Templates of Innovation in an Age of Creative Destruction

Despite the current state of the economy, innovation remains alive and well in our industry. I observe it day in and day out, working with large companies and small entrepreneurs who apparently never got the memo that we are supposed to be in a deep funk.

All of this is part of a normal economic cycle. Economies boom, then they go bust amid wails of introspective outrage on the heartless shortcomings of capitalism and innovation. Left to themselves, economies recover. The 20th century Austrian economist and historian Joseph Schumpeter first popularized the term “creative destruction” to describe how the status quo of industrial companies and goods is displaced under continuous erosion by upstart innovators. There is no standing still in business. Entrepreneurs engender small companies, which become large companies; large companies become complacent and eventually, like old-growth forest, totter and fall to be replaced by new crops of entrepreneurial innovators. Und so weiter.

The economical cycle consists of inevitable bust cycles, giving rise to powerful reactions against the perceived excesses and social inequalities engendered by capitalism, followed by reams of regulations, much as we see happening today. Then, things readjust (as they did after the United States’ “New Deal” era in the 1930s) and market forces once again reassert themselves. To paraphrase Winston Churchill, capitalism may be the worst form of economy there is, except for all of the others that have been tried. So, why all of the gloom?

Schumpeter’s experience was forged by a stint as Austrian finance minister following the WWI debacle and as a professor of economics, living through the hyperinflation and uncertainties of Weimar, Germany, in the 1920s, and finally as a Harvard professor of economics during the global depression and New Deal era of the 1930s. A harsh crucible, indeed! Yet even in those difficult periods, Schumpeter observed that it was impossible to tamp out the embers of economic innovation.

For the food industry, shoots of innovation constantly appear in the dappled sunlight of our industry’s old-growth forests. The food industry is remarkably resilient to the ebb and flow of economic forces. We pat ourselves on the back (1) for anticipating in time to become a cash-cow commodity. Unlike other industrial sectors (automobiles, pharmaceuticals, etc.), our industry is full of old-growth products with staying power. Just consider this limited list: Heinz ketchup garnered its first dish in 1876, Jell-O sashayed its way into American culture in 1887, Corn Flakes launched in 1894, Post Grape Nuts charmed American sensibilities in 1898, Triscuit crackers (shredded wheat technology) entered U.S. pantries (but not microwaves) in 1903, Vegemite forever scarred Australian tastes with its introduction in 1922 (Sorry, couldn’t resist!), and Wonder Bread became America’s first sliced bread in 1925. Successful food brands, it appears, are impervious to creative destruction.

What about recessions and depressions? Well, the Great Depression (1929–1942) hardly posed a barrier to food innovation: General Foods bought Clarence Birdseye’s flash-freeze process patent rights in 1929 and went to town; former Kroger employee Michael Cullen opened the first true supermarket in Queens, NY, U.S.A., in 1930; Skippy’s Peanut Butter debuted in 1933; Nestle invented Nescafe in 1936; SPAM appeared in 1937; and Cheerios puffed its way into the hearts of American children in 1941. The otherwise dismally depressive 1930s saw an explosion in frozen and canned food technologies, providing new value to economically challenged American and European consumers. Depression, de-smession … the food industry thrived! All of these brands are still with us! The question is: Does the deep shade cast by these old-growth successes squeeze out opportunities for food innovation? Hardly!

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Old-Growth Foods

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Templates of Innovation

Even old growth provides sufficient templates for innovation. Jell-O may not be new, but it now comes in many new flavors and recipes. Triscuit crackers are now available packed with whole grain, reduced in fat and sodium, and trans-fat free, with all new flavors to boot. Cheerios today are not what they were yesterday. Pasta may be as old as the hills in China, but not so for whole grain, gluten-free, and omega-3-rich pastas now made with flaxseed and amaranth. Enriched all-white Wonder Bread may have been quite the sensation in the 1930s, but the nutritionally packed Wonder Bread of today is hardly the same product of yesterday. And, Wonder Bread must now share bakery space with a cornucopia of whole grain and Artisan breads that would have been unthinkable 20 years ago.

Sure, there is always room for exciting new shapes, textures, and flavors in cookies, crackers, pastas, cereals, snacks, and breads, but “old” products still provide wonderful templates for creativity. The entry of the Chinese egg roll and Mexican tortillas into the U.S. market in the 1960s saw the subsequent creation of...
new cuisines for wraps, rolls, pitas, and appetizer products in Europe. Plain sliced white bread evolved into whole grain breads, artisan breads, bruschettas, and paninis that incorporate exotic grains. A cracker market dominated by two giants can still set the table for bagel crisps, curls, and flat breads.

Some of our greatest moments/examples of innovation, however, come from redefining the nutritional values of existing templates. Because of their ubiquity, grain foods already provide perfect vectors for vitamin and mineral supplementation, including iron, niacin, and folic acid. Although we should expect this next decade to create some entirely new product templates, we should also consider evolutions of existing product platforms. Chip snacks began with potato chips, then evolved into tortilla chips, vegetable chips, and bean chips of all colors. Pasta isn’t just pasta anymore, since advanced refrigeration and freezing technologies put the “fresh” back into pasta, not to mention a pastel board of exotic and colorful fillings. Consumers, meanwhile, move from traditional Italian-style noodles to Asian-style wheat and rice noodles. In sum, there are many cereal foods templates to which we can look for innovation in the years to come.

Many will come from cross-cultural pollination—India and Africa have only barely been tapped for new ideas—and others will be created out of thin air.

**Nutritional Drivers**

What will be this decade’s nutritional drivers? Here are a few predictions:

**Omega-3s**

In the United States, Omega-3 represents a very real nutritional deficiency. The U.S. National Academy of Science’s Institute of Medicine (3) estimates average American diets to be approximately 50% deficient in essential omega-3 fatty acids, a deficiency with significant negative public health implications. Grains provide a wonderful natural source of omega-3s. Consumers are catching on, nutrition bar and oatmeal product developers have caught on, and eventually, bread bakers will catch on as well. Flaxseed, soybeans, hemp, and nuts are all great sources of natural omega-3 oils. This should provide the cereal foods industries with plenty of growth and public service opportunities.

**Sodium**

Much as we may kick or scream, sodium reduction is coming to North America and the European Union under great regulatory pressure albeit without great fanfare. According to the January 11, 2010, issue of *The Wall Street Journal* (2), major food companies, such as ConAgra, Campbell Soup Co., Unilever, and Sara Lee, plan to preemptively and stealthily reduce the sodium content of their foods in small increments, hoping nobody will notice. Good luck with that.

It’s not that bakery and cereal products are particularly high in salt (salty snacks excepted), it’s because of their centrality to consumer diets. Collectively, bakery products contribute a lot of dietary sodium over the course of an average consumer’s day. Substituting calcium phosphates for sodium phosphates (in the case of leavened products) or potassium chloride for sodium chloride (in the case of yeast-raised products) identifies promising venues for sodium reduction. However, cost and taste factors need to be resolved. For an excellent review of these issues, revisit the January-February 2008 issue of *Cereal Foods World*.

**Antioxidants**

Antioxidants have been all the rage for years in the supplement industry as antioxidants *du jour* appeared in tandem with M.D.-
penned books touting the elixir-like benefits of such-and-such herbal curiosity. However, science has been catching up and research has been disclosing the many benefits associated with elevated antioxidant consumption. The biggest hurdle remains to link the consumption of specific antioxidants from specific foods to specific benefits. This hasn’t stopped the berry and beverage industries from making wild claims of antioxidant benefits to their great advantage. For now, the cereal products industry appears to be inexplicably shy about touting the antioxidant benefits of its products: whole grains are chock-full of antioxidant content and, mysteriously, baking appears to increase their antioxidant value. Once consumers catch on to this news, this should open up entire new templates to innovation (i.e., antioxidant crisps?).

**Gluten Free**

When industry giants such as General Mills commit to developing entirely new lines of gluten-free products, something very real is afoot. Just how many people are actually gluten sensitive (versus those who just perceive themselves to be so) remains a bit of a mystery. However, gluten free appears to have developed a cachet all its own. For now, it appears to be a niche phenomenon that provides a wonderful proving ground for new grains such as sorghum, flaxseed, and quinoa. Look to see gluten-free innovation create exciting new textures, flavors, and applications in cookies, crackers, pastas, and breakfast cereals. Gluten-free “breads”: now that’s a tough challenge.

**Vitamin D**

There are serious vitamin D and calcium deficiencies in Western societies. Not only are consumers not consuming or creating enough vitamin D to meet current intake standards, but there is serious discussion regarding whether the existing standards are adequate. Why a vitamin D deficiency? Most of our vitamin D intake comes from exposure to sunlight, a fairly recent “no-no” promulgated by medical scolds. Considering the use of high-barrier sun creams combined with the winter cave troll existence of most people living and working at the pole ends of the world, this shouldn’t be surprising. Fortified cereal products have already proven their worth as conduits for iron, thiamin, niacin, and folic acid. Why not calcium and vitamin D as well? Vitamin D breads for posture? Perfect!

Creative destruction will always be with us. It causes us great anxiety as new products and companies crowd out the old, but it also creates wonderful new opportunities to keep our industry young, fresh, and relevant. Innovation is necessary if our industry is to thrive, especially through difficult times. The good news is that even as our real product development successes appear to last forever, our old-growth industry always leaves room for new shoots of innovation to emerge, from both new growth and old.

**References**


Daniel Best is director of sales for ENRECO, Inc. and president of Best Vantage Inc., a food technology commercialization company based in Northbrook, IL, U.S.A. Best can be reached at dbest@bestvantageinc.com.

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