

Revolutionizing Culinary Education: Can Cooking Save Our Food System?

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As usual, more valuable than the nuggets of brilliance distributed at the sessions of the Dublin Gastronomy Symposium are the many follow-up conversations over a coffee, a pint, a meal or, less enjoyably, an email. This paper builds on these conversations with many of the colleagues in this room in three parts:

1. The paper I presented two years ago, titled, ‘Suppressing Desire as Culinary Discipline: Can Culinary Education Be Hedonistic? Should It Be?’ which got me thinking about the purpose and goals of culinary education, and specifically how we weather the transition from apprenticeship to trade school to college to research university. Is our pedagogy keeping pace with the inflation of credentials? Is our faculty? Are we elevating our approach or simply teaching more stuff to smarter students over a longer period?
2. Challenged by these questions, last summer we convened a group of culinary educators, employers, and allies in Philadelphia to better define some operating principles for the culinary education of the future. This was a tense and provocative meeting challenging the status quo. The operating principles were somewhat revolutionary given the current state of culinary education. Perhaps hyperbolically (perhaps not), we present a manifesto for culinary education.
3. The Drexel Food Lab, mentioned briefly in these documents emerges as a demonstration model for culinary research not being simply research *about* food (as it is, properly, in food studies and gastronomy programs) but using culinary skills to positively impact the food system and peoples’ interaction with it. We need post-secondary culinary programs at colleges and universities to not simply be housed in the ivory tower, but do the things universities do: investigate and challenge dominant paradigms, develop intellectual property, solve problems and transfer technologies.

Background from the previous paper

I believe we’re at a critical moment—perhaps a crisis—in culinary education. With 400 tertiary programs in the US, and programs beginning to close, the market is full. Tuitions of 50 thousand dollars per year to learn to cook are not unusual. At the same time, students are staging walkouts of even the self-proclaimed best culinary schools bemoaning declining standards, unfulfilled promises and

poor quality of education. In other cases, entire classes of alumni are filing suits that their education has not delivered promised wages, jobs or titles. Chefs and managers report being dissatisfied with many alumni hires—in some cases severing relationships with culinary schools and preferring to recruit and train on their own. I want to focus not on how we got to this ridiculous position but how we might succeed in this environment rather than being sucked into its vortex.

Paul Rozin (1999) says that ‘food is fundamental, fun, frightening, and far-reaching’. While academia loves to bemoan, prevent, dissect, and discuss, it struggles to enjoy; fun gets short shrift. Much of the early history of food studies has been occupied with establishing its seriousness and legitimacy, despite—or at the expense of—pleasure (Belasco, 2008). Lab coats, hairnets, micronutrients, and portion scales take the sensuality from cooking—and from a food safety perspective, rightly so! Professional culinary education in particular has been a discipline (and there it is again) committed to suppressing and controlling desires—desires among working class *commis* to become white collar (literally) chefs; desires to cook with passion as one does at home, tasting with one’s finger or licking the cake beaters; desires to have bad boys (and increasingly girls) behave and take their training seriously; and desires to storm the dining room to tell a dissatisfied guest where to shove his opinion of the cuisine, to name a few.

‘Culinary education has its roots in early 20th Century hotel training. Even the standard curriculum—knife skills, stocks, soups, sauces in that order—has its roots in Escoffier’s *Le Guide Culinaire* (2011) the seminal hotel cuisine training guide based largely from his time as chef at the Savoy hotel in London. As an aside, Escoffier himself would have been mortified that a century-old book, even his century-old book, would have the longevity to form the canon of professional cooking. He begins, ‘If the art of cookery in all its branches we are not undergoing a process of evolution, and if its canons could be once and forever fixed, as are those of certain scientific operations and mathematical procedures, the present work would have no *raison d’être*.’

‘Hotel training differed somewhat from the apprenticeship model used for cooks and other tradespeople throughout France and much of Europe in that the numbers gave it a quasi-academy, quasi-military style atmosphere. Where the trainee of one of Escoffier’s contemporaries might be one of a couple apprentices at an independent restaurant, learning at the side of the master, large hotels of the Gilded Age had hundreds of cooks and tens of trainees, a group not unlike what we would call a ‘class,’ though the most noticeable

difference is that it would have been all male. “The culinary system Escoffier outlined in the cookbook, which eventually became a manual of proper practice for professionals throughout the twentieth century, was inspired by the elite patrons who frequented his restaurants’ (Trubek 2000, p. 49).

‘In 1946, two do-gooding women, Katherine Angell and Frances Roth, invoked Escoffier’s *Guide* as the foundational curriculum when they formed The New Haven Restaurant Institute to take advantage of GI Bill funds and help returning World War II veterans start a career. Their school later became the Restaurant Institute of Connecticut and, in 1951, was renamed the Culinary Institute of America (CIA). As the first professional culinary school in the US—professional reads: male, partly in distinction from the many cooking schools for women that sprung from the home economics movement in the late-nineteenth and earlier in the twentieth century—CIA was a trend-setter and influencer of the 400-plus professional culinary education and training programs that followed in the US (US Department of Education 2014).

‘Most of these programs, consistent with Escoffier’s outline—stocks, sauces, soups, moist heat cooking, dry heat cooking, combination techniques, followed by *garde manger*, baking, pastry and beverages—would be familiar to any student of any Western professional culinary program. The pedagogy would also be familiar. First, consistent with Escoffier’s *brigade de cuisine* and Angell and Roth’s military student body, there is a strong emphasis on discipline and order...There is education about the uniform, its history and the need to keep it pristine. Students are taught the ultimate authority of the chef and apart from important safety commands like, ‘Chaud’ or ‘Hot behind,’ learn ‘Oui, chef!’ or ‘Yes, chef!’ as the response that a command has been heard. Consistent with the authority of the chef, teaching is done primarily by replication. I demonstrate a hollandaise. You repeat. If yours looks and tastes like mine, good! If not, keep trying. Even advanced culinary courses are taught in this vein: I show you how to make an elegant salad topped with a seared scallop and a cardamom cracker. You repeat. A final exam may be to show that you can cook without the demonstration: make a proper sole *meuniere* from memory. To be sure, there is value in learning through replication. I have a good means of cutting an onion that I learned from a mentor. It’s the best way I know. I should share it with my students rather than giving them a knife and an onion and saying, ‘Learn through project-based inquiry.’ As a counter argument, however, consider a fine arts or even craft program based solely in replication. Copying the masters is important, but the expectation is that there will always be studio space for creativity and innovation—so it should be in culinary arts. For a good example along these lines, consider Harold McGee’s foolproof recipe for *sauce hollandaise*, where cold butter, egg yolks and lemon juice are simply and slowly whisked together directly on a flame

as compared to the classic but cumbersome double boiler method as practiced by Escoffier, learned by thousands of culinary students each year. Fittingly, Escoffier (1969) himself writes, in his recipe for hollandaise, ‘Experience alone—the fruit of long practice—can teach the various devices which enable the skilled chef to obtain different results from the same kind and quality of material’ (p. 23). This particular breakdown Hegarty attributes to culinary education’s lack of a research base. He identifies four paradigms chef-instructors use to justify their practices: (1) tradition (the way we do things), (2) prejudice (how I like it done), (3) dogma (this is the only way) and (4) ideology (this is what is done by the current orthodoxy).

‘The net effect of this type of traditional culinary education is generally positive: respectful, hard working cooks who channel their desires to learning from chefs in hopes of one day becoming one. So what’s the problem? We produce good soldiers and even some generals, but no one who can talk her way out of the conflict altogether. We produce skilled technicians who can replicate a menu with efficiency and consistency but who struggle to adapt when the unexpected happens—a missing delivery, many more guests than forecasted, a problem with the gas or electric. And in the food service industry, the unexpected always happens.’

A Culinary Education Manifesto

Buoyed by the feedback of the last DGS paper, conversations led to the following: We are good at teaching cooks to cook. The best place to learn to cook may not even be in a cooking school but at the side of a master. But teaching cooking isn’t enough for the competitive environment of culinary schools. We need to create leaders and change agents. For a chef, the cooking is the easy part. Where do you go to cooking school to learn how to taste? To joke with fellow cooks in Spanish? To understand the air exchange in the hood? To write a new program for roasting a chicken in the combi oven that will be better than the presets? To send a recipe to a journalist and know it will work? To fix school food? To be sober? To cultivate regulars who may become investors? To not be an ass?

We are starting a culinary education reform movement around six core principles. Curriculum, learning objectives, assessments, and, ultimately, good cooks and great chefs flow from these:

1. Taste. It would be inconceivable to study art without understanding basic elements of design or to go to music school without ear training. But most cooking schools provide only a quick training in palate development, often as part of a wines course well into one’s studies. The very first course students take—and one they go back to every bite—should be palate training—understanding and developing better taste and smell along with understanding the importance of sound, feel, and sight, in the kitchen, on the plate and in the mouth.
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2. Cook. Most culinary schools teach by recipe or food group. Knife skills, soups, stocks, sauces, moist heat, dry heat. The curriculum is right out of Escoffier's 1903 *Le Guide Culinaire*. Cooking should be taught by transformational process. Making a pickle and making a sausage are both easy when a cook can follow a recipe. It's analogous to fixing a computer with a troubleshooting guide. Even I, who have no computing expertise, can follow the steps. But what should be taught is fermentation first and the application to the foods later so that the students can deeply understand the science and *write* the recipe. What's happening biochemically? An emulsion can be as weak as a vinaigrette stirred with a spoon to as strong as gum added to mayonnaise in an ultrasonic emulsifier. Students need to learn that they are of the same continuum—not one classic and one 'molecular.' We would never submit ourselves to a surgeon with deft hands who does not understand the science of what's happening inside our bodies. Why do we expect less of culinary faculty and chefs?
3. Celebrate. French fine dining food is wonderful. So is sushi. So is barbecue. So is feeding 60,000 people in three hours at a football game. We need to stop fetishizing French cuisine, intimate fine dining and tweezed food as the height of our art. A student is much more likely to need to know how to roll *maki* for a cocktail party than make a *chaud froid de poulet*. So let's teach both. Good food from all cultures should be celebrated at all levels of service. When teaching stewing we want students to learn a classic *boeuf bourguignon* of course, but why not a Japanese *nikujaga*, American Brunswick stew, and a Persian *fesenjan* at the same time? In our multicultural globalized society, 'ethnic' food is an anachronism. In our world where fewer people than ever cook at home, great culinarians are needed for all levels of service. Study and work abroad and voracious tasting are key.
4. Connect. A culinary academy is not a seminary. It needs to be in and of the industry. Students should be *stagiers*, reinforcing their on-the-job learning with classroom patience and depth. Graduating students should not simply be trained to 'make it in the real world.' They should be of the real world before graduating. They should be telling their instructors what is happening in the industry; not the other way around. Similarly, faculty should be leading industry experts—including current thought leaders—gifted with a skill for teaching. Too many schools rely on has-beens and never-weres. Culinary education is not a retirement career.
5. Solve. Institutions of higher education should create new knowledge, not just reproduce old. Students should have studio space to make mistakes, take risks, and solve real world problems for industry, good food causes, and technology transfer. Imagine an art school that only had students reproducing the

masters. Replication is important but where is the opportunity for students to apply their youthful energy to become the *avant garde*? Students must dive deeply into language, culture, arts, science, engineering, and the social sciences to have the depth and breadth of perspective to become more than technicians but to solve real world problems and add to the knowledge base.

6. Do the Right Thing. Our food system is a mess. When will we realize that a perfect football shaped *tournee* is less important than the global food supply? We don't propose devaluing kitchen skills but learning them in the context of doing right by and for the food system: sourcing, labour, energy use, water conservation, and resource stewardship. More important than the *tournee* is what is being done with the scraps. Every item entering and leaving the kitchen is a political statement. Chefs are activists, advocates and consumer educators. Those roles must be intentionally shaped, not picked up later if a chef reaches the spotlight.

While aspects of many of these points are in evidence in various programs, the culinary school of the future must embody these ideals for the good of our students, the industry and the food system. We are committed to developing a school founded on these principles and sharing our successes and challenges with others.

Drexel Food Lab

There will, at some point, be a fuller version of this paper illustrating examples of ways that various programs address the principles advocated in the manifesto. And there are many. For example, under *Connect*, Kennesaw State University in the US requires 400 hours of service learning in a food setting with a registered non-profit organization as a graduation requirement. Simple, effective and smart. And there is no end to the program innovation taking place.

For the remainder of this paper I would like to focus on examples of the sixth tenet of the manifesto, 'Do the Right Thing,' and share some emerging research from The Drexel Food Lab as this tenet represents the biggest hurdle for even the most prestigious culinary institutions. The Drexel Food Lab was launched in 2014 as an interdisciplinary research group that engages students by linking with non-profit partners and food manufacturers to solve real-world problems in the areas of recipe and product development. There are three baskets of activity. The lab uses a Robin Hood approach where resources garnered in the first basket, Industry Projects, support Good Food projects (the second basket) and our own product development for tech transfer (the third). Industry clients range from small producers to multinationals. Good food projects are pro-bono or grant-funded.

In many culinary programs, research means histories, ethnographies or other analyses of food employing any

number of methods. And that's good and important. But culinary research can be kitchen-based, employing the very culinary skills we all know and love while improving health, the environment, and presenting opportunities for economic development. Some current projects in our lab:

- Working with a physician who runs a free clinic in a socioeconomically disadvantaged neighbourhood, she tells us she is fed up with nutrition education that is out of touch with the real lives of her patients. They need fibre but will not get them from brown rice and kale after working long days. We developed a cookie for her with 4 grams of fibre, masked by delicious ginger and spice flavours. She now gives cookies instead of prescriptions, saving her patients and insurers money in the process.
- Working with a dehydrator that makes dried fruit and vegetables, we noticed they were buying pristine produce. We connected them with a juicer. Now their raw ingredient is already cut and pressed, saving drying time, energy and money. For the juicer, they are selling what was formerly a waste expense and is now an alternative revenue stream. In a similar vein, *okara*, the byproduct of tofu production, is a key ingredient in an alternative meat we developed (O'Donnell et al. 2015) that allows for a blended meat with similar amounts of protein but less environmental impact, lower saturated fat and reduced cost with the same price point.
- Working with the World Wildlife Federation and the US Environmental Protection Agency, most fish sold in supermarkets in the US, even in coastal areas, and especially over the 3,000 miles in between is defrosted from frozen. The perception among consumers is that refrigerated, thawed fish is preferable to frozen, where from a freshness, food safety, cost, and waste perspective, the reverse is true. Unsold fish cannot be refrozen and is often discarded day's end. We developed recipes that educate consumers to cook-from-frozen, saving stores labour and shrink in the process and yielding a better dish at home.
- Working with cancer patients, students develop recipes for a non-profit called Cook for Your Life! that are not only sensitive to the nutritional needs of cancer patients (familiar ground for a dietician) but which also take into account changing sensory thresholds, side effects of treatment and lifestyle issues like fatigue, which are less common considerations.
- Working with the Children's Hospital of Philadelphia, students are working on a quick-serve

foodservice concept with functional menu items specific to common conditions. For example, any menu item from one board would be compliant with an anti-inflammatory diet and would be familiar and comfortable to children.

And more: These are topics to discuss beyond the scope of this paper.

Conclusion

All of the projects mentioned above have a few common threads I would argue are essential to the culinary education of the future:

- Students and faculty collaborating with industry and advocates to improve our food system.
- Students building connections for careers beyond the traditional fine dining restaurant environment.
- Students and faculty working to improve the health, sustainability and economic development of our food system.
- Students trying things—making mistakes, having wins and losses; not just following recipes.

And it worked so well last time I try it again: all in the service of changing a culture of 'Oui chef!' to 'Why, chef?'

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