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Taste of Place and Provenance

A Senior Honors Capstone

Alison Stevens

Advised by Terri Kempton

Winter 2020

Food is at the center of our human complexities, of all that ties us together in a synergistic, energetic exchange with life. Over time these interactions have become more and more complex, bearing deep cultural significance and historical relationships. The necessity of eating is one of the only factors that will forever tie human practice to the abundance of the natural world. A meal is more than fuel – it is a statement of place, culture, and politics. It is the ultimate anthropogenic representation of trans-species collaboration - a demonstration of regional culture, preference, and pleasure.

In light of such delightful complexity, I was eager to further examine the significance of what we put on our plates. A meal is more than just fuel; it is the creation of an experience that satisfies multiple senses, can spark nostalgia, among other emotional reactions, and last a lifetime as a memory. Food choices historically have followed two criteria: culture and region. Food cultures can be nomadic; following families and communities as they physically move from place to place. When communities establish themselves in place, so too can their food culture settle with them. Over the course of history, humankind has developed technologies and methods to preserve, cook, and grow food depending on their unique climate, resources, and circumstances. The incredible gamut of food cultures and traditions found all around the world. How can these be categorized? The answer is by location; by region. While we do honor some concept of regionality in our vast, industrialized food system (why try and make avocados grow in Colorado when they naturally grow quicker and cheaper in Mexico?), most decisions are made for economic benefit, or efficiency, rather than biological origin. Truly eating 'locally' is far from commonplace and approaching impossible. The definition of local, even, has been lost to commercialization.

This paradox, of inherent regionalism and agricultural globalization, led to my creation and analysis of a bioregional meal. With my background in the restaurant industry, training at a fine-dining “hyper-local” restaurant, and fiery passion for a resilient and equally delicious food system, I developed a menu that exemplifies what it would be like to dine from my region: the Puget Sound of the Pacific Northwest. However, simply researching, developing, and serving a simple 3-course meal was not going to tell the story I wanted, nor entice further inquiry to the extent I desired among my guests. What does a bioregional meal suggest? Is it accessible? Realistic? Necessary? Can a dream of eating according to where we live be more feasible than we expect?

Abundance is everywhere. Forests, seas, plains, wetlands, and even deserts are subsistent in their own ways. Unfortunately, each generation is progressively removed from understanding the local ecology that we are virtually unaware of. The ecosystems around us that teem with life and flavor. Not only is there a unique profusion of edible foodstuffs found depending on the region in which they are found, but one also finds site-specific local markets, producers, farmers and communities that rely on the same natural ecosystem to uphold their socio-cultural practices. The formal recognition of environment-specific regionality as a concept in which to produce and consume food is called bioregionalism.

Upon colonizing the North Americas, white settlers had the mindset of making this land their own; of molding and shaping, conquering and altering to provide a seemingly endless bounty for an ever-growing population. Conventional agriculture has its roots in this colonization and has expanded to be what we know as our industrialized food system. More recently, in the late 1960's, the agronomist Norman Borlaug furthered this approach by developing high-yield seeds and expanding mechanized infrastructure in farming. With the

dawning of this 'Green Revolution' and the goal of feeding a developing world, the advent of genetic improvement and monoculture crops took precedence over natural growing cycles. What followed was privatization of American ag, commodification of life-sustaining crops, and a growing disconnect with the value of what we grow and eat. While physical interaction with the soil had obviously diminished, the impact on indigenous culture, environment, and identity has gone largely undiscussed in white communities. Our food systems have gone from self-sustaining to utterly commercial. With the influence of capitalism, efficiency has been prioritized over sustainability. Institutional inequality perpetuates the power of profit-hungry corporations over the voices of the common citizen. The incessance of neoliberalism values of competition and individual ability has disassociated us from the power of small-scale community and cooperation. With such a large country to serve, and a growing population to feed, it isn't surprising that the agricultural sector has chosen efficiency over environment. However, commercialization and commodification have done more than make bananas available to Alaskans. We no longer appreciate or understand the abundance of local ecosystems and their intrinsic intelligence and resilience.

How do we define local in this global era?. The word is confusing, to politicians, citizens within city limits, citizens outside of city limits, farmers, marketing directors, and consumers of all types. What if we recognized local as the products we can see in production before they're harvested? That we can grow? Or forage?

When food arrives in our kitchen, it's definability changes. Now, in the hands of the cook, its original state is transformed to become our traditions, our favorite dishes, even works of art. Once more, the meaning shifts; now one of pleasure and sensation as we eat and enjoy. This is gastronomy, the science and art of food and how we enjoy it. Not only is it important to

understand what foods bring us pleasure, but why and where those traditions come from. Tradition is a part of culture, and culture is ultimately tied to place. Our current lack of gastronomic regional origin creates another dimension of disconnect from nature, what Karl Marx described as “metabolic rift” (Foster, 1999). The historical domination of nature shifted agriculture from a work of social interdependencies and cultural connection to one of industrial development and sterilization. This metabolic rift, or the dissolution of the relationship between human society and ecological processes, has widened as national focus has been concentrated on greater efficiencies and institutional structures, rather than understanding the dynamism, ebb and flow, and great fragility of regional ecosystems. Evidence demonstrates that our system currently has a negative impact on our environment. Agricultural intensification has brought with its non-point source pollution, eutrophication, skyrocketing greenhouse gas emissions, and an incredible amount of food waste; 40% goes uneaten. Our topsoil is eroding, monocultures of cash crops are king, biodiversity is rare in agricultural practice, and reliance on genetically modified, pest and disease resistant species are more and more common across the globe. Capitalist values of efficiency, perpetual growth, and unyielding competition take precedence over social relations, sustainable and resilient practices, health and well-being, and other cultural values. Markets focus on caloric security, rather than nutrition or accessibility. The commercial food system has quite literally removed our personal food values from what is on our plates, in our kitchens, and at our fingertips. Our associations of pleasure and tradition with food are muted at best.

Our global food system is what Horst Rittel and Melvin Webber coined as a ‘wicked problem’. ‘Wicked problems’ define highly complex and entangled dilemmas in society, like poverty, hunger, social equality and other subjects of reform (Rittel & Webber, 1973). Simply put, a ‘wicked problem’ is a complex problem. They cannot be broken down into several small

solutions and ultimately *fixed*. They are dynamic, incomplete, and contradictory. Being a 'wicked problem', the food system has a myriad of resolutions that can begin to address its convolution. Food in itself is complex enough, and in order to undertake reformation there is a certain amount of humility required to recognize its place in our lives. ***Food is a statement of place, culture, politics, and pleasure.*** We must consider these factors as we amend what isn't functioning. Food has origins in histories and geographical regions, and for that reason it must be scaled down and reconsidered as native to a certain place and a certain group of people. Bioregionalism contrasts with institutionally defined borders, "following the necessities and pleasures of life as they are uniquely presented by a particular site, and evolving ways to ensure long-term occupancy of that site (Berg & Dasmann, 2014)."

This culinary analysis will critique bioregionalism as a case for food system restructuring, while maintaining support for the economy. It will also address the reinvigoration of cultural connection, where scaling down the food system can encourage white communities to respect the cultural identity of indigenous groups and their tie to the land. There is also a chance of non-indigenous groups to establish a deeper bond with their sense of place and strengthen the cultural significance of food consumed from their region. This analysis will also discuss the reestablishment of local ecological knowledge for the rhythms, intelligence, and natural resilience of the ecosystems that we live in, especially by honoring that local indigenous tribes have had and maintained this knowledge long before colonists inhabited their land. For the sake of this project, there are two types of bioregionalism that relate to my analysis. The first is a recognition of regionality based on physical, geographical, and climatological processes, a definition popularized by Peter Berg in the mid 1970's (Berg, 1991). Bioregional food strictly in this context are the wild foods that grow in the region in question. They might be historically native, brought from other regions and adapted, or first-succession species that an outsider

would define as a weed. These are the ecologically sound, naturally regenerative, and resilient foods we consider when we forage.

The second definition that I believe is important to include in this analysis is the social aspect of bioregionalism, as in the foods and products that are produced by community members within the same regions. We are entrepreneurial, curious, and creatively driven beings, and not everything can be found in the wild. Fruits, vegetables, nuts, alcohol, meat and dairy may still have provenance in the region in which they are consumed. The same geographical and environmental determinants used in the first definition above serve as the borders defining regional lifestyle, product, process, rather than political boundaries forged in North America by white settlers. Bioregionalism in this sense is the maintenance of existing markets and community-based economy within the bioregion in which they operate.

Bioregionalism serves as a geographical guide within which communities and ecosystems alike can thrive. Simultaneously, the regions are inherently wise and can serve as a comprehensive model for local food processing and production. By having a reference for our social and ecological responsibility, bioregionalism invites a great deal more of mindfulness in our choices. We are instead guided by natural processes, tangible and visible fluctuations in soil and weather, and discernible deviations that can be observed, providing evidence so that modifications to anthropogenic action can be made (Alexander, 1990). Through lenses of environmental sustainability, local economy, and cultural significance, this analysis of a single meal seeks to determine the benefits and difficulties of a bioregional food system.

The Meal– sensory experience, history, and sourcing notes

The meal begins with birch kombucha, a fermented, sparkling tea brewed with Kukicha twig tea and birch bark, which lends a nuanced, caramel note to the drink. This is the palate cleanser, and a gentle introduction to the earthy flavors of the Puget Sound. Native to the Pacific Northwest, the paper birch tree is a significantly diverse resource, providing lumber, medicine, and energy. Twigs, fresh leaves, and pollen are nutritious when steeped into a tea, while their sap is rich in manganese, antioxidants, and vitamins. With careful foraging practices, the paper birch can be utilized to make birch beer, syrup, wine, and water. The bark is edible as well, can be ground into a flour or used in a medicinal tea or infused oil. As it is profoundly valuable, birch should be foraged for with care and consideration for the survival of the host. like all other wild foods.

The birch kombucha is brewed using Kukicha tea, or Twig Tea, as a substitute for fresh young birch twigs. The Kukicha was sourced from the Community Food Co-Op to imitate the slightly nutty flavor of birch without overutilizing the resource. Dried birch bark was added to the kombucha for its second fermentation, further enhancing the warm tasting notes of earth and wood.

The first course is poached sunchoke, a root which is serving to emulate the coveted camas bulb of indigenous communities. It is finished with a dandelion and hazelnut oil persillade, shaved hazelnuts, and complemented with tart buttermilk foam. Camas has historically been one of the most important staples in the diets of the Nooksack and Lummi tribes, being the predominant source of starch and carbohydrates in their diets. Blue camas was also steadily cultivated on plots that were passed on for generations, then cooked for several days in massive pits after harvest (Krohn & Segrest, 2010; Turner & Bell, 1971). I specifically chose sunchoke as a facsimile so as to not appropriate the consumption of a food with such

deep significance the indigenous communities in this area. It is a resource that is not mine to harvest. The sunchoke, or Jerusalem artichoke, grows very well in the Pacific Northwest. It is also a tuber, and even has a similar amount of inulin as camas, an indigestible starch that made the bulb undesirable to the intestinal tracts of unfamiliar colonists. As perennial plants, they offer a steady source of subsistence each year and are an excellent example of permaculture in practice. The sunchoke in this meal were dug from the Artzen gardens on the Western Washington University campus.

The bright dandelion persillade pairs well with the bittersweet nature of the sunchoke. Dandelions grow proficiently and most everywhere, in gardens and yards, disturbed soil, banks and beds alike. What better way to easily eat from our region than make use of a plant so often sought to be destroyed? The bitterness of the dandelion greens is softened by hazelnut oil and sweet roasted garlic, further complimented by shaved, toasted, whole hazelnuts. The Eastern Beaked Hazelnut can be found along the northeastern corner of Washington and into British Columbia and has been an important source of energy for Northwest Coastal tribes. The shrub grows well in moist areas, on the edges of forests or in open forest ecosystems. As a perennial, Beaked Hazelnut provides consistent subsistence every year in the autumn.

Buttermilk was chosen for this dish to demonstrate support of local economies and businesses already in place, an example of the dualistic nature of bioregionalism in this project. Sourced from Grace Harbor farms in Custer, WA, the rich buttermilk is set with gelatin and aerated to produce a light and tangy foam, bringing acid into the dish as well as a creamy mouthfeel to accompany the bite of nut and root.

The second course features lion's mane and oyster mushroom, which are accompanied by roasted, torn sourdough and pickled sea vegetable butter. The dish is finished with Douglas

fir oil and garnished with sea salt and local dehydrated shiitake mushroom for a deep umami experience. The second course is a balanced representation of earth, hearth, and sea, highlighting the tertiary nature of native mushrooms, the aroma of forest in the fir oil, and the brine in the butter.

The mushrooms in the course were sourced from a local producer and cultivator, Cascadia Mushrooms. Cascadia is a well-established provider of mushrooms in Whatcom and Skagit county, making wild varieties accessible to the high demand of both locals and chefs, without damaging the ecosystem by overharvesting. While lion's mane and oyster mushrooms are native to the area, shiitake is not, however made available by Cascadia. The fungi are flash seared in cast iron to preserve as much moisture and structure as possible. In line with the support of Cascadia, the sourdough bread in this dish is also purveyed from a local producer, Raven Breads. Sophie the baker has been providing locally milled artisan breads for the city of Bellingham for several years, specializing in sourdough rye breads. Her Red and White loaf is featured in this dish, torn and tossed in fir oil and quickly roasted for a light brown crust and a soft chewy center.

Foraging seaweed in this region requires a permit and know-how, both qualities that I have not yet had the privilege to acquire. While some varieties like bull kelp are very easy to identify, there must be a deep understanding of the nature and preservation of seaweed species, lest risking overharvest and damaging marine ecosystem rhythms. The substitution of dulce and arame seaweed for bull kelp was a choice I made out of acknowledgement for my lack of Local Ecological Knowledge. Fortunately, they taste just as delicious. The two varieties of sea vegetable in the compound butter were sourced from the Bellingham Community Co-op.

The last component, the Douglas fir oil, was an adventure in itself. The fir tips in this infused oil were harvested on various hikes I went on throughout the early spring. Fir is easily identifiable, proliferous, and is as fragrant as any spruce tip. Sharply aromatic and rare on the palate, the Douglas fir oil in this dish is a favorite of mine.

The meal ends with a delicate acorn flour tartlet, filled with rosehip curd and finished with a toasted juniper meringue. The tartlet is made with hand-harvested, shelled, dried, leached, and milled acorn flour, a process I never thought would be under my culinary belt. These particular acorns were harvested from the grand oaks growing behind the Bellingham Public Library, who produce enough for all the local squirrels, and then some. High in protein and fat, acorns have been another important energy source for Salish Sea tribes in the area and are another excellent example of a perennial food source. The shell was baked with local pork lard and pulverized juniper berry for a note of pine.

The rosehip curd in this dessert is tart and unctuous, made from a base of cooked down rosehip butter and built up with local egg yolks, and butter. The dried rosehips in this dish were purchased from the Bellingham Community Co-op as well, as my wild harvest in late 2019 was not enough to supply 20+ people. The toasted Italian meringue is infused with more juniper, but just a touch, to mirror the flavor in the shell.

Supporting local economies

The social aspects of food extend their fingers into many aspects of human existence, from health, to justice and ethics, biology, economics, and personal identity. It simultaneously “assert[s]...both its oneness and the otherness of whoever eats differently” (Fischler, 1988).

Underpinning it all is the simple fact that we all must eat to survive. While large-scale agriculture and nationwide shipment programs do feed people, they grossly influence individual agency in local economic participation, inflate consumerism, and bypass transparency in favor for expediency. A bioregional framework of agriculture, foraging, and economic participation encourages consumers to be more informed, mindful, engaged, and supportive. The existence and preservation of community farms, native food sources and environmental health relies on awareness of their contribution to subsistence methods in those regions.

Carlo Petrini, the founder of the Slow Food Movement, which exists to defend regional traditions and gastronomic pleasure in life, wrote “food is the product of a region and of what has happened to it, of the people who live there, of its history, and of the relations it has established with other regions” (Petrini, 2013). Our relationship with food extends far beyond fuel and caloric intake. We use food as a medium on which to suspend generations of tradition, a reason to gather, a means of trade and economy, an opportunity for experimentation, and a way of life. The ingredients of this meal were chosen based on their reflection of the bioregional foods available in the Puget Sound and the Nooksack River basin, as well as modern day support for local producers and products unique to this area. By recognizing that there is innate complexity in our social relations, especially surrounding food production and consumption, so are we recognizing that a simultaneously extractive and expansive system simply cannot provide the structure to compliment it.

Bioregionalism as a concept does not necessarily replace systems in place. Rather, it is a theory and practice that can be used as the blueprint of our evolving systems and institutions, and should be layered within existing markets, processes, and communities. The shift from extraction to integration and properly scaled, regional foodsheds is an opportunity wherein we

can embrace our role as organisms possessed by life rather than by perpetual growth (Rowe, as cited by Jackson, 2011, p. 64).

Locally grown and crafted foods are expensive. In order for a farmer or producer to make enough profit from their wares to support themselves, the upsell percentage is much higher than mass-produced products. Cost of production of large farms is much lower per acre than small, local farms. The same goes for artisan craftspeople and their businesses. This is called economy of scale. More concentrated production, like on monoculture farms, creates more efficiency and higher profit margin. The opposite is found on more varied, smaller, biodiverse farms. The higher price tag at farmers markets reflects the amount of labor, time, and money the producer put into their specialized product. Unfortunately, higher prices mean not everyone can access these foods. Instead of bringing quality, local food into the community and supporting the local economy, we may be crafting an elitist food system. The value of farmers markets and supporting local businesses is intrinsically tied to monetary, temporal, and physical privilege, and often is sought out to provide a personal sense of pride. "Without an emotional, a spiritual, and a physical glue to create loyalty, not to a product, but to layers sets of embodied relationships, local will have no holding power (Delind, 2006, p.126)." While there is a need to promote mindful, sensual dimensions of regional food, it cannot be done unless one risks the product falling prey to commodification. Bioregionalism bridges the gap between the rationality of the marketplace and the depth of socio-environmental belonging. Contrary to the reductionism of capitalism, or oversimplification of an innately complicated system, bioregionalism exemplifies and honors the innate nuances of food culture and sense of place by ultimately reducing scale, while still upholding the basic premise of competition and capital accumulation.

The buttermilk in the first entrée of this meal is a perfect example of a shift in scale while maintaining existing markets and relationships. Buttermilk is a byproduct of butter production. Following the churning of butter from previously separated cream, the leftover liquid is fermented to produce a tangy, high-protein product often used in baking. However, buttermilk generally is consumed from cow's milk and therefore is not historically bioregional in the Puget Sound, let alone the Americas.

Despite lack of historical and cultural origin, local creameries and dairies are a meaningful way of life for some in Skagit and Whatcom County. Small-scale creameries, in particular, fit within a bioregional model. Berg alludes to bioregions as "life-places", and the current model of living in place involves impassioned livelihoods, entrepreneurship, and generational businesses, all of which are descriptors of family-owned, small-scale creameries (Berg, 1991). The way in which we conduct our lives is a profound intercommunication among natural and cultural elements, wherein food systems are born of. If we are to consider shifting the relationship we have with the natural environment, in the context of our food system, we too must consider the social significance of certain sources of capital, like dairy cows. Although perhaps dry, in comparison to the richness of culture in society, the upholding of a marketplace ties knots imperative to social structure and prosperity of a community. A dairy farmer themselves said it best:

"In the shift from commodity dairy to community dairy, milk buyers learn to take pride in their local milk products. The value of milk is place-based not price-based. The farmer becomes a more respected player in the food system. Communities learn the value of their local dairy to their eating pleasure, their culture, their health, their landscape, their ecosystem, and their job market. The price of milk may not be lower,

but a far greater portion of the price stays close to home and multiplies in the local economy. The regional community has a more secure food supply, and farm profitability is less vulnerable to market forces far beyond the influence of the farmer” (Best, 2004 as cited in Delind, 2006, p. 126).

This farmer speaks towards the effects of localizing food. If community dairy over commodity dairy has the power to reestablish the deserved respect of a farmer and their practice, the same can be done involving a bioregion and its bounty.

In this meal, a similar approach can be taken with the inclusion of sourdough bread, butter, and kombucha. All of these products are not traditionally made in this region in the context of indigenous food practices. However, they have been established in our community as a demonstration of self-subsistence, preservation, artisanal skill, and entrepreneurship. Sophie from Raven Breads has run her business out of a rented commercial kitchen by herself for years, while sourcing ingredients from local flour mills and wheat producers, reducing food waste by gleaning fruit, and providing a delicious product found only in Bellingham. Sophie’s bread is bioregional. Similarly, the practices of making butter and kombucha are simultaneously accessible regardless of region, and yet the resulting product reflects the inimitability of the bioregion it was made in. Butter made from cow, goat, or sheep’s milk, who eat from the land in Whatcom county, is going to taste different and mean something more to locals than factory produced butter. Kombucha brewed with respect to its Chinese origin is unique to the natural yeasts and bacteria that make up its SCOBY (Symbiotic Culture Of Bacteria and Yeast), which are unique to the microclimate in which it is brewed. These ingredients in the meal serve to exemplify the second definition of bioregionalism that I include in this analysis: the concentration of community-based economy in the bioregions where they operate.

Lens of Culture, Indigeneity, and Local Ecological Knowledge

People and their cultures have historically been connected to the land. In many cultures the ancestral understanding of geography, soils, and regional food products – passed down for countless generations - cannot be replicated outside of the unique area where it originated. While social exchange and communication have indisputable weight in the invigoration of local and wild food practices, it lacks the ability to ground a people to that place. “Cultures are adapted to localities,” just as deeply as livelihoods and social structures (Bharucha & Pretty, 2010). Unfortunately, Western culture is heavily based on expansion and the introduction of foreign societal structures. This results in a disconnect with those newly colonized lands. For North America in particular, in lieu of the adoption of local cultures and livelihoods, i.e. that of indigenous communities already residing there, localized culture and knowledge were ridiculed and suppressed. Our mainstream culture is built on a foundation of ignoring regional wisdom, and we still struggle to recognize and respect indigenous communities. This is critical when we talk about local food because of the relationship of people and place, especially when the region that colonial descendants could consider harvesting from historically defines parts of the identity and culture of indigenous groups.

The value of native, bioregional foods are immeasurably valuable, and remarkably fragile. “Agriculture is a multifaceted system that combines cultural, environmental and technological abilities to produce food, and decisions to ignore edible wild plants as part of traditional food systems are short-sighted and potentially disastrous” (Grivetti & Britta, 2000). The current system of globalized agriculture is built to maximize calorie output and corporate profit. It does not recognize intrinsic, cultural, or sustainable values of traditionally foraged

foods. Native aliments are ignored, the reliance upon them further disassociated from food altogether and instead considered “weeds of agriculture” (Grivetti & Britta, 2000). Food sources of natural origin are intrinsically part of the question of regional relationships. There is a lot to be learned about the foods that aren’t cultivated in endless rows hundreds of miles away. This kind of knowledge allows one to know when birch sap will be flowing enough so that harvest won’t drain the tree. It’s knowing when to plan for an abundance of leafy greens, or how long you have to gather and store nuts and seeds. This is local ecological knowledge (LEK); food related understanding about the region where one lives. LEK is a key in ecological understanding, as well as a valuable tool to pass among community members and handed down through families to continue observing and respecting the ecosystems in which one lives. The distribution of LEK relies on social interaction and exchange, as well as rootedness in place. While it is impossible to restrict a highly mobile global society to one region for the rest of their lives, it is possible to increase LEK interchange by properly reevaluating and reintroducing bioregional production into the social sphere. It can be the link between more commercialized local products (like buttermilk) and wild, land-based subsistence.

The historical domination of nature shifted agriculture from a work of social interdependencies and cultural connection to one of industrial development and sterilization. This metabolic rift, or the dissolution of the relationship between human society and ecological processes, has widened as focus has been concentrated on greater efficiencies and neoliberal structures, rather than understanding the dynamism, ebb and flow, and great fragility of regional ecosystems. This is deeply troubling for our social health and relationship with food. If humankind cease to understand and respect the inevitable cycles of the natural world and the repercussions of disruption and/or ignorance, there is a greater chance for ecosystems to crash altogether. Despite our incredible capability as highly intelligent beings, we are still just as fragile

as any other animal. We are not exempt from the power of nature, neither are we above it. Metabolic rift is a well-established theory that explains our deepening disconnect with the natural world, and the necessity of reversing the disparity. If it is so entrenched in Western society, how can food systems help bridge the gap?

Humans are an advanced cultural species and must preserve a certain element of historical learning, development, and progression as we shift our perspective. Our established human economies have been built on seeking and exploiting usefulness. With bioregionalism, rather than seeking growth, we seek integration. The concept of bioregionalism re-introduces the genius and the intrinsic intelligence of the complex ecological processes that constantly operate around us, tied to their climatic and geographical distinctiveness. The reconnection of a community to bioregion must be cultural in nature. Bioregionalism exemplifies the necessity of acknowledging and respecting the connections and consequences of our personal processes, and the rewarding sustainability and steadfastness that can come from deep integration and understanding. With a bioregional approach, culture can once more be tied to the individuality of different regions, with respect for and education from the communities that have come to understand those regions the best.

Food practices are quite possibly one of the most tangible, visual, and repetitive examples of collective cultural practices. For indigenous communities, food is a deeply significant and enduring aspect of traditional life, as well as one of the most personal ways to interact with the natural environment. “[I]t is more than diet; it is about cultural continuity. . .it is identity” (Williams & Holt-Gimenez, 2017, p. 144). Habitat loss leads to fewer wild foods, and indigenous communities experience food insecurity, barriers to their culture, restricted access to nutrition and medicine, and oppression of centuries-long tradition. Orally transmitted, ancestral

knowledge is not just another source that Western scientists or politicians can slap a patent on and claim it's benefit for all citizens. Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples states that "Indigenous peoples have. . .the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions, [which include] knowledge of the properties of fauna and flora". Article 26 states that "indigenous peoples have the right the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired" (United Nations, 2007). If bioregionalism is properly adopted into food systems and culture alike, while listening, learning, respecting, and empowering indigenous communities, there is a higher chance that LEK will be properly respected and adopted, rather than appropriated.

There might or might not be a place for foraging today. To marry modern, romantic desires of mushroom hunting or herbal medicine gathering with that of traditional knowledge and rightful access risks appropriation of a deep heritage that not everyone is not entitled to. Indigenous communities are at the forefront of food security and subsistence. However, it is imperative to understand that their LEK is not for colonial descendants to directly acquire, like so much intellectual, physical, and cultural property stolen before. What's more, uneducated foraging threatens biodiversity in wild ecosystems, one of the very qualities that upholds bioregionalism itself. Traipsing about and gathering from the same areas every year isn't a resilient response "to contemporary unsustainable consumption practices" of our past (De Jong & Varley, 2018). Many wild cultivars require 75-80% of their crop to remain in its place in order to reproduce for the next year. Lack of LEK greatly increases chances of overharvesting. Without access to education and understanding of the fragility of wild ecosystems, foraging can very easily shift into a destructive practice. Local foraging expert and advocate Terri Wilde said she doesn't like to share foraging spots, to avoid the risk of others overharvesting and

devastating her sources of food and medicine. Foraging is a commitment to stewardship, which is a quality not innately known among colonial descendants and requires a great deal of education and awareness. In order to respect local indigenous cultures, foraging (which risks decimating native plant populations) must be minimized to ensure access to these important foods.

Foraging is only one aspect of bioregionalism, albeit a delicious, nutritious, and romantic one. But with any food production, care must be taken. Brian Kerkvliet from Inspiration Farms stated that he would starve if he relied on wild foods for sustenance. “There simply isn’t enough to go around,” and a great risk of damaging/sabotaging what is already there (Kerkvliet, 2019) Humans burn a lot of calories and need a continuous, stable source of energy. Foraging, which changes week to week and is highly dependent on weather, animal movement, and chance, may or may not supply enough calories to reliably meet our needs.

According to De Jong and Varley, however, foraging is “thought to reduce food miles and greenhouse gas emissions, improve food safety and quality. . .and heighten social capital (2018).” There is a delicate balance in play when it comes to strictly native plants. From high-production, industrialized GMO monocultures, to small-scale creameries, permaculture, and foraging, we must “recognize that no one process of food production and consumption is essentially ‘sustainable’ (De Jong & Varley, 2018).” Sacrifices are made somewhere.

In the meal I’ve developed, examples of honoring culturally regional and wild foods without appropriating them are in the sunchokes, sea vegetables, and mushrooms. It would be highly appropriative, even offensive, of me to seek out a camas field and harvest a crop that is widely known to be one of the most valuable of the Coast Salish peoples. Sunchokes grow profusely in this bioregion and are a suitable alternative to demonstrate the nutrition available in

climatologically adapted tubers. The same goes for sea vegetables. Although I was prepared to acquire a seaweed harvesting license, my acquisition of wild bull kelp would not have been for my own survival and nutrition, but for this single circumstance. Therefore, choosing to purchase a facsimile from my local cooperative grocery store was a more respectful and sustainable option, while still supporting the bioregional model of local economies. Purchasing Cascadia Mushrooms rather than harvest them in the wild was dually motivated. On the one hand, I haven't the Local Ecological Knowledge to sustainably harvest wild mushrooms in this region without seriously doubting my identification abilities and the possibility of putting ecosystems, and eaters, at risk. Secondly, the season for most edible wild mushrooms simply is not upon us, therefore I choose to support a regional, local business who combat overharvesting with respectfully cultivated species.

Environmental Lens

It's surprising to realize that the most important concept to understand in order to establish a food system based on bioregionalism is so simple: eat what can grow around you. Bioregions have invisible borders; they are not defined by the government or historical dispute, but by their environmental features. Naturally, there is a unique compilation of organisms that reside within these ecological "countries," as described by Berg, which provide an equally distinctive array of resources for residents (1991). Unfortunately, colonists failed to recognize where these borders began and ended, resulting in a lack of relationship and understanding of the nuances therein. By "re-inhabiting" spaces in accordance to their natural rhythms, we can mend the metabolic rift and shift from exploitation to equilibrium (Berg, 1991). Bioregionalism seeks to respect and pay close attention to the natural dynamism of land ecology, a perfect

exemplification of both environmental resilience and sustainability. Resilience is both defined as a concept and a societal approach to nature-human relations that focuses on the flexibility and plasticity of response systems to disturbances and stress. Sustainability, on the other hand, places more emphasis on present day quality of life and eco-social metabolism, while functioning in a way that also preserves the same quality of life for future generations. In our current food system, the future does not look promising for health, resources, or a steady food supply. It fails to properly value natural ecosystem services and processes, and places too much emphasis on a false ideation of perfection.

My application of bioregionalism doesn't seek to reduce food production and food culture to the confines of the immediate ecology. Rather, the reevaluation of our attitude towards natural resources is required, a shift away from an extractive frame of mind. The scale of bioregionalism extends only so far until the ecosystem changes, whether that's a change in geography, climate, or soil characteristics. Reducing the scale of agriculture from global to local makes for a system that is "closer to home," literally and figuratively. In current systems, the sheer grandiosity of industrialized ag is the catalyst to a slough of unsustainable processes: monocultures, high volume chemical application, mechanization and pollution, immeasurable miles driven and diesel burned by truck, and a carbon footprint that makes up almost a quarter of the total global greenhouse gas emissions, surpassing even transportation and general industrial emissions (EPA, 2014). The scale is too big. It is unsustainable to continue supplying the world with one crop per mega-farm and expect production, yield, and health to be maintained without consequence.

Bioregionalism immediately reduces scale to an environmentally governed site, diminishing food miles - the distance that a food travels before it reaches its consumer - and

intensive production. Regional production and harvest cater to the immediate community, which increases food while reducing reliance on distant, industrialized ag. Coupled with perennial crops that are compatible with the environment, incorporation of wild foods, and regeneration techniques, a bioregional agricultural model exhibits considerable sustainability for the community that it is built to provide.

The immediate effect is more attention given to the land's fluctuations and health, fusing citizen to nature in a more meaningful and respectful way. In order to ensure productivity on smaller plots in variable environments, the farmer has greater responsibility and need for ecosystem services that affect their harvest. They become more apt to spotting variabilities in ecosystem health as well, augmenting Local Ecological Knowledge by trial and error. With attention to smaller swaths of land comes more proactive preparations to preserve the plot, such as long-term irrigation solutions, planting on contour, saving and replanting seeds that adapt alongside the soil environment, and long-providing perennials like nut and fruit trees. In terms of resiliency, this way of cultivation is already set up to respond to adversity. Polyculture planting within the ecosystem's rhythm and following suit with wild cultivars buffers the food system for disturbance. Since natural biodiversity of the region is an important element in bioregional agriculture, it is consequentially regenerative, falling in line with the natural processes and successions of the ecosystem therein. Farming and eating foods that are naturally apt to growing in an environment are ecologically sound, be they wild or cultivated within their proper hardiness zone.

While bioregionalism left here sounds like an end-all-be-all, there are without doubt many obstacles in maintaining environmental integrity with its application. For example, while bioregional agriculture is naturally regenerative and successive, care must be taken to ensure

that it stays that way. Bioregionalism does not omit the core extractive nature of human beings, however diminishing its dominance. There remains a demand for sustenance, and for bioregionalism to be maintained, the recognition of inadequate supply. We are very used to taking endless supply for granted; mountains of fruit, shelves always stocked, an ingredient a short drive away. Climate, weather, and seasons govern the duration of growth and harvest. Certain foods are not available year-round, and simply aren't meant to be. Seasonality is a very small determinant of diet, a fact that makes bioregionalism difficult to achieve. Eating outside of season is eating outside of nature. For example, when a demand for blueberries in November is not met, it must be allowed to go unfulfilled, lest we risk depreciating colonies of wild foods, creating stress in our farming environments, and/or being sucked into the same a-seasonal industrialized system all over again. The fragility of natural ecosystems must be honored, and their timeless vitality trusted.

Examples of environmentally regenerative ingredients in my meal include the birch bark in the kombucha, dandelion greens, hazelnuts and acorns, rosehips, and the Douglas fir tips. All these ingredients grow natively in this region, have incredible nutritional value, and even some medicinal value as well. The dandelion greens grow without much help from anyone and are a vitamin-dense leafy green. Both acorns and hazelnuts are perennial food sources, chock full of long-lasting energy. Nut trees are stars of the permaculture model, and don't need much maintenance once established to provide life-giving product every year. The rosehips and Douglas fir tips are also available every year, one easily found in the wild and in people's gardens, the latter proliferating throughout our beautiful forests and parks. All it takes are eyes to notice them, and the care to keep the parent plant living. The two are incredibly vitamin C dense; they are true posterchildren of nature's medicine.

Conclusion and Reflection

Implementing a bioregional foods system would ideally trigger a series of shifts in process and personal human-nature relationships. People would have a better understanding of their ecosystem and the effect of climate change and weather patterns, seen in the production and health of cultivated and wild crops. Quality would be valued above quantity, due to the necessary downscaling of consumption and a withdrawal from the phenomenon of unlimited quantity in grocery stores. Farmers would have a more secure market, as their produce will be more sought after and valued higher. This would be because of the reduction of scale in the market and increase in community reliance on their product, increasing their economic profits. More time would be necessary to dedicate to gardening and caretaking of foods, which we can start to release society's iron grip on neoliberal values of competition, individualism, and institutionalization. To consume a meal would carry with it much more meaning, would be healthier for body, soul and planet, and ground people into conviviality and positive relationships with food and mealtime. Recognition of traditional and indigenous agriculture would increase, as settlers realize that they do not have the necessary knowledge to transform their food system alone, therefore respecting land sovereignty and intellectual property, and perhaps engaging in plural ownership for a more equitable future.

The most challenging aspect of this project was pulling apart the complexity of knowledge ownership and rights. The relationship between white people and native tribes of this country is very fragile, due to a long history of dispossession. As a white student, I was hesitant to add insult to injury to local Native communities by pushing the idea of consuming native and traditional foods outside my cultural understanding. While the concept of bioregionalism came

from a place of seeking cultural invigoration for the greater good, and sustainability of the earth and humans as a species, I now wonder: Is it appropriate to assume that the necessary Local Ecological Knowledge for bioregionalism to thrive should be asked of Indigenous communities? Can it be transmitted and cultivated without appropriation? From my perspective there could be benefits for all communities, and perhaps augment respect and recognition of tribal sovereignty, it simply might not be the right way to get there.

As much as I desire for bioregionalism to be swept up and magically applied to communities with the snap of a finger, its immediate purpose rests in the hands of the reader. Bioregionalism is ultimately about being mindful of our immediate surroundings. It's about noticing the disconnect between humans and nature and placing emphasis on natural biorhythms. It's about recognizing that such a deep grounding factor of all cultures, food, has been reduced to such an extent that it's acceptable to sustain our bodies with factory-made foodstuffs, steal habitat from other living things, and destroy for the sake of efficiency. This analysis seeks to inform, not convince. My hope is that this work is a catalyst for greater awareness and mindful choices. But most of all, I hope that this information is shared. Knowledge can only become reform if its supported, and support comes from experience and understanding. There are steps that anyone can take to improve our food system and move towards a more respectful relationship with both the earth and local indigenous communities. Every person would benefit from learning about what foods grow in their region and how to grow their own food resiliently and sustainably. We all would benefit if more people supported local producers and farmers, took time to educate themselves about local indigenous communities, and tried cooking with wild foods more often. This meal demonstrates that the simplest foods

can be coaxed into something delicious, all while respecting cultural identity in food, and the ecosystem where it was grown. Even a little action is advocacy.

The current food system is a 'wicked problem', which I have mentioned before. 'Wicked problems' aren't just a socio-political phenomenon – they have ties in cultural stigmas as well, like health and wellness definitions and religious theology. Food is one of the most powerful markers of both personal and shared culture. Addressing a change in this sphere becomes even more fragile because it means asking individual people to shift their cultures to fall in line with that that adheres to a bioregional model. These lenses of indigeneity and culture, environmental sustainability, and economic vitality are a way in which the global population can observe and evaluate the interwoven nature of land, culture, and socioeconomics. While no one sphere exists without the other, no one can be dominant either. In the food system especially, there must be public understanding that food cultures, land use, history, and economy cannot be reduced to borders and dollar signs. Bioregionalism through these lenses has the capability to reconfigure the food system in a way that reflects the values of natural resources and heritage, while upholding environmental stewardship.

The meal itself brought many lessons with it. I experienced how access to wild foods is extremely limited without the necessary knowledge. Many of the ingredients I procured had to be harvested, grown, or identified for me by someone else. The time and energy it took to come about these ingredients was also an eye opener; it would be very difficult for our current societal model to adapt this way of life unless great shifts took place. Making my own acorn flour took 2 weeks, patience, and careful observation. Selecting foods that only came from my region proved difficult at first, however it did also open my eyes wider to how a-seasonal, year-round cultivation is taken for granted. For example, I had originally planned to use King Bolete

mushroom in the second course, however I soon found out that this specific variety is not available until deeper into spring. Even though I couldn't harvest it for this project, my eagerness to cook the King Bolete that much greater.

I value the power of food, the wisdom of nature, and necessity of connection. The only way for me to encourage change is to share that passion and value with others, in hopes that they too might find the same power within themselves. At our core we are members of this ecosystem, and the world will go on if we fail to feed ourselves sustainably and replenish natural resources properly. However, the importance of connection and reinvigoration of culture in the way that we eat holds more power than we can realize, unless we relinquish the obsession for control over it. Everyone should have the opportunity to live their lives with a rich connection with what they eat and the land that provides it. We cannot deny what is vibrant, what exists without human intervention – what is alive. Food is a link that ties biological synergy to cultural constructions. It's time to give it the attention and care that it deserves.

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