

Co-Creation of Culinary Experience in Open Innovation Ecosystems: The Case Study of Chez Panisse

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Abstract

The restaurant business is highly competitive with an average survival time for new restaurants being only 2.5 years. High-end restaurants, in particular, try to stay ahead of the competition by practicing a form of continuous innovation. Situated on the continuum of products and services, we show that the culinary innovation process in high-end restaurants has many of the characteristics of the generic New Product Development (NPD) process. We present an emergent NPD process that considers the nature of service-oriented food design that uses tacit knowledge of experts in the culinary design supply chain.

This paper will summarize the results of an in-depth case study of the California Cuisine movement that emerged from Chez Panisse, the world-renowned restaurant formed by Alice Waters. The case evaluates its business journey, and how it sparked and sustained a food movement by creating a surrounding ecosystem for over 43 years. We found that the Chez Panisse restaurant has been highly successful and sustainable because of its unique business and social relationships with its community: current employees at the Chez Panisse restaurant, its alumni spin-offs, farmers, purveyors, wine sellers, long-time customers, food writers, and food educators.

We present how culinary experience is co-designed at Chez Panisse by using the NPD model: idea generation, concept testing, prototyping, concept testing, and customer feedback. Its NPD processes clearly demonstrate that they incorporate “openness” to its culinary experience design. For example, their renowned ingredient-based menu, is a co-created product with long-term suppliers. Their co-created innovations, such as ingredient-based menus, not only satisfied customers, but also generated more revenues to suppliers. Suppliers not only had a dedicated customer in Chez Panisse, they were also able to increase their revenues by co-branding with Chez Panisse. This porous open innovation process led to the co-design of products and services.

The research outcomes claim that (1) culinary experience can be demonstrated as a design process, (2) innovative and successful high-end restaurants utilize the open innovation as a

business strategy to practice a continuous innovation, and (3) this results can be seen not only individual restaurants, but also an ecology level, which is a food movement.

1. Introduction

For the last decade, there has been a trend in industry to move research and development (R&D) from “closed” to “open” systems. The underlying impetus behind this phenomenon is that companies realize that harnessing external ideas can be less expensive and more agile than relying on their in-house R&D under rapidly-changing business situations. This transformation has been popularly explained by the concept of open innovation by Henry Chesbrough (2003). The concept of open innovation has received a great deal of attention in the last several years from academics and practitioners alike. Recently, growing interest on the part of small and medium enterprises (SMEs) in improving innovation has led them to be interested in concepts associated with open innovation as well. The open innovation framework has been heavily studied in the context of large, high-tech and manufacturing companies using a firm-centric perspective. Although small and medium-sized firms (SMEs) are becoming important in increasing a region’s innovation capacity (Szarka, 1990) little is known about the role that open innovation plays in this capacity building. Of particular interest is the role that entities outside of the boundaries of SME firms play as they create, shape, and disseminate technological and social innovations (West and Lakhani, 2008).

The aim and objectives of this research are to document how a small enterprise, Chez Panisse restaurant, has been innovating over the last four decades by co-creating culinary innovations with its community. In the next section, we will review the relevant prior literatures on open innovation, innovation ecosystems, culinary innovations and new product/service development in the restaurant industry.

2. Relevant Literature Review

2.1. Open Innovation

Originating from the Latin, *innovare*, 16th century definition of innovation is “to renew or change” according to the Merriam-Webster dictionary. Joseph Schumpeter, in his book of *Business Cycles* (1939), defined innovation as new changes in a firm that break from the traditional business cycle and replace it by another that brings higher increments of product throughout. In modern use, the concept of innovation has been widely applied to products, services, processes, business models, and for different contexts including enterprises, societies, and governments, etc. For a long time, it was believed that breakthrough radical innovations come from R&D at large and established firms (Chandler, 1962). He stressed the importance of internal R&D as it drives company growth and differentiation in his book, *The Visible Hand*. His theory differentiates innovating firms from non-innovating competitors as those that generate higher quality products with lower costs in a way that propels them to become main players in their industry (Lazonick, 2010). Chandler’s theory stresses that the innovating enterprises are value-creators in economic development; these firms commit to invest revenues to R&D and learning capabilities. It

demonstrates that strategic control, organizational integration, and financial commitment are the key factors to becoming an innovative enterprise (Lazonick and O'Sullivan, 2000). However, Chandlerian theory did not take into account the business dynamics associated with the introduction and growth of the internet in the late twentieth century. Chandlerian corporations benefitted from long-term employment within a single firm. But with the emergence the internet and supporting information and communication technologies, knowledge became easily distributed and shared, and promoted the mobility of labor. Research shows that knowledge that flows through career movements has benefitted small firms more than larger firms (Almeida and Kogut, 1999; Song et al., 2003). These new firms, with relaxed strategic controls and vertical integration, were labeled "Post-Chandlerian firms" by Langlois (2003).

Chesbrough (2003) coined the concept of open innovation by observing these Post-Chandlerian firms. He defines open innovation as "a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology." In other words, within this new framework "the boundary between a firm and its surrounding environment is more porous, facilitating innovation to move easily between the two" (Chesbrough, 2006). He demonstrates that the rising cost of innovation and shorter product life cycles push incumbent firms to pursue open innovation. In order to do so, the role of the business model was emphasized. A business model is a cognitive device to illustrate how a firm creates and captures value in order to deliver to its customers (Chesbrough and Rosenbloom, 2002; Osterwalder, 2004). It is far more than a financial model; it is a conceptual model that addresses "the architecture of revenue, cost, and profits associated with the company delivering the value" (Teece, 2010). Chesbrough stresses that companies can benefit by opening their business models (Chesbrough, 2007) and add value by utilizing other firms' resources and assets, harnessing a variety of internal and external ideas, and leveraging them into more innovations.

The adaptation and transformation of a business model is not an easy task. It is crucial to have a unique value proposition during the firm's birth, but it is more important to keep the model sustainable over time by adapting to the fast-changing business environment (Teece, 2010). It is beneficial to create an environment that has the capability to experiment with different business models and modes of operation. An initial good model could work very well at the beginning, but may not guarantee continuous success because of imitation by followers and changes of market positions. Companies may "quickly recognize ideas that fit the pattern that has proven successful in the past, but they will struggle with concepts that require an unfamiliar configuration of assets, resources and positions." (Chesbrough, 2007; Henderson, 2006). Thus, it is important to create an organizational culture that allows the open experimentation and design of business models by providing financial support and allowing failures as a part of design process.

In prior work, the majority unit of analysis with open innovation has been at the firm level. The business models focus on the value creation and capturing activities of a single firm (Amit & Zott, 2001; Chesbrough et al., 2006: p. 214). Chesbrough et al. (2006) do suggest

that the research scope of open innovation should be expanded to the inter-organizational level where the focal firms jointly create values with their collaborators.

2.2. Innovation Ecosystems and Open Innovation

West and Lakhani (2008) addressed the role of communities in innovation. They developed the construct of innovation communities based on the community definition of Gläser (2001). One characteristic of an innovation community is the dependency between the value creation and capture processes, a relatively unexplored area of research (Chesbrough et al., 2006). Open Innovation can be considered a value-creation strategy that is an alternative to vertical integration. In open innovation, some firms need to identify external knowledge and incorporate it into the firm; others seek external markets for their existing innovations. Knowledge, in the innovation context, is not just limited to technical knowledge, but may also include the knowledge necessary to commercialize an innovation, such as the knowledge of customers, market segments and product applications. Such knowledge may come from customers or other partners in the value chain (von Hippel 2007; Chesbrough and Rosenbloom 2002). Pulling together the concepts of open innovation and business ecologies, we can define an *open innovation ecosystem* as: a business ecosystem comprised of communities of suppliers, customers, and other stakeholders that practice open innovation within a network. With a strong local presence, this ecosystem self-sustains based on new product/service innovations as well as social innovations.

Innovation ecosystem benefits may be more readily achieved in regional clusters, since the effect of networks on innovation is magnified by geographic proximity; such clusters are defined as 'geographic concentrations of interconnected companies and institutions in a particular field' (Porter, 1998, p. 225). A few studies show that knowledge flows more readily to closer entities (Jaffe et al. 1993), whether through organizations or through individual labor mobility (Almeida and Kogut, 1999). This regional network effect applies both to high-tech and other industries such as apparel (Uzzi, 1997) and wine (Benjamin and Podolny, 1999). Since knowledge flows more readily to closer entities (Jaffe et al. 1993), the organization and institutional embeddedness of geographically-focused networks might be crucial in explaining the differences in effectiveness of innovation in different regions or nations. Cooke (2005) explains how open innovation plays a crucial role in the explanation of regional innovation systems. He argues that open innovation plays a crucial role in the changing spatial structure of industries. He claims that instead of the organization of industry determining spatial structure, the economic geography of public knowledge institution determines industry organization.

2.3. Innovation Process in the Restaurant Industry

The word "*culinary*" originated from the Latin word *culinarius*, meaning something related to the kitchen or cookery. The first use of this term appeared in 1638 (Merriam-Webster Dictionary). "Culinary" was introduced to the general public when French chef La Varenne published the book, "Le Cuisinier François" in 1651. His book contained the culinary knowledge of the kitchens of the aristocracy in the seventeenth century. It epitomized the culinary rules and principles that were used to prepare and cooking Haute Cuisine

(Freedman, 2007). In culinary history, there are two important streams: *Haute and Nouvelle Cuisine*. Haute Cuisine refers to “high food” and is usually prepared by a hierarchical kitchen at luxury hotels and restaurants. The way the food is prepared is highly complicated and extravagant. On the contrary, “Nouvelle Cuisine”, which means “New Cuisine” was introduced in the late 1960s (Svejenova et al., 2007; Rao et al, 2003). Nouvelle Cuisine emphasizes fresh ingredients, and preparations in a lighter way, lighter sauces, open fusion of other cuisine and other innovations.

Auguste Escoffier greatly contributed to the industrialization and modernization of the restaurant kitchen. Having been a military chef during the Franco-Prussian War in 1870, he learned how important it was to organize the kitchen structure and to codify the *haute* culinary knowledge into a text. His book, *Le Guide Culinaire* (1903), includes the organization of labor in the kitchen (*Brigade de cuisine*), ingredient preparation, sanitation, recipes, presentation (*Service à la russe*) and so on. His book has been the culinary training bible for young chefs and apprentices (Rao et al., 2003). The organization of the labor structure is still used in the field with many variations. The organization chart in Figure 1 provides one example of how it is used in the French Laundry, a three star Michelin restaurant in Yountville, California.

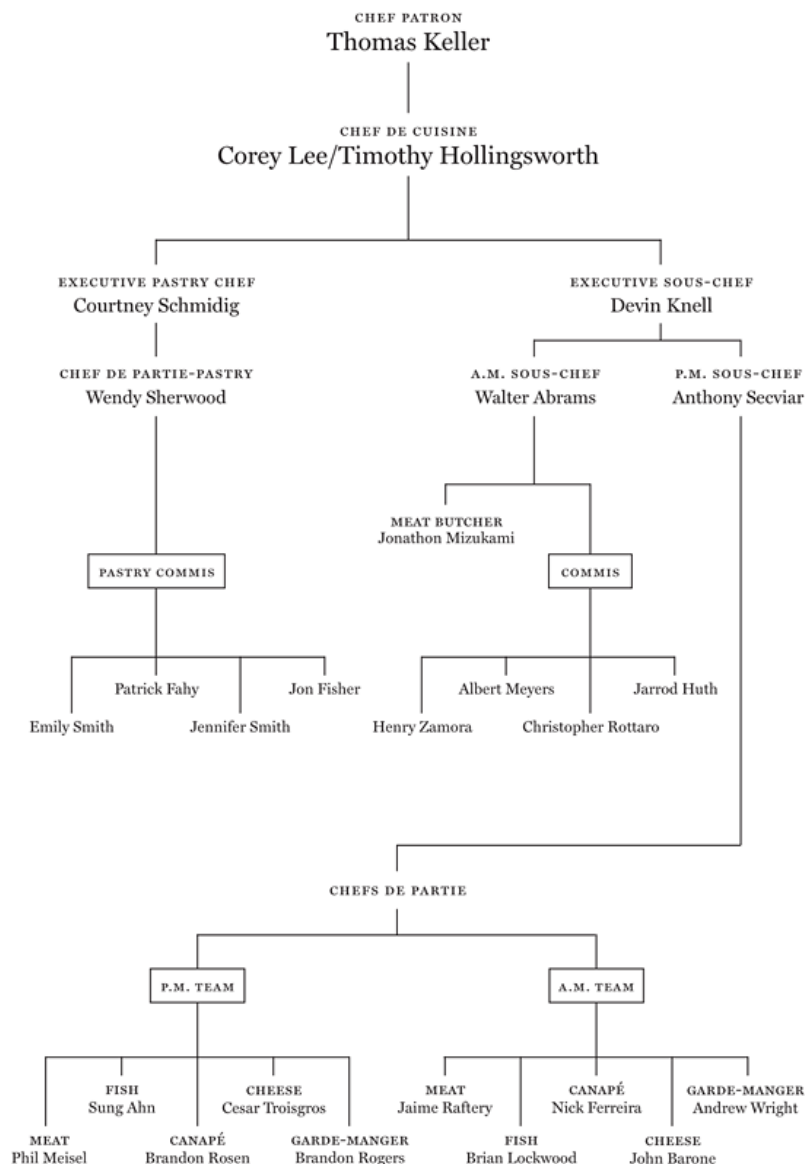


Figure 1: he French Laundry's Organizational Chart (grubstreet.com, 2009).

Restaurants are very competitive and high-risk businesses. During their first year, 26.2% of restaurants close, and by the end of the third year, 59.7% fail to maintain their ownership or close (Parsa et al., 2005). Although there are many variables involved in failures, research demonstrates that maintaining innovations in food concepts is one of the key factors for new restaurant survival. Traditionally, the chef community believes that “culinary traditions are collective, cumulative inventions, a heritage created by hundreds of generations of cooks” (Raustiala & Sprigman, 2012). Chefs work in *an open-source model*, drawing inspiration from fellow chefs’ ideas and expanding them freely. With this strong sharing tradition, the majority of chefs would not favor an intellectual property model. This community norm has made it such that innovations in food can be very easily copied or imitated; therefore continuous innovation is suggested to heighten barriers to the competition (West & Olsen, 1989; Harrington, 2004).

Additionally, there are other factors that drive innovations in the restaurant field. First, customer needs are changing. Particularly, patrons are becoming more internationalized and concerned about healthy eating (Askegaard & Madsen, 1998). Second, the supply chains for food are changing. This varies for the types of food; standardized food seeks the global supply chain whereas cultural and ethnic food prefers local and specialized ones. Third, science and technology are enhancing the techniques of cooking. Molecular gastronomy has emerged based on collaboration with scientists. Examples are the Nordic Food Lab (collaborating with restaurant Noma in Copenhagen), the Basque Culinary Center in San Sebastián, Spain, and the famous chef Ferran Adrià’s ElBulli laboratory in Roses, Spain. Fourth, new safety regulations and government policies promote changes in food. For example, foie gras, an ultimate gourmet delicacy, was banned in California with pressure from animal rights and welfare groups. Last, seasonality and *terroir* (French: taste of the earth, Merriam-Webster dictionary) have been important drivers lately. Seasonal ingredients maximize the quality of food with affordable costs while creating a “gastronomy identity” (Harrington, 2004; Ottenbacher & Harrington, 2007). *Terroir* is the collective knowledge of local taste on agricultural products. It transmits the unique characteristics of local food ecology into the whole dining experience (Fanet, 2001).

As a consequence, culinary innovation is a combination of technological innovations with social and cultural innovations. In addition, culinary innovation is situated on the continuum of products and services. When food is served at the restaurants, it comes as a bundle of products and services, and customers consume it as a total “experience” (Harrington, 2004). This leads to the consideration of how the innovativeness of food can be measured.

There are many ways to measure culinary innovations. Restaurant ranking systems, for example, are well known to the general public. The rankings and ratings appear in travel guidebooks, magazines, online sites, and environment health departments of government agencies. Among them, the Michelin Guide has been the most prestigious and popular system. The Michelin Guide was first published in 1900 by the Michelin French tire manufacturer. They send anonymous inspectors and evaluate the restaurants based on five criteria: the quality of products, mastery of flavors and cooking skills, personality of cuisine,

value for the money, and consistency. One star means “a very good restaurant in its category”, 2 stars is “excellent cooking, worth a detour”, and 3 stars presents “exceptional cuisine, worth a special journey”. Lately, crowd-sourcing review sites have become extremely popular. For instance, Yelp.com, founded in 2004 in San Francisco, is the online place where patrons write about their dining experiences and rate them. The research shows that this restaurant ranking has a very strong influence on a restaurant’s business and profit. Studies show that losing one Michelin star causes a 50% sales cut, and a one Yelp star increase brings about a 9% revenue gain (Luca, 2011).

Previously, the prevailing assumption was that the ease of imitation in service firms (including restaurants) motivates them to protect their innovations, making them less inclined to participate in networks. However, recent research indicates that the more innovative service firms actively participate in local networks and ecosystems, benefitting from external actors and knowledge trajectories in their innovation process (Sundbo et al., 2007).

2.4. Culinary Innovations as a New Product Development Process

As restaurants need to practice continuous innovation to stay ahead of the competition, the innovation process in high-end restaurants has many of the characteristics of the generic New Product Development (NPD) process. Ulrich and Eppinger (2003, p.12) say that “a product development process is the sequence of steps or activities that an enterprise employs to conceive, design, and commercialize a product.” The process is evaluated on whether to be continued or not at the each stage, based on criteria of firms such as funding, resources, and fit to business strategy. This evaluation process is called the “stage-gate process” by Robert G. Cooper (1990). NPD processes have been highly studied in both small firms and in large complex organizations (Bacon et al., 1994; Beckman and Barry, 2007; Roschuni et al., 2013). There are several versions of NPD processes, yet they generally follow six steps after an understanding of the problem and user/customer needs: idea generation – screening – business analysis – concept generation – final testing – commercialization.

The NPD process has been heavily studied for tangible products, yet research on its use in services is relatively new. The nature of services have several distinguishing features from tangible products: “largely intangible, produced and consumed simultaneously, heterogeneous and perishable” (Easingwood, 1986). According to Easingwood (1986), service staff are critical in the decision-making process of new service products because of the insights they have gained by interacting with customers. Simultaneity affects the assessment of products, and the intangibility of services can lead to flexibility and customization of production and delivery when customers need different requirements. As culinary innovation is situated on the continuum of products and services, some modification of the generic NPD model is needed. Harrington (2004) addresses the limitations of the generic model for “real-time” foodservice settings in the context of high-end restaurants. He proposes a more organic process by considering the nature of food design, which is more service-oriented and uses tacit knowledge bases (Hervas-oliver et al.,

2009). The NPD framework for culinary innovation in Figure 6 was motivated by the study of Michelin-starred chefs (Ottenbacher & Harrington, 2007).

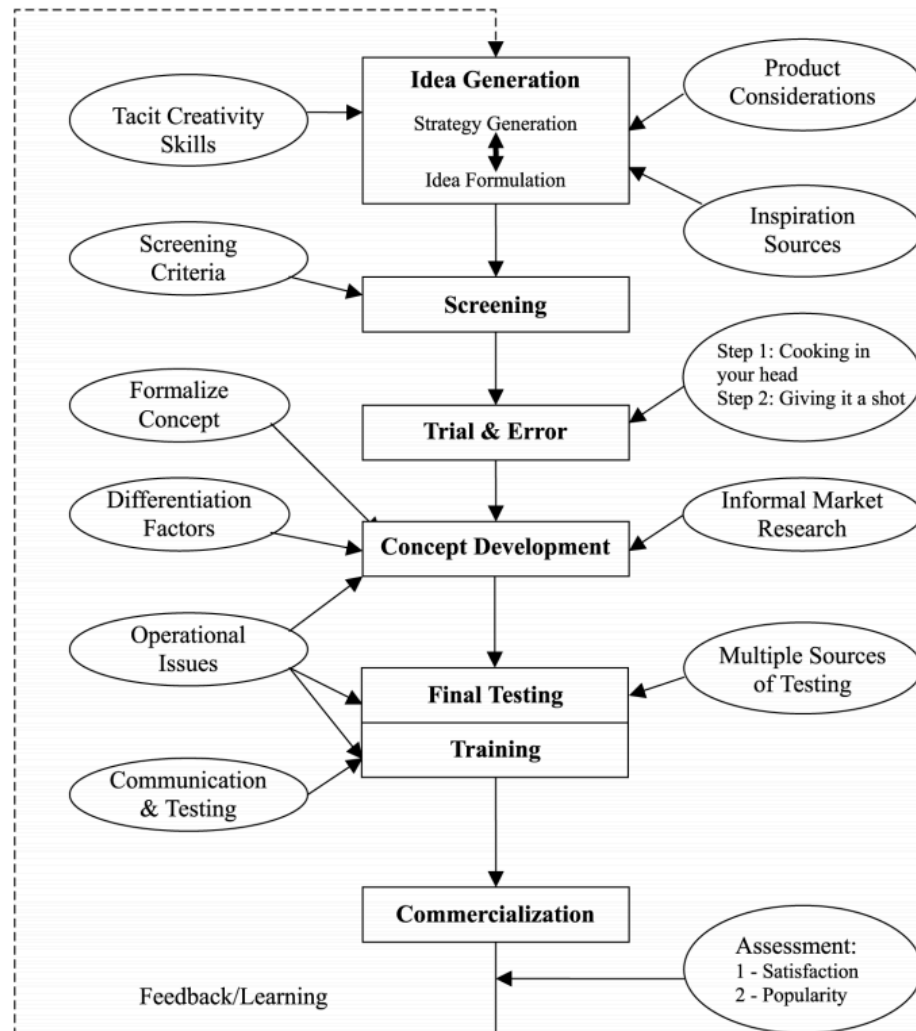


Figure 2: New Product Development Process Described by Michelin-Starred Chefs (Ottenbacher & Harrington, 2007).

The Ottenbacher & Harrington (2007) study demonstrated that culinary innovation at high-end restaurants is “more organic, less formal, less reliant on explicit financial and market analysis, and more iterative in nature.” The menu is created based on tacit knowledge in ambiguous settings – all characteristic of what Rittel (1984) called ill-defined, or “wicked” in contrast to the tame, easily solvable problems.

3. Research Design

3.1. Research Site: Chez Panisse restaurant

The Chez Panisse restaurant was founded by Alice Waters with film producer, Paul Aratow in 1971. During the 1960s, Alice Waters actively engaged in the Free Speech Movement at the University of California at Berkeley. She worked on the congressional campaign of Robert Scheer, an anti-Vietnam War politician. Her engagement was cooking for fellow campaigners, and this led her to pursue her job as a chef and an owner of a restaurant later. Upon graduating from UC Berkeley in 1967, she became a Montessori school teacher. She explains, “I loved the Montessori philosophy, which is all about educating the senses and learning by doing. While I was teaching, I kept learning about food by eating.” After quitting a teaching job, Waters opened Chez Panisse on Shattuck Avenue, in Berkeley, California. She named the restaurant after Honoré Panisse, a character in a trilogy of Marcel Pagnol films called *Marius*, *Fanny*, and *Cesar*. The food concept was called “the New Left of cuisine: college educated, erudite, and privileged, but self-consciously seeking as well a reformed simplicity that was itself a species of elite metaphor” (Starr, 2011). Alice Waters framed her concept of food as eco-gastronomy: “a hands-on understanding of where food comes from, how it is produced, and the traditions and rituals of eating it. When people know what the chickens are being fed, all of a sudden the chickens taste better” (Danigelis, 2006). She also explained that going back to basics is the innovation in food. Although it is not unusual today, the *open kitchen* was a real innovation at the time. Waters strongly believes that the people who eat and the people who cook need to be connected; the open kitchen allows customers walk into the kitchen and ask for questions about their food.

Waters’ insistence on high-quality ingredients forced her to initiate the supportive and reliable relationships with farmers and purveyors. Chefs at even the highest-end restaurants still used frozen meat and produce during that time period. Waters had to reach out to the farmers and suppliers who would collaborate to engage in this food movement. Waters emphasizes: “We need to buy real food from those who are taking care of the land. We need to support them and to feed ourselves in a wholesome, delicious way. I think that’s going to be the basis for rebuilding an economy that takes care of the land for the next generation of people, who will be making their own decisions” (Waters, 2009). Initiated since their birth, the close collaborative relationship with local producers continues today as they provide majority of ingredients for Chez Panisse. However, Waters’ strong commitment to the best fresh ingredients brought the restaurant to financial crisis a few times. She confesses that she didn’t think about a revenue model seriously. “I didn’t pay any attention to money. For years, I took no salary and lived with friends. For me, it’s never been about the money” (CNN report, 2009).

Alice Waters’ philosophy of prioritizing customer and stakeholder satisfaction also includes employees. They have a co-chef system in which the main chefs, at the downstairs restaurant, each work six months on and six months off, but they still get paid for the whole year. During the six-month sabbatical, they are free to travel and to teach in culinary schools in Bordeaux or Paris. The chefs who work at the upstairs café work three days a week, but they get paid for five days. On their free days, they spend their time with family,

design new dishes, or go to the farmers' market for new inspirations (Waters, 2009). Alice said in the interview that she realized how important to take a break and clean her head when she took few months off to France and came back to the restaurant in the year of 1979. This made her to think bigger ideas like opening an upstairs café, which was a diversification to the original Chez Panisse business model (Personal Interview, 2011).

One significant contribution of Chez Panisse is that it has served as the birthplace for numerous prominent chefs, remarkable suppliers as well as food writers. For example, the Acme Bread Company was founded by Steven Sullivan who started his first job as a busboy at the age of 18 at Chez Panisse. Acme Bread has been the bread supplier to Chez Panisse since 1983. He notes, "I really wanted to be contributing [to Chez Panisse] in the meaningful way since the restaurant was a great project and you want to offer something useful. So, the bread is something that I can offer useful. But then, it is almost like that the bread grew up. It got big and it had to go actually room. I was making four kinds of bread, using every oven, the exhaust fan in the kitchen cannot be on when the bread is in the oven, if somebody wanted to put the lamb on the oven, if the bread is in the oven, lamb had to wait. It was too big of a project to restaurant to accommodate because the restaurant size has grown when the café opened. So, in the family basis, it was kind of natural progression of growing up and moving out." He initially came to Berkeley in 1977 as he got accept to UC Berkeley as a freshman, but he had too much fun baking bread, so he never went back to school. Currently, he is an undergraduate senior at the department of history at UC Berkeley as finally pursuing his original plan. He is currently taking some break from baking, but he will go back upon graduating from the college as the age of 55 (Personal Interview, 2012).

Alice Waters' food concept of caring for the source of ingredients led to the founding of the non-profit educational organization: the Chez Panisse Foundation in 1996. Waters said, "Once kids are educated, they eat in different ways... They make choices about food based on biodiversity. They become sophisticated tasters. I think we can have a generation of kids that grow up with a different set of values" (Fast Company, 2007). The Foundation initiated the Edible Schoolyard Program at Berkeley's Martin Luther King, Jr. Middle School. Students are involved in growing, harvesting, and preparing the foods from the garden, with the aim of promoting the environmental and social well-being of the school community. Numerous restaurant patrons have donated money and time to the program, and political leaders who are interested in food justice have visited the yard, including Hillary Clinton, Tipper Gore and Michelle Obama. Waters' work at the Edible Schoolyard has also developed into her School Lunch Initiative, which has the broader goal of bringing school children into a new relationship with food by making a healthy, fresh, sustainable meal part of the school day. It is focused on bringing wholesome school lunches to the 10,000 students in the Berkeley Unified School District. The Chez Panisse Foundation, together with Ann Cooper as the Director of Nutrition Services for the district, eliminated almost all processed foods from the district and introduced organic fruits and vegetables to the daily menu, all while staying within the district's budget, (they receive funds from the United States Department of Agriculture: \$2.57 for a free lunch, \$2.17 for a reduced-price lunch and 24 cents for a paid lunch). Waters & Heron (2009) documented their initiative as "no lunch left behind" in a New York Times guest editorial.

Since 2002, the foundation's work was expanded beyond Berkeley. Waters has served as a Vice President of Slow Food International (pioneered by Carlo Petrini), an organization dedicated to preserving local food traditions, protecting biodiversity, and promoting small-scale quality products around the world. She was drawn to the Slow Food movement because of its work in passing food knowledge and traditions to future generations. Additionally, the foundation offered to help Yale University's dining halls serve healthy food that was fresh, local, and organic. By 2002, the Yale project hired Sean Lippert, a former Chez Panisse cook, to develop its menus. Waters also proposed a school garden that would teach the same lessons at Yale that Edible Schoolyard teaches in Berkeley.

Besides the foundation's influence, the philosophy of eco-gastronomy is now expanding to the corporate world. For example, the renowned Google Kitchen, where they serve all-organic meals to their employees and visitors, was founded by the alumni chef of Cesar restaurant (a spin-off of Chez Panisse).

3.2. Research Methodologies

We conducted this research based on a single-case design (Yin, 2009: p.46-53). The power of the case study method for this research highlights the history and trajectory of the growth of this ecosystem and the role of stakeholders in a very thorough and deep analytic way. The Chez Panisse restaurant has played an exemplarily successful role in the history of American cuisine, thus this unique case has great value to contribute to understanding how innovation has thrived within a target community. However, this single case method could be limited as it examines the best practices and might not be generalizable. In order to claim more general arguments, the research needs to include examples from other cases, particularly failure stories. Also, consideration must be given to construct validity, internal validity, external validity, and reliability (Yin, 2009). As Yin suggested using various sources of evidence is one way to ensure construct validity. Therefore, we attempted to collect diverse sources of data, which will be explained in the next section.

3.2.1. Data Collection

3.2.1.1. In-depth Interview

We individually interviewed 29 people to explore the participants of the Chez Panisse ecosystem and their innovation activities within the ecosystem. The initial recruitment efforts included outreach to the current chefs and service personnel at the Chez Panisse restaurant. The sample size was increased over time based on snowball sampling, the practice of asking interviewees to recommend other interviewees (Weiss, 2008). This approach was very useful, as we did not have a social contact at the very beginning of data collection. Once we gained knowledge about the formation of the Chez Panisse ecosystem, the outreach to significant potential interviewees in the ecosystem was much easier. Figure 3 displays the stakeholders of the Chez Panisse ecosystem in its current stage of growth. We tried to cover various kinds of stakeholders in order to understand the nature and growth trajectories of the ecosystem.

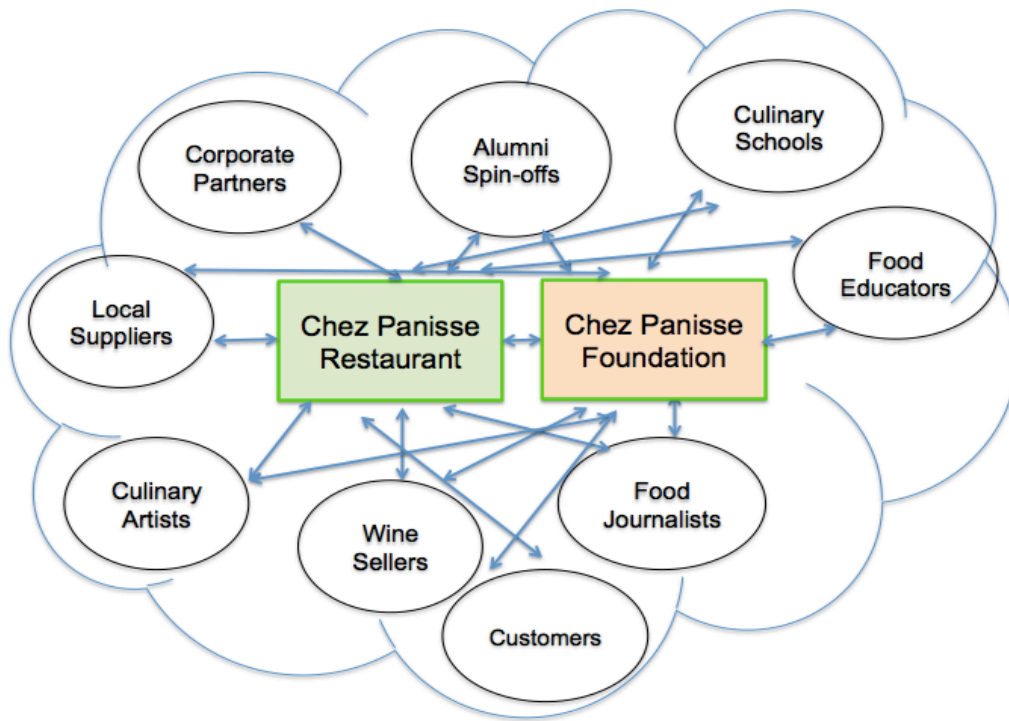


Figure 3: Open Innovation Ecosystem of Chez Panisse.

3.2.1.2. Participatory Observation

We used participatory observation through two activities. First, one of the co-authors worked as a volunteer to fully understand the research site by situating herself within it. Chez Panisse Foundation runs the Edible Schoolyard program at the Martin Luther King Jr. School in Berkeley. Through volunteer opportunities, we had opportunities to meet the chefs, educators, artists, and restaurant patrons who are highly engaged in community efforts through food education. These participatory activities allowed us to better understand how the ecosystem is comprised and what activities are held within the ecosystem. They provided an exceptional advantage in characterizing the innovation ecosystem of Chez Panisse. Second, we participated to observe the entire menu creation process at the kitchen. With the permission of several chefs, one of co-authors served as a participant observer in the restaurant kitchen of the Harvest Moon Café in Sonoma, California. Nick Demarest, trained under Christopher Lee, the former Chez Panisse head-chef, gave us access to meetings with suppliers (Figure 4), and allowed us to observe cooking preparations (Figure 5) and menu writing activities (Figure 6). By observing the whole cycle of the menu design process, we were able to understand the cooking process as a design activity or as the new product development process. Moreover, the Chez Panisse ecosystem uses co-creation in new product development as an open innovation feature of the ecosystem. As described by Prahalad & Ramaswamy (2004), co-creation through dialogues among firms, consumers, and suppliers provides a medium for open innovation.



Figure 4: Brainstorming Menu with a Purveyor, Checking their Inventories at Harvest Moon Café, Sonoma, CA.



Figure 5: Cooking preparation at Harvest Moon Café.

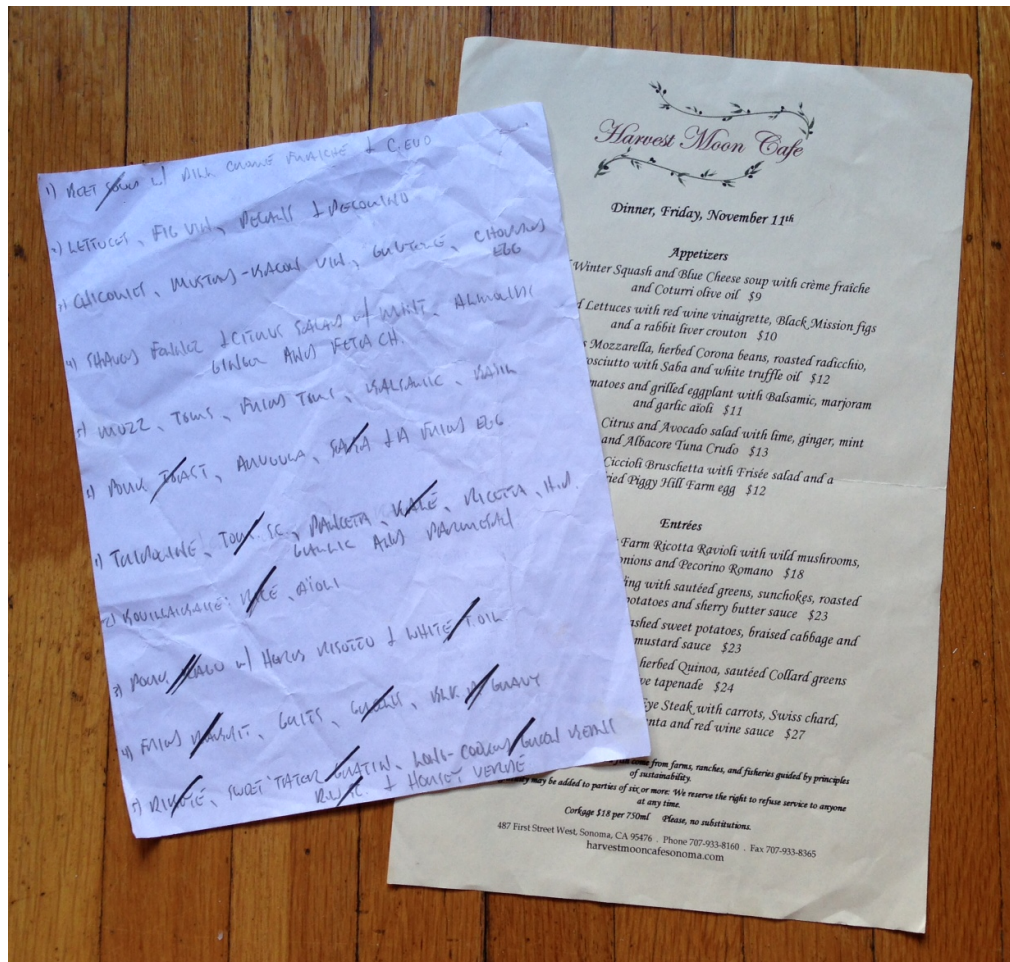


Figure 6: Work-in Progress and Finalized Menu at Harvest Moon Café.

In addition, we joined foraging trips with the Chez Panisse driver had worked at the restaurant for the last 23 years, sourcing produce from the same farmers and suppliers. A few of the chefs offered their time to show me where and how they shop for ingredients at the farmers' market. All the data was captured in the field notes.

3.2.3. Data Analysis

We applied open coding (Strauss and Corbin, 1998) to freely code to see what conceptual themes consistently appeared in the case studies using the pilot interview data. Based on several iterations, we developed the primary codes and sub-codes under the main codes. The thematic codes developed from interview cases are included in the appendix. We iteratively developed the coding system and three researchers at UC Berkeley independently coded three cases and compared the coding to see if they had a consensus. With a discussion and modification, the coding scheme was finalized and applied to all of the interviews and other data.

4. Research Findings

We will now highlight how culinary innovation is co-created within the Chez Panisse ecosystem. We frame the Chez Panisse culinary co-creation process using the six steps of the new product development process summarized in the earlier section.

4.1. Step 1: Idea Generation

Open Kitchen. Chez Panisse has an open kitchen where everyone is invited to walk in and thus the kitchen becomes a place to share ideas with all stakeholders. Curt Clingman, the former owner of the JoJo restaurant, says, “It seems like Chez Panisse had the first open kitchen in America, but kitchens were a long time ‘open’ before they were closed; but in restaurants, it was somewhat of an innovation. We had doors. I remember when I first started the thought of an open kitchen, I thought “what is that?” and that I’d just be too nervous. There were people that really didn’t like the idea of being exposed and I have to agree that it did take some getting used to. You’re concerned with what bad habits do I have, do I touch my face too much, do I put things in my mouth too much, things like that.” He added that its open kitchen allowed people to listen to others’ idea and to share what they made. Open kitchens, in contrast to the closed kitchens in haute cuisine, serve as a physical environment that encourages ideas to bloom and to co-evolve.

Community of Practice. Chez Panisse has embraced the tradition of informal learning via apprenticeship. This learning model encourages peer teaching; thus learning is embedded in the innovation process (Beckman & Barry, 2007). Jerome Waag, currently the head-chef at Chez Panisse, comments: “It’s a very interesting mix of openness as a person... a lot of the cooking was done by people who didn’t necessary go to culinary school. So they are really open to things. They don’t have a lot of skills but they have a lot of enthusiasm and a lot of curiosity...People want to discover everything about stuff, but also in the same time, it comes from a very conservative place.” Patricia Curtan, a former chef and now a menu designer, adds: “There wasn’t someone who possessed all the knowledge and really directing that.... We were teaching ourselves as we went along. The only way to achieve was for everyone to contribute. Certain people had certain skills and experience. It wasn’t as if everyone had uniforms or someone in charge who really knew. The only way it was going to happen was through collaboration.” She describes the sabbatical system they have: “Some of the very best chefs say you would have to get away for a while, go do something. And they have. They learn a bunch and get inspired, and they come back full with ideas. It’s like taking the sabbatical. Working there was my education.” Although this ecosystem started accepting academically trained people in the last several years, the community of practice is still the preferred practice. This situated learning (Lave, 1988) embraces an authentic learning experience in a real-life context and a lifelong learning environment; thus people keep learning and sharing their knowledge even after they graduate and leave the focal company, Chez Panisse. Christopher Lee, former head-chef and currently a consultant, states that it is always more of a school, so people call themselves “Chez Panisse Alumnus”, a term which is never used in the other restaurants. In contrast, “former chef” and “former restaurateur” are the common terms used in the industry (Personal Interview, 2011).

Getting Ideas from Purveyors. We had a great opportunity to accompany the truck driver of Chez Panisse, Dhondup Karpo, for few trips to farmers and ranches in Sonoma Valley (Figure 7) and to the Berkeley farmers market (Figure 8). These trips with Mr. Karpo made me understand how the restaurant interacts with suppliers about the quality of ingredients and the sourcing of menu ideas.



Figure 7: Dhondup Karpo, with 23-year Experience at Chez Panisse, Transporting Food Compost to a Partner Farm.



Figure 8: Dhondup Karpo, 23-year experience at Chez Panisse at Berkeley Farmers Market

Dhondup Karpo came to the United States 25 years ago as a refugee from Tibet, and got a job as a cleaner at Chez Panisse 23 years ago. After a few months, he learned to drive and became a driver at Chez Panisse, sourcing all the ingredients from suppliers and partners. His role at Chez Panisse is a sort of gatekeeper, who enables an exchange of dialogues between Chez Panisse and its suppliers as well as local alumni. While Alice Waters is central to the Chez Panisse ecosystem in terms of philosophy, business and social innovation, Mr. Karpo truly serves the practical role of connecting people inside and outside. When Mr. Karpo once took us to the Green String Farm in Petaluma, CA, Farmer, Ross Connard, mentioned, “We don’t even talk to them, we’ll just send them some peppers. And they’ll like the peppers, or they won’t like them and won’t order them again.” Basically, he says that they send the best products twice weekly to the restaurant via the Chez Panisse driver, and then the restaurant tries to use them for that week (Personal Interview, 2011).

The key here is that the inspiration first comes from suppliers, and then the chefs start designing meals. On the contrary, previous research shows that high-profile chefs in haute cuisine use a more sequential and top-down process than general and average chefs (Harrington, 2004), which means they start from a thorough menu planning process before initiating foraging.

Alumni Guest Chef System. Chez Panisse offers head-chefs a leave of absence for four to six months each year. They take a break to clear their brains; they travel to other countries to learn new techniques and also teach at culinary institutions world-wide while they still receive a salary from the Chez Panisse. The sabbatical system has led to a new culinary innovation, the alumni guest chef system. When one head-chef is gone on sabbatical, the other head-chef usually takes a charge. However, they occasionally invite alumni chefs to share the responsibilities. In addition, there are several chefs who have left Chez Panisse and specialized in ethnic cuisine. They are sometimes invited back to lead special theme nights, such as the Kosher-style Jewish deli night. The general manager at Chez Panisse describes this innovation: “We do a lot of cooking exchanges with other alums from different restaurants... And we have quite a lot of flow in-between the restaurants for staff and we have the edible schoolyard cook right next to us.” When they have a big event like the ‘Dalai Lama dinner’, they usually collaborate with alumni due to a shortage of staff. The expertise and involvement of these alumni chefs greatly enriches the repertoire of new ideas at Chez Panisse.

Ideas from Food Journalist. Michael Pollan, the author of *The Omnivore's Dilemma* (2006), comments in an interview: “Alice Waters is listening to journalistic conversations about food.” Pollan provided examples of how Alice Waters brought external ideas from food journalists to the Chez Panisse ecosystem. House-made sparkling water was one of his examples. From the early 2000s, a lot of food articles criticized how many resources are used to manufacture water bottles and untold millions of gallons of fuel are used to transport expensive Italian sparkling waters to American restaurants. Americans choose bottled beverages to the tune of 26 gallons per person in the year 2006. The general manager of Chez Panisse explained that they did several experiments to find the best

solution during an interview with the National Public Radio in 2007. They typically consume about 24,000 bottles of Santa Lucia from Italy per year. They first considered using local sparkling waters like Calistoga, but these products were too heavily carbonated for the food at Chez Panisse. The final solution was a carbonator, which injects bubbly into the water. The restaurant also revealed that it was not an easy decision; bottled water is a big money-maker for restaurants, which can buy it for less than \$1.5, and sell it for as much as \$8. Regardless, Alice Waters strongly took the lead in the campaign to discontinue the use of imported bottled water and the restaurant completely stopped selling it. The alumni also participated in this movement, so now house-made soda water is easily found at many of Chez Panisse diaspora restaurants and shops. This movement also influenced the schools in the community. For example, the Berkeley Unified School District replaced commercially bottled water with large containers of tap water and cups in 2007 as well. In 2010, the undergraduate student group at UC Berkeley initiated the “I Heart Tap Water” campaign, and it has been highly successful. This is an example where a seed idea from food journalists on the overuse of bottled water led to the generation of new concepts and practice at Chez Panisse and other participants in its ecosystem.

4.2. Step 2: Concept Screening

Several interviews reveal that the quality of ingredients is the top priority in the screening process. Russell Moore, alumnus Chez Panisse and the executive chef at Camino, emphasizes that he is driven by quality and the sustainability of ingredients. The screening process has to balance quality and innovation. For example, Moore expressed concern about customer satisfaction and the tension between serving high quality standard menu items versus having variety: “When I was at Chez Panisse for 23 years, I got tired of the few things that I had to make all the time: garden lettuce salad, goat cheese salad, pizzas and I’m like “I don’t want that” to me those were the worst dishes there sometimes because the cook didn’t care... But anyway I had to make them for customers.” Some interviewees also mention that they cannot be too creative, as each dish has to be balanced as a part of the whole picture. “Chez Panisse itself is very limited in what it serves. You cook a certain way within the restaurant; certain ideas are the core of their repertoire. The ironic part of Chez Panisse, the contradictory part is that they say we never cook the same menu and it’s different every day. Well, it is true. But, within the range of ideas, really.” (Christopher Lee, Personal Interview, 2011).

4.3. Step 3: Prototyping

According to several interviews, we understand that chefs start designing dishes in their head, then sketch out a possible display of the concept on paper. Several aspects of the prototyping process are of concern here, including the balance between different ingredients, spices, textures, colors, aromas, etc. Then the improvisation starts in the kitchen. “It’s so exciting to see the moment of improvisation.” (Jerome Waag, Personal Interview, 2011). And the improvisation usually takes place as a collaborative effort without following one “star chef”. “You are kind of sitting around in the table and say, let’s do this again which is fish soup and we have cod, we have lobster and we have potatoes. Do you know how we like to do it? Yes, we know how you like to do it. And you go [for it]”

described chef Christopher Lee (Personal Interview, 2011). Sometimes there is a tension between chefs and business owners on the value of many prototypes. The late Ms. Rogers, the previous owner and chef at Zuni Café, warned that too many prototypes can add risk as it takes time and one might potentially make mistakes.

4.4. Step 4: Concept Development

At this stage, the ideas that are sourced and selected are developed as concepts. The concepts can be stored as a recipe-date file, photograph, presentation with arrangement instructions, or as written working instructions (Ottenbacher & Harrington, 2007). In the culinary field, the inclusion of *terrior* (French: taste of the place, Personal Interview with Kermit Lynch, 2011) as a food concept is a differentiation factor between competitors. *Terrior* represents “gastronomic identity”, thus local influence should be transmitted into the character of the food so that it reflects the distinctiveness and uniqueness of the place of the origin (Harrington, 2004). After deciding the food concept, chefs choose the plates for presentation of the designed meal based on the hall ambiance, lighting, music, etc. Kermit Lynch taught me about the notion of *terrior* during my interview with him (Personal Interview, 2011). He is a well-known European wine importer based in Berkeley. He was the award recipient of the James Beard Foundation, and was awarded the insignia of Chevalier de la Legion d’Honneur by the French government. He says, “When I go to winery to eat, it was the food from the region that goes back centuries so that you have the wine and recipes and everything. Recipes are based on what grows right there, like in Provence, garlic, rosemary, tomatoes, eggplants...and cuisine and wine choice should reflect a certain place together.” Several customers that we have met for interviews complained that Chez Panisse doesn’t have many Californian wines; but many are French wines bottled by the local Kermit Lynch Wine Merchant in the wine list. Andrew Browne, a former waiter, who now works at the Gary Danko restaurant in San Francisco notes: “If people really, really knew about food, they would know that a lot of California wines don’t work with Chez Panisse food. It’s too light- well, not too light but it’s very subtle.” Therefore, since the food concept needs a harmonized balance with certain wines or other drinks, they then use things beyond local to complete the full concept. The founder of the Blue Bottle Coffee Company, James Freeman, also commented that a complete experience is more important than one particular dish or drink. Blue Bottle Coffee is the main coffee roaster for Chez Panisse and developed the Chez Panisse Blend after numerous tests for balancing as a food concept.

In the concept development phase at Chez Panisse, seasonality plays a huge role. Jerome Waag, now the head-chef at Chez Panisse says, “If the ingredients are good, there’s not much that you need to do with them. If you have good asparagus, then it’s good enough! It’s there for a couple of months and then you eat it all the time and then when it’s gone it’s gone.” The emphasis on utilizing the seasonality in the menu does not lend itself to the structured codification of recipes. “To develop recipes, no. We’re really driven by the food itself, like you saw the food coming from the farm. So basically, we write the menu every day so we kind of see what’s there and then we decide what to make. So we don’t really decide ahead of time. And all of our chefs travel a lot and eat all over the world so they have quite a lot of perspective and input from what they see where they eat.” This seasonality

principle led to the birth of the ingredient-based menu and encourages customers to enjoy a reflective eating experience. Mr. Waag gave an interesting metaphor about their food concept. “When you get a plate of food, it’s sort of a map of the world. If you eat a plate of food from Chez Panisse, it’s a map of a certain world. That means you can trace it. You can trace all the things, like the chicken from this place and that place, and the people about how they treat their animals in a certain way and they treat their workers in a certain way.”

4.5. Step 5: Concept Testing

Before the concept turns into a real meal, the chefs may prototype concepts and conduct concept testing. They use various people from the Chez Panisse ecosystem for testing the final concepts: internal employees, waiters, alumni, customers and suppliers. Jim Maser, the former owner/chef of Café Fanny, and now an executive chef of Picante, uses chef friends, food consultants, and loyal customers to get an evaluation. He adds, “I invite everybody who works around the restaurant whether it is the person delivering the food, garbage man, UPS man, the person who sharpens my knife, mailman, everybody comes in and I treat them like they are the internal guest. Without them, I cannot operate. So, I created the community through food that makes it so that they also eat well. So there is a lot of free food at Picante. Hospitality has to do with generosity. Also they represent a lot of different sensibilities when we design new menus” (Personal Interview, 2012).

4.6. Step 6: Customer Feedback

Feedback from Loyal Customers. “The philosophy here is that we have a lot of very long time employees, we have people who have worked here for 20 years, which is unusual in the restaurant business. And what that means is that those regular customers who come in and develop a relationship with that waiter or a host or a cook in the kitchen, they see them and they feel like it’s very meaningful, it has a deeper value than just going to a nice restaurant” says Ms. Sherman at Chez Panisse. She says that by having an open kitchen, it is very easy for chefs to communicate with clientele and to get feedback in a dining context. Often times, the restaurant observes that customers are too polite, or too upset to complain and just want to leave, and later it becomes problematic. “They’re not eating all of it or they don’t like that....You’re asking for information at the very end of the process, and you get a response too late...To be on an open kitchen, you can see the diner right there. You can see them really enjoying themselves and you can see the community that you are now part of.” Therefore, this open kitchen has helped to enrich a subtle and open communication with customers.

Also, there are customers who directly share their opinions among those who have been coming for a long time. Gilbert Chambers, referred to earlier as the most loyal and frequent customer for coming there for the last 33 years, says “Sure, I’m outspoken to the staff if I have observations or complaints, they take them seriously and sometimes they act on them...And I tell some servers about things that appear too often...Because I come here so often- sometimes I notice they serve the same soup 3 lunches in a row and I don’t like that because I like to have soup with my meal, but other customers don’t notice that because they don’t come here as often. I notice there are some things that appear with too much

regularity – like cardoons – I don’t care for them so much – and nettles! You always see pizza with nettles and it’s really just a weed.”. Then he continued, “A few years back maybe 4-5 years ago, it was very common to get at least one sandwich per week on the menu – and sandwiches are such a humble thing that the cooks took that as a challenge; but they would make a glorious sandwich. As soon as I saw a sandwich on the menu, I would go ahead and order that because I knew it would be good. But sandwiches disappeared and I complained bitterly so they brought them back and now they’ll have them maybe once every 2 months.” (Personal Interview, 2011).

Waiter/Server as a Messenger. Mr. Browne, who worked for five years at Chez Panisse as a waiter claims that the front people of the restaurant are always a good sensor for customer opinion. He thinks that the service staff should constantly catch the inconvenience of customers, and communicate observations with the kitchen. He says that the service staff at Chez Panisse attend the menu meetings everyday before they start that day, because the menu gets changed throughout the day. He does caution about the tension between the restaurant’s vision of quality food and customer satisfaction, however. He now works at Gary Danko, a one Michelin-star restaurant in San Francisco, and he says: “At Gary Danko, the menu doesn’t change that much. It changes seasonally sometimes. So it was a little bit different. They just had about a two minute menu meeting yesterday.” With a top priority on customers, sometimes he finds it difficult to communicate between chefs and customers. “Sometimes the customer isn’t always right. We often have strong disagreement with the customers. They don’t always know how it is supposed to be. Some customers walked in and they ordered pasta with some kind of shellfish. There’s no Parmesan cheese in the pasta. It’s not appropriate to put cheese on fish. But then they asked, “Where’s the cheese?” or said “You must always offer cheese with fish pasta.” We go back to the cooks asking for the Parmesan cheese. We looked down, very ashamed. As a server you couldn’t compromise the interaction.”

4.7. Reflective Menu

This co-creation process is reflected to their menus, which we claim another form of innovation. Prior to Chez Panisse, most leading American restaurants listed their menus based on food themes. For instance, the renowned restaurant *Colony* in Manhattan’s menu in 1955 listed their dishes under the theme of “Poissons”: “La Sole Anglaise Bonne Fenne,” “Saumon Froid Parisinne,” “Les Goujonette de Flounder Mural.” Otherwise, it was described by the cooking methods. “Broiled Baby Lobster Tails” is one such example from the menu by the very popular restaurant *Romanoff* in LA in the 1960s (Pearlman, 2013). Chez Panisse was the first restaurant to introduce ingredient-based menus, listing the sources such as their collaborative farmers, ranches, wineries, etc. (See example menu in Figure 9). This ingredient-based menu helped customers “obtain a keener interest in the constituent ingredients of food and how they were put together, in lieu of the haute cuisine pretension of named dishes.” (Kuh, 2001; Guthman, 2003). This also led to the customer experience of “reflective eating”, which means reflecting on the production of the food, the treatment of foods, the transport and processing, their preparation and cooking and finally digestion and physiological effects of food as a culinary experience (Santich, 1996). When we interviewed John Finger, the founder of Hog Island Oyster Company, who has been a 30-

year collaborator with Alice Waters, he said, “We wanted something distinctive that people would remember and we asked people when they served them [our oysters] to put them on the menu as ‘Hog Island’ and Chez Panisse gladly did that. And again, almost 30 years ago, that was not a common thing.” He also claims that this menu also brings more customers to his business, stating, “Customers come and say, I had your oysters at Chez Panisse or I saw your oysters on a menu there. A lot of times, this is a large part of our ideas of branding, for people to see our name on a menu and be able to come out...People can have our oysters at the Chez Panisse and the next day to be able to come out to the farm who grew them.” As for this idea of ingredient-based menu, Patricia Curtan, a menu designer for Chez Panisse, says it requires a lot of knowledge to it so: “I had physical and intimate knowledge of process of the food and the cooking process and ingredients and all of that. When I started making the menus, I had all of that internalized. And I was working in a medium that has a lot of constraints, the letterpress in general.”



Figure 9: Chez Panisse's Ingredient-based Menu with Purveyor Names
(Source: Author, 2012).

4.8. Summary of Culinary Co-Creation Process with Ecosystem

So far, we described how chefs at Chez Panisse co-create the culinary innovation within its ecosystem. This co-creation process is a good example of how open innovation is practiced in a culinary ecosystem. We organized the co-creation process around six steps of the new product development process. We argue that this co-creation would hardly happen as the main source of innovation without the collaborations and tie strengths in the Chez Panisse ecosystem under Alice Waters' leadership. The sabbatical policy initiated by Alice Waters greatly contributed to bringing in more global ideas, and allowing alumni guest chefs to contribute their skills in enriching the innovation of food concepts. As a counter example, Micheal Pollan, UC Berkeley's Journalism Professor, noted that ElBulli, the leading Molecular Gastronomy restaurant in Barcelona, has excelled through research, recipe, and novelty while Chez Panisse has grown up based on community, quality and continuity. Judy Rogers at Zuni Café provides a similar analysis, "Maybe not in Mercedes-Benz, because you only get one car per every five years. But dinner? You go out to dinner a bunch. So it's not that scary. I mean, this industry is very friendly. No one is ever worried about another great restaurant in town. Because no one is going to eat at your restaurant every single night." Her comments emphasize the importance of collaboration and open innovation in providing continuous innovation. She believes that the conventional closed model would be less efficient and effective.

5. Conclusions

This research introduces the concept of an innovation ecosystem and uses the Chez Panisse restaurant as a case study to show how such an ecosystem can practice open innovation with its ecosystem. Chez Panisse and its chef/founder Alice Waters are credited with taking the lead in the California Cuisine movement with influences that extend to numerous other restaurants, suppliers and educational networks worldwide. Although there have been numerous books and articles written about Chez Panisse, there have been no academic studies that have analyzed how its innovations were generated, and how it actively engaged its stakeholders in the process of innovation. Additionally, prior work has not documented the impact of building Chez Panisse's local and now global ecosystem using an open innovation strategy with stakeholders. Considering the relatively young history of research in open innovation, this historical study of a 43-year old successful example is a contribution to the knowledge of open innovation ecosystems in its own right.

Summary of Findings.

1. Alice Waters' determination to consistently pursue quality-driven innovation enabled Chez Panisse to seek reliable partners to provide high-quality resources for the evolving Chez Panisse ecosystem. Chez Panisse and Alice Waters were effective in communicating this shared vision and in providing an education to partners to co-evolve with them. Their co-created innovations, such as ingredient-based menus, not only satisfied customers, but

also generated more revenues to suppliers. Suppliers not only had a dedicated customer in Chez Panisse, they were also able to increase their revenues by co-branding with Chez Panisse. This porous open innovation process led to the co-creation of values as well as products and services.

2. The Chez Panisse ecosystem also grew by eventually embracing a culture of accepting turnover of employees and welcoming them back after their failures in start-ups. Well beyond being just a business network of strategic alliances, this open innovation strategy had characteristics of strong family and school ties. It truly encouraged and celebrated participating entities' growth, sometimes failure, and always pride in being a "Chez Alum". This strategy consequently enlarged the scope of the Chez Panisse ecosystem in terms of geography and variety.

3. Chez Panisse benefited from its social innovations through food education. The donation of talents and funds from stakeholders initiated and sustained this social innovation, and consequently contributed to the spread the Chez Panisse ecosystem nationally and globally. Although the investment in social innovations was truly philanthropic at the beginning, it did end up bringing in more customers and stakeholders in the long-run.

4. The co-creation of values and co-evolution of the ecosystem with stakeholders was a successful business strategy for the Chez Panisse innovation ecosystem. The celebrated culture of spin-offs and the ecosystem's subsequent expansion indicates that knowledge spillover based on employee turnover is not necessarily a cost of investment in employees, but can be understood as a benefit of open innovation at the ecosystem level. The welcoming culture of accepting spin-ins and even honoring their failure experiences also shows that the ecosystem excels in encouraging innovation experimentation. This history shows the advantage of organic, albeit slow, growth in evolving an open innovation ecosystem. It shows that a top-down short-term strategy of achieving fast innovations, as sometimes practiced in industry today, may not always be the best strategy if long term impact is the goal.

6. Directions for Future Research

A single-case study is hard to generalize to the findings, thus future research should expand the scope and number of firms studied. In addition to studying a successful firm that is still thriving, it would be useful to research a firm that has gone through an entire life cycle, including the death of its ecosystem. A cross-analysis with other competing ecosystems would provide more general insights as well. The study of one single leader also made the case study distinctive. What would happen if the ecosystem lost its initial evangelical leader? It would also be interesting to expand the scope of research to the second generation, and more consequent generations of alumni to see if these later generations still maintain and practice Chez Panisse's principles over time.

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Appendix

Table 1: Interviews of Stakeholders in the Chez Panisse Ecosystem.

NAME	POSITION	COMPANY	INTERVIEW DATE
Cathy Bailey	Owner, Craft Designer	Heath Ceramics, Sausalito, CA	11/21/2011
Andrew Browne	Sommelier, Server	Gary Danko, San Francisco, CA	02/10/2012
Mary Canales	Owner, Head Pastry Chef	ICI Ice Cream, Berkeley, CA	04/20/2011
Ross Cannard	Farmer	Green String Farm, Petaluma, CA	12/01/2009
Gilbert Chambers	Customer	Retired	02/23/2012
Curt Clingman	Owner, Executive Chef	Jojo Restaurant, Oakland, CA (closed)	06/23/2011
Patricia Curtan	Menu Designer	Patricia Curtan Studio, Napa Valley & Oakland, CA	10/27/2011
John Finger	Owner	Hog Island Oyster Company, Marshall, CA	12/01/2011
Dhondup Karpo	Driver	Chez Panisse Restaurant, Berkeley, CA	12/05/2011
Christopher Lee	Food Consultant	Berkeley, CA	11/28/2011
Kermit Lynch	Owner, Wine Importer	Kermit Lynch Wine Merchant, Berkeley, CA	08/22/2011
Jim Maser	Owner, Executive Chef	Picante Restaurant, Berkeley, CA	02/10/2012
Tom McNamee	Journalist	San Francisco	03/23/2012
Russell Moore	Owner, Executive Chef	Camino, Oakland, CA	03/10/2012
Michael Pollan	Professor, Food Journalist	School of Journalism, UC Berkeley	04/25/2012
Judy Rogers	Owner, Executive Chef	Zuni Café, San Francisco, CA	04/15/2010
Nick Rupiper	Farmer	Nix Chix	02/11/2011
Jennifer Sherman	General Manager	Chez Panisse Restaurant, Berkeley, CA	07/16/2009
Steven Sullivan	Owner, Baker	ACME Bread Company, Berkeley, CA	03/01/2012
Jerome Waag	Head Chef	Chez Panisse Restaurant, Berkeley, CA	05/09/2011
Alice Waters	Owner, Executive Chef	Chez Panisse Restaurant, Berkeley, CA	10/15/2011

Table 2: Thematic Codes Developed from Interviews.

- **Ecosystem (Actors)**
 - Farmers
 - Artists (menu, clothing, etc.)
 - Wine Seller
 - Suppliers (Blue Bottle, ACME, etc.)
 - Alumni Chefs who are currently a chef
 - Customer
- **New Product/Service Development**
 - Source of Idea/Innovations
 - Screening
 - Prototyping
 - Concept development
 - Final Testing
 - Customer Feedback/Engagement
- **Social Innovation**
 - Social Value (e.g. Philosophy, culture, motivation)
 - Foundation Activities
 - Community Engagement
- **Business Models**
- **Leadership of Alice Waters**
- **Open Innovation Activities**
 - Inside-out innovation
 - Outside-in innovation
 - Interactions between actors: Relationships, Interactions, Co-creation