old. We did not include the 18-month-old American boy in our analysis of children's eating habits, as he was fed earlier than the family dinner.

Two videographers with hand-held cameras were present in the home and filmed continuously from the moment the first parent (the mother in all 16 families in this study) and children were together at home after school and work. Video recordings captured family members as they prepared the meals, set the table, ate, cleared the table and cleaned the kitchen. During the meal, the videographers placed the cameras on tripods positioned at two ends of the dining area and left the room. This way, family members were able to eat without being watched directly by the researchers (although they were aware, of course, that they were being filmed).

In order to compare the environments within which vegetables and fruits were consumed in our U.S. and French households, we coded the dinners in the following ways. To understand the differences in children's exposure to and frequency of consumption, we counted the number of vegetable and fruit types and the size of dishes that were served in each of the 32 meals. We propose that vegetable and fruit consumption is related in part to meal structure, that is, to the ways in which a meal may be organized into courses and particular foods served as part of these courses. Thus, we also noted whether vegetables and fruits were served as dishes in separate courses, and whether other food items were offered with these dishes. Finally, we compared children's consumption of fruits and vegetables in the two sites and analyzed whether their eating behavior mirrored parental preferences regarding food practices. To this end, we studied the interaction between parents and children during the dinners, noting whether parents suggested, directed, or forced children to eat their vegetables or fruits, and whether they emphasized the health benefits or pleasures of eating these foods.

Results

We first wanted to know to what extent the children in our study were exposed to fruits and vegetables – whether these food items were introduced as part of the meal. We began by making a list of the variety of these food items that were present in the French and American meals. We excluded fruits and vegetables that functioned as condiments; we did not list, for example, the pickled bamboo shoots served in one of our American dinners. We did not include onions and garlic in our list of vegetables as they are often used as spices in small quantities and were hard to detect in the dishes served. We also did not consider potatoes as a vegetable, since they are part of the starch group (like grains and beans).

Fruits

We found that in comparison to the American children, the French children were exposed to a greater variety of fruit: 14 different fruit types were served at the French families' table, while only 4 in the American households (see Table 1). In fact, fruit was an integral part of the French dinner; it was served in all 8 French households in 14 of the 16 family meals – the two meals without fruit were in two different families. Typically, one or two types of fruit, for example

Table 1
Fruits at dinner.

| Fruits at dinner | U.S. | French |
|-----------------------------|--------------------------------------|--|
| Number of meals with fruits | 3 (out of 16) | 14 (out of 16) |
| Exposure to kinds of fruits | 4 (fig, mandarin, melon, watermelon) | 14 (apple, apricot, cherries, clementine, fig, grapes, grapefruit, kiwi, mango, melon, pear, persimmon, raspberries, strawberries) |
| Total fruits served | 4 | 27 |

melon and strawberries or mango and apricots, were brought to the table in bowls at the end of the meal, and each family member selected a piece or two, displaying a personal preference. Often parents peeled and cut pieces of a fruit that they then handed to their children, as happened in one family, when the father cut and peeled a pear and shared it with his 7-year-old son while the mother peeled a kiwi for her 10-year-old daughter, but selected figs for herself.

Dinner in our American families did not end with fruit. The four varieties of fruit that were served constituted three occasions when fruit were present in our LA sample. In one family a watermelon and a cantaloupe were cut into pieces and were served in a bowl alongside salad and hotdogs. In another, the mother brought two figs to the table at the end of the meal, handed her husband one and said "Let's eat these two figs so we can get rid of them" and bit into the other. Finally, in the third family, canned pieces of mandarin were presented in a little bowl as an optional topping for the salad. Our findings reflect what we already know, that fruit is not a significant part of the standard American diet; it seems that whatever fruit is consumed gets eaten during breakfast or as a snack, but not as part of dinner (CDC, 2013).

Overall, the variety of fruits and the number of fruits served in the French meals in comparison with the American dinners (27/4 = 6.75 times more presence of fruit) suggest that our French children had many more opportunities to eat fruits and our video recorded observations indicate that indeed they did. Although fruit did not appear to be mandatory (except in one family), the French children regularly ate it when it was offered. Of the 19 children, only one child was observed to refuse fruit in two dinners and two other children did not eat fruit during one dinner when it was served. In contrast, only 3 of the 19 American children were observed eating any fruit.

Vegetables

The matter of vegetable consumption was more complex. When we examined the exposure to vegetables, we found that they were present in both sites, and that they featured in all 16 French dinners and in 13 of the U.S. dinners. We also noted that the French children had only a slight advantage in exposure to different types of vegetables than their American counterparts (see Table 2).

We wondered if the common presence of vegetables at the dinner table and the similar degree of exposure to various kinds of vegetables also suggested that vegetables carried similar value and had a similar pattern of consumption in the two locales. In other words, since the presence of vegetables does not guarantee consumption, we wondered whether vegetables held the same importance in the French and U.S. dinners and whether the children in the two countries ate similar amounts of these food items. To begin answering these questions we first considered the structure of each meal and the place that vegetables occupied in it. We then examined whether the quantity of vegetables served was similar in the two sites. We next evaluated the children's vegetable consumption. Finally, we

Table 2
Vegetables at dinner.

| Vegetables at dinner | U.S. | French |
|---------------------------------|--|---|
| Number of meals with vegetables | 13 (out of 16) | 16 (out of 16) |
| Exposure to types of vegetables | 15 (asparagus, avocado, bok choy, broccoli, carrot, cauliflower, corn, cucumber, edamame, lettuce, pepper, spinach, sugar snap peas, tomato, zucchini) | 18 (artichoke, asparagus, avocado, broccoli, cabbage, carrot, cauliflower, celery, chard, eggplant, fennel, green beans, leek, lettuce, peas, radishes, tomato, zucchini) |
| Total vegetables dishes served | 22 | 33 |

analyzed parent–child interaction pertaining to eating vegetables for presence of particular eating preferences.

Meal structure – division into courses

Most research that looks at the organization of family meals focuses on the questions of who is responsible for what tasks (i.e. cooking, serving, cleaning), whether meals are eaten together, which family members are present at the table, and whether there are co-occurring activities during the meal (e.g. TV watching) (Boutelle et al., 2003; Larson, Nelson, Neumark-Sztainer, Story, & Hannan, 2009; Ochs, Shohet, Campos, & Beck, 2010; Patrick & Nicklas, 2005). Rarely has research considered meal structure or its relationship to food consumption.

Important exceptions are studies done by a number of French researchers (Fischler, 2011; Fischler & Masson, 2008; Mathe, Francou, Colin, & Hebel, 2011; Mathe, Tavoualris, & Pilotin, 2009; Tavoualris & Mathé 2010) who have examined and compared consumption models, including the structure of meals (“règles conditionnant la prise alimentaire”; Mathe et al., 2011), across France and the U.S. A critical aspect of the French model is that both lunch and dinner are meals that are composed of separate courses, typically a starter, a main course, and a dessert. Mathe et al. (2009) have shown that having multiple courses contributes to the variety of food served and this, they suggest, explains why there is greater food diversity in France than in the U.S.

Typically, U.S. surveys and studies that focus on health and nutrition do not pay attention to the organization of meals (e.g. Blake, Bisogni, Sobal, Jastran, & Devine, 2008; NHANES, 2008). The few exceptions include a study that found that consuming salad as a starter resulted in increased vegetable consumption in adults (Roe, Meengs, & Rolls, 2012) and another study that showed that serving 3–5 year old children vegetable soup as a starter increased overall vegetable consumption and reduced intake of fatty foods (Spill, Birch, Roe, & Rolls, 2011). These authors suggest that eating vegetables at the beginning of the meal when participants are most hungry and when there are no other competing foods present is an effective strategy for increasing the consumption of these foods. These studies contribute to the argument that composing a meal into courses can have an effect on food, specifically vegetable, consumption.

With this argument in mind, we counted the number of courses in the dinners in our two sites. We defined a course as a dish eaten alone forming one of the successive parts of a meal.

As Table 3 indicates, the American meals mostly comprised a single course where all dishes were served and eaten at the same time. In the four American dinners with two courses, the second course was a dessert (ice cream, brownies and chocolate) offered only to the children. Interestingly, the minor presence of dessert in these meals stands in contrast to recent industry and governmental surveys that indicate a rise in dessert consumption in the U.S.

Table 3
Number of courses in U.S. and French meals.

| Number of courses | U.S. meals | French meals |
|-------------------|------------|--------------|
| 1 | 12 | – |
| 2 | 4 | – |
| 3 | – | 4 |
| 4 | – | 9 |
| 5 | – | 3 |

(Technomic, 2013) and an increase in Americans’ “sweet tooth” over the last decades (Haley, Reed, Lin, & Cook, 2005).

All the French meals in our study consisted of multiple courses. Although Mathe et al. (2009) have suggested that French meals are typically divided into a starter, a main course, and a dessert, our French meals regularly featured additional courses: cheese, yogurt, and salad (see Table 4). The saliency and labeling of these categories emerged from the observed organization of dinners in these families.

As can be seen in Table 4, eight of the 16 French meals featured a starter course (served in five of the eight households) and in five meals salad constituted a course on its own. As already discussed above, Table 4 illustrates that fruit was a common feature of our French dinners, ending 14 of our 16 meals. Most apparent was the strong presence of cheese and yogurt courses in the French meals, suggesting that dairy products are integral to the French model of dinner. Their importance was made explicit in one family when a 10-year-old daughter, Fanny, asked permission to skip her dairy course. Her mother offered her cheese as an alternative, but when it was discovered that there was no more cheese left, the mother noted that there were ‘cream and cheese in the cauliflower dish’, suggesting that her daughter had consumed enough dairy in the main course, and thus was allowed to skip the yogurt course.

To what extent did the division of meals into courses offer more opportunities to consume vegetables? Of the eight French starters, six consisted of vegetable dishes, such as half an avocado with vinaigrette sauce, a bowl of radishes served with bread, butter and salt, or a grated carrot salad. In addition, five meals offered salad as a separate course. These dishes represent a direct opportunity for the French children to eat vegetables, and more so when there was no competition from other food items. Furthermore, organizing meals into courses made it harder for children to be fussy over their food. If a child refused to eat the vegetable starter or a salad when it was served on its own while other family members ate, he or she stood out as uncooperative and not participating in the family activity. In the American dinners, since all the dishes were served simultaneously, it was easier for a child to appear collaborative by eating other foods while at the same time ignoring or refusing to eat her vegetables.

Vegetable dishes

In examining the relationship between meal structure and vegetable consumption, we were interested in the way that these food items were served in the two locales. We focused on two issues: (a) the size of vegetable dishes, (b) the presence of competition from other foods.

Table 4
Type of courses offered in the 16 French meals.

| Type of course | Starter | Main | Salad | Cheese | Yogurt | Fruit |
|----------------|---------|------|-------|--------|--------|-------|
| Total | 8 | 16 | 5 | 12 | 8 | 14 |

Table 5
Small and regular vegetable dishes in U.S. and French meals.

| | Regular | Small | Total |
|--------|---------|-------|-------|
| U.S. | 9 | 13 | 22 |
| France | 26 | 7 | 33 |

Size of vegetable dishes

Since not all vegetable dishes were equal in size, we divided them into small and regular dishes (these terms do not carry intrinsic value, rather they represent value relative to one another). These categories were defined either by the portion served onto the child's plate or by the overall quantity available in the communal dish on the table. For example, a spoon of corn kernels or three pieces of baby carrots served on a child's plate were coded as 'small'. Similarly, a small communal dish containing some cherry tomatoes placed on the table was also coded as 'small'. In contrast, an oven dish containing a chard tart or a large bowl of edamame were coded as 'regular', as were several scoops of cauliflower gratin placed on a child's plate. Two coders separately coded each dish. Results were compared, and when there was a disagreement, a third coder was brought in to validate the results.

As Table 5 shows, regular size vegetable dishes were more common in the French meals and small size vegetable dishes were more common in our U.S. meals. Furthermore, of the seven small French dishes, four were served in separate crockery to be eaten together as a composed single main course. Serving a greater number of regular size vegetable dishes not only offered more vegetables to the French children in comparison to the U.S. children, but it also positioned these food items as central to the meal and displayed an expectation of the amount that should be consumed.

Competition from other foods

In considering whether other foods were competing for consumption against the vegetable dishes, we compared the content of the French main courses with the U.S. one-course meals (recall that there were no multiple courses in the U.S. meals), noting all vegetable, meat and carbohydrate dishes that were served as part of the course.

As Table 6 illustrates, 13 of the 16 French main courses consisted of regular size vegetable dishes, signaling the centrality of this food item. Eight of these courses consisted of only vegetables (e.g. chard tart, cauliflower casserole, zucchini quiche), essentially eliminating any possible competition from other foods. In two cases, beside the regular size vegetable dish, slices of cured ham (coded as a small meat dish) were served as a complement to the vegetable dish rather than in competition to it. In contrast, none of the American main courses consisted of only vegetables. Instead, twelve of the American main courses offered regular size dishes of meat (e.g. beef roast, chicken skewers), carbohydrate (e.g. pasta Alfredo, white rice) or meat/carbohydrate combination (e.g. meat pot stickers, hotdog pastries ["pig in a blanket"]) that presented considerable competition for the vegetable dishes that were served with them.

Table 6
Main course dishes in French and U.S. meals.

| Main course content and size | Number of French meals | Number of U.S. meals |
|--|------------------------|----------------------|
| Vegetable regular size | 8 | – |
| Vegetable regular size and meat small size | 2 | – |
| Vegetable regular size and meat, or carb or meat/carb regular size | 3 | 7 |
| Vegetable small size and meat, carb or meat/carb regular size | – | 5 |
| Meat, carb or meat/carb regular size | 3 | 4 |

This was particularly true when the vegetables were served in small portions (e.g. a few broccoli flowers, steamed asparagus, tomato slices), as was the case in five of the twelve meals.

Table 6 also shows that the core element in all our U.S. meals was a meat or carbohydrate dish; there was always a regular size dish of one of these foods, while the common French core element was a vegetable dish. While surveys indicate that French eat more meat products than Americans (Mathe et al., 2011), the minor presence of meat in our French dinners, according to two of our French mothers, may have had to do with the fact that most children ate meat at lunch in their school cafeteria and many of our parents consumed meat at lunch during their workday.

Children's vegetable consumption

In order to determine the extent to which the children ate any of the vegetables that were offered at dinner, we coded each child's eating behavior toward every vegetable dish in all the meals. The child's eating behavior was coded as follows: 0 – if a child did not touch the food item; 1 – if a child only tasted the food item, 2 – if the child ate the amount expected, defined as the amount of the dish served onto the child's plate (either by a parent or by the child); and 3 – if the child had a second helping. Two coders coded the data and if there was a disagreement, a third coder was brought in to validate the results.

The raw data were normalized by family; for each family we calculate the average frequency of their children's vegetable eating behavior (the 0–3 codes). We averaged these scores across all the families from each locale in order to compare the trends in children's vegetable eating behavior in our U.S. and French families.

As Fig. 1 shows, there were two important differences between the children's eating behavior in the two sites; 46% of the time the American children in our study did not touch their vegetable dishes while only 10% of the time our French children ignored these dishes. Furthermore, 58% of the time our French children ate the amount of vegetables expected of them, while only 27% of the time the U.S. children behaved in a similar manner.

These findings indicate that the French children in our study ate more vegetables than their American counterparts. They also reflect, we propose, a different attitude toward eating vegetables in the two sites, evidenced both through the way meals were organized in the two sites (as was shown above) and through the U.S. and French parents' attitudes reflected in parent–child interaction.

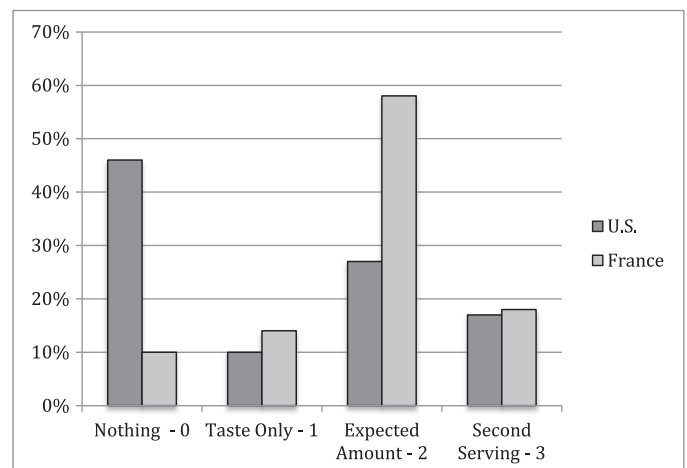


Fig. 1. U.S. and French children's consumption of vegetable dishes.

Socialization into eating

To analyze the two different approaches toward vegetable consumption prevalent in the two sites, we combed the video-recorded dinners for interactions between parents and children during the meals. We examined whether parents' talk treated certain foods as 'important' or 'must eat' and other dishes as optional, thus signaling to their children a particular eating preference.

The French children in our study almost always ate their vegetables in full without complaining or resisting. Thus, very little talk revolved around making children eat these foods. Most parent-child interaction associated with these dishes focused on evaluating the dish and the cook and commenting on the ingredients. For example, in one dinner as family members began eating, the mother asked if they could identify a specific spice that was used in the vegetable tart she had made and a little guessing game ensued. Later on they compared the dish with a quiche that the mother prepared the night before. Similarly to the Italian families in [Ochs et al.'s study \(1996\)](#), through this kind of discussion our French parents socialized their children to the pleasure of food and to the importance of ingredients, taste and cooking styles.

American children in our study, as shown above, did not eat the vegetables served at dinner almost half of the time (46%). In many of these cases they were offered a choice to eat it or not (Father: "Mark, broccoli?" Mark: "Ummm. . . no thanks."), and in other cases they were simply not served the vegetables. This was the case in one family whose dinner consisted of grilled chicken and boiled zucchini, but the parents served the children the meat only. By letting children select whether to eat vegetables or not, parents signaled acceptance of children's autonomy and expression of individual taste. By not serving children vegetables, parents treated these dishes as optional and of lesser value than other food items that were put on children's plates. In addition, by assuming that children eat different food options than adults, children's food preferences were treated as normatively distinct from those of adults, tying "taste to the child qua child" ([Ochs et al., 1996, p. 10](#)).

Indeed, like the "kids menu" common in American restaurants, a number of our American parents served their children different dishes than the ones prepared for the adults, and that was true not only when it came to vegetables. In one family, for example, while the parents cooked veggie burgers for themselves, they prepared cheese quesadillas and macaroni and cheese for the children, dishes that are traditionally found in "kids menus". The belief that children eat differently than adults was evident in another family, in which a chicken potpie was prepared for dinner. When it was time to serve dinner the mother asked her six-year old daughter and her nine-year old son if they were 'old enough for pot pie', linking age and maturity to the preference of certain foods. Being allowed to refuse the pot pie, the girl selected to eat plain pasta and the boy picked a breakfast cereal, revealing a preference for familiar and non-complex flavors. The mother accepted their choices without a comment. In contrast, our French children were treated as equal dining partners and were expected to eat the same food as the adults. Not once were they offered a different dinner, except in one case when, in addition to the green bean gratin that was served to all, the children were also offered pan-fried fish sticks, a typical children's food item.

The reason that the French children ate their vegetables could very well be because they liked these dishes. Yet, a few incidents, like the following one, suggest that there was an underlying expectation that children eat what they were served whether they liked it or not. In one family, for example, the father served cauliflower gratin onto everyone's plate. The ten-year-old daughter, Fanny, ate her portion without any comment. Her mother then asked if she wanted a second serving and Fanny turned it down, saying that she didn't like it (Fr: "J'aime pas"), revealing the understanding that there

is an expectation that one must eat the initial serving in full, regardless of personal dislike.

This example stands in contrast to a dinner in one of our American families in which skewers of grilled chicken and vegetables were served for dinner. The ten-year old, Caroline, pushed all the vegetables to the side and only ate the chicken. Her father not only accepted her refusal to eat these items, but also legitimized her personal preference by expressing interest in whether it was "Texture? Or taste?" that caused her dislike.

When the French children in the study expressed dislike, frequently their parents insisted that they ate or at least tasted the food item, displaying an expectation that the children eat what they are served. In the excerpt below a mother had just placed half an avocado with vinaigrette dressing on each family member's plate as a starter. She then remembered that her nine-year-old son, Lucien, did not like avocado and so to appease him she suggested that he'd have a small half and then eat some tomatoes, which he liked very much. As they sat at the table Lucien did not look happy. The mother, not giving up, offered a compromise.

Excerpt 1 (French family)

Lucien ((his back to the camera so one cannot see his reaction)).

Mother Come on sweetie. Just a little bit.

Fr: Allez bonhomme, Juste un petit peu.

A half of it.

Fr: La moitié.

Lucien ((does not respond)).

Mother Come on. You can have some tomatoes afterwards.

Fr: Allez. Puis tu prendras des tomates.

((pushes the dish of cherry tomatoes toward Lucien)).

Lucien ((does not react)).

Mother Here, give it to me, I'll cut it in two if you want.

Fr: Tiens donne le moi je vais le couper en deux, si tu veux.

((pointing at the half avocado that is on Lucien's plate)).

The mother reached to Lucien's plate, took the half avocado, cut it, and gave a quarter to Lucien. In spite of not liking avocado, Lucien ate the whole thing, displaying an understanding that he must eat the portion his mother served him. His mother acknowledged this saying, "Well, it was good in the end. Look, you ate it all" (Fr: "Ben, il est bon quand même. Regarde, tu l'as mangé"), treating Lucien's compliance not as an act of obedience, but as an opportunity for Lucien to rediscover avocados and learn that he liked them after all.

When French parents anticipated or met with resistance from their children who did not want to eat their vegetables, they pressured them to have a bite using taste as a persuasive tool. In one family, the father cajoled his ten-year-old daughter, Elizabeth, to eat the leek soup he had prepared pleading, "Wait, first the little soup. It is super good" (Fr: "Attends, d'abord la petite soupe. Elle est super bonne"). Note the use of the diminutive 'little' and the superlative 'super good' used to present the soup as appealing (cf. [Ochs et al., 1996](#)). Similarly, in another family, eight-year-old son, Solal, refused to eat the asparagus. His mom insisted that he tried the asparagus tips, which she explained were the best part of the vegetable (Fr: "Je te mets les pointes. C'est ce qu' y a de meilleur"). By saying that, the mother both framed trying the asparagus as a culinary experience and as a mini lesson about asparagus. Solal resisted, but the mother persisted feeding Solal a tip of asparagus with her fork. When, upon eating it, Solal made a face, the mother laughed asking, "You don't like it?" (Fr: "Tu aimes pas?"), appearing both satisfied that the boy tried the vegetable and amused that he did not like it.

The importance that French parents put on tasting the food that was prepared is also evident in the next incident. In a scene that lasted over five minutes, a French mother listed multiple advantages of the mixed sautéed vegetable dish she had cooked in order

to convince her nine-year-old son, Matthias, to eat some. First she supplicated, “Eat a bit of your vegetables, please, because they are excellent.” (Fr: “Mange un peu tes légumes, s’il te plait, parce que ils sont excellents.”), emphasizing the good taste. As the boy ignored her, she tried to convince him to eat some by describing the vegetables’ superior quality, “Because, I mean, honestly, these are – they are fresh vegetables. (Long pause.) Well, I mean, there’s nothing bad about them.” (Fr: “Parce que, je veux dire, franchement, ils sont-c’est des légumes frais. (Longue pause.) Enfin je veux dire, ils ont rien de mauvais, quoi.”) Not having elicited any reaction, a little while later she tried again, this time addressing Matthias’ preference for freshly cooked food, “You, who don’t like reheated food, these – these here are not reheated. I cooked them right away. They have just been cooked.” (Fr: “Toi qui n’aimes pas les réchauffés et tous, là ceux- là ils sont pas réchauffés. Je les ai fait cuire tout de suite. Ils viennent juste d’avoir été cuits.”) Eventually, the boy succumbed to the pressure, took a bite and gave the rest to his father.

Our American parents did not put similar effort in order to convince their children to taste their vegetables. We have already noted above that Caroline’s father accepted his daughter’s rejection of the grilled vegetables. In another family, eight-year old Josh refused to eat his tomatoes, claiming that he had a mouth sore, the mother disgruntledly accepted this excuse stating, “But you’re not going to get away with that one for very long”, suggesting that it was not the first time this reason was used. And in yet another family, the mother instructed her eight-year-old son, “Luke, you need to have some vegetable”, to which Luke responded, “Ugh. No. (Pause) I just want spaghetti”. The mother accepted his refusal and served him only pasta. Parents’ reaction to children’s refusal of certain foods, especially the vegetable dishes, signaled respect for the children’s individual taste, but it also resulted in children not exploring new dishes and new ways of preparing familiar vegetables.

While the pleasure of tasting vegetables was emphasized in the French homes, rarely was food talked about in terms of quality and flavor in the American homes. Only two incidents were observed in our U.S. data. In one family a mother prompted her eight- and ten-year-old daughters, Bess and Sonia, to eat the tomatoes grown in the family’s backyard, saying, “What about these wonderful tomatoes?”, emphasizing the quality of the produce. Both girls responded enthusiastically, handing their plates to be served. And the second incident was when the father in another family recounted his experience buying a watermelon. The storeowner gave him a taste of the fruit and the father thought that it was “so good”.

The French parents focused on taste and quality both as bait and reason to persuade their children to eat or at least try the vegetable dishes. In the few cases when the American parents pressured their children to eat, it was the meat dish that they prioritized, and the language they used emphasized the nutritional value of the food item. In one family, for example, the mother served some pieces of chicken breast and a spoon full of corn kernels onto the plates of her eight-year-old daughter, Anna, and five-year old son, Isiah. She also put a bowl full of edamame on the table for the children to serve themselves, which they did continuously until the bowl was empty. Throughout the meal, the mother monitored that the children were eating the chicken on their plates.

Excerpt 2a (American family)

Mother Okay let’s eat some chicken. ((addressing both children)).
Isiah I’ve already eaten some chicken.
Mother Good job. I need you to eat some chicken. ((addressing Anna)).
Anna ((does not respond)).

The mother’s directive to eat the chicken, and the urgency depicted by the mother’s ‘need’ that Anna eat some, framed the act of eating as a task with a minimum requirement (“eat some”). The

use of the congratulatory ‘good job’ further portrayed eating as a chore to be completed. Anna resisted:

Excerpt 2b

Anna I’ll take this ((picking up a piece of tortilla bread)) ‘cause I can’t eat anymore.
Mother ((in a raised voice)) If you can’t eat, you can’t eat anything. Not just choose – picking and choosing what you want.
Anna I- I know it.
Mother You need to have two pieces of chicken, okay? Two pieces of chicken.
Anna Fine. One and two ((selecting two small pieces with her fork)).
Mother Anna, not the little teeny pieces.

The importance of eating the chicken was heightened as the mother emphasized Anna’s moral obligation to eat a certain amount and not pick and choose (Paugh & Izquierdo, 2009; Wiggins, 2004). Furthermore, the mother’s insistence on the quantity that Anna had to eat foregrounded the essential nutritive elements contained in two pieces of chicken. Finally, the importance of eating the meat dish was further evidenced by the mother’s lack of acknowledgment of the children’s consumption and enjoyment of the edamame.

Although not very common, some of our American families discussed explicitly the nutritional value of food. In the excerpt below, eight-year-old Josh said he was full, but the mother wanted him to eat some more.

Excerpt 3a (American family)

Josh I’m full.
Mother You barely ate anything!
Josh I know.
Mother Eat at least one of these.
((pointing with her fork at one of the vegetarian meatballs in Josh’s plate)).

The mother viewed Josh’s desire to stop eating as a health concern that could be remedied by eating one vegetarian meatball. Identifying a minimal quantity to be consumed (“at least one”), the food item is treated as a scientific object with specific nutritional value. As Josh resisted, the mother elaborated:

Excerpt 3b

Mother Yeah, because it has your vegetable and protein in it. I mean – your protein, or your vegetables, or something. ((hesitant tone)).
Father Or all of those things ((cynical tone)).
Mother I don’t know.

The mother’s case was weakened by her inability to identify the specific nutrients in a vegetarian meatball and by the father’s mild mockery of her ignorance, exposing the need for some degree of expert knowledge when discussing food as nutrition. The nutritional argument also brought dinner and eating into the realm of the scientific and sterilized, where food is treated as the sum of its nutritive elements and where eating is a health-related task. This aseptic approach to eating, completely absent in the French meals, stands in clear contrast to the French parents’ emphasis on quality, taste and the pleasure that can be derived from eating (Rozin, Remick, & Fischler, 2011).

Conclusion

Research has demonstrated repeatedly that the consumption of fruits and vegetables is critical for the prevention of childhood diabetes and obesity. Yet prevention programs have not been successful in modifying individuals’ behavior and changing one’s dietary patterns. Studies show that the French eat more fruits and vegetables

than Americans (Tamers et al., 2009) and that childhood obesity and overweight rates in France are among the lowest in the developed world (14%), while the rates in the U.S. are among the highest (35%) (OECD, 2014). We thus set out to compare French and American family dinners with the goal of identifying local practices related to the consumption of fruits and vegetables. Taking the view that the family and the context of eating as a cultural activity are consequential to one's food choices and practices, we have conducted an ethnographic study that has compared the organization of dinner in the two sites and its relationship to the socialization of children to fruit and vegetable consumption.

Not surprisingly, our observations showed that the French children in the study ate more fruits and vegetables than our American children. But we wanted to know what accounted for this difference. Through analysis of our ethnographic observations we identified specific local practices and preferences that dominated the activity of eating dinner in both sites and these, we argue, help explain children's eating patterns.

Our analysis reveals that the consumption of fruits and vegetables is linked to cultural preferences regarding the structure of meals – what, when and how food is served – and local beliefs about children's eating practices – whether they should at least taste or eat what is served, or have the freedom to select what they want to eat. The organization of meals into courses that reduced the competition between vegetable dishes and other foods, the habit of serving fruit at the end of the meal, the tendency for larger numbers and bigger sizes of vegetable dishes, and the preference for children eating or at least tasting the food served resulted in French children consuming more vegetables and fruits than their American counterparts. The U.S. children in our study experienced quite a different dinner organization: all the dishes were served simultaneously, offering an environment for picking certain foods over others; the larger dishes consisted frequently of meat and carbohydrates with vegetable dishes playing a smaller role in the overall meal; fruit was not present, suggesting that it was not part of the American dinner schema; and parents supported children's individual tastes and preferences, rarely obliging them to eat if they expressed dislike or disinterest.

We have demonstrated that the French model lends itself more than the American model to the eating of fruits and vegetables. This, we suggest, is part of the reason why intervention programs in the U.S. fail to modify individuals' eating patterns of fruits and vegetables. Americans, we propose, may find it difficult to adopt the recommendation to eat more fruits, for example, because fruit is not an integral part of their daily food intake schema, and thus they may lack a repertoire of eating opportunities onto which they could map the recommended food. The French, in contrast, are likely to respond more easily to such a recommendation, for example, by making sure to serve fruit, and more of it, at the end of every dinner.

We conclude by calling for more research that further examines family preferences for meal structure and for children's eating patterns in addressing childhood obesity prevention. We also suggest that intervention programs consider incorporating into their recommendations suggestions for both fitting fruits and vegetables into local eating models and modifying meal schemas (e.g. dividing meals into courses, offering a vegetable starter). These steps may contribute to an increase in education and awareness of healthy eating habits and ultimately to a decrease in childhood overweight and obesity.

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