

Ideology Versus Reality in the Lunchroom: A Comparative Study of Three School Nutrition Programs

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Abstract

American children are becoming increasingly overweight and inactive; consequently, the school lunch room is fast becoming an ideological battle ground. Legislators, medical professionals, school districts, parents, and the media are focusing intense scrutiny on school nutrition programs, and sweeping changes to these programs are federally mandated to occur before July, 2006. However, equal scrutiny has not been focused on the actual operations, logistics, or requirements of these programs. Through interviews, on-site visits, and participant observations, this eight week study focuses on current (April through June 2005) conditions in three economically disparate public school nutrition programs in one California county. This study asks if school nutrition programs can implement the numerous changes required under new cultural (informal) and upcoming federal (formal) mandates. The conclusion in this instance is that no, public schools are under too much existent financial, physical plant-related, and personnel-related strain to be able to easily or effectively retool their nutrition programs to match the burgeoning ideology. This study provides recommendations and considerations for schools, parents, and legislators – not from an ideological elevation, but from the actual locations within which our children are being fed.

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Introduction

Wherever we look these days, we are confronted with news about diet and obesity, especially in regard to our nation's children. Studies show that in the last few decades, obesity has continually increased among children in all racial categories; in Caucasian and African-American populations, for instance, the percentage of obese children has more than doubled since 1976 (Childstats, 2004). Concerns about children's low activity levels, overeating, weight gain, poor nutrition, and poor health are widespread.

As a result, policy makers, parents, doctors, nutritionists, news media outlets, and even entertainment providers are focusing on sending children (and adults) new and more health-conscious messages about nutrition and exercise. Even Sesame Street's Cookie Monster is now singing a different tune, aptly titled "A Cookie Is a Sometime Food" (Frey, 2005). While media pundits have poked a great deal of fun at the

creators of Sesame Street for this seeming muzzling of a beloved cultural icon, the situation is clearly serious enough to warrant action at all levels – corporate, governmental, cultural, familial, and personal (Berthelsen & Gledhill, 2005; Yee, 2005).

While this massive ideological shift is noteworthy, this comparative research study focuses not on cultural or legislative approaches to these serious public health issues, nor on the USDA's newly re-tooled nutritional guidelines (USDA, 2005b), nor on the sweeping changes mandated for U.S. school nutrition programs before July of 2006 (Child Nutrition and WIC Reauthorization Act, 2004). Instead, this study focuses on a location where many of these issues are being argued and tackled: the school lunch room. While this study includes information about the changing content of school nutrition programs, it is more concerned with the everyday realities faced by the people who serve and are served by these programs: nutrition

supervisors, cafeteria workers, school personnel, and the children themselves.

Questions central to the focus of this study are: Do school nutrition programs have the resources, the time, the funding, the personnel, and the physical plants necessary to implement the changes required under new cultural (informal) and upcoming federal (formal) mandates? And, can schools reasonably be expected to be held responsible for changing the health habits of children in a nation that is overwhelmingly overweight, food-centered, and inactive?

This study takes a comparative approach to these questions by observing three widely disparate school districts (and lunch rooms) within the same county: California's Monterey County.

Research Methodology

Demographics: Census data (U.S. Census Bureau, 2000) were compiled and used to identify three Monterey County school districts (and representative towns within those districts) that best represent three widely disparate socioeconomic strata. The nutrition supervisor at each of these chosen districts received an e-mailed questionnaire and was then interviewed by phone or in person. All supervisors were willing participants, and all were given the chance to correct or critique this study before publication. Site visits were made to one or more representative schools in each district during lunch hour to observe the process of feeding the children. Site visits were made at two elementary schools, two middle schools, and one

high school in one of the most socio-economically disparate counties in California.

Welcome to Monterey County

Monterey County is considered one of the most beautiful coastal areas of the world. Its real estate is in great demand, and it is a highly valued agricultural area due to its consistent and moderate weather. However, it is also a county with extreme socioeconomic disparities, from the absurdist heights of Carmel's numerous multi-million dollar mansions to the unsettling depths of the migrant farm workers' shacks lined up alongside the farming fields of Salinas and Castroville. This considerable economic disparity, however, provides pertinent and intriguing data about the differences and similarities in school nutrition programs.

Though I visited five schools in total, this study focuses on three lunch rooms in three very different small towns (within seven to twenty miles of each other) in Monterey County: Carmel High School in upper-class Carmel; Los Arboles Middle School in middle-class Marina; and Castroville Elementary School in working-class (and farm-laboring) Castroville. Each of these schools is a public school, each provides some percentage of its students with free or reduced price meals, and each must follow USDA regulations that specify nutritional and caloric requirements for each meal and snack provided by the school.

Table 1 (with data from the U.S. Government's 2000 census) illustrates the demographic differences between the towns in which these schools reside.

Table 1
Comparative Data for Carmel, Marina, and Castroville

Town	Carmel	Marina	Castroville	U.S. Average
2000 Population	4081	25,101	6742	281,421,906
Median age	54.3 years	32.3 years	24.8 years	35.3 years
Number of school-aged children	330 (8%)	3,921 (15.6%)	1819 (27%)	18.9%
Median income, per capita	\$48,739	\$18,860	\$10,729	\$21,587
Median income, per family	\$81,259	\$46,139	\$38,021	\$50,046
Median home value	\$675,300	\$247,000	\$170,000	\$119,600
Those aged 25+ w/H.S. or higher	97.3%	71.8%	40.2%	80.4%
Those aged 25+ w/B.A. or higher	54.7%	14.3%	3.0%	24.4%

As this Table 1 shows, the difference between these three towns is rather stark (Note: though this data is based on the 2000 census, the demographic disparities between these three towns have remained essentially the same). Carmel is populated primarily by older people (median age, 54.3); and school-aged children do not make up a significant percentage of its population (just 8%). Castroville, on the other hand, is populated by a large percentage of younger people (median age 24.8); more than a quarter of Castroville's residents are school-aged children (27%). The rest of Table 1 is self-explanatory, but note that even in the working-class community of Castroville, median home prices are quite a bit higher than the U.S. average. Also note that middle-class Marina residents have median per capita and family income that is slightly below national levels, yet they pay twice as much, on average, for their homes. As the 2000 census data shows, Carmel's median home values are some of the highest in the nation – more than five times the national median average.

Though these three towns are economically disparate, the websites of each of the school districts associated with these towns post sample school lunch menus that are very similar (CUSD, 2005b; MPUSD, 2005b; NMCUSD, 2005b). Each menu lists typical lunchroom fare such as pizza, corn dogs, hash browns, chicken nuggets, sandwiches, macaroni and cheese, and Sloppy Joes. None of the menus contain more or fewer mentions of fruits, vegetables, and salads; none are observably distinct from the others. In fact, federal and state involvement in the school lunch program tends to even out the disparities between these schools, at least where the lunch program is concerned.

The District Nutritional Supervisor Interviews

I approached the district nutritional supervisors for three districts: 1) North Monterey County Unified School District (USD), which includes Castroville Elementary; 2) Monterey Peninsula USD, which includes Los Arboles Middle School in Marina; and 3) Carmel USD, which includes Carmel High. All three supervisors agreed to answer a list of questions that were e-mailed to them; I transcribed their answers in phone interviews one to three weeks later. These three supervisors are: Kathy Cleary, supervisor for Monterey Peninsula USD; Kathy Cunnane, supervisor for North Monterey County USD; and Lynn Robertson, supervisor for Carmel USD. They are identified below by their names and the towns focused upon in this study.

1) What brought you into this field? What is your background?

K. Cunnane (Castroville district): Kathy Cunnane has a degree in business and a background in large scale institutional food service. She taught at a culinary program at Columbia College in the foothills of California's Sierra Nevada and began working as a nutrition supervisor when her youngest child started first grade.

K. Cleary (Marina district): Kathy Cleary is a Registered Dietician who received her B.S. from CSU Chico. She has worked in County Health Departments, but she moved into school nutrition because she prefers working with healthy populations and children.

L. Robertson (Carmel district): Lynn Robertson taught Home Economics in middle schools and high schools for many years, but when Home Economics programs were discontinued, she started her own catering business and eventually translated her food service experience into the school nutrition field.

Table 2
Comparative Lunchroom Demographics

District	Carmel	Marina	Castroville
Schools in District	7	24	8
Number of students	2,750	12,050	4,950
*% Free and Reduced Meals, District	11.7%	55-60%	55%
**2005 Commodities Reimbursement	\$12,000	\$160,000	\$64,000

*State and federal support and government commodities reimbursements are based on the percentage of free and reduced meals served in each district in the previous year.

** Commodities reimbursements are scrip-like funds that allow districts to buy government commodity foods such as cheese, eggs, meats, fruits, and vegetables at reduced prices.

2) How is your program funded?

K. Cunnane (Castroville district): The NMUSD nutrition program receives 60% of its funds from federal and state reimbursement for free and reduced price meals and 40% from cash and a la carte sales. Cunnane estimates that 90-95% of the meals her district serves are made from government commodity foods.

K. Cleary (Marina district): The MPUSD nutrition program is funded primarily through federal and state reimbursement based on the percentage of free and reduced price lunches served in the previous year (at 17 cents per lunch served). A la carte snack and meal sales also contribute to the program's budget.

L. Robertson (Carmel district): The CUSD nutrition program relies primarily on a la carte and cash sales and the district General Fund. The Carmel district's percentage of free and reduced price meals is so low (11.7%) that it impedes the district's ability to apply for grants to help fund its nutrition programs. Robertson reports that she belongs to a food buying cooperative that allows her to purchase foods at prices lower than restaurants pay, but not as low as the commodities program offers.

3) Do the children have a say in the menu offerings? What is their favorite meal?

K. Cunnane (Castroville district): Castroville Elementary had a student forum earlier in the

year, where the children helped to plan the May menu. However, the children asked for foods like Taco Bell, McDonald's, Pizza Hut, and ice cream, which Cunnane couldn't serve because the foods contain too much fat (the 2005 USDA school nutrition guidelines require foods to contain less than 30% fat). The children, she noted, also asked that white bread be served instead of whole wheat. Cunnane spoke of the difficulty in providing healthy meals to children who tend to prefer foods that are higher in fats and sugars than government regulations allow her to serve. As for favorite meals within the district, pizza is first, followed by chicken nuggets and hamburgers.

K. Cleary (Marina district): No, children don't have a direct say. All districts are now mandated to make changes in what is served in the schools (no sodas, no candy bars, no fried chips, etc.), and these changes are often counter to what the children would choose. Pizza is the favorite meal for most schools.

L. Robertson (Carmel district): Yes, because funding comes primarily from the children's purchases, Robertson is attentive to their tastes and wishes. At Carmel High School, for instance, students can purchase sushi, large salads, Odwalla juices, and sandwiches with fresh vegetables and deli-quality ingredients. Favorite meals within the district are pizza, followed by wrap sandwiches and chicken nuggets.

4) Do you oversee breakfast, lunch, and after school meals?

K. Cunnane (Castroville district): NMUSD serves some breakfasts (the children are not usually at school early enough), and some after school snacks. One school, however, is currently serving free breakfasts to all children as a part of a pilot program (see Question 6). The after school program was recently cut back (due to budget cuts) to a two-item snack, two days per week at the elementary and middle school levels.

K. Cleary (Marina district): Yes, all three meals are available in many parts of the district, though only “high need” schools (those with 60% or more of free and reduced meal recipients) qualify for an after school snack program.

L. Roberts (Carmel district): No, the Carmel district does not qualify for any breakfast or after school food programs, since both programs are based on the percentage of free and reduced meals served (11.7% in the Carmel district).

5) Are physical activity, nutrition education, and lifestyle curriculum considered a part of your nutritional program?

K. Cunnane (Castroville district): No, these curricula are totally separate from the school nutrition program. However, they will be a part of the nutrition program by July of 2006 (for more information, see Cunnane’s answer to question 7, below).

K. Cleary (Marina district): No, these lifestyle curricula are under a different umbrella than the food program. Cleary notes that PE teachers, who often present Health & Nutrition classes, are being laid off throughout her district.

L. Robertson (Carmel district): Not yet. These are all a part of the Child Nutrition and WIC Reauthorization Act, which mandates that new wellness policies be in place by July of 2006. The implementation of these policies will be funded for CUSD through the County Health Department.

6) What is innovative about your program?

K. Cunnane (Castroville district): Cunnane has implemented two innovations. The first was to discontinue the Preferred Meals pre-made menu and turn the district’s high school into a central kitchen that supplies freshly made meals to the entire district. She has also created a pilot program called Universal Breakfasts, which was a response to a district request for more participation in the free and reduced price breakfast program. This pilot program is unique in that it serves free nutritious breakfasts to the entire student body of Castroville Elementary School after school has started (breakfast is served in the classrooms at the children’s desks). This program has numerous benefits, including providing all Castroville Elementary students with a healthy, free breakfast even if they can’t come to school early; creating a calm, family-like eating environment in the classroom; and ensuring that the children will be able to focus on their school work all the way up to lunchtime without hunger pangs or blood sugar dips. Cunnane funds this program with the 65 cent reimbursement provided by the federal government for each of the free and reduced-price breakfasts served. This free Universal Breakfast program can only work, however, in districts where the percentage of free and reduced meal recipients is high (Castroville Elementary’s percentage is 82%). In essence, the free and reduced-price meal reimbursements for Castroville Elementary are subsidizing breakfast for the entire student body.

K. Cleary (Marina district): In 2005, Cleary’s district made changes in the snack bars in the middle schools to provide more nutritious, lower fat, and less sugary foods. They’ve also been able to keep prices for bottled water low (at 50 cents).

L. Robertson (Carmel district): Robertson took charge of the CUSD program in 2003, and she inherited a district in varying levels of crisis. She has worked hard to organize, standardize, and essentially re-tool the CUSD’s school nutrition program from the ground up. One of the most recent innovations is Carmel High School’s new “Farm to School” salad bar. Local organic

grower Earthbound Farms provides much of the produce. This new salad bar, which debuted in the week before my site visit, seems already to have achieved a healthy level of buzz.

7) What are your program's main challenges?

K. Cunnane (Castroville district): 1) Remaining profitable so that the program doesn't have to encroach on the general fund, 2) Dealing with the parents' concerns about providing healthy foods, yet knowing that the children often don't respond favorably to healthier foods, 3) Implementing the 2005-2006 Child Nutrition and WIC Reauthorization Act that mandates an overhaul of the national school lunch program. This overhaul includes changes to the nutritional content of foods (lower fat and sugar, etc.), providing physical education and nutrition education, and implementing new rules about the kinds of foods that can be sold, bought, or consumed at schools (this includes foods used in fundraisers, bake sales, and class birthday parties). Cunnane is concerned that there is so much pressure on academic achievement and testing in all districts that these changes will not be treated as first priorities.

K. Cleary (Marina district): Staffing and staff salaries. Monterey County is a very expensive area in which to live, and the school nutrition program offers non-competitive salaries and primarily part-time positions with no benefits. School lunch and food service workers are the lowest paid workers in the district.

L. Robertson (Carmel district): Staffing and staff salaries. Robertson can't afford to hire enough workers at the high school to staff enough points of sale to serve all the students in a timely way (in the 30 minutes the students have for lunch). Most schools in the CUSD have one to three 3-1/2 or 4-hour per day hour workers on site, but one elementary school, Carmel River School, has no food service workers at all; the lunch is served by the school janitor. Robertson also notes that her high school food service staff prepares all the food for the Carmel district in the high school kitchen. However, break time for the high school occurs at the same time her four-person staff is working full-out to package

and deliver all of the meals to the entire district. As such, she doesn't have the staff she needs to provide enough points of sale for break-time snack sales at the high school. Higher staffing levels would alleviate this problem. Robertson is also dealing with a completely unusual problem, which is that CUSD has modernized numerous sites over the last five years and converted many cafeterias into multi-purpose rooms or, in the case of Carmel High, into a dance studio. This unaccommodating situation will be addressed in the Carmel High site visit report, below.

Surprises

I assumed that food suppliers and agricultural businesses gave schools a discount on supplies, not only because the schools are volume buyers, but because they're feeding our nation's children. But the reality is that when school districts exhaust their government commodities reimbursements, they pay the same prices for supplies, produce, meats, and prepared foods that any restaurant does, yet they aren't able to charge restaurant prices for the foods they serve.

I was also surprised to learn that food service workers and cafeteria workers are the lowest paid employees in all three school districts – lower even than custodians. This may be attributable to the gender split in these jobs, and the continued “ghettoization” of salaries for blue collar work done by women. Of the fifteen cafeteria workers and servers I observed in this study, thirteen had more than one job and only two (thirteen percent) were male.

Visiting the School Lunch Rooms

I visited five different lunch rooms during lunch hour, and observed the workings of the food service process from as many vantage points as I could. Some similarities:

- All of the cafeterias were understaffed and too small to seat all of the children. Most schools had indoor lunch seating for less than 20% of their students, and two schools in the wealthy Carmel district had no indoor seating whatsoever.
- None of the cafeterias had signs, posters, or information about healthy eating, exercise, or healthy lifestyles.

- All of the serving times and locations were dictated by the academic schedule or the needs of the administration. Focusing on the needs of the children or the food service staff, or creating time and space for relaxed eating and a clear understanding of nutrition seemed to be tertiary concerns.
- The sheer volume of meals served by very small staffs in small kitchens and cramped cafeterias is astonishing. Feeding an entire school under these constraints is a massive operation undertaken with military precision at breakneck speeds.

In each of the schools districts, I gathered information through observation, participation, and interviews. My observations, it should be noted, are informed by my own background in large and small scale food service.

Visiting Los Arboles Middle School (A Timeline Approach)

Los Arboles Middle School (6th - 8th grades) is located in a quiet middle-class suburban neighborhood in Marina, California. Los Arboles has a very small (10 by 12 feet) “heat and serve” kitchen and a cafeteria that seats approximately 125 children (there are 720 children at this school). Some of the food, such as tuna salad sandwiches, is prepared on site, but most entrees are Preferred Meals (pre-made school lunches that can be reheated in warming ovens). In this district, approximately 55% of the students are eligible for free or reduced price meals.

11:15 a.m.: Three female cafeteria workers in their 20s and 30s (one full-time site supervisor, Bambi Barker, and two part-time workers, Crystal Jacobson and Lesvia Sierra) work together to stock their respective food service areas in preparation for today’s lunch. They have been at work since eight this morning, and everything is orderly, clean, and ready to go. I recognize a familiar feeling from my food service days as I watch the women’s quick and focused movements; I call it “the calm before the storm.”

The women take time to show me the ropes of their work as they continue to stock, clean,

organize, and check their paperwork. I try to stay out from underfoot in the small space. The kitchen is full of boxes, serving trays, and food warmers, and the central lunch line (a long row of refrigerated metal food storage containers) takes up a third of the small space. I am interested to see Domino’s Pizza warmers stacked against one wall. This pizza is a part of the a la carte service, which students pay for out of pocket.

11:30 a.m.: Today’s school lunch contains many entrée options: Pizza; baked chicken and tater tots; chicken sandwiches; tuna sandwiches; and a small number (7) of green salads in plastic clamshell containers. The two a la carte wagons that Crystal and Lesvia will operate sell pizza, Gatorade®, and approved snack foods such as baked chips, Grandma’s cookies, Smucker’s Peanut Butter® and Jelly turnovers, Pop Tarts®, Gatorade, bottled water, and sandwiches.

In the school lunch line, children will choose 1% fat regular or chocolate milk from a large refrigerated container, they’ll pick up their trays, and they’ll pass by a shelving unit containing an assortment of side orders of fruits, veggies, and “bread:” a small salad cup, a pineapple cup, a baby carrot cup, a celery and peanut butter snack, and a bag of pretzels. Then, they’ll choose their entrée, pay cash or enter their school lunch pin code, and move into the cafeteria to sit down.

11:40 a.m.: The first shift of about a dozen special education students comes through the line. I am surprised to see that Crystal and Lesvia are no longer in the kitchen, and that Bambi is handling the line, restocking the line, handling cash, and overseeing the electronic lunch accounts alone. Bambi also keeps certain foods back behind the line with her, such as the salads and the dessert option – which today is a chocolate or vanilla pudding cup. She juggles her many jobs admirably, holding two or three puddings in her left hand, managing the cash register with her right, and gesturing with her elbows as she answers questions, addresses special food requests, and keeps the line moving.

11:45 a.m.: The lunch service begins in earnest. Children crowd into the kitchen through one small door, and the line snakes out into the yard and around the building. Bambi is still alone in the cafeteria line. I watch the children, but miss something we discover later – someone mischievously opens a carton of chocolate milk and upends it into the refrigerated bin; Bambi will have to unpack and clean out the entire milk bin when lunch is over.

After observing about 75 children moving through the line, I walk out into the cafeteria and discover why Crystal and Lesvia are not in the kitchen – they’re operating their a la carte wagons at the far end of the cafeteria, and children waiting to purchase from them are lined up along the full length of the both sides of the cafeteria. Crystal and Lesvia are extremely busy, and are selling, handling cash, serving, and restocking their respective wagons alone. I see a number of children whose a la carte-purchased lunch consists of Gatorade, Grandma’s® cookies, and baked chips.

I observe the children eating; the process seems primarily social. Some eating is accomplished, but the social nature of eating with scores of other people is the central focus. Food is often toyed with, traded, discarded, or ignored in favor of conversations and joking. The cafeteria is a collegial place – noisy, but not wild. Two adult lunch monitors keep the peace and keep things moving – seating space is at a premium.

12 noon: Large numbers of students continue to pour into Bambi’s, Crystal’s, and Lesvia’s food lines. I write in my notebook: “It is like managing a swarm of locusts.” But the lines continue to move, and the cafeteria monitors continue to maintain order and peace (albeit, a noisy peace). I notice that many children eat quickly and discard a significant portion of their lunches so that they can leave the cafeteria and go to recess; I did not observe any child who finished every item in his or her lunch. Food trading was a normal social activity. I wonder to myself if there is a way for the children to keep some of their uneaten lunch items for later.

12:10p.m.: Back in the cafeteria line, Bambi is still juggling all of her duties alone, and the children are still pouring in. There are only two entrée choices left: the chicken sandwich and the baked chicken and tater tots. Though the fruit and veggie selections are prominently displayed and easy to access, only the pineapple cups and the pretzels have been chosen in great numbers. The carrots, celery and peanut butter, salad cups, and bananas were not popular today.

12: 15 p.m.: The lunch period is coming to an end, and Bambi moves the line along quickly. These later children want to know if anything else is available, but school lunch entrees are available on a first come, first served basis; children who arrive late do not have the choices that the earlier children do. I walk through the cafeteria again and watch children eating, talking, and socializing. Food continues to be a secondary focus of the lunch break. Crystal and Lesvia’s lines are shorter, and everything is winding down. I write in my notebook: “There is a nearly mathematical precision to this massive undertaking.”

By 12:45, the children are finished with lunch, the a la carte wagons and tables are cleared away, the cafeteria floor is swept, and Bambi’s kitchen is cleaned and prepped for the next day’s meals. Lesvia and Crystal’s shifts end at 1 pm, and the lunch rush is over.

On this day, Bambi served 203 lunches in less than one hour and ran her cafeteria line alone. Crystal completed more than 150 transactions at her a la carte wagon in the same time frame, and Lesvia served more than 200 slices of pizza and provided drinks and other snacks at her a la carte wagon. On average, these women each served four to five children per minute for 40 minutes straight. Special notes: Bambi Barker notes that most school food workers have two or three jobs (this is consistent throughout all of the districts in this study). She also notes that at Los Arboles, religious beliefs affect the kinds of foods she can serve. It is not mandated, but Bambi provides non-pork and non-beef entrees for the Muslim and Hindu children at the school.

Bambi also expressed concerns about the mandated changes to the food offerings on campus; these changes coincided with her hiring on at Los Arboles, and many of the children seem to think that she was responsible for the changes. Bambi doesn't like being seen as strict or disciplinarian; she reports that many of the children view the dietary changes as *punitive*. Many children stated openly that if chips, candies, and sodas were not available at school, they would just bring them from home or purchase them on their way to school. In fact, when I left the cafeteria and observed the children sitting outside with their bagged home lunches, chips, candies, and sodas were everywhere. The general sense at the middle school level is that controlling or guiding the nutritional choices of students is difficult at best.

Visiting Castroville Elementary (A Participant Observational Approach)

Castroville Elementary School (Preschool - 5th grades) is located on the main street in working-class and farm laboring Castroville, kitty corner to a Round Table Pizza, a Taco Bell, a Burger King, and the famous Giant Artichoke Restaurant (Castroville is "the artichoke capital of the world"). Castroville Elementary has a relatively spacious "heat and serve" kitchen (warming ovens only), though it has very small food preparation areas. Its small, clean cafeteria seats less than 75 children (there are nearly 500 children in the school). The foods here are made from scratch at the local high school and transported to Castroville Elementary each day. At this school, 82% of the students qualify for free and reduced meals (the district average is 55%). Castroville Elementary is also the site of the Universal Breakfasts pilot program created by supervisor Kathy Cunnane (see question 6, above).

At Castroville Elementary, the size of the cafeteria necessitates feeding the children in shifts (from youngest to oldest), starting at 11:15 with the preschoolers and kindergarteners and continuing until 12:30, when the 4th and 5th graders arrive. The preschoolers and kindergarteners are able to eat in the cafeteria, but all of the higher grades eat outside. This creates a great difference in the quality of the

mealtimes; the younger children have a quiet and focused environment in which to eat, and their teachers eat with them, so there tends to be more focus on finishing meals than on socializing. Outside, sixteen large, picnic-type lunch tables are set upon an asphalt surface in full view of the recess areas, and the eating tends to be louder, more scattered, and more social than it is inside. Also, there seems to be a great urge among the outside eaters to finish quickly so that recess can begin. Therefore, the yard monitor's job is two-fold: to see that the children eat rather than fool around – and to keep the children seated long enough to ensure that everyone does eat. On this day, there was only one lunch monitor supervising an average of 50-75 children per shift. On average, approximately 400 Castroville students eat school-provided lunches each day. Interestingly, the children who bring lunches from home are relegated to benches without tables on the sides of the yard; the tables are meant primarily for children who eat the school lunches.

On this day, nutrition supervisor Kathy Cunnane is on site and helping with the preparation and running of the food line. The regular worker is out today, and a worker (Yvonne Silva, who works 5-1/2 hours per day) from the high school is subbing. There is some confusion associated with this change, because the regular worker knows the children by name, and intuitively understands the nuances of all the different lunch accounts, lunch cards, and payments; however, the regular worker is absent. I pitch in for a quarter of an hour and keep the lunch line stocked so that Kathy and Yvonne can work together to make sense of the accounting system. Once they do, they stock the line together, work it together, and support each other throughout the long lunch shift.

The food at Castroville is appealing and healthy, and arrayed in a self-service line that is at a low enough level for young children to reach easily. Today's entrées are a choice of two sandwiches, a hot "chicken dunkers" and potatoes meal with barbeque sauce, and a large chicken shaker salad in a cup. The children are also able to choose a whole wheat bun, an apple, a cup of pears, and 1% fat regular or chocolate milk. I am interested

to see that five preschoolers and kindergarteners choose a lunch of salad, pears, and milk; these salad shakers continue to be very popular throughout the lunch service.

The preschool and kindergarten shifts are comparatively relaxed, and Kathy and Yvonne are able to monitor the children to make sure that they are choosing a meal with all of the necessary food components. Also, the younger children are able to finish their meals in quiet before the older grades are allowed to line up for lunch. As the older grades file in and the room becomes more crowded, it becomes harder to pay individual attention to each child's food choices. Though revolving student helpers man the lines, none are allowed (for health and safety reason) to restock the line, so Kathy and Yvonne continue to work diligently to accommodate all of the children, restock the line, and deal with the accounting difficulties. Kathy must veer away from serving at one point to make more salad shakers, as they are a heavily requested item. I wonder how a single person (the regular worker who is absent) could manage all of this alone.

After the younger children are cleared out of the cafeteria, and the older grades began filing in, I observe the outdoor eating atmosphere. I notice that the energy, the socialization, and the noise levels increase with each grade level. There is also a markedly high level of food wastage; I observe child after child throwing unopened, untouched, or barely eaten food into two large trash cans. This level of wastage was not observed in the younger children, whose eating was accomplished indoors in a more calm and supervised atmosphere. Outside, the janitor stands at the ready, and empties these two large trash cans at least three times during the lunch shift. When queried about the level of wastage, the janitor notes that, in his experience, outdoor eating involves significantly more wastage, noise, and disorder than indoor eating does. His impromptu estimate is that food wastage more than doubles when school lunches are eaten in an outdoor setting.

Food trading is strongly in evidence in this school, especially as socialization and noise

levels increase; in fact, there is an informal food exchange area at the end of one of the lunch tables, where unwanted fruit, milks, and entire meals can be had for the taking by anyone who wants them. Even at the elementary level, it seems, trying to control food intake is a difficult task.

In today's lunch shift, Kathy and Yvonne served 420 meals in a 90-minute period, which averages out to between four and five meals per minute. By 1:15, the cafeteria, kitchen, and outdoor lunch areas are cleaned, organized, and ready for the next day's meals. Special note: This is the school (see Kathy Cunnane's answer to question number 3, above) where children were invited to help create the lunch menus for May. The children asked for a number of foods that didn't conform to federal school nutrition guidelines; therefore, many of their suggestions had to be scrapped. However, the "word on the street" (among the children and some of the staff at the school) was that the children's needs weren't being heeded by the school lunch program. None of the people who held this view realized that the children had asked for fast food, ice cream, and white bread instead of whole wheat. The common assumption was that the food service people were ignoring the children's ideas and suggestions.

I was struck throughout the entire length of this study by how little workable communication exists between children, parents, administrators, and food service personnel. People seem to be talking at but not with one another, and every group seems to have its own ideas about the "best" way to feed and manage children. Significantly, people approached school lunch personnel in a rather paternalistic, "how-can-we fix-your-program" way – instead of observing the intensity of their work, listening to their concerns, or relying upon their hard-won expertise.

Visiting Carmel High School (A Multiple Site Approach)

Carmel High School is located beside tree-lined Highway 1 in upper-class Carmel. Carmel High is the central kitchen for the CUSD; it is where all lunches are made from scratch for all seven

schools in the district. In this district, 11.7% of the students qualify for free and reduced meals.

The kitchens at Carmel High are large and well-appointed, though the physical plant is more like a mid-sized restaurant kitchen than a large industrial kitchen. For instance, there is one gas range, one large walk-in refrigerator, two convection ovens, and a reheating oven. In an industrial setting where hundreds of meals are made at the same time, more and larger equipment is required. Making hundreds of meals in a setting of this size requires that kitchen workers be exceptionally fast, coordinated, focused, organized, and good natured. Otherwise, collisions (physical and emotional) can reduce efficiency and make the workplace uncomfortable and unprofitable.

I arrive at the tail end of the district-wide lunch preparation, and watch as trucks are loaded with lunches for each of the schools in the district. 387 lunches were prepared before 11 a.m., but a sudden request for additional lunches and deli items has the kitchen in a flurry of activity. Lunch time at the high school today is 12:30 (lunch time differs each day), and the staff must squeeze these extra meals and items into the time they usually dedicate to focusing on lunch at their own campus location. I try to stay out of the way. A chart on the wall lists the lunch times for Carmel High School; depending on the day, the lunch break is at 11:50, 12:30, or 12:50 (regardless of the start time, students have a half hour to line up, purchase food, and eat lunch). These varying lunch times are organized around the academic schedule and not the needs of the kitchen staff.

The CUSD district kitchen has one full-time worker, Pam Weaver, one seven-hour worker, Jerry Johnson, and two 3-1/2 hour workers, Hilda Hernandez and Mia Luango. Jerry, Hilda, and Mia have second jobs (and third jobs, in Jerry's case) in order to supplement their incomes. In the office at one end of the kitchen, district supervisor Lynn Robertson is busy trying to coordinate with a group of parent volunteers who want to help staff more "points of sale" (POS) at the high school during lunch and snack

break, so that the long lines now being experienced by the students can be alleviated.

The POS at Carmel High today are one a la carte wagon that is rolled out onto the campus, and three windows near the former cafeteria (which is now a dance studio). These windows are reminiscent of theater ticket booths or glass enclosed teller windows; the students will line up outside the windows, completely separated from the food and the workers. Inside the windows, the three workers will gather menu items from counters, trays, and refrigerators, and pass the items through the windows to the students. These four POS locations serve the 732 students of Carmel High. (Note: Carmel High is a district high school; it serves the children of Carmel, Pebble Beach, Carmel Valley, and outlying areas of Monterey).

No parent is able to staff a POS today. When things calm down a bit, Robertson explains the problematic issues of using parent volunteers in food service. First, the parents often don't understand that they need to have tuberculosis clearances, training in blood-borne pathogen techniques, and training in food handling and cashiering. Second, though volunteers seem to be a good solution, they are really a stop-gap and not entirely reliable measure, and Robertson is concerned that the district might consider free parent labor preferable to hiring more workers, or increasing the hours and/or salaries of the existing workers.

At 11:30, the extra meals and deli items are now ready to ship out to the schools that called in late orders. However, the delivery trucks have already left, so Robertson offers to deliver the food in her own car, and invites me to go along. We drive into Carmel and deliver four heavy, duffle-bag-sized hot packs of food to Carmel River Elementary School, which is in a quiet, upscale residential neighborhood (with average 2005 home prices nearing one million dollars). This elementary school has 394 students (this school is a district school that serves more than just the small number of children in Carmel) but no cafeteria due to a district-wide modernization process that converted many cafeterias into multi-purpose rooms or dance studios. This

school also has no kitchen, so we deliver the large hot packs to an impromptu food service area made up of two long folding tables that take up about one fifth of the dance studio. As we unload the food, we are careful not to disrupt the dance class going on around us. The janitor helps us unload; he is responsible for serving lunch at Carmel River Elementary, and he serves it alone. Parent volunteers sometimes pitch in, but none are in evidence today.

Robertson points out a small refrigerated milk bin that is plugged into the wall of the dance studio; it was installed six months ago after state regulators cited the school for not having any refrigeration, food service areas, or proper food storage. After we unpack, Robertson speaks to one of the teachers, and I search for lunch seating areas. I see none on the grassy grounds of the campus until Robertson points out five or six small picnic-type benches near the parking lot. I ask where the children eat on rainy days, since there is no seating in the dance studio. Everyone within earshot shakes their head or shrugs their shoulders, but no one answers. The first lunch shift files into the dance studio as the janitor opens the hot packs; the dance class moves over a bit, but continues dancing. The sound of the dance music follows us as we return to Robertson's car.

On the way to our next delivery, Robertson relates the struggles involved in her two years of re-tooling and rebuilding what was an essentially nonfunctioning district nutrition program. Her gains have been steady but hard-won, it seems. For instance, getting the folding tables and the refrigerated milk storage bin into the dance studio at Carmel River School was a lengthy process involving a great deal of persistence and logistical planning. The same is true of the new "Farm to School" salad bar program, which is set up in a similarly small section of the dance studio/former cafeteria at Carmel High School. The salad bar is currently available only on Thursdays. Space is at a premium in the CUSD.

We arrive at Carmel Middle School, which is located in a bucolic valley. There is an actual lunch room (it's not a cafeteria, because there

are no cooking facilities) here at CMS that seats about 100 children; there are 540 students enrolled. At this middle school, three women manage a deli-type serve-yourself lunch line and an a la carte station. All of the women work 4-1/2-hour days, and one, lunch room supervisor Marian Alvarez, has worked in the lunch room for 30 years. This lunch room is clean and well organized, and the lunch items and snack foods tend to be a bit more "upscale" than those found in the a la carte wagons at Los Arboles middle school in Marina. There are brightly colored bottles of Gatorade, baked chips, and Pop Tarts, but there are also full salads in plastic clamshells, Odwalla juices, numerous fresh fruits, and thick, vegetable-filled sandwiches on whole wheat bread.

Robertson and I deliver two trays of pasta salad and fresh-baked Otis Spunkmeyer cookies to Marian, then head back to the high school and arrive 15 minutes before lunch time. Pam, Jerry, and Hilda are now moving in concert like athletes or dancers, stocking, counting, organizing, and preparing for the lunch. I clear out of the kitchen and search through the high school grounds for a lunch area. There isn't one. I count seven small picnic tables on the entire campus; each seats about six teens. I check the attendance level again: 732 students attend Carmel High. I notice soda machines on campus. Robertson reports that these will soon be replaced with juice vending machines as a part of sweeping changes mandated in the district's new wellness policies.

The lunch bell rings at 12:30, and the quiet campus fills with students. Mia has set up her a la carte wagon (pizza, drinks, chips, Pop Tarts, Otis Spunkmeyer® cookies, etc.) at an upper level of the campus, and students make a beeline for her. There is also a lone woman selling Jamba Juice® from a folding card table. Jamba Juice sends vendors to many of the middle schools and high schools in Monterey County with carts of 16 ounce juices that cost \$3 each. Jamba contributes 20% of their sales to the school nutrition program. Today, 37 Jamba Juices will be sold at Carmel High; the nutrition program will receive \$16.20.

Back at the POS windows, more than 75 students wait in line to buy school lunches or a la carte options like pasta salad, sushi, Pop Tarts, fresh salads in plastic clamshells, fresh fruit, Odwalla juices, vegetable sandwiches, cheeseburgers, fruit yogurts, chips, bottled water, Odwalla food bars, Otis Spunkmeyer cookies (baked daily in the convection ovens), and candy (the candy will soon be removed as per the wellness policies). I peer into the POS area, which is a tiny 5 x 10 room adjacent to the kitchen where Jerry, Pam, and Hilda work the windows; they handle money, manage accounts (the students enter pin numbers that display their account balances on computer screens), take orders, fill lunch trays with all of the components of a school lunch, answer questions, and perform a complicated dance as they cross back and forth, behind and in front of each other, going from station to station, fridge to counter, shelf to till, and back again. No one stops moving for an instant.

Outside, ten minutes later, the line is moving, but still long. I spy one young man carrying a drink and a large salad in a clamshell, and I surreptitiously follow him to see where he'll sit: all the tables are full. I pass students who eat standing up, sitting on low walls, leaning against buildings, and on the lawns (it rained the previous night, so the lawns aren't terribly inviting today). Everyone seems to be eating on the fly, with hands instead of utensils. After a leisurely amble, the young man leans against a wall, balances his drink in one hand, and opens his salad with the other. He eats with his hands, though a fork is available (but unwieldy). I wonder about rainy days; the Jamba Juice vendor tells me that when it rains, the students eat standing up, huddled under the eaves and covered walkways.

By 1 pm, the last stragglers reach the POS windows. Many entrée items are no longer available, but Jerry, Pam, and Hilda assemble impromptu meals for the latecomers. Everyone is fed, and the lunch is complete. The windows are closed, and by 1:25, the kitchen and the POS area are organized, down-counted, cleaned, and stabilized for the next day's shift (which starts at 6 am).

In this thirty minute lunch period, Mia handled 97 (3.2 per minute) a la carte transactions alone, the Jamba juice vendor handled 37 transaction (roughly 1 per minute), and the three-window POS station handled 206 transactions (6.8 per minute, or 2.3 per minute per worker).

In keeping with the worker's-eye and student's-eye view of this study, I did not contact CUSD administration to get their side of the story about why kitchens and cafeterias were converted into dance studios, or why a solitary janitor serves lunch on folding tables at an elementary school. Clearly, there are as many different stories and views about the issues presented here as there are people involved. However, this study is focused on the stories and experiences of the people who are actually doing the hard physical and intellectual labor of feeding our children every day.

Conclusions

The central questions of this research study were: Do school nutrition programs have the resources, the time, the funding, the personnel, and the physical plants necessary to implement the changes required under new cultural (informal) and upcoming federal (formal) mandates? And, can schools reasonably be expected to be held responsible for changing the health habits of children in a nation that is overwhelmingly overweight, food-centered, and inactive?

The answer to the first question is, quite simply, no. All of the children at these schools who want food get food each day – that much is clear. But while each of these programs meets or exceeds the demands placed upon it, it is equally clear that a rethinking of the position and importance of school nutrition programs will have to occur if formal and informal change is to be implemented effectively. This study found no school nutrition program that was generously staffed, supported, funded, or sufficiently outfitted to provide what it currently provides. Irrespective of each district's relative wealth or size, there were no lunch programs with resources fully adequate to deal with current needs in overcrowded schools, even though all three directors and their staffs are working

incredibly hard and with clear dedication and ingenuity.

I share the concern of NMUSD nutrition supervisor Kathy Cunnane about the possibility that school boards and administrators will not be able to shift their focus from academic achievement and testing to these new nutritional mandates. It seems likely that the 2006 implementation of the new federal mandates of the Child Nutrition and WIC Reauthorization Act will introduce more strain into an already strained situation.

The answer to my second thesis question (about our school's chances of changing entrenched American eating habits) would also have to be a qualified no. Schools can do a lot to make sure that what they serve is healthy; this is clearly important. However, if children aren't being fed well at home, and are constantly bombarded with advertising, promotion, and marketing of empty yet "fun" foods, it is unlikely that schools can compete ideologically. I heard consistently throughout this study that the home is the foundation of eating habits. All of the nutrition supervisors and lunchroom workers told stories of providing healthier menu options that were avoided like the plague; it's a very hard thing to change children's eating habits from the outside. The new wellness and nutrition education mandates are important, but will they turn the tide in American eating and activity patterns?

For instance, do these formal and informal mandates include provisions or funding to educate parents about good nutrition? Are there provisions to limit the full-time, multi-media, multi-billion dollar marketing of junk foods to children? Is there funding available to increase the size of cafeterias, kitchens, and food service staffs in our nation's schools? And what about creating more time in the school day for eating so that school children aren't hurrying through their meals and snacks in order to get more

recess time or to rush back to class? Is there funding available for any of these important changes?

At the elementary school level, it seems possible to make some positive changes in the health of America's children – provided that school nutrition programs are adequately staffed, funded, and supported by administration, parents, and the community. However, when children become more mobile and self-reliant in middle school and high school, it seems that the schools cannot have as strong an impact. Older children can buy food outside of school, they can leave campus, and they can bring food from home or buy it at convenience stores on the way to school. And if they eat from the a la carte wagons at school, nothing can stop students from choosing "lunches" consisting of baked chips, Gatorade, and Pop Tarts – all of which are acceptable foods under the new federal mandates (Nevius, 2005; USDA, 2005a).

School nutrition programs can have some impact on the health of American children, but they can only be a part of the solution to our multi-faceted and pervasive nationwide health crisis. The health of our children is certainly a central national concern. However, focusing a significant amount of that concern on the content of school lunch programs – without also becoming equally concerned about the paltry support we as a society provide for these programs – tends to focus our attention on the wrong issues in the wrong way.

School lunch programs provide a valuable (and seemingly impossible) service; they feed all of our children while they're away from home. Increasing the nutritional content of that food, and helping children understand the importance of nutrition and activity are laudable goals. But the schools can't – and shouldn't be expected to – achieve those goals on their own.

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