The Meaning of Applied Creativity in the Culinary Industry

The purpose of this paper is to present a study which explores the origin of applied creativity in the culinary industry, in Taiwan. A total of 36 Chinese and Western cuisine chefs from five-star hotels and top restaurants were interviewed to provide the data from this study. The findings indicate that the role of applied creativity in the culinary industry has played a key role in culinary change and evolution in Taiwan. Culinary creativity has its own distinct characteristics, such as time limitations and market acceptance, which are acquired through building blocks of professional skills and experience. The study contributes to understanding the role of applied creativity in the culinary industry.

Keywords: culinary creativity, culinary industry, culinary market

Introduction

Creativity is the route to competitive advantage and a key method to gain competitive advantage over rivals(Hospers, 2003). In today's world, creativity is applied extensively to enhance value in products and services, such as high technology products, business and financial services, media and cultural industries, and neo-artisanal manufacturing (Scott, 2006). Creativity plays a central role in stimulating economic growth in cities, regions and advanced capitalist economies in general (Stam, Jong, & Marlet, 2008). It is considered as a policy option for stimulating a range of wider economic, cultural and social outcomes. Creative industries are defined "in terms of a class of economic choice theory in which the predominant fact is that, because of inherent novelty and uncertainty, decisions both to produce and to consume are determined by the choice of others in a social network" (Potts, Cunningham, Hartley, & Ormerod, 2008, p. 169).

Stam et al. (2008) classify creative industries into three domains: arts; media and

publishing; and creative business services, within which the subject of this paper, culinary creativity, could legitimately be located. According to Richards (2011), in some cases the definition of creative industries has been expanded to include tourism (Bagwell, 2009; Bonink and Hitters, 2001; Evans, 2009 cited in Richards, 2011). The impetus for creativity can be linked to the broader process of globalization, commodification, raising competitions between cities, industries and the development of new economies (Richards, 2011). The phenomenon of creative cities and industries demonstrates that social, economic and political development can provide the appropriate underlying framework conditions to promote creative cities, industries and nations. Similarly, these environmental factors provide a clear wider context for culinary creativity.

The growth of creative approaches to the tourism industry can also be associated with numerous strategies to create unique places, including the promotion of creative industries, cities, and classes. "Arguably these various strategies manifest themselves concretely through the absorption of creative production and consumption into specific creative clusters" (Richards, 2011, p. 1245). Consequently, the culinary industry can be seen as a core component of services which focus on experiences and which include wider engagement through tourism, special events, culture and sport. Creativity in services, generally, presents challenges because of the intangible nature of much service delivery. Therefore, it is contendable that all areas within services need to conceptualize and develop their own, contextualized approach to their understanding creativity in that no generic, pan-services approach can be applied. As the culinary industry plays a dynamic and core role in both tourism and retail, culinary creativity can serve as a part of a robust medium to assist in the conceptualisation of creativity and innovation in both the tourism and retail sectors.   The culinary industry depends on the fact that eating is one of our daily routines. Eating is both a personal and social act(Brown, Edward, & Hartwell, 2010, p. 206). In human living, when we

dine out and to choose a restaurant, food and service are the most common considerations in mind. With restaurants constantly coming to the market with new culinary creations, the culinary industry is a highly competitive environment (Ottenbacher & Harrington, 2007). Success in this industry, therefore, depends on chefs who can be considered as the most influential people in the restaurant business and who have to continuously develop their culinary creations in order to satisfy their customers and achieve profit targets. However, culinary creativity is difficult to gauge by easily identifiable tools and measures. Consequently, the aim of this paper is to explore the meaning of applied creativity in five star hotels and upscale restaurants in the Taiwanese culinary industry in order to contribute to the future development of culinary education. The main objectives are to define culinary creativity and the role of applied creativity in the culinary industry. To achieve these objectives, this paper begins by evaluating relevant literature in applied creativity in the culinary industry and follows this by exploring the nature of the culinary industry. A presentation of empirical findings follows. The research participants were drawn from on top level restaurants and five star hotel chefs working within both Chinese and Western cuisine in Taiwan in order to ensure a similar level of culinary background. Finally, comparisons between the perspectives of participants from the two cuisines are presented.

Defining culinary creativity

It can be noted that there are numerous definitions of creativity from different perspectives. Taylor (1988, p. 118)presents six major groups of creativity definitions that highlight the main themes in definitions.Firstly, "Gestalt" or "Perception" creativity emphasises the recombination of ideas or the restructuring of a "Gestalt". Wertheimer (1945)says that creativity is the process of destroying one gestalt in favour of a better one. Secondly, "end product" or "innovation" is considered in number of definitions. Stein

(1953)explains that creativity is that process which results in a novel work that is accepted as tenable or useful or satisfying by a group at some point in time. The third group is, "Aesthetic" or "Expressive" creativity, where the major emphasis is upon self-expression. Fourth, is "Psychoanalytic" or "Dynamic" creativity which is defined in terms of interactional strength ratios of the id, ego and superego. Fifthly, "Solution Thinking" creativity places the emphasis upon the thinking process itself rather than upon the actual solution of the problem. Finally, "Veria" creativity refers to whatRand (1952) sees as addition to the existing stored knowledge of mankind. From these six groups, some definitions contain elements that fall into different groups. Thus, in order to define creativity, one must consider a range of factors, which include interactions, translations, rearrangements, evolutions and stimulations, as well as the creator's (person) own abilities and personality in order to produce a product and be accepted and satisfied by a group. In summary, De Dreu (2010)summarizes a range of researchers' perspectives to conclude that creativity is often identified with three dimensions, person, product and process.

The purpose of creativity in the culinary industry is to increase sales and profit and improve the quality and reputation of an organization, which outcomes are vital to the advancement of culinary professions (Horng & Hu, 2009). However, creativity research in the area of the culinary arts has been relatively limited. In the restaurant and hospitality industry, creativity is considered a practice based approach which has rarely been considered to explore (Bouty & Gomez, 2013). Conceivably, culinary performance or outcomes are not often considered as visual arts. Culinary creativity is frequently seen to be tangible and considered as a "skill-oriented discipline" (Horng & Lee, 2009, p. 100) to satisfy basic human needs(Horng & Hu, 2008). Chossat and Gergaud (2003, p. 130)note that culinary creativity is aimed at introducing radical changes in the traditional way of cooking, or experimenting with new combinations of foodstuffs like fish and meat in the same course.

Classical or traditional cooking signals the reproduction by a chef of the French gourmet cuisine standards or canons for example, voliailleenvessie or boeuf bourguignon.

Culinary creativity has, arguably, played a key role in the culinary revolution. "The culinary revolution of nouvelle cuisine, which reimaged the food industry in the 1970s, was underpinned by creativity. Specific work advocates new training methods for chefs to help in upgrading the profession" (Gillespie 1994, Horng and Lee 2006 cited in Robinson, 2011, p. 36).As example of the culinary revolution, la nouvelle cuisine Française is Bocuse's version of la cuisine du moment, was influenced by mentor Chef Point. The secret and soul of nouvelle cuisine lay in the simple act of following Chef Point's insistence on cooking according to the day's market, cooking it at the last minute, individually for each client, and cooking it perfectly. Further, Point demonstrates his philosophy of cooking that the simplest dishes that are the hardest to master(Chelminski, 2005, p. 6). The nouvelle cuisine approach could be one style of culinary creativity and is still deeply influenced by considerations of how cuisine should be prepared, presented and appreciated.

Horng and Hu (2009, p. 376) summarize that in the French culinary tradition, creativity is the refinement of classical or traditional culinary art (Chossat and Gergaud, 2003), and top chefs do need to know the classical arts to refine them. This is a representation of culinary refinement rather than development from completely new which is similar to the argument put forward byRobinson and Beesley (2010, p. 767)   who note that "a chef 'creates' a meal: raw ingredients are skilfully selected, prepared, combined, transformed, cooked and presented to be enjoyed by the consumer. From this perspective, creativity need not always mean something new or 'novel' as has hitherto been the focus of discussion, but is aligned more with 'creation' and where creativity (new and novel combinations of ingredients, variety, aesthetics, and 'artistry') exists on a continuum".

Frumkin (2005, p. 78)presents interview findings with well-known chefs in the USA and the UK where each chef defines and describes culinary creativity differently. Culinary creativity can be considered 'of the moment', 'as a product', 'experience' (your growing up, your travels, your observations and memory), 'a cycle of change' (transformation), 'a process like playing musical instrument' and 'psychology and flavour memory' (childhood memory and experiments). Some chefs even question whether culinary creativity will be a valid concept a decade hence, asking whether a new wave of culinary invention is truly creative at all, contending that many new dishes that are being praised as original are simply reinterpretations of classic preparations (Frumkin, 2005, p. 78). Parseghian (2002) argues that truly creative cuisine depends on the ability to combine the knowledge of various cultures and experience of other cultures and travel in order to stimulate culinary creativity.Furthermore, Albors-Garrigos, Barreto, García-Segovia, Martínez-Monzó, and Hervás-Oliver (2013) discuss that searching for differentiation from competitors is one of the main motivation for culinary innovation.   Therefore, the creation of a new culinary product requires merging into the nature of its style of cuisine, which echoes notions of with creativity as synonymous with cookery. Each cuisine represents the cultural background and history which lies behind it.

The role of creativity in the culinary industry

The culinary industry is a competitive and intensive business and a distinguishing culinary vision can have a powerful appeal to potential customers. Frumkin (2005, p. 75) quotes Tim Zagat (the president of the Zagat food guide) who states, "unrestrained creativity is not the answer to a chef's prayers. Ultimately, it is whether the dish tastes wonderful". Culinary creativity takes various manifestations, whether as a creative product, creative process, or creative person. A culinary product is received and is evaluated by customers;

chefs develop product through the culinary process and are evaluated by food cost; the culinarian is nurtured by experience and/or education.

Whether a chef can be considered as an artist who produces an art work that is worthy of appreciation by customers, or whether she/he should be considered as a craftsman who has the required skills to produce good food to satisfy the hunger of consumers is an important question. Perhaps she/he can also be considered a scientist? There is some evidence from other researchers (Hegarty & Barry O'Mahony, 2001; Horng & Hu, 2008; Peterson & Birg, 1988; Robinson, 2011) which claims that culinary production and gastronomy are fine arts, and chefs should therefore be considered as artists. By contrast, Vikneswaran (2008) notes that most chefs do not only know how and why things work, but also require some knowledge of scientific phenomena, such as emulsion and vacuum-packing. Thus, science has been recognised and applied in the culinary field for many decades. Fine (1992, p. 1271) notes cooks have a set of conflicting identities, being simultaneously artists, professionals, businessmen and manual labours. In addition, professional cooking is situated amid demands for aesthetic choice, consistency, efficiency, autonomy and highly skilled technical work (Hall 1975, p.188-200 cited in Fine, 1992). Farmer, Tierney, and Kung-McIntyre (2003)highlight that, in Chinese culture, social force and culture have strong influences on creative identity and performance. The hospitality environment in Taiwan is an open-minded market. Customers are always looking for new trends and creative tastes. Therefore, local street food, fast food restaurants, and fine dining restaurants are all searching for creativity in food and service. Some culinary creations may have a shorter life cycle than others, or, indeed, no success at all. Applied creativity in Taiwan culinary industry still remains as a significant strategy.

The hospitality industry involves commercial organizations that specialize in providing accommodation and /or, food, and or/drink, through a voluntary human exchange, which is contemporaneous in nature, and undertaken to enhance the mutual well-being of the parties concerned(Brotherton & Wood, 2000).Food, atmosphere and service are identified by Campbell-Smith (1967) as the key elements in restaurants and could impact commercially on the provided meal (Jenser & Hansen, 2007). Thus, a restaurant is a commercial place, and customer tastes are always taken into consideration by chefs. Client demands are the main difference between the contemporary practitioners of the fine arts and chefs. Chefs are artists who can at least bend to client demands, and insist their occupational standings (Fine, 1996). In addition, Peterson and Birg (1988, p. 67) discuss the occupation of a chef who is more like a "commercial artist" who is "less fully under control of the artist and more directly subject to the wishes of the consumers". Perhaps, these culinary commercial artists are like many painters and writers who can produce their works, which are not necessary creative in the purest sense but are popular and fashionable and meet market demand. These considerations also relate to an individual chef's personality in that a chef can be more adventurous in risk taking or non-risk taking to develop his/her creations to fit or create the market demand. Horng and Lee (2006, p.11) propose four distinct experiences of creative culinary artists: "professional knowledge and skills; comprehensive understanding of cultures; life experience; and cultivation of an aesthetic sense". Some of these characteristics are similar to the character of creative artists. From the artists' perspective, culinary creativity is the way to express a personal style, which places emphasis on uniform creation. Unlike artists and writers, chefs' work places emphasis on uniqueness and problem solving (Peterson and Birg, 1988).   In addition, Horng and Lee (2006) state that creative chefs have the characteristics of being willing to take reasonable risks, and being achievement-oriented to develop their creations.

Fine (1996, p.229) states that "cooking has had an ambivalent and often distant relationship to the world of art.   All diners agree that the sensory characteristics of what is served matter deeply to the outcome. Cooks must negotiate the ways in which they are expected to take aesthetic concerns into account but simultaneously must do this with the recognition that they are industrial employees, and that their ultimate goal, if they wish to remain employed,   must be to prepare food so as to be profitable and to satisfy both customer and managers. This is a delicate balance in that it involves questions of autonomy and control, craft and labour".

The environmental effects on creativity development have been increasingly considered through the study of various senses, notably the work environment and the educational environment. The work environment is defined as the social climate of an organization which may include physical environmental variables(Amabile, 1989). Furthermore, social and environmental factors appear to play a critical role in creative performance, where social-psychological factors have an important impact on the productivity and creativity of outstanding individuals (Amabile, 1996; Boden, 1994). In today's scientific society, it is widely accepted that genetic and environmental factors, working in dynamic consort, influence intelligence (Reuter, 2007). Notwithstanding an individual's talents, expertise and skills, the conditions of a social environment can significantly increase or decrease the level of creativity produce (Amabile, 1996).

It is clear that the culinary industry is commercial and making profit and satisfying customers are the major concerns. The role of applied creativity in the culinary industry plays a sensitive role which is to continuously develop new ideas for culinary products but also to maintain a balanced position in matching culinary fashion and market demand.

A majority of assessments focus on measuring products or persons as creative in a way which is similar in form to conventional intelligence tests. Moran (2009) points out that

to measure creativity one should consider the interaction of the three components: individual (person); field (press); and domain (process). However, Moran (2009) also notes that this is limited by the need for precise measurement. On the other hand, creativity within the food industry and its organizations cannot be measured by objective means. In a practical and commercial sense, the creative product is produced and decided by the organization in order for it to proceed and be accepted by customers. Therefore, the majority of creative products are accessed in a business transaction. (Ottenbacher & Gnoth, 2005, p. 208) discuss measuring hospitality innovation success, where new services and products are most frequently based on financial measures of performance, for instance, revenue or profit-related-measures, such as sales volume or market share. Other indirect benefits include: improved image and enhanced customer loyalty and the ability to attract new customers. In the same way, the culinary industry is part of the hospitality industry, where culinary creativity can be measured in a similar way to hospitality innovation, so it depends on profit making, customers' feedback and organizational support. The nature of culinary creativity is based on the commercial environment with an aesthetic approach to create and satisfy customers within a limited amount of time (Peterson &Birg, 1988).

Whether fast food or fine dining, the importance of applied creativity in the culinary industry is more likely to act as a key factor to success. An example is of McDonald's fast food restaurants introducing Kimchee Beef burgers during the World Cup in Korea in 2002 which brought great success to their operations. On the other hand, the recent development of molecular cuisine by Spanish chef FerranAdrià has highly impacted on the evolution of world cuisine. According to Svejenova, Mazza, and Planellas (2007), Adrià has the reputation as the Picasso and the Dali of haute cuisine, the world's best chefs and one of the its most influential citizens. However, Ottenbacher and Harrington (2007) state that quick-service restaurants seem to apply as much creativity but target an area wider than just the creation of

the menu item which leads to this research focus on one segment in five star hotels and upscale restaurant in Taiwan.

In summary, it seems that the role of applied creativity in the culinary industry demonstrates complex purposes, as an artistic form of cuisine to satisfy customers' demand, organizational goals and reputations. Still, defining the role of applied culinary creativity is still insufficient. What is required is to further investigate the characteristics of culinary creativity and its implications for the culinary industry and education.   Therefore, this research focuses on exploring the role of applied creativity and its meanings in the culinary industry.

Methodology

The purpose of the interview method is to elicit views and opinions from participants (Creswell, 2009). Open-ended questions were used to identify possible determinants in the origin of culinary creativity and help to generate insights into how chefs perceive their culinary creativity, and in this way, establish the meaning of culinary creativity. The advantages of this method are that it offers a context for understanding behaviour and attitudes in developing creativity.   It also assists in understanding complicated behavioural variances differences between Western and Chinese cuisines' chefs in terms of their differences in training background, experience and personal characteristics. In-depth and semi-structured interviews were applied in qualitative research in order to conduct discussions not only to reveal and understand culinary creativity and how to develop it but also to place more emphasis on exploring why culinary creativity is important in the industry (Saunders, Lewis, & Thornhill, 2003). Additionally, the interview method can support an understanding of the relationships between variables, such as those revealed from a descriptive study where this is directly observed. This allows the researcher control over the

line of questions. The researcher started by contacting participants by the phone and email to confirm date, time and location. Each interview lasted between one and one and half an hours. The interviews were digitally recorded and transcribed.

Expert respondents

This research utilizes expert participants to meet the study objectives. With very focused and deliberate sampling of Western and Chinese cuisine chefs in Taiwan, this research seeks to explore the meaning of culinary creativity from experienced and professional chefs within academia and industry in order to explore their opinions in relation to culinary creativity. Experts were selected based on their professional experience and current related work in the culinary industry and academia. All experts were male, had at least 25years of hotel working experience, and held executive sous chef positions or higher in five-star hotels or upscale restaurants. Their average period of working in the hospitality industry was over 25 years. Around 20 years ago, the profile of kitchen staff was male-dominated, with only few female pastry and cold kitchen staff. Experienced chefs were able to share their knowledge and perspectives about this specific topic. Predominantly, participants contribute their perspectives based on their culinary experiences. Experienced chefs were able to share their knowledge and perspectives in this specific topic. Thirty-six expert participants were deemed appropriate for this research. Participant coding starts with a cuisine type W (Western cuisine) or C (Chinese cuisine), and includes the number of each participant in each category. For example, C1 represents chef number 1 in Chinese cuisine and W1 represents chef number 1 in Western cuisine. The data were collected in Taipei, Hsin Chu, Taichung, Tainan, Kaohsiung, and Hualin.

Table 1. Expert Participants

	Western Cuisine	Chinese Cuisine
Participants	20	16
Total Participants	36	

The interview questions consisted of four main themes. Four questions were conducted in Chinese, transcribed and translated by the researcher.

- What is the nature of culinary creativity in the hospitality industry?

- Define culinary creativity.

- What is the difference between culinary creativity to creativity in general?

- What are the differences between western cuisine and Chinese cuisine chefs' perspective of culinary creativity and develop?

The strength of data collection by interview strategy is that it allows probing by the interviewer, offers in-depth information and is good for measuring attitudes. On the other hand, the weakness of an interview data collection strategy is that it is time consuming and costly method.

The reason for collecting qualitative data initially is the absence of creativity research in the culinary industry. According to Horng and Hu (2008), creativity research in the culinary arts has been largely neglected, perhaps because chefs are not often seen as culinary artists in the same sense that painters, musicians, and poets are seen as visual, musical, and literary ones. Without sufficient reference to creativity research as a background, this

research will not be able to testify or verify any existing culinary creativity theories, nor measure quantitatively a large number of chefs' personal characteristics, training background and cultural background. Moreover, each chef has his/her own individual characteristics, in term of his/her social and cultural background. Thus, this particular group, chefs, is a better fit for qualitative method, interview strategy in order to understand complex patterns of chef behaviour in terms of their perspectives of culinary creativity.

Coding process

36 interviews were audio-recorded and transcribed in order to organize and prepare the data for analysis. Each interview was conducted individually over 1.5 hrs. to 2 hrs. First, interview data were divided between 16 Chinese cuisine participants and 20 Western cuisine participants. After reading through all data, this was coded into three main themes: defining culinary creativity, role of culinary creativity within restaurant business and Chinese cuisine and Western cuisine of creativity. From each main theme, the data were developed into sub-themes in order to gain clear views as to their interrelationships. Themes and sub-themes are identified from interpretation of the meaning of the data. To address the reliability of the coding process, all transcribed data were sent back to 36 participants to reconfirm the accuracy of datain order to elicit the key elements of culinary creativity for future quantitative survey.In addition, triangulation was applied in this study which includes field note, audio recording and one of research team's observations. The advantages of triangulation is to increase confidence in research data and offer a better understanding of the issues (Guion, Diehl, & McDonald, 2011).

Findings

All participants noted the importance of creativity to culinary industry from fast food

to upscale fine dining as key to success. Participantsemphasised that 5 star hotels and upscaleculinary creativity involves a wider range of skills and techniques than creativity in general. Most participants (35 out of 36) stated that culinary creativity builds on the fundamentals and basic principles of cooking which include knife skills, food science and knowledge, sanitation and hygiene, cooking methods and history in order to develop ideas and turn these into creativity. However, one participant (W2) did not agree that creativity has to be built up from tradition. He argued that building up from tradition may restrain creativity development.

Defining culinary creativity

Some of the participants (C12, C15 and W8) felt that culinary creativity is difficult to achieve. Most of the time, culinary creativity is more like combining different elements into a new dish, rather than starting from scratch.

A creative dish can be defined broadly and more specifically, one as the cuisine itself, and the other is the packaging. Firstly, it is difficult to achieve culinary creativity. Frequently, we are just combining existing elements into a dish. For example: if you start with A+B+C, then you can withdraw B and add D.   "I think it's more like a combination" (W9). To summarize, most participants' reported that culinary creativity is based on the foundations of traditional cuisine by adding various elements in order to extend and culinary traditions and also satisfy customers.

The difference between culinary creativity and general creativity

According to all participants, there are two main characteristics (Figure 1) which can be considered in a definition of the nature of culinary creativity: 'market' (time limitations and commercially driven), and 'person' (practical experience and professional skills). Most participants pointed out that comparing culinary creativity and creativity in general highlights

both similarities and differences. However, all participants agreed that the ultimate aim of both culinary creativity and more general creativity is acceptance by customers or the public.
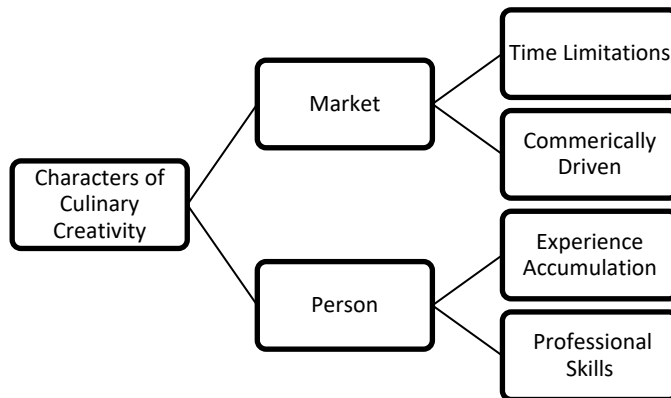

Figure 1   Characteristics of Culinary Creativity

Market

Market is a place where chefs can present their culinary creations. On the other hand, market reaction is the reality test for culinary creations. All participants agreed that the ultimate goal of culinary creativity is to be recognized by the current market.

"As a chef, I need to know my market demand. If in this city, everyone likes to eat spicy food and the flavour of creation is mild, this may not be accepted by customers.   On the other hand, if the current trend is for healthy cooking and my creation is heavy in flavour this may limit its success. Therefore, the market is a very important element to a chef's creativity where a chef can develop creations according to location, to source and age of customers and to market demand" (W17).

Time

Time imposes a limitation on culinary creativity, which does not appear to affect other forms of creativity to the same extent. Some of the participants(W1, W12, C1, C2 and

C5) pointed to time limitations as a distinct characteristic in the culinary industry within which a culinary creation has to be accepted within that specific period of time in order to gain acceptance by the market. Participants stated that the success of culinary creation is typically measured by making profits and giving customers satisfaction (W2). Feasibility was also reported as a concern by some participants. Culinary creation should be saleable without involving too much increase in cost, notably labor. Therefore, the market, time limitations and feasibility are crucial elements in culinary creativity.

Unlike other arts, like architecture or music, culinary creativity has a very short shelf life unlike for example, Michaelangelo's David sculpture which was created between 1501-1504, and will stand in the museum forever (W9).

"If your culinary creation is not accepted by the market within that period of time, then this can't be called creativity. A painter's creation may not be accepted by people when he is alive. However, people can still evaluate this painter's artwork after he/she is dead" (W17).

Commercially Driven

The participants agreed that culinary creativity is driven by commercial sense which means its purpose is to make a profit and gain customer satisfaction. Furthermore, participants admit that applied creativity has to be practical in an industry kitchen. It will not be called creative, if the creation is not making a profit and satisfying customers (W12).

"We are combining our local produce, winery, and handmade paper art gallery into our creative signature dishes which is not only of benefit to our restaurant business but also our local business" (C13).

A creative person should understand market demand and consider cost control in order to plan a new creation. Too high a cost will not attract customers to try a new creation

(W11). Depending on the brand of hotel, or restaurant and its theme, some creativity may be limited and constrained by organizational business strategies and direction. To some five star chain hotels, culinary creativity may not be the first priority in kitchen operations (C2). Most hotels have their annual plans and promotions which may not require each kitchen outlet to develop original creations (C11, W10). Some theme restaurants, culinary creativity is required to match operational themes in order to create suitable products to match the restaurant environment (C13). Some participants also stated that decisions to put creativity into the menu depends on the owner's taste (C12, C14). However, participants who were also restaurant owners demonstrate more flexibility and control over their creativity development. Participants agreed that culinary creativity has to be considered alongside many other factors, for example: location, customers' preference, theme, and culture.

"Working in a five star hotel chain, most creations are from our executive chef team and also their sister hotels food promotions. My job is to transform these creations and promotions into business ideas. My job does not really involve much culinary creativity" (W14).

"Sometimes, I like to add some new elements into my dishes. However, my boss (CEO) will restrain some of my creations. He does not like over exaggerated creations. Some loyal customers would also object to my creations, if they prefer the original dishes" (C12).

To summarize, culinary creativity is based on considerations of a restaurant's theme, location, target market, and final profit objectives. It seems that higher management positions (such as CEO and owner) can influence creativity directions and decisions. Hence, creativity in the culinary industry is commercially driven unlike much general creativity.

Person

Participants (34 out of 36) agreed culinary creativity puts emphasis on techniques in

which experience accumulation and professional skills, in their career development are vital. Experience accumulation and professional skills include culinary knowledge, management, and cooking techniques where chefs can excel in their learning and experiences and move into a higher level of career. Experience accumulation from the culinary industry is a major source of advancing culinary creativity.

W12 gave the example of cutting vegetables from 10 times to 1000 times accumulating the experience of how to cut efficiently and precisely. It is the same as preparing a dish. Therefore, this participant thinks that experience accumulation is a key to developing culinary creativity. This is echoed by W1 who noted, that developing culinary creativity is similar to how the Chinese learn how to undertake traditional Chinese painting. First of all, you need to learn how to imitate cookery, followed by continuous practice. When you cook it over 100 times, you can naturally experience the key elements of a dish. Therefore, good foundation skills can enhance your creativity development and reduce your practice time.   Professional skills are the foundation of the culinary vocation. Without professional knowledge and skills, it is difficult to learn to cook professionally and properly. A dish can be prepared by one, two or the whole team of kitchen staff in a way that is similar to playing music (W15).

"A song can be sung as a solo, chorus and other ways to express the flavour of this song, which is similar to cooking. You can cook a traditional dish with various combinations; however, the outcome has to depend on your experience and skills so that you know what elements can be combined well and work together" (W1).

Applied creativity in the culinary industry in Taiwan appears to have distinct characteristics as represent in the interview comments. In summary, it can be argued that applied creativity in the culinary industry is under the influence of and driven by internal (person) and external (market) factors. A chef has to create a dish which is based on his/her

professional skills and experience accumulation to present to the market within time limitations.

Discussion

The nature of the culinary industry demonstrates that culinary creativity has an important role in business strategy. Culinary creativity can be considered as a form of artistic expression by a chef within the constraints of certain conditions. A majority of the study participants considered themselves as culinary artists with some degree of food science knowledge underpinning their art. This outcome supports Preston and Birg (1988), Hegartyand O'Mahony (2001), and Horng and Hu (2006) who noted that chefs can be seen as culinary artists. All participants expressed various perspectives of how creativity is considered an important strategy in the culinary industry. To some extent, applied creativity in the culinary industry is a fashion (Horng and Hu, 2006), which can lead and change people's taste buds (C9). In addition, C12 indicated that real culinary creation should be able to last for a long period of time (from generation to generation). He gave the example of some classic Chinese dishes, such as Kung Pao Chicken and Longjin Tea Shrimps. However, C2 noted that culinary creations happen at different levels and across various themes of restaurants. He stated that culinary creativity in hotels and upscale restaurants may not be as important as popular (mid-level) restaurants. This outcome contradicts Ottenbacher and Harrington (2007) who hold that Michelin restaurant chefs strive for culinary innovation to achieve success. Mainly, hotels and upscale restaurants have demonstrated high quality and standard in culinary production. All participants agreed the final goal of culinary creativity is to satisfy customers and make a profit in order to survive in a very competitive industry, and this corresponds with the views of Ottenbacher and Harrington (2007), and Horng and Lee (2009). In addition, Peterson and Birg (1988) propose that chefs are like 'commercial artists'.

This research argues that within the time limitations and customer-orientation constraints, chefs can be considered to be contemporary commercial artists who have to meet current market demand and achieve profit goals for their organizations.

Character of culinary creativity

The findings of this study demonstrate that the characteristics of culinary creativity are constrained by market (market acceptance, time limitations) and person (practical experience and professional skills) factors. From the market perspective (market acceptance and time limitations), chefs have limited time to create culinary products which are required to meet market demand in a commercial sense. The market perspective (market acceptance and time limitations) is parallel to the notion of time as one of the critical factors that impact on market reaction according to Getz and Lubart (2009), and Peterson and Birg (1988). Moreover, participants noted that the market is not only the culinary market in general but also reflects regional/local market demand. Some participants noted that, depending on the type of cuisine and source of customers, chefs are required to understand market demand in order to present proper creations to the market.   From the person perspective (practical experience and professional skills), to ignite culinary creativity, chefs are required to have experience and professional skills in order to spark their creativity and be appreciated by customers. The majority of Chinese cuisine participants emphasised the importance of practical experience to their creativity development. On the other hand, Western cuisine kitchens adopt standard operations procedures (SOP) by which the formula for recipes is given so that they can easily prepare the components of a dish (C9). For example, a Caesar salad can be simply prepared by a trainee or a line cook, whereas, a Chinese cuisine kitchen might have difficulties in building a SOP system. Essentially, Chinese cuisine tends to present one dish to share with a table of people (10-12 people). For example, to cook a whole

fish, a chef has to consider the individual size of the fish in order to determine the deep-frying temperature and timing. This depends on the chef's experience (C13). On the other hand, Western cuisine presents a single portion per person, which can be prepared by a line cook with SOP (standard operation procedure) recipes. As a consequence, the accumulation of practical experience could contribute to a chefs' culinary creativity development. The expert panel agreed that the accumulation of both practical experience and professional skills are the basic elements of culinary creativity development. This outcome agrees, in part, withHorng and Lee (2009) that culinary creativity is a skill-oriented discipline. However, this research argues that practical experience appears as an important element in the development of culinary creativity.

Defining culinary creativity

From the literature, the only published definition of creativity in the culinary industry is that of Chossat and Gergaud (2003) who state that "in the French culinary tradition, creativity is the refinement of classical or traditional culinary art" (Horng and Hu, 2006, p.376). Following this, Ottenbacher and Harrington (2007) discuss commercialization in the case of a Michelin-starred restaurant, where chefs focus on customer satisfaction and long-term reputation rather than food cost or profit margin.

Some aspects are similar to earlier literature. For instance, C2, and W2 defined culinary creativity as to destroy and create a better entity, similar to Werthimer (1954), while, some participants saw culinary creativity as to create from fundamentals, (traditional and/or original) without missing the essence. Perhaps they noted culinary creativity as a type of rearrangement of traditional or classical dishes. This reflects the importance of culinary foundations. Similarly, Harmon (1955 cited in Taylor, 1988, p.118) illustrates this as "any

process by which something new is produced an idea or an object, including a new form or arrangement of old elements".

Some participants demonstrated different views of culinary creativity. Participants pointed out that culinary creation should be able to survive the challenge of time and last forever. To some of chefs, culinary creativity is a refinement and recombination process, which supports the definition by Chossat and Gergaud (2003). To a majority of chefs, culinary creativity is built upon the fundamentals, which are inspired by cultural background and traditions. However, W9 argued that to create from tradition may constrain creativity development. All chefs agreed that culinary creativity is developed from the foundations of skills and experience in order to present original and competitive products, satisfy customers and make a profit. To elaborate on previous literature definitions, this research argues that culinary creativity can be defined as based on the foundation of traditional cuisine with additional elements which extend and emerge from culinary traditions and satisfy customers.

Conclusions

This paper explores creativity in its applied services sector context by focusing on the forms it takes in the culinary industry in Chinese culture. It is argued that culinary creativity has its own distinct characteristics which it plays an important role in culinary evolution and in education and training for work in this area. The findings of this research have implications which go beyond the specific culinary context and have meaning in related areas of what might be styled experiential services, such as those delivered by sommeliers, through special events and within areas of retail. Within all of these areas, an applied, time-constrained and commercialised interpretation of creativity, such as that explored in the culinary context in this paper, has resonance and relevance.

The findings of this study indicate that the role of applied creativity in the culinary

industry has played a key role in the culinary revolution, which is considered as a leading trend to change customers' taste and dining experience. It has its own distinct characteristics, for example time limitations and market acceptance, which are acquired through building blocks of professional skills and experience.   These distinct characteristics present a perspective on unique basic principles of creativity development in the culinary industry. To summarize participants' perspective of culinary creativity, this is based on the foundation of traditional cuisine by adding various elements in order to extend and "escape"from culinary traditions and to satisfy customers. The study contributes to an understanding of the role of applied creativity in the culinary industry from the perspective of Chinese and Western cuisine chefs in a Chinese cultural context. To extend the discussion of Peterson and Birg(1988), this study argues that, within the limitations of time and customer-orientation, chefs can be considered as contemporary commercial artists who have to present their creations to meet current market demand and achieve profitability in the organization in order to survive in the industry.   In addition, the characteristics of culinary creativity are constrained by market acceptance, time limitations, professional skills (Horng and Lee, 2009) and practical experience. This study highlights that practical experience is considered as an essential element in the development of culinary creativity. In particular, without standard operating procedures in Chinese cuisine kitchens, practical experience appears to be rather more important to Chinese cuisine chefs than Western cuisine chefs. Therefore, by exploring the meaning of applied creativity, this qualitative findings show the importance of creativity in the culinary industry which it can assist in planning culinary training and education in the future.

This study was conducted in Taiwan with thirty-six participants who are Chinese and specialize in either Chinese cuisine or Western cuisine. The findings reflect the cultural influences of both cuisines. The major limitation relates to the sample of respondents within

Chinese culture which cannot represent to whole target populations. In addition, with researcher's own personal industry and academic connection, 36 respondents were carefully reviewed and considered with their achievements and experience in the culinary industry in order to achieve the research purpose. The purpose of this study was to investigate their perspectives of creativity role within their organizations which may not represent these 36 chefs are very creative in their culinary profession.Furthermore, each chef shared their creative idea in cuisine development and their views of creativity in culinary sector.Future research areas can be extended to different cultures and countries or other comparable contexts using a diversity of methodological approaches.

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Appendix: Participants' experiences and positions

Code	Position	Hotel/Restaurant	Experience	Location
W1	Owner/Chef	Restaurant	40 years	Taipei
W2	Ex. Chef	Hotel	39 years	Taipei
W3	Ex. Chef	Hotel	40 years	Kaohsiung
W4	Chef	Hotel	44 years	Taichung
W5	Chef	Hotel	30 years	Kaohsiung
W6	Chef	Hotel	25 years	Taipei
W7	Chef	Hotel	22 years	Taipei
W8	Chef	Hotel	25 years	Hsin Chu
W9	Ex. Chef	Hotel	25 years	Hulain
W10	Ex. Chef	Hotel	26 years	
W11	Director	Restaurant	23 years	Kaohsiung
W12	General Manager	Hotel	38 years	Tainan
W13	Chef	Hotel	25 years	Taipei
W14	Chef	Hotel	26 years	Taipei
W15	Owner/Chef	Restaurant	40 years	Taipei
W16	Ex. Chef	Hotel	26 years	Taipei
W17	Owner/Chef	Restaurant	39 years	Taipei
W18	Chef	Hotel	28 years	Taipei
W19	Chef	Hotel	22 years	Taipei
W20	Ex. Sous Chef	Hotel	24years	Taipei
C1	Ex. Chef	Hotel	43 years	Taipei
C2	Ex. Chef	Hotel	34 years	Hsin Chu
C3	Ex. Chef	Hotel	42 years	Taichung
C4	Ex. Chef	Hotel	43 years	Taipei
C5	Ex. Chef	Hotel	43 years	Taipei
C6	Chef	Hotel	29 years	Kaohsiung
C7	Ex. Sous Chef	Restaurant	32 years	Taipei
C8	Ex. Chef	Hotel	47 years	Kaohsiung
C9	Ex. Chef	Hotel	42 years	Kaohsiung
C10	Ex. Chef	Hotel	36 years	Kaohsiung
C11	Ex. Chef	Hotel	45 years	Hulain
C12	Ex. Chef	Hotel	36years	Hulain
C13	Owner/Chef	Restaurant	25years	Taichung
C14	Chef	Hotel	23years	Tainan
C15	Chef	Hotel	22years	Hsin Chu
C16	Ex. Chef	Hotel	37years	Taipei