An Individual Perspective on Open Innovation Capabilities in the Context of Haute Cuisine

Laura Bockelmann  
University of Potsdam  
Business Administration  
laura.bockelmann@uni-potsdam.de

Andreas Braun  
BSP Business School Berlin Potsdam  
Business Administration  
andreas.braun@businessschool-berlin-potsdam.de

Abstract

Previous research on open innovation (OI) has primarily focused on the organizational level of R&D intensive industries. With this paper, we contribute to research on the individual level of analysis by analyzing specific perspectives in the context of creative industries. Our study is based on 36 interviews with haute cuisine chefs in France, Germany, Great Britain, Italy, Spain, Sweden, and Switzerland listed in the 2012 Michelin Guide. Building on the OI capability concept, our results demonstrate that chefs use absorptive and desorptive capacity as means to generate and market culinary innovations, respectively. Moreover, we found that chefs almost exclusively rely on their own inventive and innovative capabilities in the early stages of the culinary innovation process. In subsequent phases, however, chefs increasingly integrate other sources such as employees, suppliers, and guests. Our study contributes to the literature in two ways. First, we research the individual level within the OI process, and second, we provide insight into OI practices in the creative industries.

Jelcodes:M19,M10
An Individual Perspective on Open Innovation
Capabilities in the Context of Haute Cuisine

Abstract:

Previous research on open innovation (OI) has primarily focused on the organizational level of R&D intensive industries. With this paper, we contribute to research on the individual level of analysis by analyzing specific perspectives in the context of creative industries. Our study is based on 36 interviews with haute cuisine chefs in France, Germany, Great Britain, Italy, Spain, Sweden, and Switzerland listed in the 2012 Michelin Guide. Building on the OI capability concept, our results demonstrate that chefs use absorptive and desorptive capacity as means to generate and market culinary innovations, respectively. Moreover, we found that chefs almost exclusively rely on their own inventive and innovative capabilities in the early stages of the culinary innovation process. In subsequent phases, however, chefs increasingly integrate other sources such as employees, suppliers, and guests. Our study contributes to the literature in two ways. First, we research the individual level within the OI process, and second, we provide insight into OI practices in the creative industries.
1. Introduction

Open innovation (OI) has received extensive attention from both scientists and practitioners over the last decade. Since Chesbrough coined the term “open innovation” in 2003, managers have enthusiastically incorporated OI elements into their strategic considerations, and scientists have researched this on-going development in companies (Bianchi et al., 2010; Dodgson et al., 2006; Giannopoulou et al., 2011; Hsieh and Tidd, 2012; Salmi et al., 2010; Trott and Hartmann, 2009). More than 460 scientific articles on OI in various disciplines, including economics, politics, psychology, sociology, and geography, serve as an indicator of an intensive and prevalent discussion (Huizingh, 2011).

Previous research has advanced our understanding concerning two fundamental questions: (1) with whom and (2) how should organizations interact to gain the most out of the OI approach?

- Research on question (1) has addressed the multiple external partners the organization can engage with, including research institutes, customers, competitors, and suppliers (Jespersen, 2011; Muhdi and Boutellier, 2011; Remneland-Wikhamn et al., 2011; Sjödin and Eriksson, 2010).

- Research on question (2) has addressed the degrees and directions of openness, including classifications such as “open,” “semi-open,” and “closed innovator,” as well as the accompanying inbound and outbound activities along the innovation process (Barge-Gil, 2010; Chesbrough and Crowther, 2006; Dahlander and Gann, 2010; Laursen and Salter, 2006; Salge et al., 2012).
In answering these questions, researchers have almost exclusively focused on the organizational level in mostly large organizations. To the best of our knowledge, no study has explored the individual level yet, i.e., the single member of an organization and his or her openness behavior. With this paper, we aim to address this gap by researching the OI approach of individuals in a less R&D-intensive industry, such as creative industries. Based on 36 interviews with chefs in France, Germany, Great Britain, Italy, Spain, Sweden, and Switzerland (listed in the 2012 Michelin Guide), we demonstrate how individuals use openness as a means to create culinary innovations.

For this purpose, we modify Lichtenthaler and Lichtenthaler's (2009) OI capability concept, originally addressing the organizational level. The original concept combines a classification of knowledge exploration, retention, and exploitation with an internal and external perspective resulting in six capabilities. This OI capability concept provides an integrative perspective on how to manage knowledge flows in OI processes (Lichtenthaler and Lichtenthaler, 2009).

By transferring the concept to an individual level, we show how chefs use absorptive and desorptive capacities to generate and market culinary innovations, respectively. Moreover, we find that chefs nearly exclusively rely on their own inventive and innovative capabilities in the fuzzy beginnings of the culinary innovation process. In subsequent phases, however, they integrate other external and internal sources such as their employees, suppliers, and guests. Therefore, our study contributes to the OI literature in two ways. First, we are among the first to draw attention on the individual level of OI research. Second, we provide insight into OI practices in creative industries. In summary,
we advance the OI capability concept by transferring it from the organizational to the individual level.

This paper is structured as follows. We start with the conceptual framework by adopting the original organizational-level OI capability concept for individual-level analysis. Then we describe our research context and methods, presenting and discussing our results while reflecting on the innovation the OI approach of chefs. We conclude with a brief summary, highlighting the implications for future research and OI management practice at the individual level.

2. Conceptual Framework

Chesbrough (2003: xx) defined OI 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 the firms look to advance their technology.” Chesbrough (2006: 1) further called OI “the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively.” In line with this definition, an increasing number of studies have highlighted knowledge and its management as a crucial element of OI (cf. Huang and Rice, 2009; Robertson et al., 2012; Schweitzer et al., 2011).

2.1 The (Open) Innovation Process

At its core, OI gears to a more porous innovation process to gain an overall competitive advantage (Chesbrough, 2003, 2006). However, this approach constitutes two basic challenges concerning the internal consistency and external orientation of the innovation process (Judge et al., 1997; von Krogh et
First, what is the optimal degree of internal formalization of the innovation process (cf. Jansen et al., 2005; Dolfsma, 2004)? Second, what is the optimal degree of openness (cf. Laursen and Salter, 2006; Dahlander and Gann, 2010)? Bergman et al. (2009: 142) suggested a balanced approach “between control and freedom and the openness and closeness.” In line with this argumentation, previous research called for new or modified process models, examining the knowledge transfer with the external environment (Berkhout et al., 2006; Cooper, 2009).

In this context, OI literature has differed in how it understands the two directions of knowledge transfer between organizations and their environments. Inbound openness refers to the internal use of externally absorbed knowledge (such as customer or supplier integration) and outbound openness to the external use of internally stored knowledge (e.g., out-licensing) (Chesbrough and Crowther, 2006).

Previous reviews of OI literature have indicated that inbound activities are far more common in practice and far more researched than are outbound activities (Huizingh, 2011; Lichtenthaler, 2011). Inbound openness is thereby often linked with absorptive capacity and defined as the process of recognizing, assimilating, and applying external knowledge (Cohen and Levinthal, 1990). Huang and Rice (2009) showed that investments in knowledge absorption positively influence innovation effectiveness in the long run. More recently, Newey (2010) identified different forms of absorptive capacities in OI activities, and Harison and Koski (2010) investigated how inter alia absorptive capacity affects OI strategy. In contrast, outbound OI is a far less researched topic.
Lichtenthaler (2009) contributed to the discussion by showing how outbound strategies affect innovation performance.

OI literature has focused almost exclusively on the organizational level of analysis. To the best of our knowledge, no paper has explored the individual level yet, i.e., the single member of an organization and his or her openness behavior. This is even more surprising, taking into account that innovation management literature offered different concepts that have explained the facilitation and enforcement of innovations on an individual level, such as gatekeepers and innovation promoters (Jespersen, 2010; Mansfeld et al., 2010).

An explanation for this context-related constraint in OI research may be that in large enterprises (which are usually the preferred object of analysis), multiple organization members contribute to the innovation process. This makes it difficult to assign the OI performance of an organization to an individual. More recently, publications addressed the problem of performance allocation between the individual and the organization (cf. Mollick, 2012; Jääskeläinen and Laihonen, 2013).

For the purpose of this study, we concentrate on the creative industries, in this case haute cuisine, where the individuals are often perceived as drivers and sources of the innovation process (Chaston and Sadler-Smith, 2012; Hotho and Champion, 2011; Preston et al., 2009). For example, Alvarez et al. (2005) showed how film directors shape their creative ability. More recently, Tran (2010) evaluated the innovation process of designers in the fashion industry. In the context of haute cuisine, previous research has concentrated on the inner structure of the innovation process (cf. Harrington, 2004b; Ottenbacher and
Harrington, 2007; Horng and Hu, 2008) without explicitly considering the variation of closeness and openness in knowledge exchange.

This limitation is surprising because various researchers emphasized the impact of external factors on the culinary innovation process. For instance, Harrington (2004a) described, inter alia, the influence of customer and competitor behaviors on culinary innovations. On a more abstract level, Stierand and Lynch (2008) stressed the integration and accumulation of knowledge as basic features in the culinary innovation process. Recently, Hu (2010) found evidence that the ability to integrate domestic and foreign cooking cultures, among other capabilities, influences innovation in haute cuisine. In sum, the results of these studies suggested that both internal and external sources influence the culinary innovation process. To integrate these perspectives, we apply and modify Lichtenthaler and Lichtenthaler’s (2009) concept of OI capabilities.

2.2 Open Innovation Capabilities Concept

Lichtenthaler and Lichtenthaler’s (2009) concept of OI capabilities combines elements of knowledge management (Nonaka, 1994), absorptive capacity (Cohen and Levinthal, 1990), and dynamic capabilities (Teece et al., 1997) to create a capability-based framework. Based on previous research, they defined knowledge management capacity as a “firm’s ability to dynamically manage its knowledge base over time by reconfiguring and realigning the processes of knowledge exploration, retention, and exploitation inside and outside the organization” (Lichtenthaler and Lichtenthaler, 2009, 1322).

Each of these three processes is characterized by a capacity on both the internal and external level:
- Knowledge exploration reflects a generation of new knowledge. Thereby, inventive capacity (IvC) is defined as the ability to explore knowledge inside the firm, while absorptive capacity (AC) is defined as the ability to integrate knowledge from various external sources and assimilate it in the firm’s knowledge base. Absorptive capacity is a crucial element for performing inbound openness (Parida et al., 2012).

- Knowledge retention ensures that knowledge is stored in the firm over time and can be reactivated or even combined with new knowledge. In this context, transformative and connective capacities (TC, CC) refer to the ability to maintain knowledge and subsequently reactivate knowledge portfolios in intra- and inter-firm settings.

- Knowledge exploitation refers to the process of making use of the knowledge. As such, innovative capacity (IoC) is the ability to exploit knowledge within the company for new products and services, and desorptive capacity (DC) is the ability to transfer and exploit knowledge outside of the firm. Desorptive capacity is a crucial element for performing outbound openness (Lichtenthaler and Lichtenthaler, 2009).
The framework provides an integrative perspective on the management of knowledge flows in the OI process and draws attention to the capabilities for inbound and outbound activities. Moreover, with desorptive capacity, Lichtenthaler and Lichtenthaler (2009) defined a complementary ability to the already well-established absorptive capacity proposed by Cohen and Levinthal (1990). In our paper, we transfer the six capabilities to the individual level by analyzing how chefs use the knowledge available inside and outside the firm in the culinary innovation process. This change in the perspectives was motivated by King et al. (2010), who described organizations as social actors by applying human features to them. Reversing this, we transfer the organizational capabilities to the individual level. Thus, we aim to improve the understanding of (open) innovation behavior of individuals (see figure 1).

3. Research Context and Method
3.1 Haute Cuisine, Culinary Innovations and the Michelin Guide

Our study examines the innovation behavior of chefs in haute cuisine restaurants. Despite their marginal proportion in the overall gastronomy sector (roughly 0.5%), haute cuisine restaurants and their chefs play a critical role in setting trends and standards for the industry when it comes to culinary innovations (Surlemont and Johnson, 2005). Hence, analyzing the individual level (chefs) effectively addresses our research interests. Culinary innovations have gained increasing attention from researchers interested in delineating what constitutes an innovative and successful individual in the creative industries (Fauchart and von Hippel, 2008; Svejenova et al., 2007).

For the purpose of our paper and in line with previous research, we define culinary innovation as the development and commercialization of a dish or menu that is perceived by the chef as a novelty or as an improvement to an existing dish (Harrington, 2004a, 2004b). Research highlighted culinary innovations as a central feature of how haute cuisine restaurants gain uniqueness and competitiveness (Fauchart and von Hippel, 2008; Svejenova et al., 2007).

The supply of (post-) experience goods is characteristic of most parts of the gastronomy sector. Experience goods are goods whose characteristics, e.g., quality, are difficult to judge in advance (Nelson, 1970). In the case of post-experience goods, the utility of the offered product or service is even more difficult to measure after consumption (Wolinsky, 1995). Therefore, third-party experts act as information providers. In the case of haute cuisine, several gastronomy guides measure the quality of restaurants based on various criteria. The most prominent one is the annually published Michelin Guide for different
countries and cities in Europe, North America, and parts of Asia (Balazs, 2002; Johnson et al., 2005; Ottenbacher and Harrington, 2008, 2009).

The Michelin Guide ranks restaurants in three categories one, two, or three stars (wherein three stars is the highest nomination). As a fourth category, Bib Gourmand, is lower than one star and is awarded restaurants with good dishes for moderate prices. The testers are chosen and trained by Michelin and visit the restaurants anonymously to guarantee independence (Johnson et al., 2005; Ottenbacher and Harrington, 2007). The evaluation criteria are often criticized as extremely vague, because they consist of factors difficult to qualify, such as the quality of the products, the use of flavors, and the character of the kitchen (Johnson et al., 2005). Apart from these justified points of criticism, the Michelin Guide is perceived as the most prestigious and most reliable evaluation tool in the community (as our interview analysis indicates).

In the past, the number of awarded restaurants has increased. Taking Germany (with the second highest frequency of three-star restaurants in Europe after France) as an example, the number of awarded restaurants (including Bib Gourmands) increased from 587 to 680 between 2010 and 2012. The highest in growth were the two-star (30%), Bib Gourmand (15%), and one-star restaurants (10%). With nine, the number of three-star restaurants remained constant (Michelin 2012).

3.2 Methodological Procedure of Data Selection and Analysis

We apply a qualitative method for our empirical research. Between June 2012 and March 2013, the two authors (plus four colleagues) conducted 36 interviews with haute cuisine chefs listed in the Michelin Guide 2012. The data selection and analysis followed three steps.
First, we identified all chefs listed in Michelin Guides for France, Germany, Great Britain, Italy, Spain, Sweden, and Switzerland. The geographical restriction to those countries was because of linguistic reasons (because we wanted to conduct the interviews in the chefs’ native language). We identified 1529 star-awarded restaurants. For Germany, we also included the 431 Bib Gourmand restaurants. Taking into account that 125 chefs in the targeted countries run more than one restaurant with a Michelin Guide nomination and that at least 13 restaurants closed during our survey period, we put together a list of 1822 potential chefs for interviews.

Second, we applied a “waterfall model,” asking each of our interview partners with whom else we should conduct interviews. We started with chefs in Germany and expanded our radius to the neighboring countries. We conducted 36 semi-structured, guided interviews with chefs ranging from Bib Gourmand to three-star restaurants followed by an ethnographic interview guide (Spradley, 1979). The questions covered the following topics: (1) general information about the participants and his or her restaurant(s), (2) definition and importance of culinary innovations for haute cuisine in general and the interview partners in particular, and (3) the culinary innovation process and OI behavior in relation to internal and external sources. Each interview took 30 to 90 minutes and was recorded and subsequently transcribed.

Third, for the analysis of the transcribed interviews, we applied Mayring’s (2003, 2010) model of qualitative content analysis. This qualitative content analysis model is a systematic rule and theory-guided methodology that proceeds with a set of categories. It compensates for the disadvantages of quantitative analysis models (Mayring, 2003, 2010).
We coded the 36 interviews with the computer software Atlas.ti following our conceptual framework. First, we coded the data to determine the culinary innovation process by applying the broad categories “idea generation,” “idea implementation,” and “idea commercialization.” As an intermediary result, we defined the culinary innovation process. Second, we applied the categories “knowledge exploration,” “knowledge retention,” and “knowledge exploitation” to the data to determine knowledge flows during the innovation process. We grouped those findings according to the perspectives “inside the firm” and “outside the firms.” These led us to six sub-categories. Third, for each of the six sub-categories, we determined the various forms applied by the chefs and the importance of them. To validate our analyses and results, we asked a third person to code 12 of the interviews and found a high degree of congruency (see figure 2).

![Data Structure](image-url)

Figure 2: Data Structure.
4. Results and Discussion

To assure the highest possible level of anonymity for the chefs, we used abbreviations for the sources in the results and discussion sections (e.g., I-01). Similarly, we replaced designations of restaurants and references to other chefs with an “X” to avoid deductions about the interview partner.

4.1 Defining Culinary Innovations in Haute Cuisine

The chefs we interviewed agreed on our definition of culinary innovations “as the development and commercialization of a dish or entire menus that is perceived by the chef as a novelty or as an improvement to an existing one.” Chefs from France called for more attention to the guest as additional evaluator of culinary innovations (I-08/I-23/I-32). One criticized the “self-referential” (I-32) character of the definition. Another stated, “It is the guest who has the final say – nobody else” (I-23).

Asking more precisely for individual definitions, we find two perspectives on culinary innovation. The first one refers to innovations as cooking trends and techniques with major influences on the branch. Trends are associated with particular chefs such as Michel Guérard and Paul Bocuse (nouvelle cuisine) or Ferran Adria (molecular cooking), chefs who formed specific cooking styles.

“There are guys of nouvelle cuisine developed something radically new. More recently, 2005, 2006, Ferran Adria created something radical again” (I-26).

These days, haute cuisine follows a cooking style that is characterized by the predominant use of regionally available products and is labeled regionalism,
purism, or natural cuisine. A three-star chef stated, “Innovation is when you make use of regional products” (I-29).

The second perspective refers to the constant development of dishes and menus, including the composition of new menus that differ from classical ones, and more closely relates to our definition. “When is something new? When I advance the classical form, meaning appetizer, soup, fish, entremets, and I create a new sequence of the menu” (I-09).

A two-star chef, for instance, stated that one of his menus is solely vegetarian: “This would have been absolutely unimaginable some years ago” (I-11). Another chef from Italy offers a menu called “Tutto con le mani” in which guests eat all dishes with their hands (I-03).

In sum, the chefs can be grouped according to these two perspectives. Most Bib Gourmand and one-star chefs referred to culinary innovations as cooking trends, whereas two- and three-star chefs predominantly related culinary innovations also to their kitchen.

4.2 Culinary Innovation Process

The interview analysis indicates that the culinary innovation process follows a certain repetitive process that can be divided into five phases: (1) idea, (2) concept, (3) evaluation, (4) training, and (5) commercialization phase. As initiators and drivers of this process, chefs play a major role in generating, developing, and launching culinary innovations. However, we found differences between Bib Gourmand and star-awarded chefs.

In the first phase, ideas are generated and selected. chefs make use of various sources of inspiration (that are defined and discussed in the following
section). A chief selection criterion is the season because it ensures the availability of products in the best quality and of sufficient quantity. “For the selection of ideas, I have to check if the season allows the implementation and if the products are available” (I-25).

The analysis of the interviews shows a difference between Bib Gourmand and star chefs in the execution of this phase. Star-chefs operate this phase alone. A three-star chef told us, “One has to determine the direction – and that’s me” (I-36). In contrast, Bib Gourmand chefs integrate their team: “The whole team is seated together. Everyone is involved. Otherwise, it would be difficult for me to create a new menu” (I-28).

In the subsequent concept phase, the selected ideas are combined into a menu card, i.e., chefs determine the sequence of dishes. Again, we find differences in how chefs conduct this phase. Bib Gourmand chefs integrate the kitchen team, whereas star-chefs perform the phase alone as the following statement shows:

“I don’t like interventions by my colleagues, by those people I’m working with. I think that the people working for us want to learn, not the other way round” (I-03).

Subsequently, all chefs test the concept in the evaluation phase, either performed by word of mouth, e.g., in the form of meetings, or in practice, by cooking the entire menu or parts of the menu. All chefs, regardless of their Michelin Guide nomination, integrate their kitchen staff in this phase. “Test cooking is a must. Especially in the modern, experimental cuisine there is no room for mistakes” (I-16).
Chefs with one or more stars do at least one, sometimes several, practical run-throughs until they finalize a new menu. Bib Gourmand chefs told us that they do not conduct practical tests and justify this approach with limited capacities in time, money, and facilities. Instead, they talk the employees through the new menu and admit the kitchen crew into the particular development tasks. “We don’t test cook; we don’t have a star to lose” (I-09).

In the training phase that is closely connected with the previous evaluation phase, the chefs instruct their employees on the realization of the menu, as most star chefs have already performed practical run-throughs and explicit training is not necessary any longer. In contrast, Bib Gourmand chefs brief their kitchen staff in a meeting. Both Bib Gourmand and star chefs integrate their service staff in the training phase to give them information about the menus. “The service staff is briefed by me. What they have to say and to know about the dishes. Of course they also have to read about it in detail” (I-26).

The commercialization phase starts with the offering of the menu to guests and defines the ending of the culinary innovation process. Again, we found differences in the way the chefs perform this phase. Bib Gourmand chefs directly offered their menus to guests. A Bib Gourmand chef said, “The guests are your first testers. We produce the menu, we taste single components, but there is no such thing as test eating” (I-28).

The majority of star chefs, in contrast, conduct pre-tests by offering their guests amuse geuleles. In this way, they get direct responses from the guests to new dishes. If the feedback is positive, the chefs integrate the amuse geulele as a dish in the menu. Accordingly, star chefs seem to be more cautious in the
innovation process and test their dishes in the evaluation and the commercialization phases.

“I suppose for me that’s about making sure that we’ve trialed dishes quite extensively in the kitchen before they actually reach the menu. Then we perhaps do things like offer them as specials rather than putting them straight on the menu” (I-05).

In sum, the interview analysis indicates that there are significant differences between Bib Gourmand and star chefs in (1) executing the culinary innovation process, (2) integrating guests and employees, and (3) delineating the role of the chef in the culinary innovation process. We also found that the culinary innovation process consists of a mental and a practical part: Bib Gourmand chefs perform the entire process mentally. They discuss ideas and concepts and define particular tasks in the team. For star-chefs, the mental process comprises the idea and concept phase. After defining the concept of the new menu, star chefs start cooking and testing new dishes or menus and as such train their employees. “I suppose for me a lot of it happens in my head before we get anywhere near the kitchen. It’s a thought process” (I-05).

Despite these differences between Bib Gourmand and star-chefs, all interview partners perceive themselves as critical sources for and drivers of the culinary innovation process.

“I captured my audience with my personal style and way of cooking. Because of this, we are successful” (I-36).

“In this case I’m an egoist. People come to me and if I consider something to be good, then I do it. I don’t take others into consideration” (I-09).
4.3 Open Innovation Capabilities on the Individual Level of Analysis

In the previous section, we characterized chefs as drivers of and sources for the culinary innovation process. Consequently, the analysis of OI capabilities on the individual level in this section concentrates on the chefs and their OI behavior during the innovation process. We discuss each of the six capabilities by describing their characteristic features and evaluating their importance.

Absorptive Capacity

The chefs listed various external sources that are relevant for inbound OI in the innovation process. The single most important source is the peer, i.e., other chefs and suppliers. In contrast, guests play a marginal role as external sources due to their limited expertise in culinary techniques (I-10).

Chefs access other chefs’ knowledge in two ways: by reading cooking books and by visiting restaurants. Both are equally important, however varyingly often applied by the chefs.

Nearly all chefs frequently read cooking books as sources of inspiration. Three chefs mentioned of having private libraries with some hundred cooking books (I-25/I-17/I-14). “I read cooking books all the time to understand other chefs and their philosophy, and the way they think about food. It helps you to improve yourself” (I-06).

Moreover, chefs visit restaurants “to slip into the role of a guest” (I-11). One one-star chef told us that he tours through the European haute cuisine restaurants for two weeks once a year. He said, “Lunch in one restaurant, dinner in another one – this can be exhausting” (I-10). However, visiting restaurants is a costly and time-consuming way to gain knowledge:
“When I visit a restaurant and don’t get inspired, 300 euros are a false investment. I have become very critical in the choice of the restaurants I visit” (I-18).

Only a minority of chefs is in close contact with other chefs to exchange ideas. “Here in town ... we know each other, we greet each other, but I don’t go for instance to XX to exchange ideas. That’s not the way we do it in haute cuisine” (I-01).

Suppliers and producers are the second most important source for knowledge exploration, especially in providing chefs with background information to existing or new products. “When my fish supplier says, don’t use turbot because its quality isn’t optimal at the moment, I won’t take turbot” (I-26).

Other external sources, such as music (I-17), films (I-28/I-32), foreign cultures (I-14), travelling (I-10/I-03/I-31) and art (I-23), serve as more general impulse generators.

All interview participants perceived the capability to absorb and subsequently integrate knowledge as an important and continual activity strongly attached to the early phases of the innovation process. Interestingly, chefs repeatedly emphasized that other chefs’ dishes and menus only serve as sources of inspiration. The pure imitation of recipes would violate an implicit ethical code and jeopardize their reputations in the community. A one-star chef stated, “I’d rather die than copy my colleagues. Imitating is embarrassing” (I-19). Moreover, chefs expressed concern about diluting their individual cooking style (I-19/I-26/I-14/I-04). However, not all chefs adhere to this implicit ethical code, as a two-star chef told us. When visiting another star-restaurant, he found an “interesting, somehow familiar combination” (I-20) on the menu card and ordered it:
“But I had never expected that I would get a 100 percent copy of a dish I had published in a magazine weeks before. Partly, I felt honored; partly, I was puzzled” (I-33).

Inventive Capacity

Chefs perceive themselves as drivers for and sources of the culinary innovation process. Hence, it is no surprise that chefs nearly exclusively rely on their own inventive capacity. This finding is especially true for chefs with one or more stars (as we showed above) who do not integrate other internal sources into the early phase of the culinary innovation process, i.e., the idea and conception phases. “It’s a mental, theoretical process I work out with myself. For stimulation I now and then withdraw in a monastery” (I-29).

Other sources within the restaurant such as employees in the kitchen or the service staff get increasingly involved in the latter phases of the innovation process, e.g., cooks in the evaluation process and waiters in the training process (I-35/I-30/I-31/I-34). In contrast, Bib Gourmand chefs are more open to the feedback of their kitchen staff in the early phases of the innovation process.

Star-awarded chefs explained their reluctance to approach employees more intensively with the aim of developing and maintaining a personal style (I-36). Too many cooks would literally spoil the broth. When chefs integrate kitchen staffs, they rely on the opinion of selected, mostly long-standing employees. In this context, one two-star chef differentiated between employees and colleagues (I-01).

Connective Capacity

As mentioned earlier, suppliers are the most important external partners for haute cuisine restaurants. Nearly all chefs have an established and permanent
network, including gardeners, farmers, fishers, brewers, and winemakers. Thereby, the relationship goes far beyond an ordinary “supplier-buyer” transaction.

“Suppliers are partners. You have to foster them. This is as important as fostering our employees and our guests” (I-14).

“I perceive my farmers, fishers, shepherders, all of them, as part of my kitchen team. They are a specific part of the organizational chart in my restaurant” (I-02).

“Everything depends on mutual trust. For this reason, we are aiming to build up a personal relationship, some kind of familial atmosphere with our suppliers” (I-29).

The chefs told us that they communicate frequently, in certain cases, daily, with selected suppliers, mostly via phone. Chefs visit their suppliers regularly, either alone or with their team.

“In my experience, it makes a difference if you know your suppliers face-to-face” (I-08).

“To visit my suppliers, to see how they work, is good for my creativity” (I-28).

“I visit my poultry farmer twice a year to get an idea of the living conditions and the quality of the poultries” (I-23).

Chefs mentioned two primary reasons for developing strong ties with suppliers. The first and most obvious one is to ensure the supply of products is of the best quality and provides a sufficient quantity. “Some of my suppliers I bribe two or three times a year with a good bottle of Bordeaux to send me the
freshest fish, and the rest to XX or X” (I-15). The second reason is to get an expert’s evaluation about the development of certain products:

“Next week, I’ll be in the Bourgogne to visit my four wine-makers and to find out about the quality and quantity of the last vintages and to understand how the wine will be in the next three, four years. I do not want to experience an unpleasant surprise” (I-23).

We find that connective capacity is an important feature for chefs to predict the current and future availability and quality of products. Here, the focus is on suppliers and producers. Direct contact with other chefs or other network partners is rare.

**Transformative Capacity**

Almost all chefs utilize one or more methods to store knowledge and keep it alive over time. The documentation is carried out in written, e.g., notepads and computer data, or visual forms, e.g., drawings and photos, and contains ideas that have not been implemented yet or that have been already implemented in the past (I-10/I-28/I-27/I-08). Accordingly, transformative capacity is relevant in all stages of the culinary innovation process. In this context, one three-star chef is an exception in a way that he or she has access to the idea collections of several chefs:

“Our notebooks are handed down from generation to generation. That’s why I sometimes realize ideas uncle XX had once, but did not realize them himself” (I-32).

Chefs make use of their documentation as inspiration in the early phases of the culinary innovation process and combine it with previous new ideas (I-20/I-
Moreover, one two-star chef describes idea collections as a good means to monitor the personal development over time (I-01). Only a few chefs memorize their ideas (I-18/I-25/I-30). And one three-star chef stated, “I only develop ideas that I can implement immediately” (I-29).

**Innovative capacity**

Chefs judged culinary innovations as an important feature haute cuisine in general and their culinary innovation process in particular. One French one-star chef stated, “Culinary innovations are the engine for our entire work, to develop new techniques, new dishes, new menus that the guests do not known yet” (I-08).

Interestingly, only two Bib Gourmand chefs assessed “being innovative” as less important (I-09/I-04): “We do not develop innovations” (I-09). For these chefs, innovative capability represents a means to respond to the guests’ needs and expectations as well as to develop and maintain their individual cooking styles. From the guests’ perspective, increasing health awareness leads to the creation of menus with less butter, fat, and cream. A three-star chef said, “Crème double was the clue of haute cuisine 30 years ago – nobody would eat this today” (I-36). And a one-star-chef stated, “Guests expect a tasty meal, with few calories – this requires an innovative way of cooking” (I-14). Moreover, guests, especially those who regularly visit a particular restaurant, expect variation:

“It means you’re offering something new and of interest because otherwise what reason do guests have to return to the restaurant” (I-30).
“With a high proportion of regular guests, like I have, innovative power is a means to excite my guests, to bind them to my restaurant” (I-36).

From the chefs’ perspective, innovative capacity is a means to develop and improve their cooking style. Some chefs perceive it as their fulfillment and as a challenge to be innovative:

“The haute cuisine chefs in France and all around the world – including me – see themselves as engines of change, as agents of newness. We are obliged to offer our guests newness and surprise. We all work in this direction. In my case the reputation for experimenting, for the new is the reason my restaurant is doing so well. People explicitly come to us because of the innovations” (I-08).

However, chefs are aware of balancing guests’ expectations and chefs’ innovativeness. Guests should be neither shocked nor bored by culinary innovations: “If the end result is not pleasant to a guest, then it’s not a good innovation; it is just something new” (I-30).

In the attempt to measure the chefs’ innovative capacities, we find a high variation rate with regard to innovation frequency and degree. Innovation frequency refers to the number of menu changes in the dishes and menus offered and ranged from daily to seasonally. However, innovation degree concerns the differences in the perceived novelties of the current versus the previous menu and ranges from very weak to very strong. A one-star chef assumed a correlation between the innovative capability and the Michelin Guide nomination, with Bib Gourmand and one-star chefs being less innovative than
are two- and three-star chefs (I-10). Although most chefs did not share this perception, we found some evidence for this statement. By trend, the innovation degree between two consecutive menus is judged low to middle by one-star chefs and strong to very strong by three-star chefs.

Descriptive capacity

Chefs listed three channels to transfer knowledge to recipients outside the restaurants: (1) cooking books, (2) cookery courses and events, and (3) TV/radio shows. These three channels are equally utilized, but differently assessed by chefs. Moreover, the channels address different recipients, i.e., actual and potential guests as well as other chefs.

The single most important and most preferred means to transfer knowledge are cooking books. The target groups are both actual and potential guests as well as other chefs, keeping in mind that most chefs use cookbooks as favorite sources for inbound openness. A three-star chef stated, “An authentic knowledge transfer can only be ensured through cooking books” (I-29).

Thereby, cookbooks function as marketing instruments to gain recognition in the community and popularity with regard to actual or potential guests. A chef stated, “It is good for the business to be seen, it’s a bit of brand building” (I-31).

An equally often used channel is cooking classes; albeit, knowledge transfer is a less important aspect. With cooking classes, chefs almost exclusively address actual and potential guests. In contrast, some chefs mentioned cooking fairs and events to perform new cooking techniques. In this case, the target group is limited to peers.

Although approximately one-third of the chefs interviewed have already participated in TV and radio shows, this channel is perceived of as an
inadequate form of knowledge transfer. Whose critique refers to so-called “TV cooks” who prevailingly are not awarded with a Michelin Guide nomination.

“This has nothing to do with cooking” (I-09).

“Cooking shows on TV – this is absolute nonsense” (I-15).

In this context, one chef told us that the growing number of TV shows has changed society’s appraisal of chefs and their work. He said, “When I was 15 years old and started my career, I was ashamed of only becoming a cook. Now I have the notion that being a cook is a prestigious job” (I-26).

In general, chefs explicitly stated that they made all their recipes public. A one-star-chef told us, “I am not afraid to circulate my knowledge” (I-22). The reason for this relative high level of outbound openness is the ethic code not to imitate other chefs. However, one chef told us that in some cookbooks, the recipes are incomplete and therefore difficult to “re-cook” (I-17).

We show that desorptive capacity is an important marketing instrument for chefs to increase their popularity with regard to other chefs and to actual as well as potential guests.

Figure 3 summarizes the central findings (for abbreviations, see pp. 54-55).
5. Implications and Conclusions

The aim of this paper is to shed light on the individual level of OI behavior. Based on 36 interviews with chefs in France, Germany, Great Britain, Italy, Spain, Sweden, and Switzerland listed in the 2012 Michelin Guide, we show how individuals use openness as a means to create culinary innovations. For this purpose, we combine Lichtenthaler and Lichtenthaler's (2009) OI capability concept with the innovation process model in haute cuisine.

In our interview analysis, we found that chefs are the main sources for and driver of the culinary innovation process. The process consists of five phases, whereby the first phases are executed mentally and the latter phases practically. We also show that there are differences in the way chefs perform
the culinary innovation process based on their standing in the Michelin Guide: whereas Bib Gourmand chefs favor mental cooking as a dominant strategy during the entire innovation process, star-chefs start with practical cooking in the evaluation phase. Moreover, our results indicate differences in the way employees and guests are integrated into the innovation process: Bib Gourmand chefs integrate their kitchen staff earlier than star-chefs do. In contrast, Bib Gourmand chefs use their guests as final testers, whereas star-chefs integrate guests into the innovation process.

With regard to OI capacities, we show that chefs apply all six capabilities to their innovation process. However, chefs differ in the intensity in which they make use of these capabilities. Our results indicate that chefs use absorptive and desorptive capacities to generate culinary innovations and build up their reputation with regard to potential guests and other chefs, respectively. Moreover, we demonstrate that chefs (almost) exclusively rely on their own inventive and innovative capabilities in the culinary innovation process. However, this finding is only true for the fuzzy beginning of the culinary innovation process. In subsequent phases, the chefs increasingly integrate sources within and outside their restaurants such as employees, suppliers, and guests. On the individual level, we therefore find a gradual opening up during the culinary innovation process. The mental phases as a means to develop ideas for culinary innovations are determined by closed innovation and driven by the chefs’ internal innovation capabilities. In contrast, the practical phases as a means to implement and commercialize culinary innovations and therefore open innovation capabilities become increasingly important.
By focusing on the individual level of analysis, we contribute to the ongoing discussion of OI and address an existing research gap and, for organizations, highly relevant research gaps. We show that the OI capability concept can indeed be transferred to the individual level. Our findings are transferable to other industries, particularly those in which individuals act as the source and driver for innovation and the individual style is a form of brand recognition, including the music, movie, and fashion industries (Alvarez et al., 2005; Tran, 2010). As our study is of an exploratory nature, based on 36 interviews, future research should therefore focus on confirming our findings. One way could be the application of quantitative methods in the haute cuisine industry or other sectors of creative industries.
References


Appendix

I. Description of the interview partner/restaurant
1. How old are you?
2. How many years have you worked as a chef? 
   (How many of those years were you working within star gastronomy?)
3. How long have you been the head of this restaurant? 
   (How old is the restaurant?)
4. How many employees (kitchen/service) do you have?
5. How many people does the restaurant seat?
6. How long has the restaurant been listed in the Guide Michelin?

II. Clarification of the term ‘culinary innovation’
1. What distinguishes star gastronomy/your restaurant? 
   (Sales, number of awards, customer satisfaction, extent of recognition)
2. How important is the subject of innovation for star gastronomy?
3. What do you consider to be a culinary innovation?
4. According to which factors do you measure culinary innovation?
5. “A culinary innovation is developed by a chef and is an reproducible dish which he perceives as an innovation (or as an improvement to existing dishes) and offers to the customer for consumption.”
   Do you agree with this definition?

III. Significance of culinary innovations (branch/company)
1. How significant is culinary innovation for a Michelin ranking? 
   (Is it necessary to be innovative in order to gain a Michelin star?)
2. Which significance/consequences has the mention in the Guide Michelin had for the restaurant?
3. Which role does culinary innovation play in your restaurant?

IV. Emergence of culinary innovations
1. Describe your process for the development of a culinary innovation. 
   (Developing and selecting ideas, concept presentation, testing, training staff, presentation, feedback)
2. How long does this development process take?
3. How many culinary innovations did you create in the previous year?
4. Which parameters do you use to measure the success of culinary innovations?

V. Factors influencing the innovation process
1. Which role do the following play in the innovation process:
   - external factors such as customers, suppliers, other chefs, cook books, etc.?
   - internal factors such as kitchen and service staff?
2. When and how do you ask for suggestions and feedback during the development process?
3. Which role do conditions such as region, trends and seasons play?
4. Which skills should a head chef have in order to be able to develop culinary innovations?
5. How important is an ability to combine for a star chef?

Figure 4: Guiding Questions for the Interviews.