

The symbolic understanding of milk in Swiss gastronomy

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ABSTRACT: In the 21st century, in a context where milk and dairy products are at the centre of many debates, this article wonders how doubts about these products are perceived in a gastronomic context where they are particularly appreciated and used. This article focuses on a Swiss context, since milk and dairy products are an integral part of Swiss culture. The article explores the history of milk in the Western world and highlights the fact that milk has had an ambiguous position throughout the centuries. Some studies make it possible to question the consumption of such products, while in Switzerland there is no doubt that they are products strongly rooted in the country's heritage. Eighteen interviews with gastronomic chefs were conducted to develop answers to the questions raised by the potential questioning of milk and dairy products in Swiss gastronomy. The results show that the reflections about dairy do not impact the gastronomic field, and that chefs are inclined to keep these products, as long as moderate use is made of them. In a Swiss context, the results show that milk and dairy products are untouchable and that it is important to defend the cultural heritage of the country.

KEYWORDS: dairy products, Switzerland, symbolism

Introduction

Since the end of the 20th century, food has been the subject of more or less intense debates in the media and among the public. While industrialisation has allowed economically developed countries to move beyond all kinds of food fears, such as famine, it has also brought about new challenges, such as obesity. In turn, this poses new questions. These challenges are often perceived as health crises, which concern consumers, who increasingly care about their diet (Denizeau et al., 2008). In this context, milk has also become subject to scrutiny and reconsiderations.

Milk is a major market. Indeed, in his documentary *La planète lait* (The milk planet), Pichler (2017) speaks of a market of 100 billion euros for Europe alone, and approximately 200 million tons of milk are produced and sold every year. The evolution of milk production has had a strong impact on society and the environment (Pichler, 2017). There are many books and documentaries that question the production and consumption of dairy, such as *Lait de vache: Blancheur trompeuse* ("Cow's milk: Deceptive whiteness") by Anne Laroche de Rosa, published in 1998, *Lait, mensonges, et propagande* ("Milk, lies and propoganda") by Thierry Souccar, published in 2008, and as already mentioned, *La planète lait* by Andreas Pichler, published in 2017. But how can such changes — the questioning and criticism of milk production and consumption — be managed in a gastronomic environment where milk and dairy products are fundamental? And the question is even more delicate in a Swiss context where milk is a historical and economic pillar

of the country. Milk is the best ambassador of Swiss culture and symbols, as illustrated by the double cream of Gruyère, Emmental, and milk chocolate (Bewes, 2012; Breiting, 2014). The aim of this research is therefore to provide answers and attempt to explain how the reconsideration of milk can affect the world of gastronomy and in particular Swiss gastronomy (Goldstein & Merkle, 2006; Hache-Bissette & Saillard, 2011).

It is important to note that this study evokes milk in a general way, i.e. milk is understood as a whole with its derivatives, such as butter, cream, milk chocolate and cheese. When the distinction is necessary, this is specified. When the term "milk" is used, it refers to animal milk, specifically cow's milk. Again, when precision is particularly necessary, this is specified. Finally, it is important to note that this article focuses on the history and culture of milk in the western hemisphere and especially in Europe.

At first, this work presents various research on milk in order to evaluate how milk is perceived through history and Swiss history, and how its production and consumption are questioned, especially in recent decades. This research on milk and milk in Switzerland poses research questions that are studied through the interviews. Finally, the results of the interviews are presented and discussed in order to reveal and develop answers to the research questions.

Literature review

The history of milk consumption goes back about 10 000 years before our era, but it is only from antiquity (ca 8th century BC) that this beverage became a source of questioning and ambiguities. Indeed, from that time, milk has been balanced between positive and negative representations. Outside the mythological world that praised it by associating it with purity and immortality (Auberger, 2001; Morel, 1994; Thoueille, 2007), milk was also represented as a barbaric, savage and primitive symbol (Auberger, 2001; Fournier, 2013). Milk reflected unfinishedness, a lower and unworthy state of the evolved humans, unlike processed foods such as bread or wine that represented the ennoblement of primitive beings and civilisation (Auberger, 2001; Denizeau et al., 2008; Laurioux, 1994). The ancient Greeks consumed milk more readily in the form of derivative products, such as cheese (Auberger, 2001; Valenze, 2011). Concerning its medicinal properties, Auberger (2001) notes that milk was sometimes perceived both as harmful, in particular because of its indigestible characteristics, and sometimes as healing for human health. Morel (1994) and Thoueille (2007) also observe that milk was often used as a medicine, and Schmid (2009) describes it as a food with strengthening and curative properties for the human body.

During the Middle Ages (ca 6th–15th century), the ambiguous position of milk continued. Laurioux (1994, p. 30) notes that dairy and in particular milk had "poor gastronomic status". Cheese and milk were considered farmer's food (Guillaume, 2003; Laurioux, 1994). In contrast, according to Valenze (2011), milk retained a positive symbolism at that time, such as abundance, conviviality and success.

Laurioux (1994) notes that dairy habits have evolved mostly since modern times (ca. 15th–18th century), when processed milk products such as cream and butter became more esteemed and finally found their place in the kitchen. Moreover, a notion of delicacy was often associated with dishes made from milk (Guillaume, 2003). Nevertheless, the consumption of dairy continued to provoke many debates among doctors as to its benefits and troublesome effects on the body. Although certain virtues were recognised, other trends indicated that milk was rather unsuitable for the human body and that people should be wary of it (Guillaume, 2003; Laurioux 1994). According to Laurioux (1994), Guillaume (2003), Fanica (2008) and Souccar (2008), milk became a popular product in the 19th century. It did not escape industrialisation, and became a large-scale market (Guillaume, 2003; Fanica, 2008; Souccar, 2008; Valenze, 2011). It is also at the beginning of the 19th century that medical discourses softened with regard to milk consumption (Guillaume, 2003). However, Valenze (2011) highlights once again the ambiguous position of milk in relation to its effects on health. For example, while the industry encouraged for a time the substitution of breast milk by animal milk, towards the end of the 19th century, milk appeared as unhealthy and contaminated and as a source of certain diseases, such as tuberculosis (Fanica, 2008; Valenze, 2011). Fanica (2008) and Souccar (2008) find that technical progress encouraged and renewed milk consumption, especially pasteurisation in 1865 and domestic refrigeration at the beginning of the 20th century.

This brief retrospective indicates that milk has been perceived in a variety of ways throughout history, from a symbolic, culinary and medical point of view. However, a slight trend against raw

milk is revealed, particularly because of its poor conservation and its association with digestive troubles. In contrast, once the product had been manufactured, it was more readily accepted in the diet of our ancestors. It is only from the 19th century, as a result of industrialisation and technological progress, that milk became a mass market product and found its place in consumer culture.

As Génin (1939) pointed out in his day, propaganda campaigns emerged in the 20th century to encourage the consumption of dairy products throughout the Western world. In particular, the actors of the agribusiness world started to see children as very promising market tools (Fanica, 2008; Souccar, 2008) and thus they became a target for the dairy industry (Campbell & Campbell, 2016; Valenze, 2011). In the middle of the 20th century, advertising campaigns were launched in maternity wards (Souccar, 2008) and milk started being distributed in schools at the beginning of the century (Atkins, 2005; Fanica, 2008; Souccar, 2008). Since that time, the promotion of milk is also carried out through commercial advertisements put in place by the industry. Milk campaigns have given the population the feeling that milk is undoubtedly good for one's health (Campbell & Campbell, 2016; Souccar, 2008). Many researchers have also positioned themselves in support of milk and dairy as a contributor to good health (Guéguen, 2006; Lecerf, 2010; Lecerf et al., 2016; Rizzoli, 2014; Bourre, 2010; Weinsier & Krumdieck, 2000).

However, large swaths of the world's population, for example in Asia and South America, do not consume dairy products and live very well without them (Bernot, 1988; Fournier, 2013; Klein et al., 2002). Medical studies also show that cow's milk is not an essential element for human health (Campbell & Campbell, 2016; Chan & Giovannucci, 2001; Feskanich et al., 2003; Laroche de Rosa, 1998). Finally, the dairy industry is known to finance medical and nutritional research, which may result in conflicts of interest. This causes the objectivity of that research to be questioned (Campbell & Campbell, 2016; Souccar, 2008). In fact, according to Bachelot-Narquin et al. (2009, p. 122), "[t]here are sometimes conflicting interests between public health objectives and those of economic actors, particularly at the level of the agri-industries".

Questions also arise concerning the natural characteristic of the milk consumption of human beings. Indeed, Bernot (1988), Bourlioux et al. (2011) as well as Fournier (2013) observe that humans have a low capacity to digest lactose and these studies also underline the fact that humans are not genetically designed to consume milk, other than (human) breast milk during infancy. However, milk can be transformed into other products through fermentation, which makes it easier to digest (Schmid, 2009). This technique has been used by our ancestors for a long time (Auberger, 2001; Gerbault & Roffet-Salque, 2017). Nevertheless, conflicting views persist and milk is sometimes perceived as inappropriate (Laroche de Rosa, 1998), and/or sometimes as legitimate (Fanica, 2008) for human consumption.

This retrospective on the history of dairy consumption identifies some facts that encourage serious reflection on whether to consume milk nowadays. Indeed, researchers have looked at this issue from different points of view, such as the industrial, medical and natural aspects. Their research exposes some arguments that call into question the consumption of milk and dairy products. Major efforts — particularly through propaganda campaigns during the 20th century — have been

deployed to give milk the characteristic of an essential food for health (Bachelot-Narquin et al., 2009; Brodbeck & Moser, 2007; Campbell & Campbell, 2016; Guillaume, 2003; Souccar, 2008). However, some authors agree that the real motivations of these campaigns are economic and put the dairy industry's interests above those of consumers (Atkins, 2005; Souccar, 2008).

Many authors agree that food reflects the cultural and historical identity of a given population (Poulain, 1997; Fischler, 2001; Goldstein & Merkle, 2006; Hache-Bissette & Saillard, 2011). Thus, casting doubt on food practices of a certain culture would be analogous to questioning its very identity. As far as Switzerland is concerned, milk is an integral part of the Helvetic identity. Milk chocolate, cream and cheese, all three milk-based products, as well as dairy products as a whole, are symbols of Swiss culture (Bewes, 2012). Milk is also a pillar of Swiss history and a foundation of its economy (Bewes, 2012; Breiding, 2014; Valenze, 2011).

Breiding (2014) says that Swiss milk history begins from the Middle Ages, when the country made the production of milk its main agricultural activity. Swiss people learned how to work with milk in order to turn it into other dairy products, such as butter and cheese. Schmid (2009) highlights the nutritional importance of these products for the Swiss people throughout history. Swiss dairy products, especially cheese, gained in popularity throughout the world from the 19th century onwards. Schmid (2009) notes that the cheese trade greatly contributed to the financial and cultural development of the country. The influence campaign in favour of dairy is also present in Switzerland. In fact, all kinds of advertising in favour of milk and dairy emerged in the country starting in the 20th century (Brodbeck & Moser, 2007). Although not part of this approach, chocolate is nevertheless a vital part of Swiss culture (Bewes, 2012; Breiding, 2014; Valenze, 2011); accordingly, Switzerland has been able to develop valuable know-how in the field of chocolate production.

This retrospective of the history of milk in Switzerland reflects the importance of the place that this product occupies within the cultural heritage and identity of the country. This strongly connects milk to gastronomy, since gastronomy reflects the culture, heritage and way of life of a society and a country (Bonnet & Villavicencio, 2016; Stengel, 2014). While butter is a flagship product of gastronomy because of its strong culinary functionality, chocolate and cheese are gastronomic products in their own right (Bewes, 2012; Lallemand, 1965). Since the Middle Ages, milk seems to have an obvious place in the Swiss culinary heritage (Bewes, 2012; Breiding, 2014; Valenze, 2011), while for a long time it struggled to find its place in Western gastronomy (Lauriou, 1994). It is only from the 19th century — and thanks to the numerous food derivatives that it can generate — that milk became an appreciated food in Western kitchens and that it became a product with high gastronomic potential (Delfosse & Williot, 2016; Lauriou, 1994). Milk thus seems to have found an important place in gourmet cooking, and is even more important in Swiss gastronomy and Swiss food culture.

Changing food practices in a culture is a touchy subject because, according to Fischler (2001), these practices and habits are highly resistant to change. Eating habits appear relatively stable and continuous over time. Speaking of food and gastronomy, Stengel (2016) observes that the population tends to desire traditional and authentic values. Food is a cultural pillar of a country's identity and some foods are so ingrained in a people's culture that it is difficult to change certain consumption

patterns (Bachelot-Narquin et al., 2009). Culinary heritage therefore imposes a kind of limit on the evolution of food (Bonnet & Villavicencio, 2016). However, Fischler (2001) also observes that in parallel with this resistance, culinary practices and food can in fact change and evolve — sometimes even drastically. Finally, he finds that food is always impacted by the laws of change and that this process is accelerating over time.

Thus, although apparently stable and continuous, culinary practices can evolve. Therefore, in a context governed by evolution and change (Fischler, 2001; Proust, 2006), the question of the evolution of food habits and practices is more than legitimate. The question is even more relevant in the Swiss context.

Indeed, since Switzerland is a particularly traditional country (Bewes, 2012) and milk has an undeniable place in its gastronomy and culture, the reconsideration of the country's eating habits and its gastronomic heritage raises a dilemma that is interesting to examine. What is the place of milk today in gastronomy in general? And in Swiss gastronomy? What importance should be given to this reconsideration in a country such as Switzerland? In a gastronomic context where dairy products have gained a fundamental place, what response does the potential reconsideration of milk and dairy products receive? And in a Swiss gastronomic context, what response does the potential reconsideration of milk and dairy products receive, knowing that they are an integral part of the Swiss identity? How could the potential reconsideration of milk likely impact gastronomy and Swiss gastronomy?

Questions also arise about the difference in perception between the reconsideration of milk and the reconsideration of its derivatives, which have been accepted more in food for centuries. Why are dairy products more accepted than milk today? This situation and these questions lead to an intense reflection on milk and its derivatives in the 21st century.

Methods

The research questions of this work revolve around the ambiguities linked to dairy products and aim to better understand the current situation of these products in gastronomy and Swiss gastronomy. The qualitative method emphasises a comprehensive dimension of research and consists in analysing the thoughts and feelings of the interviewees at the heart of the study (Corbin & Strauss, 2004; Dumez, 2016). In this case, the interviewees, also called participants, are chefs working in a gastronomic context in western Switzerland. The purpose of this study is to collect the participants' thoughts and opinions about the place of milk in gastronomy and specifically in Swiss gastronomy; consequently, the research interview seems to be the most relevant method to conduct this study (Crouch & McKenzie, 2006; Gardner et al., 2012; Kvale, 2007). Semi-structured interviews are the most suitable method for this work, because when the expected answers of the interviewees are uncertain, as is the case here, semi-structured interviews are a relevant method (Gardner et al., 2012). Conducting a semi-structured research interview is a complex method that requires some caution in interpreting the data (Anadón & Guillemette, 2006). The interpretation and analysis of the interviews are developed from the collected data's categorisation. According to Alvesson (2011), categorising data is a method for finding a general overview of the material

collected and for helping to design models, as well as to develop results. In addition to classifying data, it is also necessary to interpret and find the links between these categories in order to understand the situation studied and to interpret in depth the implicit content emerging from the interviews with the chefs (Anadón & Guillemette, 2006).

A total of 18 interviews were carried out in spring 2018 in the framework of this research with chefs, some of them Michelin Star chefs and *Meilleurs Ouvriers de France* (MOF) chefs. Some of the interviewees are teachers of the *Ecole hôtelière de Lausanne* (EHL). In order to complete this research, the other interviewees were chefs in gastronomic restaurants in western Switzerland. In order to obtain deeper content and a wide range of viewpoints, it was important to promote the diversity of interviewees (Alvesson, 2011). Thus, while remaining in a gastronomic context, the sample included people with different levels of experience and different working environments.

The interviews took place at EHL with the teachers of the school. As for the interviews with external chefs, they were held in their own restaurants. Before the interviews began, a consent form (Appendix A) was given to each participant to be signed, in particular to validate their consent to participate in this research and to be audio-recorded. All agreed to be recorded. The interviews were conducted following the questions developed in advance to guide the participant (Appendix B). The interviews lasted between 9.28 minutes and 53.42 minutes, with an average of 31 minutes.

Results and discussion

The interviews showed that milk and dairy products today are very far from the negative considerations that have been observed in their history. Lauriou (1994, p. 30) speaks about "poor gastronomic status", while all participants agree that dairy products bring value to gastronomy. A participant even said that *"butter, milk and cream are amazing ingredients for cooking"*. For participants in the bakery sector, there is no doubt that dairy products provide value and quality that no existing substitute is able to provide. One of the chefs working in that field added that *"these products are unequivocally the best ones"*.

The characteristics given to milk in the 21st century seem therefore rather to follow in the footsteps of what was said of this product in the time of the Renaissance and early modern times. Indeed, Guillaume (2003) and Valenze (2011) speak of pleasure and delicacy, as did the majority of the people interviewed in this study.

Another common element in the thinking of the 21st century and previous centuries is the preference for manufactured products rather than for liquid milk. Indeed, Guillaume (2003) notes that this preference persists over the centuries and almost half of the participants regarded milk as less important than other dairy products. As a Michelin Star chef said about this subject: *"The most interesting products are obviously the processed milk-based products, not the milk itself"*; and a MOF chef said *"If I have to keep only one dairy product, it is butter. If by obligation I have to remove milk, I have no particular concern with it"*.

One of the most noteworthy elements from the interviews is the importance of dairy products in cooking. The majority of participants said that dairy products are highly present in cooking. Some participants even said that these products are

used *"for everything", "everywhere, all the time"* and in *"all recipes"*.

Beyond the quantity used, dairy products seem to be anchored in the culinary education of chefs. Thus, beyond their undeniable culinary value, there is no doubt that dairy products represent more than just ingredients with remarkable properties. They also represent a cultural force in the gastronomic field and their use/consumption is a deeply rooted habit among the participants. One chef added that *"It's mostly emotional because I don't see myself in the kitchen how to make a sauce without finishing it with a piece of butter in it. That is unquestionable"*.

All this highlights the fact that dairy products have an undeniable place in gastronomy. This finding is based in particular on the fact that almost all participants consider dairy products to be deeply imbedded in gourmet cuisine. Thus, in a context where dairy products are seen as indispensable and are highly valued, doubts and reflections on milk production and consumption — particularly those in recent years — (Fournier, 2013; Pichler, 2017) are not particularly relevant. Indeed, the participants did not seem to feel fully concerned and affected by the potential reconsideration of the consumption of milk and its derivatives. Moreover, the majority of participants did not perceive any conflict generated by a potential reconsideration of their favourite ingredients.

The fact that participants are so unequivocal on this subject can be traced to their scepticism of studies concerning this topic. They do not necessarily believe that a change is necessary. The objectivity, reliability and impartiality of studies can be questioned, particularly in the food field (Bachelot-Narquin et al., 2009; Campbell & Campbell, 2016; Combris et al., 2006; Souccar, 2008) and some participants also share this mistrust. One of the chefs even said, *"Any study will be based on who is going to sponsor it, and especially who will fund it"*.

So, as long as the chefs are sceptical, it seems quite coherent that they prefer to follow their own will. Another interviewee added, *"All these kinds of studies are contradicting themselves years after year... You have to make your own reason... Anyway, what you're told about the milk, in three years they will tell you the opposite"*.

For the participants, there does not seem to be sufficient evidence to cast doubt on their consumption of dairy. For some chefs, the debate is therefore quickly closed, since there is no question about the place these products should have in the kitchen. Only a minority of participants wondered whether milk is healthy for human consumption. Thus, arguments against milk (Campbell & Campbell, 2016; Chan & Giovannucci, 2001; Feskanich et al., 2003; Laroche de Rosa, 1998) seem very far from reaching the gastronomic kitchen. This is quite consistent with the fact that the vast majority of participants want to continue to use dairy products and do not plan to stop working with them.

The fact that dairy is so ingrained in a chef's culinary education may possibly explain why interviewees are so sceptical about studies that question these products. In fact, for half the participants, dairy products are a matter of education and culture. So it seems consistent that these persons are not fully prepared to adhere to arguments that go against what they have learned and assimilated throughout their training. To reconsider dairy would be to challenge the education and culinary culture of many chefs. One of the MOF chefs expressed this about the reconsideration of dairy products: *"It is the questioning of the training, it is the questioning of the professionals... Cooking and*

gastronomy is an empirical environment and changing habits is very complicated".

It seems obvious that these chefs are not inclined to warmly welcome doubts about the consumption of milk and dairy products. The fact that participants do not feel particularly concerned or affected by the potential reconsideration of milk and dairy products may also be linked to the fact that they have already adapted their way of using these products. Indeed, half of interviewees state that in order to make meals lighter, they have seen a clear decrease in the amount of dairy used, with butter and cream being the most reduced. The interviews reveal that the chefs have already adapted their way of cooking dairy products, notably by reducing or substituting these ingredients. It therefore seems understandable that they do not wish to go even further in this approach, or at least not too far, since the vast majority of participants do not want to give up dairy products entirely. A participant perfectly summarised this principle by saying about the lactose-free diet: *"Currently we have already adapted a little...We will have to continue to adapt, but we will still have this basis of dairy products that will remain anchored"*.

A limit seems to have been reached, beyond which it is not reasonable for the participants to venture. The principle of moderation would therefore reflect the limit to the changes and reconsiderations that are taking place in gastronomy, with regard to dairy products at any rate. Indeed, over three-quarters of the participants agree milk consumption and use should be made more moderate in restaurants and at home. But moderating dairy products does not mean that they are superfluous. Some chefs highlight that *"There is no kitchen without cream or butter...but in moderation"*, and *"Milk, butter and cream are products for me that are imperative but once again that must be fairly dosed"*.

Regarding Switzerland, there is no doubt that milk-based products and dairy products form an integral part of the identity and culture of the country. Except for one chef who did not really express attachment to the cultural notion of milk, the unanimity of participants joins Bewes' (2012) and Breiding's (2014) assertion that milk is a pillar of Swiss history, an element of its heritage and a cash cow. For all the participants, it is therefore clear that the consumption of dairy products should not be challenged in Switzerland. They do not imagine the country without these products and consider that they should keep their place. Some even go so far as to talk about revolution to keep these products in Switzerland. As an example, some chefs said about dairy products in Switzerland: *"gastronomy will defend that"* and *"I'll be there to really put them forward"*. Another participant even expressed the idea that *"there are already a lot of people who would defend dairy before we do"*. To sum up, whether it is for the culture or gastronomy of the country, the place of milk and dairy products is strongly defended and highlighted.

Thus, the questioning and doubts concerning milk and dairy products in the 21st century do not seem to impact gastronomy, least of all Swiss gastronomy. It even seems obvious that these products have a significant place in gourmet kitchens and that it would be unrealistic to think that they will ever be done away with completely. Although the interviews reveal that the interviewees are not particularly receptive to the potential reconsiderations of milk and other dairy products, this does not mean that the world of gastronomy is closed to discussion. Indeed, as the interviews showed, some participants are quite inclined to question themselves, to ask themselves the right

questions and to remain open to any change. As one of the Michelin Star chefs said, *"We are the first to question ourselves each day, in our profession that is how we move forward"*. The food world is evolving (Fischler, 2001; Proust, 2006) and half of the participants perceive it, like another Michelin Star chef said, *"We must follow the world of today"*.

At the same time, the population's food practices appear to have strong resistance to change (Fischler, 2001). This principle is also well entrenched in the gastronomic field since the trend indicates that participants do not feel really concerned about the potential reconsiderations of milk and dairy products and that they do not want to give up these products that they know so well. Resistance to change is even more glaring in a Swiss gastronomic context, where all the interviewees believe that the use of dairy products should not be called into question.

Thus, the gastronomic world seems to be balanced between stability and change. As some chefs explain, food products are not immune to various changes and disturbances. For example, salt, sugar, meat and soybeans are products whose use and consumption, in terms of quantities, have changed in recent years. Any product can be inclined to evolve. But at the moment, as far as milk is concerned, the balance seems to be in favour of stability, especially in a Swiss context.

According to the interviews, with regard to milk and dairy products, moderation seems to be the principle to be followed in order to take advantage of the qualities of these products without going too far. Indeed, the vast majority of participants agree that the use of these products should be moderate, in particular given the trend towards a lighter cuisine. This principle of moderation can also extend to gastronomy in general because moderation seems to be the ally of the gastronomic kitchen, just as extremism seems to be its enemy, like one of the chefs said, *"It makes no sense to forbid somethings. It is always fundamentalism that poses a concern"*. Besides, several chefs talk about the concept of eating less, to eat better. In the gastronomic context in general, while moderation is the limit to changes in culinary practices and ingredients, cultural heritage serves as the limit in the Swiss gastronomic context (Bonnet & Villavicencio, 2016). Some participants concluded about reconsideration of milk in gastronomy: *"Questioning Yes. Applying it in Switzerland, I'm not necessarily for it"*, and speaking about milk-based products in Switzerland, *"products with strong identity like that, regional products, I don't think it will change"*.

Implications for the foodservice industry

Reconsidering the consumption of milk and dairy products appears irrelevant in a gastronomic context, especially in a Swiss gastronomic context. Chefs are fervent supporters of a cultural and gourmet heritage. They do not feel the need to read studies to know how to do their job. Yet, their openness indicates that they are ready to ask themselves the right questions and that when the time comes, they know how to pass on their knowledge (e.g. cutting back on butter and cream). Therefore it seems reasonable to trust them and to be guided by what they propose. Moreover, the chefs interviewed in this study promote moderation. What could be more reasonable than this principle? And as far as Swiss culinary culture is concerned, it does not seem unreasonable to defend a heritage that is particularly focused on the pleasure of savouring so-called passion products.

Finally, moderation is a principle that can be applied to all kinds of products, whether in gastronomy or in everyday life in general. As far as defending culinary heritage is concerned, from the point of view of a certain culture versus another, defending this principle may not be so simple. Indeed, it is likely that food practices of foreign cultures may disturb some people. However, this is another debate that falls outside of the scope of this study, but it would be interesting to deepen the discussion in order to study the extent to which a culture is willing to protect its culinary heritage.

Conclusion

After conducting this research, it appears that milk is an inexhaustible source of questioning, reflections and discussions. Throughout history, milk has fluctuated between virtues and vices, between benefits and problems, as well as between beloved and unloved elements. The ambiguous position of milk has not seemed to fade through time. Nowadays, in the 21st century, many authors still position themselves either for or against milk. From all points of view studied in this research, milk is a product that has provoked many debates throughout its history.

Milk-derived products are somewhat exempt from such controversy. Indeed, dairy products have been relatively unaffected by conflicts regarding milk, and they are much more accepted than its liquid form. This trend has lasted to the present day. Beyond the observed difference between the representation of milk and the representation of dairy products, this article also highlights that in the 21st century, dairy may be at the centre of various challenges, but it still holds a fundamental and undeniable place in gastronomy.

In this gastronomic context, and specifically in Switzerland, dairy products are therefore unassailable products. And while reflections about dairy consumption are far from reaching the world of gastronomy as a whole, they are even farther from reaching the world of Swiss gastronomy. Indeed, dairy products are iconic in Switzerland from many points of view: historical, economic and culinary. These products are indeed emblematic of Switzerland's alpine culture. Thus, in Switzerland, it appears that — despite the questioning and upheavals facing milk in the 21st century — milk is poised to ride out any and all negative publicity.

Beyond the results collected and analysed in the framework of this study, other areas to think about have emerged. While this work focuses on the concept of milk, i.e. milk being understood as a whole with its derived products, the difference in perception that exists between milk and its derivatives deserves more attention. Indeed, while all dairy products have the same product of origin as liquid milk, milk-derived products do not suffer the same considerations as basic milk. Why are manufactured products more acceptable than the basic product? Although the literature review and interviews suggest some explanations, such as digestibility, conservation, harmfulness and utility, the subject is amply worth exploring and deepening in order to identify potential outcomes and implications arising from a clear distinction between milk and other dairy products.

Apart from a purely dairy and purely Swiss framework, it would also be interesting to deepen the subject in a broader context. Indeed, as the interviews reveal, gastronomic chefs tend to defend the fact that milk and dairy products seem to

be immune to criticism in Switzerland from a gastronomic and cultural point of view. Therefore, it would be interesting to study to what extent some products are protected and defended on behalf of gastronomy and culture. What are the limits of the defensible? Although the interviews provide some elements of response such as moderation and respect for heritage, it is a subject that deserves to be explored in more depth.

With regard to the way in which this work has been conducted, after reflection, the structure of the interview is not perfectly adequate. Despite some differences of opinion, participants tend to have the same general view on milk and dairy products. As a result, the collected responses are rarely diversified. The structure of the interviews carried out in the context of this work is probably too rigid to allow the participants free access to their knowledge and their opinions on the subject studied. The questions asked were very specific and it would have been necessary to go beyond the elaborate interview model. In order to capture a greater variety of answers, the structure of the interview should have been more flexible, in particular by being less focused on the specific order in which the questions were supposed to be asked.

References

- Alvesson, M. (2011). *Interpreting Interviews*. London: Sage. <https://doi.org/10.4135/9781446268353>
- Anadón, M., & Guillemette, F. (2006). La recherche qualitative est-elle nécessairement inductive? In C. Baribeau & F. Guillemette (eds), *Recherches qualitatives*, 5, 26–37. Montreal: McGill University Press. http://www.recherche-qualitative.qc.ca/documents/files/revue/hors_serie/hors_serie_v5/anadon.pdf
- Atkins, P. (2005). The Milk in Schools Scheme, 1934–45: Nationalization and resistance. *History of Education*, 34(1), 1–21. <https://doi.org/10.1080/0046760042000315291>
- Auberger, J. (2001). Le lait des Grecs: Boisson divine ou barbare? *Dialogues d'histoire ancienne*, 27(1), 131–157. <https://doi.org/10.3406/dha.2001.2440>
- Bachelot-Narquin, R., Beck, F., Bossard, C., & Escalon, H. (2009). *Barometre sante nutrition 2008*. Paris: Institut national de prevention et d'education pour la sante (Inpes). <http://inpes.santepubliquefrance.fr/Barometres/barometre-sante-nutrition-2008/pdf/consommations-et-habitudes.pdf>
- Bernot, L. (1988). Buveurs et non-buveurs de lait. *L'Homme*, 28(108), 99–107. <https://doi.org/10.3406/hom.1988.369046>
- Bewes, D. (2012). *Swiss Watching: Inside the Land of Milk and Money*. London: Nicholas Brealey.
- Bonnet, E., & Villavicencio, D. (2016). Sources et ressources des chefs : Les ingrédients de la créativité en gastronomie. *La Nouvelle Revue du Travail*, 9. <https://doi.org/10.4000/nrt.2923>
- Bourlioux, P., Braesco, V., & Mater, D. D. (2011). Yaourts et autres laits fermentés. *Cahiers de Nutrition et de Diététique*, 46(6), 305–314. <https://doi.org/10.1016/j.cnd.2011.07.001>
- Bourre, J. M. (2010). *Lait: Vrais et faux dangers*. Paris: Odile Jacob.
- Breiding, R. J. (2014). *Swiss Made: Tout ce que revele le succes du modele suisse*. Geneva: Editions Slatkine.
- Brodbeck, B., & Moser, P. (2007). *Du lait pour tous*. Baden: Hier + Jetzt.
- Campbell, T. C., & Campbell, T. M., II. (2016). *The China Study: Revised and Expanded Edition: The Most Comprehensive Study of Nutrition Ever Conducted and the Startling Implications for Diet, Weight Loss, and Long-Term Health*. Dallas: BenBella Books.
- Chan, J. M., & Giovannucci, E. L. (2001). Dairy products, calcium, and vitamin D and risk of prostate cancer. *Epidemiologic Reviews*, 23(1), 87–92. <https://doi.org/10.1093/oxfordjournals.epirev.a000800>

- Combris, P., Etile, F., & Soler, L. G. (2006). Alimentation et sante: Changer les comportements de consommation ou mieux reguler l'offre alimentaire. In I. Proust (ed.), *Desirs et peurs alimentaires au XXIe siècle* (pp. 203-261). Paris: Editions Dalloz.
- Corbin, J., & Strauss, A. (2004). *Les fondements de la recherche qualitative*. Fribourg: Editions Saint-Paul, Coll. Res Socialis.
- Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview-based qualitative research. *Social Sciences Information. Information Sur les Sciences Sociales*, 45(4), 483-499. <https://doi.org/10.1177/0539018406069584>
- Delfosse, C., & Williot, J. P. (2016). *Promouvoir la gastronomie*. Report of session 4 of the third season of the seminar Medias et mediations de la gastronomie XVII^e-XXI^e siecles, Paris. <http://www.lemangeur-ocha.com/wp-content/uploads/2016/01/Compte-rendu-de-la-seance-4-Promouvoir-la-gastronomie.pdf>
- Denizeau, M., Hebel, P., Mathe, T., & Pilorin, T. (2008). Du discours nutritionnel aux representations de l'alimentation. *Cahier de recherche*, 252, 1-74. <http://www.credoc.fr/pdf/Rech/C252.pdf>
- Dumez, H. (2016). *Methodologie de la recherche qualitative*. Paris: Magnard-Vuibert.
- Fanica, P. O. (2008). *Le lait, la vache et le citoyen*. Versailles: Editions Quae.
- Feskanich, D., Willett, W. C., & Colditz, G. A. (2003). Calcium, vitamin D, milk consumption, and hip fractures: A prospective study among postmenopausal women. *The American Journal of Clinical Nutrition*, 77(2), 504-511. <https://doi.org/10.1093/ajcn/77.2.504>
- Fischler, C. (2001). *L'Homnivore*. Paris: Odile Jacob.
- Fournier, H. (2013). Les discours anti-lait, entre ethique et dietetique: Essai d'interpretation d'hypermodernes attitudes. In D. Ricard (ed.), *Les reconfigurations recentes des filieres laitieres en France et en Europe* (pp. 372-390). Clermont-Ferrand: Presses Universitaires Blaise Pascal.
- Gardner, D. C., Haeffele, L. M., & Vogt, W. P. (2012). *When to use what Research Design*. New York: The Guilford Press.
- Génin, G. (1939). La propagande en faveur d'une consommation accrue du lait : Le lait comme source de vitamine D en hiver. *Le Lait*, 19(188), 806-811. <https://doi.org/10.1051/lait:193918835>
- Gerbault, P., & Roffet-Salque, M. (2017). Histoire de l'utilisation des laitages et de la persistance du gene de la lactase. *Cahiers de Nutrition et de Dietetique*, 52(1), S19-S24. [https://doi.org/10.1016/S0007-9960\(17\)30195-5](https://doi.org/10.1016/S0007-9960(17)30195-5)
- Goldstein, D., & Merkle, K. (eds). (2006). *Cultures culinaires d'Europe: Identite, diversite et dialogue*. Strasbourg: Editions du Conseil de l'Europe.
- Guéguen, L. (2006). Faut-il remettre en cause les apports calciques conseilles? *Sciences des Aliments*, 26(2), 115-122. <https://doi.org/10.3166/sda.26.115-122>
- Guillaume, P. (2003). *Histoire sociale du lait*. Paris: Editions Christian, Coll. Vivre l'histoire.
- Hache-Bissette, F., & Saillard, D. (2011). *Gastronomie et identite culturelle francaise*. Paris: Nouveau Monde Editions.
- Klein, R. M., Swagerty, D. L., & Walling, A. D. (2002). Lactose intolerance. *American Family Physician*, 65(9), 1845-1850. <https://www.aafp.org/afp/2002/0501/p1845.html>
- Kvale, S. (2007). *Doing Interviews*. London: SAGE. <https://doi.org/10.4135/9781849208963>
- Lallemand, R. (1965). *La gastronomie suisse: Vue par un Francais*. Neuchatel: Editions H. Messeiller.
- Laroche de Rosa, A. (1998). *Lait de vache: Blancheur trompeuse*. Geneva: Editions Jouvence.
- Lauriou, B. (1994). Du rejet a l'integration. In P. Gillet (ed.), *Memoires lactees: Blanc, bu, biblique: Le lait du monde* (pp. 30-43). Paris: Autrement.
- Lecerf, J.-M. (2010). Les produits laitiers et le risque cardiovasculaire. *Cahiers de Nutrition et de Dietetique*, 45(1), 18-26. <https://doi.org/10.1016/j.cnd.2009.12.004>
- Lecerf, J.-M., Colin, J., Hebel, P., Bongard, V., & Ferrieres, J. (2016). Les consommateurs de produits laitiers frais: Des consommateurs comme les autres? Analyse de leurs profils alimentaires et nutritionnels. *Nutrition Clinique et Metabolisme*, 30(1), 11-21. <https://doi.org/10.1016/j.nupar.2015.12.001>
- Morel, P. (1994). Lait des faibles et lait des forts. In P. Gillet (ed.), *Memoires lactees: Blanc, bu, biblique: Le lait du monde* (pp. 74-86). Paris: Autrement.
- Pichler, A. (2017). *La planète lait* [Documentary]. France: ARTE.
- Poulain, J. P. (1997). Mutations et modes alimentaires. In M. Paillat (ed.), *Le mangeur et l'animal: Mutation de l'elevage et de la consommation* (pp. 103-121). Paris: Autrement.
- Proust, I. (2006). *Desirs et peurs alimentaires au XXIe siècle*. Paris: Editions Dalloz.
- Rizzoli, R. (2014). Dairy products, yogurts, and bone health. *The American Journal of Clinical Nutrition*, 99(5), 1256S-1262S. <https://doi.org/10.3945/ajcn.113.073056>
- Schmid, R. (2009). *The Untold Story of Milk*. Washington DC: New Trends Publishing.
- Souccar, T. (2008). *Lait, mensonges et propagande*. Vergeze: Auteur.
- Stengel, K. (2014). *Heredités alimentaires et identite gastronomique*. Paris: Harmattan.
- Stengel, K. (2016). La representation du bon produit et sa transmission ou la relativite gastronomique. In J. J. Bourtaud, S. Dufour, & C. Hugol-Gential (eds), *La gastronomie au coeur de la Cite* (pp. 201-207). Dijon: Universitaires De Dijon Eds.
- Thouelle, E. (2007). Lait et mythologie. In: D. Blin, M. Soule, & E. Thouelle (eds), *L'allaitement maternel: Une dynamique a bien comprendre* (pp. 35-42). Toulouse: Eres, Coll. A l'aube de la vie.
- Valenze, D. (2011). *Milk: A Local and Global History*. New Haven: Yale University Press.
- Weinsier, R. L., & Krundieck, C. L. (2000). Dairy foods and bone health: Examination of the evidence. *The American Journal of Clinical Nutrition*, 72(3), 681-689. <https://doi.org/10.1093/ajcn/72.3.681>

Appendix A: Consent form

CONSENT FORM

You are invited to participate in a study on milk in Swiss gastronomy. Thank you for your participation. This study is carried out as part of the Bachelor thesis at the *Ecole Hôtelière de Lausanne*.

If you agree to participate, I will ask you to take part in a semi-structured interview.

The interview can last between 30 and 60 minutes.

Your participation is entirely voluntary and you are free to stop your participation at any time without notice.

If you agree to participate, do you agree to be audio-recorded?

YES NO

If you agree to participate, do you agree that your answers are used as part of this Bachelor thesis at the *Ecole Hôtelière de Lausanne* on milk in Swiss gastronomy?

YES NO

Your interview will be conducted by Perrine Leroy.

If you sign this form, you are aware of the fact that you have read the above information and agree to participate in this study.

Nom, Prénom: _____

Signature: _____ Date: _____

Appendix B: Interview questions

Interview process

First of all, I will ask you questions about you, your career and your mission as a chef. Then we will go back to the main subject and I will ask you some questions about your opinion on milk and dairy products. From there, we can deepen the subject and we will talk about questioning of dairy products in gastronomy, and especially in Swiss gastronomy.

Introductory questions

Can you describe your career path?

What training(s) did you follow?

Where did you work (restaurants, palaces, schools)?

In which countries did you work?

Mission as a chef

How do you perceive your profession as a gastronomic chef?

What are you trying to accomplish through your profession?

As a chef, what mission(s) do you consider to have regarding the eating habits of the population?

Opinion on dairy products

As a chef, what difference do you see between milk and other dairy products in gastronomy?

In a professional context, how much do you use dairy products? What about milk?

In a professional context, are these essential products?

What values do these products bring to the cooking? Do they bring something different depending on the type of cooking, daily or gastronomic?

In a personal context (at home), how much do you use dairy products? What about milk?

In a personal context, are these essential products?

If there is a paradox:

How do you explain this paradox between the use of dairy products at home and at work?

Opinion on the questioning of dairy products in Switzerland

Nowadays, some studies question the consumption of dairy products. Some authors such as Atkins (2005), Bachelot-Narquin et al. (2009), Proust (2006) and Souccar (2008) explain that consumption of dairy products comes mostly from industrial motivations and not from medical motivations. Moreover, Bourlioux et al. (2011) as well as Fournier (2013) observe that, beyond breastfeeding, the human being is not genetically designed to consume milk. To support these researches, medical studies conducted by Campbell and Campbell (2016), Chan and Giovannucci (2001), Feskanich et al. (2003) show that milk is not essential to human health.

In a gastronomic context, do you think that questioning of dairy products can generate a conflictual situation? In what way?

If the answer is rather negative

And in a gastronomic context in Switzerland, where dairy products are cultural symbols, do you think that a questioning of these products can generate a conflictual situation? In what way?

If the answer is not negative

And in a gastronomic context in Switzerland, where dairy products are cultural symbols, do you think that a questioning of dairy products generates a different conflictual situation? In what way?

What importance should be given to this questioning, in a country like Switzerland?

How is the reconsideration of milk linked to the reconsideration of all dairy products in Switzerland?

How do they differ?

During your career, did you observe a change in the use of milk in gastronomy? If so, which one?

And a change in the use of dairy products?

Today, what place should dairy products occupy in Swiss gastronomy?

Today what difference do you make between the place of milk and the place of other dairy products in Swiss gastronomy?

In a gastronomic context, how can we understand the potential conflict generated by the questioning of dairy products in gastronomy?

And in a Swiss gastronomic context, how can we understand the potential conflict generated by the questioning of dairy products in a country where milk-based products, such as cheese and chocolate, represent strong cultural symbols?

Conclusion

What future prospects do you see regarding dairy products in Swiss gastronomy?

Do you have to adapt the way you work? In what way?

Do you have anything to add?

