



Planetary Sculpture Supper Club

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The Center for Genomic Gastronomy
in collaboration with
Special Snowflake Supper Club
Gorilla Meats Co.

July 28th, 2011
- RECESS -
SE Portland, OR, Earth

COCKTAIL

*M. Chevallier Brut Cava (Spain)
& Pop Rocks*

CHEESE

*Chevre Anise Lavender, Rollingstone (ID)
Smokey Blue, Rogue Creamery (OR)
Seastack, Mt. Townsend Creamery (WA)*

SOUP

*Vegetarian Bouillabaisse with
Pa amb tomàquet, Aioli & Pimentón
Spiral Wines Cabernet Sauvignon (Napa Valley)*

SORBET

RioStar Grapefruit Sorbet

SALAD

*Tofu on a bed of pickled seaweed
with Sichuan pepper, salt and scallion oil.
Capsule with toasted rice powder.
Unfiltered Saké*

MAIN

*Three sausages:
Old World, New World, After the Exchange
with a side of Nixtamalized Polenta
Bitburger Premium Pilsner (Germany)*

DESSERT

*A cherry cola cake (corn syrup) and
a red velvet cake (cane sugar)
accompanied with flambéed Marshmallows*

FAKE FRUIT PLATTER

*Miracle Berry pills
with a platter of tasters*

A Word on Planetary Sculpture

EATERS AS AGENTS OF SELECTION

The Planetary Sculpture Supper Club is a collection of foods, recipes and stories that point to the varied ways that humans sculpt the planet's biosphere. In agriculture, sculpting the biosphere and steering evolution is commonplace. Animal and plant breeders have steered evolution for thousands of years. With a dramatic increase in the human population over the last century, the sum total of decisions that eaters make on a daily basis means that eaters exert increasingly intense selection pressures on the diversity, abundance and distribution of life on the planet.

Every time a food-secure eater chooses to eat one kind of food over another they make a small, downstream, but not insignificant selection pressure that privileges certain genomes to propagate on the planet.

WITHIN OUR GLOBAL CIVILIZATION AND GLOBAL FOOD SYSTEM EATERS ARE AGENTS OF SELECTION.

What preferences, constraints, biases or assumptions determine the genomes that comprise our food system? Which food system? How big is it?

What role should individuals, communities, governments or businesses have in determining the genomes that make up our food systems and ecological systems?

COCKTAIL

Lavas & Magmas

CUISINES OF THE ANTHROPOCENE

The influence of human behavior on the Earth's atmosphere is so significant as to constitute a new geological era. The Planetary Sculpture Supper Club is an attempt to cook and eat with intentionality and awareness of our current geological epoch: The Anthropocene.

In order for humans to survive the anthropocene we will most probably have to make substantial shifts in consciousness, reintegrating multi-generational and geological scale temporalities into our mental models and cultural technologies. For now, mankind is surfing far from equilibrium, the biosphere is shaking and popping, and we barely know where to begin.

"We live in a world populated by structures - a complex mixture of geological, biological, social, and linguistic constructions that are nothing but accumulations of materials shaped and hardened by history. Immersed as we are in this mixture, we cannot help but interact in variety of ways with the other historical constructions that surround us, and in these interactions we generate novel combinations, some of which possess emergent properties. In turn, these synergistic combinations, whether of human origin or not, become the raw material for further mixtures. This is how the population of structures inhabiting our planet has acquired its rich variety, as the entry of novel materials into the mix triggers wild proliferations of new forms."

'Lavas and Magmas', *A Thousand Years of Non-Linear History*,
Manuel De Landa

CHEESE

Cheese is an

◆.....◆ APPROPRIATE BIOTECHNOLOGY

One of the Center's mandates is to study the biotechnologies that make up human food systems. Cheese is one of the earliest, non-obvious and most widespread biotechnologies in use on the planet. Tonight we are serving three regionally produced cheeses and asking whether these Cheeses can be classified as **Appropriate Technologies**. This subset of technologies have some or all of the following characteristics: small scale, labor intensive, energy efficient, environmentally sound, locally controlled and people-centered. What are the advantages and disadvantages of privileging these characteristics in a technology?

Explicitly naming cheese production a "biotechnology" and comparing it to the range of other biotechnologies and controversies surrounding food is one way the Center has tried to open up a space for eaters to taste and talk about difficult topics.

Controversies in cheese making include: ongoing debates about pasteurized vs. raw milk cheeses, and the role of rennet. GMO-Microbial rennet is used more often in industrial cheese-making because it is less expensive than animal rennet. Traditional cheeses from Europe must legally be made using rennet from animal stomachs. There are also cheese innovators that use rennet substitutes to create entirely new cheeses.

Even the legal regimes for how cheeses are named are hotly contested. In 2002, the U.S. FDA issued a Warning Letter to Kraft that Velveeta was being sold with packaging that inaccurately described it as a "Pasteurized Process Cheese Spread." Instead of complying with the label's requirements Kraft rechristened Velveeta "Pasteurized Prepared Cheese Product," a term for which the FDA does not maintain a standard of identity.

Is taste or flavor a legitimate way to assess biotechnologies?

SOUP

Vegetarian Bouillabaisse

◆.....◆ THE SEARCH FOR THE FISH TOMATO

Vegetarian Bouillabaisse is a historical reenactment of Science. The goal of the project is to find and cook with the infamous, but misunderstood, frost-tolerant Fish Tomato genome. Although canonical in the cultural memory of Biotechnology, this ingredient has somehow slipped through the cracks of official history, much like its original creator DNA Plant Technology. This project asks the question "Where do failed GMO's go to die?"

The Center is currently documenting the sightings of this plant and is seeking information about whether any copies of the genetic material (seeds or cryogenically preserved plant tissue culture/germplasm) remain on the planet.

In the process of locating, planting and cooking a transgenic Fish Tomato we hope to make public the processes that led to the creation, hype and abandonment of this genome and to provide the missing data to the scientific commons about whether or not this plant was frost tolerant and any other interesting characteristics it might have.

Mutagenic Meals◆-----◆
INVISIBLE HISTORY

The process of radiating seeds and plants to generate mutations accelerated after World War II. At this time 'atoms for peace' campaigns were launched to justify ongoing atomic programs. In field tests agricultural plants were exposed to gamma rays, protons, neutrons, alpha particles, and beta particles to see if these would induce useful mutations. The Mutagenic Meals series attempts to assemble and cook with commercially available mutagenic plants in order to make this invisible culinary history visible, discussable and edible.

Rio Red and Star Ruby are two varieties of grapefruit that were exposed to thermal neutrons. They were selected and propagated because of desirable traits such as their color. Today these are commonly grown, and easily found in any supermarket. This explicitly named "Mutagenic Meal" implicates us as eaters in this invisible history, and is an opportunity for eaters to ask questions about what they are about to, or just have, put into their mouth.

You can find more mutagenic ingredients on this database:
<http://mvgs.iaea.org/Search.aspx>
 [META: The FAO/IAEA Programme's Database of Mutation Enhanced Technologies for Agriculture]

Utopian Cuisines & Superfoods◆-----◆
ARCHEOLOGY OF FUTURE FOODS

This is the first meal from our early investigations into Utopian & Intentional Cuisines. The Center is starting to scope out and unearth past visions of the future that outline how we could or should eat. Why were some movements and ideas successful while others failed? What are the fantastical images of the future of eating that can help us think through the present?

We've started to establish some definitions - that overlap and mingle - to guide our research:

Intentional Cuisines are planned cooking practices and communities that are goal-directed and designed as an alternative to dominant or normative cuisines.

E.G. Diet for a Hot Planet, Ministry of Food campaign during WWII

In **Modernist Cuisine** food follows function. Rationalist and reductionist scientific methods and tools are used to control and standardize chemical processes.

E.G. molecular gastronomy

Utopian Cuisines are idealized food systems that are imagined by various communities. The term can apply to attempted intentional cuisines as well as fictional cuisines portrayed in the arts.

E.G. Pill diets

Extreme Cuisines: Lifestyles that are driven by political and/or environmental ideals that are difficult to maintain over an entire life-cycle under current food cultures.

E.G. raw food, veganism, Ministry of Food campaign, WWII

Columbian Exchange◆.....◆
INNOVATION & CONSERVATION OF FOODWAYS

The Columbian Exchange was a massive exchange of animals, plants, culture, human populations, communicable diseases, and ideas between the Eastern and Western hemispheres (Old World and New World). It was one of the most significant changes in ecology, agriculture, and culture in history. New foods became staples of human diets, and new growing regions were opened up as a result of access to new crop genomes, technologies and recipes, transforming cultural practices the world over.

These three sausages are NOT an attempt to accurately re-stage recipes from a past era. These three sausages use the limited palette of genomes available in the “Old World” and “New World” before the Columbian exchange as a set of constraints to improvise within. Each sausage should let your tongue glimpse the flavor sets available based on the genomic resources available before and after this massive migration of genomes around the planet.

The history of gastronomy and genomic diversity is always one of innovation and conservation. What are the genomes and processes from the past worth holding on to? What new genomes and processes should we integrate or reject from our tables?

A Side Note◆.....◆
NIXTAMALIZATION, RENNET
& OTHER NON-OBVIOUS BIOTECHNOLOGIES

We will need as many foodways and techniques alive in our cultures as possible in the face of rapidly changing environmental conditions. Gastronomy is a great place to explore appropriate technologies, because it is a domain where values beyond economic can take precedence. Eaters desire more than efficient, practical and rational foods. We want to taste things that are delightful and delicious, no matter how labor intensive, non-normative or non-obvious, as long as they open up new taste landscapes.

We have already mentioned the biotechnology of cheese and the use of Rennet which was probably discovered because animal stomachs were used as a vessel for carrying milk.

Nixtamalization (the alkaline processing of corn other grain) is another non-obvious biotechnology. This process makes the grain more easily ground; increases its nutritional value; improves its flavor and aroma; and reduces the amount of mycotoxins in the food. Adoption of the nixtamalization process did not accompany the migration of maize to Europe and without this biotechnology, maize is a much less beneficial foodstuff. As a result, malnutrition and pellagra epidemics struck many areas where maize became a dominant food crop in Europe and Africa.

Health problems associated with maize-based diets in modern times have usually been remedied by means of vitamin supplements and broader diets, rather than by adoption of nixtamalization. However, the experience and desire for the flavors that come out of this process is one way to keep this discovery and history alive and accessible to future humans.

What historical and contemporary techniques, ingredients and processes can be combined to encourage resilient food ways?

DESSERT

Tasteless Terroir

REVEALING & CONCEALING GEOGRAPHY

All foods are shaped in some ways by the geography where they are grown. How and why do food processors or cooks attempt to reveal or conceal the qualities that a particular landscape has on a genome?

Terroir is the set of special characteristics that the geography, geology and climate of a certain place bestows upon a particular variety of food. How do eaters experience Terroir through taste, packaging, preparation or presentation of food?

Boutique or high-end agricultural products such as wine, coffee and tea, often boast the particular farm or ecoregion where they are produced. These agricultural producers offer cooks and eaters metadata about their food such as flavor profiles and recommended pairings. Industrially produced foods, particularly field crops, are explicitly geographically anonymized in a process of aggregation and grading, leading to a highly efficient and fungible process.

Sugars such as refined sugar and corn syrup are good examples of foods having a tasteless terroir. In the U.S. they are sold without explicit reference to their geography. These two cakes are sweetened with different genomes (sugar cane and corn) which are tastable, but their landscapes are not revealed to us as eaters.

Can we imagine a cuisine where every ingredient is explicitly tasted and talked about in terms of its terroir? What is the relationship between genome and geography in food?

FAKE FRUIT PLATTER

Miracle Berry

CHANGE THE EATER, NOT THE FOOD

This is our last experiment of the evening and points to one further area of investigation of the Center: gastronomical design fictions. The use of the miracle berry is an example where the “cooking” happens by affecting the eater and not the food. When the Miracle Berry is eaten, molecules from the Miraculin protein, bind to the tongue’s taste buds, causing sour foods to taste sweet. The exact process is not fully understood but one theory is that miraculin works by distorting the shape of sweetness receptors ‘so that they become responsive to acids.

What other chemical, architectural, biological and mental changes in an eater can be identified or imagined that shape the way food tastes and is consumed?

Conclusion

Thank you for letting us share our first year of research with you, and introducing you to next years research agenda. Each of these courses and research topics are experimental inquiries that will be refined and redesigned based on your feedback.

You can write to us at info@genomicgastronomy.com

We would love to hear what pleased your palette or left you with more questions than answers. The Center would love to receive any interesting ideas, peer-review articles or other research you run into.

The *Planetary Sculpture Supper Club* was created by:

The Center for Genomic Gastronomy
The Special Snowflake Supper Club
The Gorilla Meats Meat Club

CREDITS

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AND A SPECIAL THANK YOU TO ALL
OF OUR VOLUNTEERS THAT HELPED
MAKE IT HAPPEN!



The Center for Genomic Gastronomy is an independent research institute engaged in exploring, examining and understanding the genomes and biotechnologies that make up the human food systems of planet earth. We are dedicated to the advancement of knowledge at the intersection of food, culture, ecology and technology. The Center presents its research through public lectures, research publications, meals and exhibitions.

genomicgastronomy.com/