

# THE PHYSICIST & THE BAKER

BY SIMONA CARINI

**Space is the set of positions described by three independent coordinates at a given instant of time.**

That's the definition of space my physicist husband gives me as I complain that I need more counter space in the kitchen. Right now I can't find any *set of positions* ready to receive the hot pot I'm brandishing. I believe I need a bigger working surface, as I am sure they have in

professional kitchens, square miles of countertop where I would build outposts for my dishes-in-progress.

As an enthusiastic baker eager to improve, I decide I ought to get some advice from the professionals, so I follow my nose to the baking facility where Guy Birenbaum, chef and owner of La Fleur de Lyon, makes the delicious brioches, pies

and galettes, which he sells at several local farmers markets and through some local retailers. The first thing I notice upon entering the room, is that, unlike what I imagined, the working surface is not measurable in square miles, but is simply a longish table, of which at this moment only a quarter or so is occupied by nicely shaped chicken pies in the making. "Need to learn to use available *set of positions* (a.k.a. space) more efficiently" immediately goes to the top of my improvement list.

Birenbaum, who named his business after his hometown in France, exploits his enthusiasm for a versatile dough made with four ingredients: unbleached organic flour, cream cheese, butter, and salt. The dough provides support to different fillings and toppings and bakes into a pastry that is crisp, flaky and delicate in flavor. At his baking facility, I look on as the famous dough makes its entrance and goes through a roller machine that flattens out each thick square to the right thinness, prior to becoming the vehicle for different combinations of flavors.

In the case of galettes, the bare dough is baked, then the topping (which includes a thin layer of Béchamel sauce) is added, and the ensemble is frozen.



In the case of brioches and pies, the marriage of dough and filling occurs first, then the item is baked and finally frozen. Fresh ingredients are complemented with salt, pepper, and fresh herbs. No dry or canned ingredients are used. The results are items such as: free-range chicken pie in three flavors (mushroom, cream of spinach, spinach feta and pesto), cheese and ham pie, salmon pie, galettes topped with mushrooms, or caramelized onions, and brioches with fillings ranging from French brie to sweet potato. Once ready, La Fleur de Lyon's products are carefully packaged for delivery and subsequent gustatory enjoyment. (A label provides preparation instructions.)

I leave Chef Birenbaum and La Fleur de Lyon having learned that space is not an essential requirement for the production of great food. Wisdom is.

**Time is the single coordinate which measures the distance between two events occurring at the same location.**

That's my husband, again, and I tell him that, when working with yeast dough, one can really appreciate the time dimension: The sequence of events has a rhythm to it that the baker must accommodate, a rhythm driven by the yeast.



This rhythm fits more easily in my afternoon-at-home schedule, but many working people, who might be interested, for example, in baking pizza for dinner, can't so easily measure that coordinate into their schedules.

Luckily, there's Mom's Pizza Dough,

made locally by Kim Cole. She produces two types of organic pizza dough, regular and whole wheat, each made up of half unbleached pastry flour and half unbleached bread flour. Having an operation that makes organic products has some challenges. For example, Cole cannot use instant yeast, which contains some stabilizer, and must use fresh (bakers') compressed yeast in cakes.

When I make pizza dough in my own kitchen, I mix the dough and then let it rise at room temperature for as much time as it needs. Cole plays with time in another way, using delayed fermentation, a process that occurs in the fridge at 38 degrees and lasts 24 hours. Cole makes several batches of dough at once, and I watch as she pours the first batch from a metal bowl onto a metal table, kneading it by hand with fluid strokes. When one batch is done, Cole lets it rest for five minutes as the next one gets its turn. Each batch of dough gets a second kneading before finding repose in a rising container. A bit of oil is sprinkled on the surface, the lid goes on and the dough goes into the fridge. See you tomorrow.



The day after, the dough is retrieved from its cool resting place and divided into 14-ounce portions, each of which is packaged, labeled, and frozen, a state maintained until the product (purchased from a local retailer) is put to use. The next step occurs when the customer decides to bake pizza for dinner and takes Mom's Pizza Dough out of the freezer to thaw and rise. Here, time moves pretty slowly again, as the dough spends 10–12 hours at room temperature. The risen dough can then be rolled, topped and baked.

Pizza baking requires a hot hot oven, which requires time; time that can be used to get the toppings ready and the dough into the preferred pizza shape. Cole has a number of nice ideas for topping on her web site (see resources box below). Visit it and be inspired. You can also sign up for her newsletter and receive her newest topping ideas as she comes up with them. Pickled beet and Gruyère pizza anybody?

**The mass of an object is the ratio between a force applied to the object and its resultant acceleration.**

So my husband explains... I tell him that in baking, the mass of all the ingredients is important, but for me, the most daunting mass to work with is that of butter in the act of becoming part of a pastry dough, such as *pasta frolla* (sweet shortcrust pastry), Danish pastry, or puff pastry.

*Pasta frolla* is made easily in the food processor. For Danish pastry, one can apply the force of a mixer to accelerate the butter into a thick paste before spreading it over the base dough. But puff pastry remains mysterious. Purchasing frozen puff pastry does not suit my do-it-yourself personality: I want to learn how to manage the mass of butter so that the result, once baked, is the almost mass-less puff



pastry. Trace Leighton, Chef de Patisserie at Nibblers Eatery & Wine Bar in Pleasant Hill, kindly prepares a demo for me, explaining how puff pastry is not as forbidding as many make it out to be. Leighton strives to find quality ingredients for her sweet creations, organic whenever possible. For her puff pastry, she uses unbleached all-purpose flour and European style butter, which, she explains, has less moisture than American unsalted butter.

She begins by making a *détrempe* (dough made up of flour, water and melted butter). Once this is chilled, Leighton flattens it into a

small square, then puts the slab of cold butter in the middle and brings the flaps of dough over it. The result is a small package that faintly disguises the forbiddingly solid core mass. What force applied to that mass will accelerate it into the rest of the dough? It's the "turn": roll the dough into a rectangle, fold the rectangle into thirds, apply to it a 90-degree turn. The way to keep the butter from breaking through is to maintain dough and butter at the same cool temperature. Leighton's experience makes the movements of the rolling pin small in number and big in wisdom. But there is no limit to the number of movements you may use, and also no need to have a beautifully shaped rectangular packet of dough while you are working at it.

Three sets of two turns, with resting periods in the fridge in between and before the final shaping into cookies, little tarts with different toppings (fresh fruit, jam, custard, something savory, etc.), heart-shaped pastries, or whatever you like. Then it is oven time until the golden state is reached. Finally, the result is in front of your eyes and in your mouth: the seemingly unwieldy mass of butter that became part of the dough has turned the single layer of matter into a multi-layered delight: a magical result with no magic required. My next step? *Millefoglie* (a thousand leaves), layers of puff pastry filled with my favorite pastry cream: what a dream!

*A native of Italy, Simona Carini moved to the Bay Area in 1993 to live with her (now) husband. She works part-time as a researcher and writes a food-related audioblog (briciole.typepad.com).*



*Trace Leighton's recipe for Tarta de Manzana was in the Harvest 2008 issue of Edible East Bay.*

**RESOURCES**

Find Guy Birenbaum and his La Fleur de Lyon creations at the Grand Lake, Montclair, and Concord farmers markets (see our market guide at the end of this magazine), and also at the Marin Civic Center Market on Thursdays and Sundays, 8–1. At some of the markets, the item of choice can be warmed up and served accompanied by a mixed salad seasoned with Chef Guy's signature balsamic vinaigrette.

Mom's Pizza Dough can be found at many East Bay grocery stores. Visit [momspizzadough.com](http://momspizzadough.com) for locations, recipes, and more.

Visit Nibblers Eatery & Wine Bar at 1922 Oak Park Blvd, Pleasant Hill, or contact them at: 925.944.0402, [nibblerseatery.com](http://nibblerseatery.com)