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Propagating the consumption of seaweed in the Azores Islands through recipes

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DESIGNING FOOD CULTURES: PROPAGATING THE CONSUMPTION OF SEAWEED IN THE AZORES ISLANDS THROUGH RECIPES

DR. SÓNIA MATOS.

ABSTRACT

Despite the existence of resources, the age-old tradition of foraging and consuming seaweeds from the coastal shores of the Azores islands is today almost non-existent. Biologists specializing in edible macroalgae of the Portuguese coast recognize that what may be lacking are levels of awareness and engagement amongst communities of practice (for example cooks and restaurant owners) and lay people alike (Neto, 2011; Pereira, 2011; Sousa Pinto, 2011). In an attempt to fill this void thereby addressing issues of sustainability and dietary health, I conducted a pilot study to revitalize the foraging and consumption of wild seaweed through the co-development of recipes for a future cookbook with communities of practice and lay people from the Azores Island.

I begin with an overview of the contextual background of the Azorean foraging tradition and the region's health status. Next, I present the problem that this study aimed to address – the challenges to Azorean diet, health, and environment caused by the suppression of a food cultural tradition that conceals a healthy relationship with food along with the surrounding environment. A methodology section follows in which I describe participatory action research (PAR), a qualitative research approach aimed at developing forms of 'knowledge in practice' within context. Then, I present two different subsections of data collected from conversations with key stakeholders in the island of Flores that informed a series of cooking sessions with other stakeholders from two cooking schools in the island of São Miguel and Terceira. In the final section, I discuss the key findings that have resulted from the pilot study including the notion that the design of food cultures requires action and participation within context.

Key Words: dietary health, foraging, sustainability, recipes, cooking

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FULL PAPER**Introduction: Food for Discourse**

Far off the coast of Portugal and toward the middle of the Atlantic Ocean, one finds the Azorean archipelago. With nine islands distributed across three main groups, this Atlantic region presents a temperate climate and a total population of 246,746 (INE, 2012). Once pristine and untouched by mankind, the Azorean islands reflect the adaptation of mostly agricultural people from Portugal to a new and untamed environment. Despite the populations' cultural background and the intent of King João I to use the Azores as a cultivation ground for cereals, grapes and sugar cane (Diffie & Winus, 1977: 305), the newcomers had to adapt to the geographical and

climacteric conditions and in more extreme cases, such as in the island of Pico where volcanic rock is abundant, they often had to “seek in the ocean what the land could not offer” (Gomes Vieira, 2012).

If the early Azoreans would soon find ways of working the volcanic land by planting and breeding animals they would also find, in the surrounding shores, new delicacies such as limpets, barnacles, octopus, seaweeds and a variety of fishes that would later influence the development of what could be qualified today as an ‘Azorean regional kitchen’. And while some of these delicacies continue to thrive amongst both local, and more recently, the tourist population, some have fallen into disuse or even oblivion. This is the case of seaweed such as the *Porphyra* sp. type, mostly known as laver in the English-speaking world, nori in Japan and *erva-do-calhau* (meaning ‘grass-from-the-rocks’) or *erva-patinha* (meaning ‘little-duck’s-grass’) in some of the Azorean islands such as the islands of Pico and Flores. One can associate this neglect with the difficult and arduous task of collecting these ‘plants’ from the wild seashore in the intertidal areas, with the *Porphyra*’s seasonal development (only available from January to March) and with the introduction of new lifestyles and eating habits that have developed alongside.

While the first two points seem to be less influential – see for example the popularity of limpets despite their seasonal scarcity and development in similar intertidal locations – the last point seems to strike the right cord particularly when we think of the rather unattractive nature of seaweed, at least on first encounter. And while for example the consumption of limpets have very easily blended with other local ingredients and delicacies, only one seaweed dish – still known in the island of Pico and Flores as *tortas-do-calhau* or ‘patties-from-the-rocks’ – has so far survived in the island of Flores and more than often as a local ‘exotic’ delicacy.

On the island of Flores the foraging tradition is still transmitted from generation to generation – even though here it is also slowly declining (Dias, 2012). Generally, the seaweed is not considered a popular aliment throughout the archipelago; a fact that is mostly influenced by a globalizing process that affects food industries around the globe (Goody, 2008). In fact, today, the region largely consumes horticultural produce imported from elsewhere (A União, 2012); a phenomena that affects both the Azorean archipelago and the Portuguese continent more broadly as the socio-cultural and economic detachment from agriculture, fisheries and all other primary sectors of production has brought adverse consequences for both the economy and Portuguese society as a whole (Freire & Parkhurst, 2002).

Despite the lack of a regional and national dietary survey (EU, 2009: 351), it is possible to assert that today the country does not differ from a global trend whereby developed nations witness an increase in the rates of obesity (Padez, 2006) and related chronic diseases. In fact, today, both the Azorean and Portuguese diet reflect a global phenomena that has been largely affected by ‘progress’ and the development of methods of food production and transformation. These methods emphasize refined carbohydrates and processed foods or ‘techno-foods’ (Nestle, 2007) – that have dramatically ‘altered the patterns of health and illness’ (de Almeida et al. 2007) in the affluent West and beyond (Young, 2012). With severe

health and environmental consequences (Cook et al. 2000), the new highly processed ‘techno-foods’ are largely supplanting local resourced edibles – such as seaweed – that have potential to yield a diet with higher nutritional value (Gottlieb & Joshi, 2010) and are friendlier to our planet (Natural Resource Defense Council, 2007) when sustainably foraged.

Problem Statement

Seaweeds are thought to be future ‘super foods’ as they can compensate severe nutritional deficiencies of iron, calcium, proteins, amino acids, vitamins and fibers (Baptista et al. 2011; Patarra, 2008; Pereira 2008: 2-3, referring to Saá 2002). With this in mind, this pilot study addresses the following question: How might the foraging and consumption of seaweeds from the Azorean coastal shores be revived considering its nutritional value and history as an ingredient of the local Azorean diet and largely consumed due to the scarcity of other aliments?

Methodology

Using PAR to understand local foraging of and cooking with seaweed in order to develop recipes

To begin, I identified key local stakeholders that would converse with me about cooking with seaweed within domestic and professional cooking environments and participate in the development of recipes. The ultimate goal of these conversations was to collect ethnographic data including local recipes, personal stories and themes relating to the foraging tradition. The local seaweed foraging tradition was used as a key topic for discussion and development of unstructured interviews where questions were woven into a fluid interaction and where four main points guided the discussions:

1. When the subject was introduced to this practice and by whom
2. The varieties of seaweed that were eaten and/or included in a particular recipe
3. Local perceptions of this aliment today
4. The importance (or not) of safeguarding this tradition.

I selected stakeholders based on their interest in the project and their roles within these insular communities. I identified a local restaurant owner, a family with local roots, and students at local culinary schools.

Mrs. Rosa

On a first visit to the island of Flores during the month of January 2012 I connected with local restaurant owner Mrs. Rosa who informed me that even though locals will sporadically ask for tortas-do-calhau, this delicacy is most popular amongst tourists. And despite the fact that her restaurant does not present this dish on the menu, visitors will often ask for the seaweed patties. In an attempt to satisfy the visitors’ palate, Mrs. Rosa collects seaweed from locals during the winter months and then freezes the edible ‘plant’ in order to guarantee sufficient supply during the warmer months of the year.

Over the course of one week, it soon became clear that Mrs. Rosa, a

native of the island of São Miguel in the western group of the archipelago, was only introduced to the seaweed patties when she moved to the island of Flores and after marrying a local islander. Her first impressions were not positive and she did not understand how one could eat seaweed, a 'plant' that was used as bait in her native village to catch pork-fish. After working with a group of women in the local fish factory in the island of Flores she soon learned the patty recipe and started foraging and preparing this delicacy at home for her family.

The conversation with Mrs. Rosa regarding her introduction to the consumption of seaweed was complemented with a cooking session in her restaurant kitchen where she was able to demonstrate her version of the seaweed patty recipe (one that uses wheat flour as opposed to corn flour which has for long been the staple flour used in the Azorean region). Mrs. Rosa very intuitively described the quantities, ingredients, cooking steps and possible side dishes ranging from rice, feijoada or even with potato chips and fruits such as local pineapple and grapes (a very popular way of serving fried food in the archipelago).

The Dias family

During the same visit to the island of Flores I also conversed with Elisabete Dias and her family. A young biologist from Flores now residing in the island of São Miguel, Elisabete has been eating the seaweed patties since a young age. In fact, her parents very often acquire the seaweed from locals while preparing the patties at home. Her first encounter took place in the Porto do Boqueirão, a former whaling harbor near the main village of Santa Cruz. Here Elisabete explained the foraging procedure:

'Never turn your back to the ocean. The goal is to gently pull, and while rolling the fingers around the fronds, without completely extracting the holdfast so as to guarantee that the species will grow during future seasons' – pertinent information for those new to the foraging practice.

While attempting to approach the shore and after spotting a vast tuft of seaweed, Elisabete explains that most locals know where to find the *Porphyra* seaweed even though the consumption of this rich aliment is largely being replaced by other more 'trendy' and 'international' products imported from elsewhere. This trend, she says, is particularly strong amongst the younger generations that identify the seaweed patties as a 'thing of the past' in fact confirming a tendency in many 'developing' regions where traditional foods are replaced with an often prejudiced understanding of certain aliments as 'hunger foods' (van Esterik, 2006). After various unsuccessful attempts to approach the shore, soon we made our way to the bay of the Fajã Grande village where the harvest was bountiful.

Back in the village of Santa Cruz and in the middle of pots and pans, Elisabete and her mother take on the lead and explain every step as they prepare and cook the patties:

Figure 2 Top: Edible Aroids in the Western World; Bottom: Edible Aroids in the (Sub) Tropics © Grahame Jackson, INEA



First one has to carefully wash the seaweed. And even though today one could use tap water traditionally one would use seawater, a method that will help preserve the original flavor. After, the seaweed is carefully washed and all rocky particles and sand are removed one has to carefully cut the seaweed. After the seaweed is chopped, we add the garlic and malagueta pepper paste, a local and mildly hot staple ingredient. At this point, Elisabete and her mother explain that there are two traditional recipes; one is simply fried using corn flour. For the other recipe, we have to incorporate an egg or two (depending on the number of people) and gently form the patties, later frying them one by one.

As the cooking proceeds we continue conversing and soon Elisabete's father joins to explain that in the 'old days' the majority of consumers of patties were the most impoverished even though one could not really find rich people in an island that mostly subsisted on an economy of direct trade and where money was a rarity. This is not to say that wealthier islanders did not eat the patties. In fact, they did while adding other and more precious ingredients such as limpets. The patties were fried in animal fat and eaten with bread so as to console the stomach during the winter months. Alternatively, the seaweed was often added to fish broths as a way to add flavor.

Mr. Dias also mentions that even though today we might qualify the patties as an unhealthy dish – mainly due to its frying procedure – in the 'old days', the amount of physical activity that locals performed while carrying out agricultural, fishing or whaling tasks compensated for a fatty diet that was mostly produced while using local animal fats as opposed to the imported and highly processed cooking oils that can be found today with abundance on the shelves of local shops.

Soon, the Dias family sets the table and serves both versions of the patties with bread and a glass of red wine. The taste is wonderful and immediately reminds us of all those dishes associated with the sea. The egg, garlic and corn flour add a more familiar flavor that is common to both the Azorean and Portuguese palate. As to my final question regarding the role of seaweed in the development of future Azorean cooking practices, the Dias family oscillated between two different generations. Elisabete, even though not always engaging with this practice, defends the importance of safeguarding the tradition due to its ecological value and health benefits. Her father, Mr. Dias, tends to imagine it as a 'hunger food', a thing of the past, a tasty snack that can be consumed now and then.

Students at culinary schools in the Island of São Miguel and Terceira

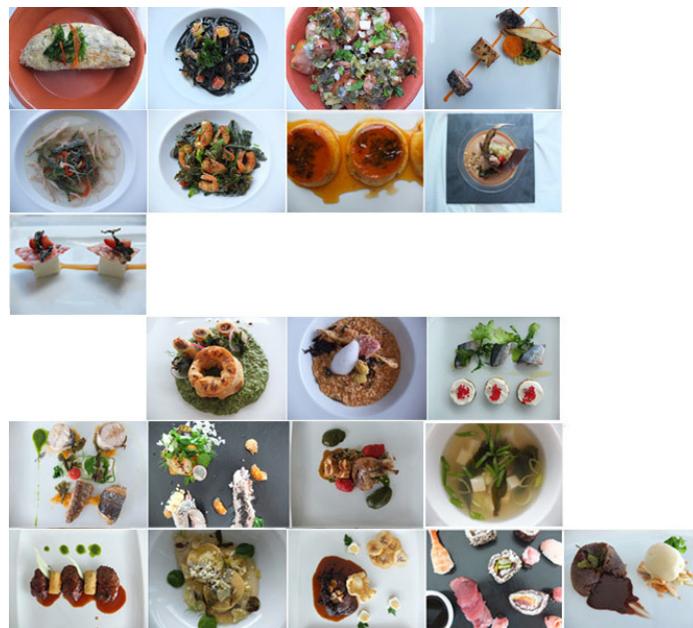
Taking into account the challenges set forth by Mrs. Rosa and the Dias family I decided to broaden the array of stakeholders. I conducted two workshops at two culinary schools situated in the most populous islands of São Miguel and Terceira during May 2012. Here a challenge was presented to the students, aged 17-30, to create a series of recipes using four types of locally foraged, locally sourced and highly nutritional seaweeds: the *Porphyra* sp. (laver), the *Ulva rigida* (sea-lettuce), the *Fucus spiralis* Linnaeus (spiral wrack) and the *Osmundea pinnatifida* (pepper-dulse). I chose to use these students as stakeholders because their future roles as local chefs and trendsetters would enable the dissemination of the seaweed foraging tradition amongst the islands where this practice can no longer be found.

Some students were initially reticent in associating seaweed with food, and thus responded unexpectedly by creating sweets. And though most of the dishes displayed in Figure 2 demonstrate their interest in a gourmet style of cooking, other dishes such as the 'Taro Root Omelet with Sea-Lettuce', the 'Pork Cheeks with Spiral Wrack Vinaigrette' and the 'Creamy Rice with Limpets and Laver' demonstrate a closer appreciation of existing local dishes.

Once the three-day workshops ended, both the chefs and myself sat down with the students and discussed the project. One of the main guiding questions regarded the way in which the act of working with the different seaweeds had or had not altered the students' perception of what is edible. The students presented ideas regarding the sensorial qualities of the different seaweed – like the sea lettuces' green transparent gradients, the pepper-dulse's rich fiery flavor, the laver's nutty hint and the spiral wrack's tangy bite. These responses demonstrate potential for future culinary experimentation and the development of more complex sensorial information that can be passed on to other chefs, foodies and the general public through a cookbook.

Figure 2. Dishes produced by the 3rd year students from the Professional School of Praia da Vitória, from left to right: 'Taro Root Omelet with Sea-Lettuce'; 'Pasta Nero de Sepia with a Sea-lettuce Pesto'; 'Pork Cheeks with Spiral Wrack Vinaigrette'; 'Tuna Tataki Rolled in Pepper-Dulse and Laver Dumpling'; 'Chicken Soup with Laver Noodles'; 'Laver Noodles with Shrimp and Spiral Wrack Vinaigrette'; 'Flan Pudding with Pepper-Dulse Caramel'; 'Pepper-Dulse Chocolate Mousse with Orange Crystalized Spiral Wrack', 'Lemon Sorbet with Strawberry and Pepper-Dulse Crisp and Orange Crystalized Spiral Wrack'.

Dishes produced by the 3rd year students from the Tourism and Hospitality School of Ponta Delgada: 'Tender-dough Pie filled with Regional Loin Stew with a Puree of Pepper-Dulse and Sea-lettuce', 'Creamy Rice with Limpets and Laver', 'Blinis with Regional Cheese Mousse, Dried Sea-lettuce and Local Smoked Mackerel', 'Two Textured Horse-Mackerel with Spiral Wrack', 'Regional Fresh Mackerel with a Spiral Wrack Vinaigrette Salad', 'Chicken stuffed with Local Sausage and Wheat and Pepper-Dulse Stew', 'Tuna Consommé with Pepper Dulse and Fresh Cheese', 'Pork Cheeks with Fig Sauce and a Sea Lettuce Croquette', 'Ravioli stuffed with different Seaweeds on a Bed of Cauliflower Puree', 'Regional Style Steak with Pepper-Dulse Sauce', 'Sushi made with a local Nori and a Selection of Regional Fishes', 'Pepper-Dulse Chocolate Fondant' served with 'Sea-lettuce Ice-cream'.



Analysis of Data

The conversations with Mrs. Rosa and the Dias family provide an opportunity to introduce a rather valuable discussion regarding the cultured assumptions behind our understanding of what counts as food and non-food. As proposed by food anthropologist Amy Trubek in ‘The Taste of Place’ “the reasons we refuse to eat certain foods are not arbitrary, but mediated by cultural beliefs and practices” (2008: 7). This resonates with Isabel González Turmo’s (2009) discussion of the various factors that come into play as we attempt to distinguish foods from non-foods. These factors can be highly personal and idiosyncratic – based on personal taste or even gender – but also highly cultural and largely informed by our identification with particular cultural groups, geographical locations and available resources. This largely explains why certain islands, such as the island of Flores and Pico, have formerly adopted the consumption of seaweeds as opposed to islands such as the island of São Miguel where agriculture and farming has always played a prominent role.

There is an inverse relationship between the ways in which local visitors valorize the seaweed patties and the ways in which local populations at times perceive this aliment as ‘a thing of the past’, a ‘hunger food’, often ignoring the potential nutritional and gastronomic value and variety. While taking this information into account three important guidelines were identified:

1. The importance of reversing this effect
2. The importance of further extending the interaction with more stakeholders while developing new recipes that will later integrate into a community cookbook
3. The importance of working with the PAR research framework while incorporating practical knowledge that will resonate with a local community of stakeholders

Focusing on the last point, this pilot study also suggested that this practical information is of course amenable to change. This is particularly relevant when analyzing the ways in which the young chefs:

1. Reject (e.g.: the way in which the patties are traditionally fried in animal fat)
2. Assimilate (e.g.: the way in which they used local existing ingredients such as the tarot root now combined with the seaweed)
3. Reinterpret (e.g.: their use of Azorean laver to create nori sheets for the Azorean sushi dish)
4. Negotiate (e.g.: the use of seaweed in the confection of a popular seafood/ pork recipe)
5. Reinvent (e.g.: the use if seaweed in the confection of sweets)

This process resonates with Peter Scholliers (2001) understanding of culture as a largely performative act whereby processes of identification (as opposed to identity) result from the reenactment of everyday practices (p.7).

Hence the development of the recipes with the stakeholders at the culinary

schools expresses the community not as a static and fixed identity, a tradition worthy of preservation, but rather sets forth ways in which its diverse range of actors identify with various aspects of their local and global environment and culture. However, and while one can quickly assess the quality of the students' culinary experiments, their preferences also largely contrast with Mrs. Rosa's and the family Dias' approach. In the attempt of developing recipes that will account for a vast array of Azorean voices and flavors, this pilot study has equally identified the growing necessity of developing similar workshops amongst other pertinent insular social-cultural groups and key stakeholders.

Conclusion

In order to facilitate a comprehensive understanding of the overall project I will attempt to momentarily discuss the defining moments, key questions and points while emphasizing the importance of instigating a participatory and action-based research in the development of recipes. Briefly assessing the work developed so far it is important to set forth the following questions:

1. How will the cooking sessions with key stakeholders and the design of recipes for a future cookbook inform the Azorean population regarding the significance of collecting and identifying edible seaweed in the wild?
2. How will the coordination of these two elements affect the sustainable and healthy development of the region?

Taking once again Schollier's (2001) understanding of culture as a largely performative act, one of the most interesting outcomes of current grassroots movements, that have actively attempted to intervene in the ways in which we produce, treat, access and consume our food, is that they have resonated with local audiences and while using a diverse range of mediums of communication and distribution such as television, printed media and the internet (Gottlieb & Joshi, 2010) and as proposed by this pilot study, a series of cooking activities and the recipes resulting from this activity. On its own turn, these communities of practice have at times affected the ways in which local authorities have become increasingly interested in fostering healthy eating habits and sustainable methods of food production (Lavine & Salkine, 2011). In this sense, the goal of this overall project – one that is still under way and that can only be assessed over an extended period of time – is to create awareness amongst a local community.

In the Azores, the consumption of foraged seaweed should not be ignored. In fact, this has worked in the past and during periods when the islands were more populated. While some might argue that these 'plants' can only be collected on a seasonal basis therefor limiting their benefits, it is exactly the demands of a seasonal and cyclical diet that a new globally conscious regimen will require, particularly on behalf of wealthier nations. And while the biggest limitation can be seen in the uneven distribution of seaweeds throughout the nine islands as well as the limitations in accessing some of the areas where the seaweeds can be found (Neto, 2012), the reintroduction of seaweeds in the Azorean consciousness has the potential to instigate attempts to sustainably harvest some of the 'plants' as

already practiced for many decades in countries like Japan. And while we can only wait for these opportunities to come, for now we will continue foraging and cooking; exploring the rich flavors of these marvelous and delicate ‘plants’. Until then – bom apetite!

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