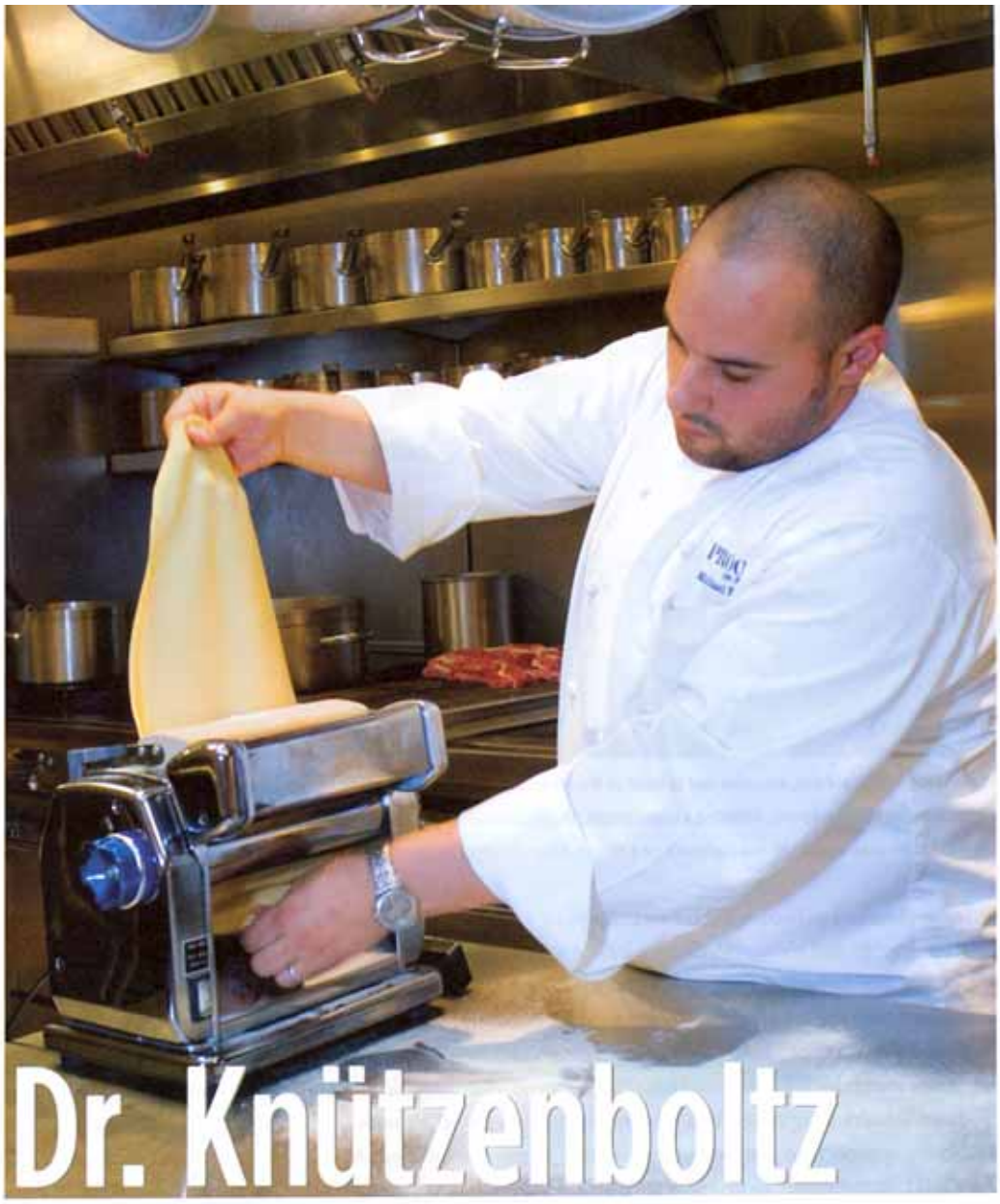

Ask Dr. Knützenboltz

Equipment Chefs can dream, but reality says they may have to sublimate their culinary ambitions to the capacity of their kitchen equipment. Unless, of course, they speak up loudly or, better yet, start off with fresh blueprints. Equipmentologist Dr. Knützenboltz (aka Chris Styler) probes the dilemma.

Dear Dr. K: Just asking, but does the kitchen equipment make the menu or vice versa? The chicken or the egg?

A: Every chef faces the same challenge when designing or inheriting a kitchen. How do you pick equipment with a particular menu in mind when you know that this year's hot dish could be next year's blackened redfish? Which equipment will seem like a wise choice 10 years from now when plancha-seared ahi has gone the way of fusion cuisine? Without a crystal ball, how do you choose specific pieces of equipment that will work as well now as they will for future menus that you haven't even dreamed up yet? In other words, which comes first, the salamander or the eggs Benedict?

Ideally, a chef works with an expert kitchen designer, unlimited funds, and equipment so hot off the assembly line it resembles something from *The Jetsons*. Back here on Earth, embarking on kitchen design is a lot like playing poker. Sometimes we stand pat; sometimes we're able to turn in some clinkers and draw new hope from the deck. Or—rarely—we're able to stack the deck in our favor for a surefire winning hand.

Standing pat

Brendan Walsh is chef of **The Elms Restaurant and Tavern** in Ridgefield, Connecticut, which features a formal dining room and a casual tavern—each with its own menu—housed in a 200-plus-year-old building. When Walsh began leasing the space back in 1996, he had little time and limited funds to redo the kitchen to his liking. The Garland six burner–cum–flattop range, which still forms the backbone of the line, dates from 1964. "It still gets hot when you turn it on," Walsh notes, with Yankee simplicity. "To me, it's not about maximum BTUs but technique. Medium-high heat on that range is just what we need to render and crisp salmon skin or pan-sear jumbo sea scallops." The

Previous page: Michael Paley, executive chef of Proof on Main in Louisville, runs dough through an Imperia pasta machine. Above: Proof on Main's prep area, including a pastry station, churns out food for as many as 350 guests a day. Paley got the last word in on some equipment and placement on a kitchen designed before he came aboard. Photos by Jeff Rogers.

latter get treated to brown butter and capers or a compote of diced fresh tomatoes and olives, depending on the season.

Walsh, the father of four, speaks from experience. "The more toys you have, the more get broken," he says. "Besides, when you cook the way we cook, how much other stuff do you need? We do a lot of work with local farmers and base our menu on what they have."

Even Walsh's imaginings for a kitchen renovation reveal his nuts-and-bolts approach to equipment and its role in menu evolution. A Blodgett convection oven, which Walsh installed shortly after moving in and which runs constantly, according to Walsh, would stay. With its fast recovery time, it turns out items for all parts of the menu but shines especially at desserts, like seasonal bread puddings (pumpkin, Meyer lemon, or sticky toffee) and flaky-crust pies (apple, peach, or cherry). "That's really what I'm after—old-school, sturdy, reliable equipment. I would like steamers, though," says Walsh, who still blanches all the evening's vegetables in large pots of salted water on the stovetop. "And a candy stove would fit in nicely, bringing big pots of stock to a boil a lot faster than I could on the range."

The wood-burning grill, which cranks out everything from bread for *bruschetta* to double venison chops, along with the separate ventilation it required, were among the few changes Walsh made to the kitchen when he moved in. But they would go in a renovation. "With energy costs being what they are, the cost of running a separate flue—which we have to start every time we light the wood—is substantial. I'd replace the wood grill with a countertop char-grill for some items and add flavors with marinades and wood chips. I would probably also return to a steakhouse-style broiler—you know, with the drawer that slides out and a really hot oven overhead." Ironically, that is the piece of equipment Walsh removed to make room for the wood-burning grill.

Drawn to an open kitchen

Michael Paley, executive chef of the **Myriad Restaurant Group's Proof on Main** in Louisville, states the challenges of kitchen design very well. "It's like putting together a puzzle, really. If I need a little more cash for this area, something has to give somewhere else." Paley signed on to Proof after the kitchen had been designed and the heavy equipment ordered. Not too late, however, for tweaking the equipment list so that it would include some of the items he considered vital for Proof's Tuscan-inflected American fare, featuring local and artisanal ingredients. "Design comes down to using every inch, including spacing of the tables between stations and landing zones. I was able to move some things around but had to stick within the parameters of the hood and the gas lines."

For example, Paley, whose kitchen prides itself on its flawless bison burger (courtesy of nearby Kentucky pastures), traded in a huge floor mixer for a 20-quart tabletop Berkel mixer and a stand-alone Hobart meat grinder. "We don't make our own bread," Paley explains, "so didn't need that large a mixer. The 20-quart is plenty for our pizza dough and desserts. Between the grinder attachment for the mixer and the meat grinder, we can more than keep up with that part of the menu."

Paley's mastery of the art of gelati and sorbetti demanded an ice cream maker that could turn out small, custom-flavored batches of both. "I had my eye on an Italian brand," admits Paley, "but was afraid that our location might have made service difficult. I found that the smaller Taylor model that freezes three quarts at a time and fits on the tabletop is perfect for smaller batches." That means guests at Proof can follow their bison burgers with small-batch frozen treats like sorbetti made from fresh seasonal fruit (not purees, Paley stresses) and gelati that range from sweet (vanilla or chocolate malt) to savory (goat cheese or olive oil).

"I had to have a vacuum sealer," says Paley. "I don't do a lot of sous-vide, but I think it's a really valuable tool for preserving fragile things like fresh spring peas."

Proof's open kitchen faces the dining room, so looks are as important as practicality. When it came to the big-ticket items, Paley still had time to make some last-minute adjustments to tailor his equipment to his menu. Speaking of the Jade ranges, Paley says, "I didn't feel there was enough range-top space on the line, so I cut the flattop by 12 inches and gained two more burners." A Jade char-broiler with a convection oven beneath tackles the grilled and roasted portions of the menu, while an Alto-Shaam smoker turns out everything from pastrami and chicken to smoked salt (used as a garnish) and smoked grapes, which take on a raisin-like texture and complement the cheese plate. Two cheese melters, a deep fryer, and a pasta cooker round out the big equipment on the line. Among the smaller, menu-driven choices are an ice crusher for plating oysters on the half shell

and an electric Imperia pasta machine for house-made pastas.

The prep kitchen is shielded from customers' view by a wall that runs between it and the service line. It's equipped with workhorses that enable Paley and crew to serve 220 to 350 guests a day and also accommodate a budding banquet and meeting business. Flexibility for party menus is guaranteed by a Blodgett double convection oven and a French-style flattop range (with a surface made from rectangular rather than circular segments) that produces some serious BTUs. "It has the same footprint as a six-burner range," says Paley, "but because there are no burners, the space is much more flexible."

Stacking the deck In the case of The French Culinary Institute (FCI), in lower Manhattan, it's the curriculum, not a menu, that drives kitchen planning. The FCI started as a group of classrooms that also prepared meals for the school's functioning restaurant, **L'École**, on the ground floor of 462 Broadway. In the past decade alone, the size of the school has expanded from 35,000 to 75,000 square feet. The recent merger of the FCI with the Italian Culinary Academy (the two entities under one roof are housed in the newly named International Culinary Center) accounts for some of that growth. The third and fourth floors of the building received a major overhaul to permit them to incorporate a new kitchen for **Cesare Casella**'s Italian program and the center's growing number of students.

Just as evolving tastes and changing equipment preferences define design in a commercial kitchen, so do the changes to a school's curriculum drive the layout and outfitting of its kitchens. The center's new fourth floor kitchens reflect all that master chef and roundsman **Marc Bauer** and Alexander Antonelli of Manhattan-based Alexander Antonelli Architecture have learned about teaching kitchens in the 11 years they've been working on upgrade at the school. The hallmarks are sturdy equipment that can stand up to the rigors of constant use by the students, design that allows uninterrupted lines of vision from student to chef/instructor, and a flow around the room and around the individual island stations to promote safety and interaction and reduce crowding. Gilding this marble and stainless-steel lily are countless finishing touches and custom-made features, many of them the brainchildren of Bauer.

Explaining his approach to this kind of kitchen design, Antonelli says, "The State of New York has guidelines for how much space must be allotted for classrooms of any type. This and a lot of other parameters go into determining the size of 'the box,' that raw space that I begin with." The six workstations in the four fourth floor kitchens offer students plenty of space for the hands-on cooking segments of their classes. Two pairs of students work on opposite sides of one of the kitchen's six island stations, which are made of heavy gauge stainless steel. The surface of each station is composed of workspace, open gas burners, and a flattop range. Underneath each side of the station are a stainless-steel lined Jade oven and shelving for storage. Central to the island is a slim exhaust system that

removes smoke, heat, and grease without interfering with cross-island communication or vision. Retractable faucets for filling pots on the stovetop run alongside the exhaust system. For the demonstration portion of the classes, students line up on one side of each island, facing the instructor's demonstration island, which is backed (in some cases) with a pull-down video screen for augmenting the day's lesson. By distributing some equipment that isn't used every day—such as a Vulcan-Hart pasta boiler and char-broiler, Hobart convection oven, and Baker's Pride pizza oven—around the perimeter of the classroom (or "decentralizing" the equipment, as Bauer puts it), he left more space for the students to work in.

The kitchens are stunning in their design and attention to finishing detail: heavy-gauge stainless steel is used not only for the work surfaces and undershelving but also for sealing spaces between equipment and ends of equipment that may protrude a little from the wall. This, as well as the choice of stainless-steel refrigeration and cabinet doors with inner rather than outer hinges, eliminates places for grime to collect. The dish and pot washing station, set off in a corner for better flow, features an angled stainless shelf with upright stainless dividers to hold freshly washed cutting boards upright and separate as they dry, for better air circulation and sanitation. Anyone who has ever taken a whiff of cutting boards that were washed and stacked while still wet can appreciate the simple genius behind that. The shelf is angled toward the wall and equipped with a drain so that water doesn't collect. All condensers for the new classrooms' refrigeration are remote (located separately from the refrigerators themselves), which cuts down on noise during class time. Load-bearing columns are incorporated seamlessly into the design, and doors on ranges and refrigeration were customized to accommodate odd corners and angles. Huge windows open onto the hallways outside the kitchens and create a feel of spaciousness, not to mention permitting visitors unobstructed access to the workings of a classroom/kitchen. There is even room for the whimsical: at the FCI's 20th anniversary, noted chefs from around the world were asked to leave their handprints in freshly poured cement. Antonelli has given the weighty piece of memorabilia a new home in the form of wall-mounted rectangular frames on the third floor.

Jade island stations as far as the eye can see in the International Culinary Center's new kitchen.

All these lessons, according to Antonelli and Bauer, have not been lost on equipment manufacturers. "Through osmosis, the refinements that we and others have asked for in equipment become part of many manufacturers' standards," Antonelli says.

Old, new, borrowed, or blue, when it comes to equipment, Bauer hits the nail on the head. "If you invest in quality, it pays off." And it's true; a look at those of the FCI's kitchens that were renovated 10 years ago reveals some wear, for sure, but not the degree of wear one would expect from kitchens that have housed a decade's worth of fledgling chefs for two classes a day, six days a week.

The theme that runs through these kitchens is a foundation of solid, adaptable equipment—ranges, heavy-duty ovens, flexible flattops, workhorse convection ovens, and the like. With these and a little imagination, chefs are ready for whatever menu changes they may dream up next week or next year.

For a manufacturers listing, see Source Index.