Introduction

As the food industry is well aware, making food choices is a highly visual activity. We see food before we touch or even taste it, and use our eyes to determine whether or not something “looks good enough” to eat. These visual cues are not all innate; instead we learn what attractive and unattractive foods and meals look like through our individual visual, taste, and smell experiences, as well as through watching what others around us do with food (Birch et al. 1986; Birch et al. 1996).

It makes sense, then, that visually-based research methods are particularly relevant tools for explorations of food behavior. As nutrition researchers have discovered, asking people to describe their quotidian food behaviors can be challenging, and documenting food behavior through photography and video can be more accurate than questionnaires or memory recalls (Williamson et al. 2003, 2004). In addition, image-based researchers have pointed out that the production and examination of photographs and videos of social life can act as a concrete activity around which researchers and participants develop a greater understanding of both individual and cultural norms (Collier 1967; Prosser 1998; Wagner 2004). In this respect, images taken of food in everyday social use can not only help to bring routine eating behaviors to the forefront of subjects’ consciousness, but also assist researchers and participants in “visualizing” socio-cultural food norms and values that might be hard to articulate through other means.

A third, and often-overlooked benefit of employing visual recording into food related fieldwork, however, is that visual data provide rich “snapshots” of social life that can be viewed (and re-viewed) as research inquiries develop and change. Images, though fixed in a certain moment in time, can contain a surprising amount of information—often beyond what the photo- or video-grapher set out to capture. Researchers and participants can mine visual data again and again, each time with fresh eyes, moving background activities in the photograph or video to the forefront, and re-analyze photos and video not only for what “truth” they portray but also for what they do not (Becker 1986; Prosser 1998).
For all these reasons, visually-based methodologies can be particularly useful in examinations of food in cultural life. In this photo-essay we will explore such a case—specifically, how taking photographs of children’s lunch plates provided our team of nutritional researchers with additional (and unexpected) information about children’s food culture. In the next section, we will discuss our case in more detail, first by presenting the purpose of the project and where our photographs came from, and then follow with some specific examples of how our visual data became useful to us in other ways. We’ll conclude with a discussion of how the photographs allowed us to better understand the ways children go about assigning meaning to their food choices, and, in a sense helped us to “see” food through child rather than through adult eyes.

“Can we please take a picture of your lunch?”

The photographs presented here were taken as part of a comprehensive evaluation of a salad bar school lunch program operating in several elementary schools in Northern California during the 2004–2005 school year (Ohmart & Feenstra 2004). The school districts had spent considerable time and money in instituting the program and were interested in finding out more about students’ use of their new school lunch program. The school lunch salad bars featured bins of fresh fruits and vegetables in a self-serve format, with the intent of encouraging children to select (and consume) a wider variety and greater amount of produce as part of their school lunch. As a result, a main objective of our evaluation was to determine if the produce portion sizes of children’s choices within this context were greater than the pre-packaged and pre-selected fruits and vegetables that were served with the ordinary school hot lunch.

The self-serve aspect of the new school lunch salad bar was the driving force behind our initial decision to use photography as an evaluative device: during lunch-time, hundreds of children went through the school lunch line within the course of an hour. Rather than trying to sample random students, or record each student’s individual meal with written field notes, we decided that a more efficient and accurate method would be to photograph every student’s individual lunch plate as they left the salad bar lunch line. To move as quickly as possible and not miss any of the students, two researchers were stationed with hand-held “point and shoot” digital cameras at the exits of the lunch line. We approached students quietly as they left the line, asking them if we could take a picture of their lunch plate “in order to learn more about what kids like.” Since it was important to our evaluation that the children’s normal lunch behavior would not be altered by our presence, we tried to be as inconspicuous as possible, and not have students entering the line knowing that we were going to take their picture.

We collected approximately 850 digital photographs of individual students’ lunches over a period of three months, both on salad bar days and regular hot lunch days where the school served a pre-portioned meal. Because we had intended to use the photos to quantify the students’ serving sizes of various food components, we zoomed in quite closely to the meal, and our photos were filled with a great deal
of food detail. As we sorted through the hundreds of photos, our eyes glazing over as we meticulously counted croutons and the numbers of carrot coins on each plate, we began to notice several qualitative themes from our photographs—particularly those taken on salad bar days where children had wider freedom in arranging food on their plates.

As a result, we decided to revisit our salad bar photographs with new questions in mind. Instead of simply cataloging the quantities of fruits and vegetables on students' plates, we took a step back and examined each photographed school lunch plate as a cultural construction: a visual depiction of a series of conscious actions and decisions made by the children that reflected the cultural meaning behind their food choices. We were particularly interested in the plates of food that we (as adults) thought looked “disgusting,” or “weird”—in other words plates that caught our eye because they deviated from our adult norms of what a “proper” lunch salad should look like, and challenged our expectations of what we had thought children would do with the choices we had laid before them at the salad bar. The following pages present some of these photographs, accompanied by text that describes some of our thinking about these images. Some of the photos made us laugh, others perplexed us, but overall we found the following images valuable in raising our awareness of the various disconnects between adults and young children’s food rules, norms, and values in their lunchtime agendas, and thinking more broadly about the design of school lunch programs for elementary age children.
Deconstructing a salad

Order in the (Food) Court

These photos show the general set-up of the salad bar program. Children lined up on both sides of the bar, picked up a plate and utensil set, and then slid their tray along the bar. There were several aspects of the program design that encouraged children to copy adult food norms, and hinted at adult’s expectations of how children should go about building their salads. For example, the salad bar equipment closely resembled self-serve salad bars found in adult restaurants, complete with germ-fighting plastic sneeze guards, although the height of the salad bar was adjustable to allow the bar to go lower to the ground.

The salad bar was messy. The tongs and spoons were adult rather than kid-sized, and meant that younger children with still-developing motor skills had a harder time scooping food neatly onto their trays without spilling. At times we also observed children using their hands to scrape food off of their serving spoons or simply picking up the food out of the bins with their fingers. Food would often end up on the floor or on the sliding area of the salad bar setup.
The loose bins of food and the resultant lack of “order” in the service area clearly bothered the food service workers. Many of them carried a wet towel with them in order to wipe up the inevitable spills, and constantly reminded students about food safety and proper handling of food. But their exasperation at the students’ messiness was due to their concern about the bottom line—cleaning up after the salad bar took much longer than on a regular hot lunch day, causing them to work overtime and raised labor costs (and food service worker resistance) to the program.
What adults planned . . .

Another kind of “adult order” was apparent from the order of the ingredients within the bar. The students encountered the salad bar from left to right, and would encounter lettuce first, then toppings like carrots and cheese, followed by a variety of fresh fruit. Then, students would move to a second table that held bins of croutons, protein options like beans, chicken, and tuna fish, and finally salad dressings and cartons of milk. From this order of ingredients, a child was most likely expected to construct something like this salad made by a teacher going through the lunch line with her class.
... and what kids did

The following photographs depict the “salads” constructed by the elementary age students. At first glance, we felt these salads looked odd, as they challenged our adult images of what a correct salad should look like. Once we completed our nutritional calculations, however, we saw that the majority of children’s salads met or exceeded the nutritional requirements for a balanced school lunch.

While both the teacher- and student-constructed salads had similar components, visually they were strikingly different. Children’s plates typically showed careful arrangements of foods into piles, some into compositions worthy of Mondrian. It appeared children wanted to eat small collections of hors d’oeuvres plates, rather than a mixed salad typically made by adults. We wondered whether this occurred due to children’s lack of visual knowledge of what a “proper” salad should “look like,” or if they knew about—but chose to ignore—the expectation of building a mixed salad.
In either case, it was apparent to us from these photographs that what children did was no accident; the clearly defined, discrete homogenous food piles they created indicated that they were thoughtful about their food choices and placements. The use of recyclable brown lunch trays was a major accomplishment for the eco-friendly parent advocacy group in this area, but they were an annoyance to the students. They complained bitterly about the trays for making it difficult to take a larger pile of food without having their foods mix or touch. Many students went so far as to use objects like utensil packets and milk cartons to create makeshift sections in their trays that would keep various components from mixing.
Freedom of Choice?

Creative meal combinations

Our photos also showed us the potential dangers, as well as the pleasures, of allowing children to make their own combinations and amounts of food at the salad bar. On hot lunch days, children had to make very few (if any) of their own decisions—they simply walked through the line and picked up a pre-packaged meal with pre-selected food combinations. On salad bar days, however, children told us they enjoyed the freedom of the salad bar program as they could accommodate their variable appetites and tastes. With the salad bar, they said, they would take only the amounts and types of food that they really “felt like” eating that day.

This led to some unusual visual combinations of food but perhaps meals that were more reflective of the “mini-meal” eating style that this age of children seemed to prefer.

*Kiwis, cheese and croutons.*
Lopsided plates

There were several institutional tensions, however, that limited students’ self-serve freedoms. Adults working at the salad bar did frequent visual checks of student’s plates for correct portion sizes and variety. These visual checks were not arbitrarily imposed—under the “offer vs. serve” USDA model of school lunch, students’ salad plates were required to contain at least 3 out of the 5 nutritional components (milk, fruit, vegetables, bread, protein). But the larger battle between adults and children was fought over portion size. The economics of the program meant adults had to limit children’s servings of more expensive (but highly popular) items like cherries, strawberries, oranges, and kiwis, or else these items would run out by the end of the first lunch period. The small ratio of adults to students, however, meant that some students snuck larger serving sizes than they were allowed.

Making economic matters worse, lunch workers also had to allocate more food to the program than the students would actually take. Apparently this was necessary for psychological reasons—according to the workers, students coming in during the final lunch period were more tempted to buy the salad bar lunch by seeing full “fresh looking” (rather than mauled through) bins of carrots, lettuce, and fruit, rather than an almost empty bin.

*Apple and oranges.*  
*Chicken and cherries.*
Skip the lettuce

Building crouton-based “salads”

Croutons were popular, and were used by the children in creative ways different than adults. Students seemed to treat croutons as adults would treat lettuce in a salad, using it as a crunchy base that would support (and soak up) salad dressing and other toppings. But since adults often place croutons on top of salad, the crouton bin was located at the very end of the salad bar setup. Students were careful planners in this respect, saving room for their croutons on their trays while loading up on fruit and other items in the beginning of the line.

![Croutons and dressing, with a side of chicken and oranges.](image)
While crouton abuse was a common complaint from adults watching over the salad bar, our nutrition analyses showed a different story. On average most students took only one or two servings of croutons, and the majority of students’ crouton servings were within the USDA guidelines of bread servings. But crouton-heavy plates like these pictured here were such powerful visuals to the adults running the program that eventually a crouton management system was set in place where students would be handed prepackaged and pre-measured serving size packets of croutons instead of being able to serve themselves.

*Croutons topped with chopped egg, tuna fish and beans.*
What our photos helped us to ‘see’ about children’s food culture

Our choice to use images in our research on children’s lunch plates provided several benefits to our evaluation process. The photos allowed us a more comprehensive, and holistic view of children’s use of the salad bar program. For example, from our photos we could see not only what children took from the salad bar, but also how they took the materials and arranged them on their plates to construct a different type of “salad.” While the nutritional analysis from our photos confirmed that children were indeed taking a greater number and a wider variety of fruits and vegetables, the photos also provided some clues as to why that was so. From the high number of lunch plates that contained diverse (and sometimes abnormal-looking) combinations and arrangements, it appeared that children enjoyed the freedom to feed their highly changeable and individualistic tastes and appetites.

The photos also helped us to gain new insights and understandings into children’s food culture. The loose, self-service style of the salad bar, where children were relatively free to choose their own ingredients, combinations, and amounts of food, was an ideal vantage point from which to view children’s own food values and material culture as distinct from adults. Rather than building what adults might consider a “salad” (mixed ingredients with certain foods like lettuce on the bottom and others like carrots and croutons on top) children instead crafted carefully separated piles of bite-size pieces of fruits, vegetables and meats—a deconstructed “salad” that appeared to an adult eye to be unevenly balanced and visually monotonous.

Children’s distinctly different visual food culture also served as an especially important counter-point to deterministic models of children’s food socialization; namely that children will simply copy adult ideas of what looks good to eat when presented with the freedom to conduct their own food experiments. Instead, our photos showed exactly the opposite—children built salads that were strikingly different than adults, and were also exceedingly thoughtful about how best to utilize the food selections and materials presented to them. Sociologist William Corsaro characterizes this as the process of interpretative reproduction, a dynamic process by which children actively contribute to their own cultural production while living within an existing adult-imposed social structure (1997). This model supports a new paradigm in child development that treats children as beings that not only are capable of complex thought but also able to actively construct their own lives and experiences (Prout & James 1997).

The photographs also helped us to explore tensions between satisfying children’s cultural food preferences and the institutional tensions of operating a school food program. Allowing children to make their own meals might account for happier lunchtime eating, but giving children these freedoms to construct their own lunches has other costs. In this case there was considerably more prep and clean up work for the food service workers, which raised costs. In addition, the many choices also slowed children’s passage through the lunch line, turning away children who were too impatient to wait.

Without a major overhaul of the financial and time constraints that school lunch programs operate under, however, caring about children’s individual tastes and their
ability to express variety on their lunch plates will always take a back seat to economic concerns. In the case of this program, due to the high cost of the salad bar in labor and overtime paid for cleaning it up, after a few years the salad bars in almost all of these schools were eventually phased out and replaced with pre-packaged lunch salads. Although we were disappointed in this outcome, our photos still played a role in the design of the new program. The school district food service manager used them to help decide what selections of foods should be in the pre-packaged salads offered to students (although, in the end, we saw no kiwi, cheese and crouton salads being offered).

Overall, children’s food actions that were depicted in the photos spoke louder than any words the children had used in interviews to describe their use of the program. As nutrition researchers and reformers, the re-examination of our photos for these cultural behaviors added considerably to our understanding of how young children thought about food choices, and how adults’ best intentions might not mesh with children’s food agendas. While we knew that kids thought about food differently than adults, and we had caught glimpses of this behavior from our live observations, only from the systematic review of the hundreds of photographs after the event did we realize the extent to which children were re-institutionalizing the program to meet their own needs.

In this respect, we contend that those with food reform projects and nutrition interventions in mind would similarly benefit from ethnographic visually-based studies of the program in use as a way to better understand the food culture of the people that the program is intended for. Although photographs and video of cooking, eating, and procurement of food are fixed in a certain time, they are still important discussion catalysts as they can be examined and re-examined for what “truth” they tell about people’s use of food in place, and additionally can counteract researchers’ own biases and assumptions about what “should be” versus what really “is” happening. Considering that people’s food habits of all ages and cultures are becoming increasingly important to watch and understand, image-based fieldwork appears to be, more and more, an ideal methodology for the food researcher.

Notes

1. The salad bar programs were running in each of the schools two days of the week and took the place of the normal “hot lunch” program the schools offered as part of the USDA’s National School Lunch Program (NSLP). As such, the salad bar was a nutritionally complete meal and contained all the components necessary to meet USDA school lunch requirements (i.e. protein, bread, fruit, vegetables, and milk).

2. The entire school community (as well as students’ parents), however, was notified in advance about the salad bar evaluation and allowed to decline participation in the study by requesting to opt out beforehand. We also gave all students an additional opportunity to decline before we took their photograph. After we examined the pictures, we were also careful to remove any identifying characteristics like hands and clothing that might have appeared in the picture. In the end, only a few students declined to have their plate of food photographed. More often, students were disappointed not to be included in the picture as well.

3. We used a set of “baseline” photographs of pre-measured and therefore known portion sizes of fruits and vegetables. Using these visual markers, we then quantified the serving sizes of each food type (bread, fruit, vegetable, etc.) on individual students’ plates. For more details on the results of our nutritional study, contact the authors. Partial results have been published in the UC SAREP Sustainable Agriculture Newsletter currently available online at http://www.sarep.ucdavis.edu/newsletter/v16n3/sa-1.htm
4. This change occurred after our photographic study, so we were unable to see the differences in salads.
5. Although we did conduct a plate waste study as part of our evaluation of the salad bar program, we were not able to conclusively determine if the salads children chose were also more likely to be eaten.

References
