GEOGRAPHICAL INDICATIONS AND THE PROTECTION OF INDIGENOUS RESOURCES: AN EXAMINATION OF HOW GEOGRAPHICAL INDICATIONS CAN BE UTILIZED AS A TOOL TO PROTECT INDIGENOUS RESOURCES FROM OUTSIDE EXPLOITATION AND GENERIC IMITATIONS

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INTRODUCTION

Indigenous peoples are increasingly faced with the challenge of protecting their intellectual property rights, and, more specifically, their traditional knowledge and resources, against outside exploitation, generic imitations, and unfair patent challenges. "Thousands of crop varieties grown for hundreds of years by the world's resource-poor farmers are under threat-not from new diseases or insect pets, but something much more insidious. They are being targeted by western companies, eager to develop new products based on the traditional knowledge of indigenous peoples."[1] The economic, environmental, and cultural effects are devastating. Because of the link between indigenous peoples and their environment, protection of their plants and crops is crucial, not only in terms of protecting the environment, but in terms of the preservation of their cultural heritage as well. Particularly in the face of globalization, as pharmaceutical companies have greater access to remote regions of the world where native plants and crops are cultivated, and as researchers are more and more interested in picking the minds of tribal peoples concerning the usage of these plants, the challenge is to find a way to protect these resources from outside abuse and generic imitations that are harmful to tribal peoples, financially, environmentally, and culturally. Their right to ownership over their knowledge and resources is continually being tested as corporate actors are attempting to patent native plants and crops for financial as well as medicinal purposes. Not only are tribal peoples not consulted regarding the usage and importance of these resources, but, more often than not, they are not compensated for this knowledge. As a result of this "biopiracy", tribal peoples are rapidly witnessing the destruction of their ecological and cultural environment.

Within the international context, a regulatory regime, outlined in the TRIPS Agreement, has emerged as a means to protect groups and individuals from unfair resource exploitation. It is true that the system is far from perfect, as it tends to be based on a much more modern paradigm that is geared towards individual rights, as opposed to community rights (which tribal communities tend to emphasize). However, geographical indications, which are one of the protective instruments outlined under this regime, have great potential in the context of protecting tribal resources. TRIPS defines geographical indications as the following: "Those names 'which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given

[1] Biopiracy threat to traditional crops, New Agriculturalist, www.new-agri.co.uk.

quality, reputation, or other characteristic of the good is essentially attributable to its geographic indication".[2] Generally speaking, geographical indications are useful for a number of reasons:[3]

1. They could protect and reward traditions while allowing innovation.
2. They will emphasize the relationships between human cultures and their local land and environment.
3. They are not freely transferable from one owner to another.
4. They can be maintained as long as the collection tradition is maintained.

The objective of this paper is to demonstrate how the current system of protection, despite its imperfections, can, and should, be used to protect native plants and crops, and ultimately, indigenous culture and heritage. This paper will look at a number of components regarding geographical indications. A brief examination of what geographical indications are will be done. It will also be important to look at instances in which geographical indications have been useful. Here, the example of the European Union, and more specifically France, will be analyzed. Many European countries, in their own quest to protect tradition and culture, have staunchly supported and promoted the protection of appellations of origin. For this reason, the United States should use the European, and French, systems as a model of protection and prevention in the future. Lastly, two specific cases in which indigenous plants and crops of the Americas could potentially be protected by the system that has been established will be addressed. These cases are surrounding Hopi blue corn and the Enola bean of northern Mexico. The cases are different, yet it is clear that if applied, geographical indications could be beneficial to Hopi and Mexican farmers who have been impacted as a result of outside exploitation and generic imitation attempts.

BACKGROUND ON GEOGRAPHICAL INDICATIONS

Historical Background

> *"Since the earliest days in Europe, geographical indications were used to protect certain industries. As local reputations grew for certain products, use of the place names became attractive. To some extent such markings served as a warranty for the quality of the goods. To ensure the locale's reputation, the local industry would agree to certain standards of protection. The granting of a right to use a geographical term associated with particular goods exclusively to the producers within a certain region served to limit competition, especially from producers outside that region".*[4]

The idea of establishing appellations of origin for goods deemed to be regionally unique and authentic developed in Europe. France was the first country to pass legislation dealing specifically with the protection of designations of origin. During the 19th century, the French government began to penalize anyone who used false identifications on his or her product labels. A century later, the government elaborated on its protective regime by adding an element of reputation and quality to how protection should take place. Under new regulations passed, as long as all the components used to make the good originated in the region used in the appellation, there was no

[2] TRIPS Agreement on Trade-Related Aspects of Intellectual Property Rights, Section 3: Geographical Indications, http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.
[3] Dr. R.A. Mashelkar FRS, The Role of Intellectual Property in Building Capacity for Innovation for Development: A Developing World Perspective, WIPO, May 2000.
[4] Christine Haight Farley, Conflicts between U.S. Law and International Treaties Concerning Geographical Indications, Whittier Law Review, 2000.

penalty. This was the first time quality and geographic origin were linked within an organized legal framework.

Since the beginning of the 19th century, when legal protection was first officially discussed in Europe, a variety of legal instruments addressing intellectual property rights as they relate to appellations of origin have emerged. Under the Paris Convention for the Protection of Industrial Property of 1883, paragraph 2 of Article 1 states: "The protection of industrial property has as its object patents, utility models, industrial designs, trademarks, service marks, trade names, indications of source or appellations of origin, and the repression of unfair competition".[5] This was certainly the first mention of appellations of origin. More specifically, the Convention noted that importing goods with names or indications with false originations was prohibited. There were 117 signatories to this Convention, including the United States. The Madrid Agreement for the Repression of False or Deceptive Indications of Source of 1891 expanded on the Paris Convention in that it prohibited both the importation of such goods with false indications, as well as the actual usage of these appellations. This Agreement took a more in-depth approach to protection than did the Paris Convention. The Lisbon Agreement for the Protection of Appellations of Origin and Their International Registration is another more recent international instrument dealing with protective measures. It was adopted in 1958 "as an attempt to achieve effective and enforceable protection for geographical indications".[6] The idea for a registration process through which member countries would have to go emerged out of the Lisbon Agreement. Countries were to register their indications with the World Intellectual Property Organization (WIPO) in order to gain protection against other signatory countries. Of course, not many countries signed onto this Agreement, and by 1996, there were only 17 signatory countries. The final agreement addressing specific protective measures for geographical indications is TRIPS, which deals with various kinds of intellectual property rights. Articles 22, 23, and 24 of TRIPS address the issue of geographical indications specifically, and these articles will be discussed in further detail below.

Geographical Indications and TRIPS

There exist a number of instruments that are geared towards protecting geographically unique products, both at the international and regional levels. Here, it will be important to look into the TRIPS Agreement, which is the only contemporary international instrument that addresses the importance of indication protection. The TRIPS Agreement was originally developed by the United States in order to address all intellectual property rights concerning international trade law. Though the importance of protection is still up for debate under the current protective regime, geographical indications are considered to be important within TRIPS. The Agreement "aims to stimulate and ensure fair competition and to protect consumers, by enabling them to make informed choices between various goods and services".[7]

There are three articles within the TRIPS Agreement that address geographical indications in particular, and these will be discussed briefly.

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[5] Paris Convention for the Protection of Industry Property, 1883, revised at Brussels on December 14, 1990.
[6] Stacy D. Goldberg, Who will raise the white flag: the battle between the United States and the European Union over the protection of geographical indications, University of Pennsylvania Journal of International Economic Law, Spring 2001.
[7] Stacy D. Goldberg, Who will raise the white flag: the battle between the United States and the European Union over the protection of geographical indications, University of Pennsylvania Journal of International Economic Law, Spring 2001.

Article 22: Article 22 addresses the need to protect geographical indications. Paragraph 2 states that: "In respect of geographical indications, Members shall provide the legal means for interested parties to prevent:

a) the use of any means in the designation or presentation of a good that indicates or suggests that the good in question originates in a geographical area other than the true place of origin in a manner which misleads the public as to the geographical origin of the good;

b) any use which constitutes an act of unfair competition within the meaning of Article 10*bis* of the Paris Convention (1967)."[8]

When a connection between the actual characteristics of the product can be made with the geographical location of origin, protection of the indication is granted. Moreover, this article addresses the importance of making sure that consumers are protected from false advertising, that is, from names that make it seem like the product is from a particular region when, in fact, it is not. WTO member countries cannot use false or deceptive indications and individuals and countries are prohibited from registering false appellations.

Article 23: Article 23 provides additional protection of geographical indications, dealing specifically with wines and spirits. Again, false appellations are prohibited; however, in this case, the prohibition deals directly with the wine and spirit industry. "Even when the true origin of the goods is indicated or the geographic indication is used in translation or accompanied by expressions such as 'kind', 'type', 'style, 'imitation', or the like"[9], the appellation cannot be used. As a result, countries and individuals must make sure not to mislead consumers by adding extra information to the labels on wines and spirits in order to get around copying or imitating another product. Additionally, it states that, "in the case of homonymous geographical indications for wines, protection shall be accorded to each indication, subject to the provisions of paragraph 4 of Article 22. Each Member shall determine the practical conditions under which the homonymous indications in question will be differentiated from each other, taking into account the need to ensure equitable treatment of the producers concerned and that consumers are not misled".[10]

Article 24: Article 24 addresses international negotiations in particular. It "calls for continued negotiations to further protect geographical indications for wines. The Council is ultimately responsible for the review and compliance of the measures and standards put forth in the above mentioned Articles. Moreover, members agree not to lessen protection for geographical indications that existed in their respective countries prior to the World Trade Organization Agreement".[11] Furthermore, this article deals with cases in which members are not required to acknowledge already existing geographical indications. If a country used a certain appellation for ten or more years before the Uruguay Rounds took place, another country is allowed to use the

[8] TRIPS Agreement on Trade-Related Aspects of Intellectual Property Rights, Section 3: Geographical Indications, http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.
[9] TRIPS Agreement on Trade-Related Aspects of Intellectual Property Rights, Section 3: Geographical Indications, http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.
[10] TRIPS Agreement on Trade-Related Aspects of Intellectual Property Rights, Section 3: Geographical Indications, http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm.
[11] Leigh Ann Lindquist, Champagne or champagne ? An examination of U.S. failure to comply with the geographical provisions of the TRIPS Agreement, Georgia Journal of International and Comparative Law, 1999.

same appellation. Additionally, if a country uses an existing appellation in "good faith", it may continue to use it as well.

EUROPEAN UNION AND FRANCE

In addition to the TRIPS Agreement, there are a variety of protective instruments that have been developed at the more regional level as well. For instance, the European Union has established a well-recognized and extremely effective regime which supplements the three articles mentioned above. Europeans, and most particularly the French, have always supported the notion of protected designations of origin, mainly because of their interest in maintaining traditional and culturally authentic products and practices. As was mentioned above, "since the middle of the 20th century, in several countries of the European Union, public institutions have played an important role in the recognition and encouragement of coordinated steps of product promotion, in particular for regional products".[12] As a result, the regulatory regime in Europe, based on a strong institutional framework and structure, has been rather successful in granting protection to a great number of agricultural and foodstuff goods, that is, goods deemed to "have a history" within the European Union.

ECC Regulations 2081/92 and 2082/92

In July of 1992, Council Regulations (ECC) 2081/92 and 2082/92 were passed. Regulation 2081/92 relates specifically to the protection of protected designations of origin (PDO) for agricultural products and foodstuffs, while Regulation 2082/92 addresses Certificates on Specific Character for agricultural products and foodstuffs.

The primary objectives of Regulation 2081/92 are:[13]

- Establish common rules on the protection of geographical indications and designations of origin in order to develop certain specific quality products from a distinct geographical area.
- Encourage the diversification of agricultural products as part of rural development.

This Regulation addresses agricultural and foodstuff goods "for which there is a link between the characteristics of the product and its geographical origin. It does not apply to products of the winemaking sector or to beverages and spirits".[14] In doing so, it differentiates between geographical indications and protected designations of origin.

The Primary objectives of Regulation 2082/92 are:[15]

- Encourage the diversification of agricultural production by developing certain specific products in a context of rural development.
- Establish for this purpose rules on obtaining a Community certificate of specific character for agricultural products and foodstuffs.

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[12] Dominique Barjolle, Bernard Lehmann, Protected Designation of Origin and Institutions, 52nd EAAE Seminar on typical and Traditional Productions: rural effect and agro-industrial problems, Parma, Italy, June, 1997.
[13] Agricultural policy and rural development: Protected Designations of Origin and Geographical Indications, www.rural-europe.aeidl.be/rural-en/euro/11-3-2.htm.
[14] Protected Designations of Origin, Agricultural policy and rural development, www.rural-europe.aeidl.be.
[15] Certificates of Special Character, Agricultural policy and rural development, www.rural-europe.aeidl.be.

This Regulation also addresses a very specific registration process for agricultural and foodstuff products. As opposed to protected geographical indications and protected designations of origin, it deals specifically with what is referred to as a Community Certificate of Special Character. This Certificate demonstrates that a foodstuff product has a certain distinctiveness from other foodstuff products that are similar in nature.

The Regulations outline a very complex registration process through which countries or individuals must go in order to apply for protection. Both registration processes take place through a community registry. Under Regulation 2081/92, if a product is given a certain appellation of a particular region or locality, and registered in the EU under that name, no other country is allowed to give its products the same appellation. The ultimate objective of this Regulation is to "harmonize protection of geographical names for all food products other than wines and spirits and to clarify the market and give solidly effective protection to producers and consumers against practices and imitations that misuse these geographical names".[16]

There are two specific registration processes outlined in Regulation 2081/92. If an individual or entity chooses to go through the "normal" procedure, he or she must submit an application that includes an extremely detailed outline to a member state representative. In this report, a number of issues regarding the respective product must be addressed, including: "the name of the product; its description (raw materials, main physical, chemical, microbiological, and/or organoleptic characteristics); the exact borders of the geographical areas; the method of production; the elements justifying the link with the place of origin; the references concerning the inspection structure or structures; the specific labeling elements related to the equivalent traditional national indication or indications; any requirements that need to be met".[17] The application is then sent to a Committee that processes the application and either accepts or rejects it within a six-month period. If the Committee accepts the application, the indication is then printed in the Official Journal of the Commission.

Opposition of the application on the part of other countries and individuals is allowed under the normal procedure. In order to oppose an application, a legal individual (from the European Union) may send a statement of opposition to the "competent authority" in his or her respective member state, and this representative will examine the statement. Essentially, some sort of demonstration of "legitimate concern" must occur. Of course, as long as no individual or group opposes the application, the registration process can take place. After the six-month period, if no opposition occurs, the appellation is officially registered in the Register of Protected Designations of Origin and Protected Geographical Indications. Once an indication is published, no other person or group can attempt to register the same kind of product under the same name. An "accelerated" registration procedure also exists under Regulation 2081/92. Generally, this involves the member state going directly to the Committee itself, and "informing" them of which products they want to be registered and published. With this procedure, no member states can object to the applications.

Regulation 2082/92 outlines a slightly different process through which individuals and groups must go to register their appellations of origin. Applicants must submit a report which includes the following about their product: "the selling name, the production rules, a description of the food and

[16] Proposal for a Council Regulation Amending Regulation (EEC) No 2081/92 on the Protection of Geographical Indications and Designations of Origin for Agricultural products and Foodstuffs, EC Document, Brussels, 2002.
[17] Community system for the protection of foodstuff products whose characteristics are based on geographical origin, www.rural-europe.aeidl/ne/rural/euro/11-3-2.htm.

its main characteristics, the elements that can be used to evaluate the traditional character, and the requirements and procedures of inspection of the specific character."[18] In terms of who receives this application, applicants are required to send it to the in-country "relevant authority", who makes sure that all components are covered, and then sends it to the Commission. The rules for opposition are similar to those outlined above.

French AOC System

Of all the European Union member countries, the French system of appellation protection is the most extensive in Europe, and perhaps in the world, mainly because the French tend to pride themselves greatly on their traditional culinary and farming practices. This system should be used as a model, primarily due to its effective organizational structure, as well as to its emphasis on the rights of the farmer. The AOC system of protection was first established in 1935, when l'appellation d'origine controlée was introduced. Originally, when the system appeared, it dealt primarily with wine production. As new technologies became available, market competition increased, which made it difficult for many local producers to keep up with the constant influx of technologies in a world that values mass production capabilities. As a result, wine growers and producers set out to differentiate between their own wines and those from others on the market. They were particularly interested in maintaining their own traditional winemaking techniques, as opposed to those that allowed for mass production. Eventually, the AOC system of protection was extended to a variety of other traditional goods, including foodstuff and agricultural products.

There are a number of issues that emerge when examining the French AOC system that are worth noting. Two issues that deserve particular attention here are: 1) product differentiation and 2) terroir. Generally, there are three factors that differentiate similar products from one another. Firstly, there is the "ecological dimension", which refers to all the environmental factors that go into producing and processing a product. Secondly, there are "sensory properties", which entail the actual taste and smell of goods. Lastly, consumers tend to be interested in the "geographic origin" of the product they are purchasing. Many products are typical of and unique to a particular region or country in terms of the raw materials used as well as all of the specific production techniques of the local people. For this reason, appellations that specify the above listed details are key to guaranteeing authenticity. This, in turn, plays an extremely vital role in product differentiation within the competitive market. Today, given that high quality products will always be in competition with each other, particularly in light of the current globalization trend, maintaining the difference between high and low quality products is extremely important for smaller, local, and more traditional producers and farmers. As will be become clear later, product differentiation will also be key to protecting indigenous resources.

The notion of terroir is perhaps the most important concept to understand when examining the AOC system. It is through an in-depth examination of terroir that similar products can be differentiated. "The true concept is not easily grasped but includes physical elements of the vineyard habitat-the vine, subsoil, siting, drainage, and microclimate. Beyond the measurable ecosystem, there is an additional dimension-the spiritual aspect that recognizes the joys, the heartbreaks, the pride, the sweat, and the frustrations of its history".[19] Generally, terroir takes into account all natural, as well as human, factors involved in the production and processing of goods. It is all these factors which sort of create the identity of the product in the end. A great number of traditional French products are unique because of the characteristics of their respective terroir.

[18] Certificates of Specific Character, Agricultural policy and rural development, www.rural-europe.aeidl.be.
[19] James E. Wilson, Terroir: The role of Geology, Climate, and Culture in the Making of French Wines, 1998.

Identity and product specialization have everything to do with the concept of terroir. For instance in 1996, a scientific study on terroir was carried out in France. Researchers looked into the impact of terroir on the flavor and taste of various products, especially on wines and cheeses. They found, "beyond doubt that specific organic constituents present in minute traces gave their inimitable flavors to the local products".[20] The local products that they tested in France had different tastes, given the very specific soil, chemicals, and meteorological patterns in the region in which they were produced and prepared. Clearly, the AOC system is fundamentally based on the notion of terroir and resultant product differentiation.

Regarding the functioning of the AOC system itself, the primary institution in France dealing with concerns of appellation is INAO (L'Institut National Appellation d'Origin/The National Institute of Origin Appellations). INAO was created in 1935, though, at the time, was called the Comite des Appellations d'Origine (National Committee for the Origin Appellation). It was in 1947 that it actually came to be INAO. The main objective of the Institute has been to recognize appellations of origin, as well as to ensure the protection of registered AOCs. Currently, there are four Committees that deal with various products, including wines and spirits, dairy products, agricultural goods, and many other foodstuff products. These committees are the following: Comite National des Vins et Eaux de Vie, Comite National des Produits Laitiers, Comite National des Prodiots Agro-Alimentaires, and Comite National pour les Indications geographiques protégées. It is ultimately INAO that brings AOC applications to the Minister of Agriculture. If they are accepted, it is the Minister who signs the decree. Currently, INAO works alongside numerous organizations worldwide that deal with geographical indications, such as the WTO, as well as a variety of European Union institutions.

The application process through which producers must go is rather lengthy. Producers are in charge of bringing their case regarding the product they wish to register to INAO. In order to apply for AOC protection, there is a list of issues that must be addressed in a written report. Producers must demonstrate the traditional nature and production techniques of the product, as well as the value and quality of the product, all due to the geographic region from which it has come. The applicant must also inform INAO of terroir-related issues, that is, the geological, climactic, and production requirements of their traditional product. Specifically, the report must include the following:[21]

1) Gives reasons that justify their request.
2) Brings the proof of the name's use and of the product's reputation, giving historical data.
3) Establishes the link between terroir and the product, showing the natural, technical, and human factors that confer the unique characteristics to the product.
4) Includes an economic analysis.

After a representative from INAO has received the application, the request goes before a national committee that hears it and validates the request, that is, if the request is worthy. This national committee is similar to a parliament in that it is made up of professionals from a variety of societal sectors in France. These representatives are in charge of tasting the product and testing the quality in order to rate the excellence and value. Once a request is deemed to be AOC-worthy, the

[20] Why can you only make champagne in Champagne and cognac in Charente, adapted from article by Fabien Gruhier, Le Nouvel Observateur, No. 1726, 410, December 1997.
[21] Celine Albert, The Appellation d'Origine Controlee (AOC) and other official product identification standards, School of Higher Education in Agronomy of Dijon, University of Kentucky, September 1998, www.winedine.cln.com.

standards for the product are published, and the producers are required to respect the standards that the committee has approved. If the producers fail to comply, the appellation protection is no longer granted.

The standard by which each producer given appellation protection must abide specifies a variety of important components. For wines and cheese, as well as for every other AOC product on the market, the criteria that producers and growers must follow are extremely strict. For instance, in the case of French cheese, producers must follow rules applying to the species of cows that are traditional for the climate and terrain of the region producing this specific cheese, to the feed given to the cows, to the milk being made into cheese (it must be raw), to the transportation of the milk (it cannot travel more than a given distance prior to fabrication), to the manner of production (it cannot be turned with a certain frequency), and to specific requirements of taste, texture, and smell. In the geographical area of Comte, which is known as the Jura Massif, any cheese produced outside of this region, and not following certain norms will not be considered to be Comté, an AOC cheese. These standards are the following:[22]

1. Only cows of the Montbeliard breed are authorized to produce milk used for making Comté.
2. There must be one hectare of natural pasture for each animal to graze on.
3. Soil fertilization is limited so as to preserve the richness of the natural flora.
4. Cattle feed must e natural and totally free from fermented products (no ensilage)
5. Milk straight from the cow must be collected daily and transformed within 24 hours, without additives, preservatives, or coloring.
6. For transforming the milk into curds, the cheese maker must only use natural fermenting agents.
7. In order to bear the name "Comté", the cheese must be matured for at least 4 months in a special cellar.

The Comté Technical Committee is charged with ensuring that these standards are met, as well as with carrying out routine inspections. The producers themselves, in addition to representatives from INAO, will also go through their own set of inspections to make sure that every stage of the production process follows the above-mentioned set of criteria.

Typically, in order to fill out this report, producers and farmers consult what are referred to as syndicats de defense (producers' organizations/unions). The syndicats discuss the conditions of classification firstly with the producers, then with INAO. The syndicats are well informed about the functioning of the system itself, as well as about any regulations and alterations surrounding market practices. There are hundreds of thousands of local syndicats that work in partnership with farmers and producers in their respective regions in order to both guarantee the highest quality goods, as well as to present the case for appellation protection, if necessary. These entities act as coordinators throughout the entire process, and assist producers and farmers in their dealings with INAO. Additionally, they control the actual production process. For instance, with wine, the local syndicat will control which grape varieties within a particular region are AOC-worthy. In this sense, the syndicat is in charge of deciding the parameters of the AOC. Additionally, the producers' organizations are viewed as relatively independent from the government of France itself, which would be key to the functioning of a similar system to protect indigenous resources in the Americas.

[22] Label of Origin Guaranteeing Quality (AOC), www.comte.com/english/prairie_aoc2.html.

There are a number of more regional and departmental organizations as well, which the local syndicats regularly consult. For instance, FNSEA (Federation Nationale des Syndicats d'Exploitants d'Agricoles) was the first departmental agricultural syndicat/union in France, and since 1946, has assisted those at the local level in voicing their concerns in a more public and large-scale forum. The Federation is in charge of representing rural community interests at the national level, addressing agricultural and farming issues in particular. It is made up of approximately 600,000 farmers in addition to 38 specialized organizations and associations that represent the interests of specific groups of people. Generally, the partnership between the local syndicats, FRSEA (regional), and FDSEA (departmental) is a crucial part of the French protective regime. It is this organizational and institutional partnership that links local producers and farmers to French public and administrative entities who can be of great assistance, such as the Chambers of Agriculture, Credit Agricole, Mutualite Sociale Agricole, and the Cooperatives Agricoles. The FNSEA is charged with carrying out the following: [23]

- Ensure that the farmers are remunerated fairly based on their work and their capital.
- Improve all structures of production.
- Improve the statutes of agricultural businesses.
- Promote the renewal and revitalization of generations and the involvement of young farmers.
- Normalize all economic and financial forces.
- Develop greater means of training/teaching, social promotion, research, and the diffusion of technical, economic, and social techniques and practices to farmers and producers.

Overall, though many have considered it to be a bit too bureaucratic, the AOC system has been successful, primarily because of its institutional structure. In fact, the European Union emulated the French in 1992 when it developed Regulation 2081/92. The AOC system benefits everyone, which is why it should be used as a model for tribal populations in the fight to preserve and protect their traditional food and agricultural products.

Firstly, consumers benefit in that it helps distinguish between high and low quality products. As with the international and regional protective regimes that have been discussed, one of the main objectives of the French system has been to protect consumers from deceptive indications. Additionally, the objective has been to guarantee higher quality products for consumers. Secondly, the regime they have set up takes a much more environmentally conscious approach to production and preparation. The goal is to help traditional farmers and producers produce their goods in a more sustainable manner. Helping producers and farmers develop more sustainable practices is key to the French regime. Thirdly, this system is economically beneficial to producers. In order to comply with the AOC standards set forth in the "cahiers des charges", the costs to producers are much greater. As a result, producers are forced to charge higher prices for their products to make up for the elevated production costs. This, in turn, means that higher quality products tend to be sold at higher prices, which means that this regime is financially beneficial to producers and farmers in the long run.

Furthermore, the AOC system is an excellent way for farmers to enter into the market. Because their products are classified as unique once they are given AOC status, many producers and farmers from poorer areas who normally do not have access to the market are allowed entry. Moreover, all raw materials and goods produced are considered to be under the ownership of the farmers, which "gives them a "monopoly power over clearly segmented markets for certain fine

[23] 50 Ans d'actions: Les valeurs de la FNSEA, www.fnsea.fr/Presentation/valeurs.htm.

goods".[24] Giving farmers this power is the ultimate goal of the AOC system, the belief being that they deserve a right to their know-how and traditional production techniques. Generally, with the French *Code de la Consommation*, "farmers enjoy: 1) the privilege of producing and marketing an AOC-protected wine or cheese, 2) rights and claims against others who misappropriate the informational value of an AOC, 3) the power to challenge an AOC not granted in accordance with previously established geographical criteria, and 4) immunity against the transformation of an AOC into a generic label resting in the public domain".[25]

RELEVANT CASE STUDIES

Given the specifics of the above-mentioned protective regimes, it is now important to turn to two cases in which the current regime can and should be applied. There are a number of current cases which could be sited as examples. However, there are two that are of utmost importance to the present discussion given the cultural and traditional value placed on the products. One involves the plight of Hopi blue corn farmers who are witnessing the decline of their practices and their traditional blue corn in the face of modernization. As generic imitations of blue corn are emerging in the marketplace, the need to protect the most authentic and true form of Hopi blue corn has arisen. The second example involves the very controversial patent case surrounding the yellow bean in the United States. Though the latter has become a well-known case within the patent community, it is certainly arguable that geographical indications would be beneficial to Mexican farmers.

Hopi Blue Corn

> *"In the Americas there is one grain that was and is essential to life, maize. This has been called the staff of life, and has been characterized as the 'blood' of the people. The production of this grain has provided the calories that enabled populations to grow, in some cases, to immense proportions. Maize has allowed the great civilizations of the Americas to build some of the most spectacular prehistoric cities, and monuments in the world. There is a rich amount of lore and stories that surround this most important staple. It has become more than just that which feeds the populations that created these spectacular and fascinating cultures of the Americas. It has become an indicator of well-being, and the mother of all the people. In some cases this is what the people are made of. Scientifically, the people made this productive plant what it is today, and this symbiotic relationship has been one of great importance."*[26]

Maize (corn) has always been linked in an important way to American Indians, and particularly to the Hopi Indians. For the Hopi, blue corn has played a symbolic role in their lifestyle, not only for culinary purposes, but for spiritual and traditional purposes as well. The Hopi have also developed their own cultivation and harvesting techniques, which makes Hopi blue corn unique in preparation and nature. That is, given the geological and arid climactic conditions characteristic to their land in northern Arizona, Hopi farmers have developed their own way of growing blue corn through "dry

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[24] Jim Chen, A Sober Look at Appellations of Origin: How the United States Will Crash France's Wine and Cheese Party, Minnesota Journal of Global Trade, winter 1996.
[25] Jim Chen, A Sober Look at Appellations of Origin: How the United States Will Crash France's Wine and Cheese Party, Minnesota Journal of Global Trade, winter 1996.
[26] Maize Utopia: The Importance of Maize to Culture in the Americas, www.geocities.com/CapeCanaveral/Hangar/3288/ucopia.htm.

farming". This form of farming "depends completely on natural precipitation – winter snows or summer monsoons. Corn and bean fields are usually located in areas to maximize surface moisture: at the foot of the mesas, on sand slopes, in small canyons, along alluvial plains in washes, and in the valleys between mesas."[27] Additionally, "Hopi farmers do not plow their fields but leave rows of natural vegetation in the fields to retain soil and serve as windbreaks. Planting is usually done using a long digging stick in order to place the seeds deep in the earth without opening large holes in which will reduce ground moisture".[28] Likewise, the Hopi have perfected their own varieties of blue corn crops, and these varieties should be differentiated from others that are either generic attempts at blue corn or indigenous varieties harvested in other regions of the Southwest. Given this situation, there is a need to prevent Hopi farmers from having to unfairly compete with generic imitations. Moreover, there is a need to protect consumers from believing that the corn they are buying is of the Hopi variety when, in fact, it is not.

Unfortunately, over the last few decades, the main varieties of Hopi blue maize, such as the "standard" blue (sakwaqa'o), the "hard" blue (huruskwapu), and the "gray-blue" (maasiqa'o), are gradually decreasing. Additionally, as was mentioned briefly above, an increasing number of producers how have taken it upon themselves to develop more generic forms of blue corn to sell in the marketplace. This has been economically and cultural harmful to the Hopi Indians. Furthermore, many Hopi farmers have found that in order to maintain a place within the market, more mainstream techniques, in addition to more mainstream forms of blue corn, will be crucial. Not only has this resulted in the loss of control over blue corn, but it has also resulted in the degradation of Hopi culture. "The Hopi people of the southwest United States, the original caretakers of blue corn genetic stock, are particularly threatened by crop genetic diversity loss. Though evidence suggests that some traditional Hopi crops are grown by a larger percentage of Hopi farmers today versus 50 years ago, the total number of Hopi farmers has decreased, and so has cultivated acreages. Loss of crop genetic diversity among the Hopi is also due to replacement of traditional species by exotic hybrids, decreased use of traditional seed saving skills among the Hopi, and changes in crops' vulnerabilities to weeds, pests, and contamination. This modern dirge about traditional Hopi agriculture is being repeated in rural societies all over the world. Moreover, it is not only the native crop gene pools that are threatened, but ways of life and traditional farming wisdom".[29] As a result, a system that protects both the blue corn, as well as the Hopi culture itself, is necessary.

Though the United States has yet to fully conceptualize the importance of protecting indigenous resources from imitation products, the application of geographical indications within the context of indigenous resources, such as Hopi blue corn, is a means by which the prevention of generic imitations and cultural loss can occur. Again, under the TRIPS agreement, geographical indications are defined as the following: "Those names 'which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation, or other characteristic of the good is essentially attributable to its geographic indication." Given that the ultimate objective of geographical indications is to protect traditional products and know-how, applying geographical indications in the case of Hopi blue corn could potentially assist in the alleviation of some of the above-mentioned problems that Hopi farmers are facing.

Geographical indications are meant to ensure that consumers are not "misled" regarding the origin of the product. In the case of Hopi blue corn, because there are several different varieties of blue

[27] Farming, www.hopi.nsn.us/Pages/Culture/farming.html.
[28] Farming, www.hopi.nsn.us/Pages/Culture/farming.html.
[29] Conserving Native Seeds and Culture: Grassroots Seed Conservation Emerges, http://fadr.msu.ru/rodale/agsieve/txt/vol5/4/art1.html.

corn, many of which are generic versions not produced by Hopi farmers themselves, the usage of geographical indications would be useful here. In gaining protection under this legal concept, Hopi farmers would be guaranteed ownership over their blue corn. Likewise, with regards to maintaining a place within the market economy, Hopi farmers would not be subject to unfair competition with generic varieties of blue corn that were not "produced, processed, or prepared" in the same manner as their own. As long as the link is made between their production practices and the origin of the blue corn, Hopi blue corn could be protected. Additionally, consumers interested in buying Hopi blue corn specifically would know that their purchase was, in fact, authentically Hopi. With an emphasis on geographical origin, the reputation and quality of Hopi Blue corn would be emphasized, which would benefit consumers, as well as the Hopi blue corn growers themselves.

It has also been noted that the European Union, and France in particular, has developed a very extravagant system geared towards protecting appellations of origin, and these regimes should be used as a model in the case of Hopi blue corn. Clearly, the emphasis has been placed on rural development, on assisting farmers, and on encouraging the production of high quality products, quality being based on origin. Here, the French notion of terroir is relevant. Again, terroir relates to all the natural and human components that are involved in processing and production techniques. As was mentioned earlier, the natural environment in which Hopi blue corn is harvested and grown is very unique to the Hopi Indians. Their dry agriculture techniques are a result of the arid land on which they live, the scarcity of water resources, and the "fragility of the soil"[30], these all being components of terroir in the case of the Hopi. For this reason, the blue corn they grow and sell is very unique, as it is processed and produced in a very specific way given the natural environment. Consequently, the flavor of Hopi blue corn is different, as is the quality. These very unique and authentic components of Hopi blue corn deserve protection, and the French AOC system outlined above should be used as an example of how this protection could take place. It is true that France has established a very intricate system that relies on constant communication between the primary government body, INAO, and the more regional and local producer organizations. However, if the Hopi mobilized at the most local level in an effort to protect their traditional variety of blue corn from generic imitations, this would potentially preserve their farming culture, and the products themselves.

In order for such a complex model to be used, a number of steps would have to be taken by both Hopi farmers and the agricultural bodies within the United States government. The first step would be to understand each specific component that goes into the process of producing Hopi blue corn. A set of standards would have to be developed. Hypothetically, these standards would then be presented to a larger national body which would then assess the application. Of course this would require that the United States develop a rather extensive protective regime, similar to that implemented in France and other European countries. Fortunately, though the United States has been hesitant in the past, as the wine industry in the West has become more prestigious throughout the world, a regime aimed at protecting local and traditional producers, whether they be winegrowers or blue corn farmers, is not as farfetched an idea as before. Such a system based on protecting local interests at the national and international levels would be extremely beneficial to the Hopi Indians. Like farmers in France, Hopi farmers would be able to differentiate Hopi blue corn from other versions, to maintain a reputable spot in the blue corn market, and to preserve their farming practices, their resources, and their culture.

[30] Hopi Fry Farming, www.geocities.com/Yosemite/Trails/1942/h_far_19.html.

Yellow Bean Patent Case (Enola bean)

As corn blue corn has been associated with the southwestern United States, several different varieties of bean have been associated with Mexico, including the yellow bean. "The Mexican yellow bean has been grown in Mexico for centuries, developed by generations of Mexican farmers and more recently by Mexican plant breeders."[31] Clearly, the yellow bean has played an extremely symbolic role in Mexico, particularly in northern Mexico. A study carried out in the midst of this controversial case found that over 90% of the people in northern Mexico consume yellow beans, and this percentage is extremely significant.

Unfortunately, like Hopi blue corn farmers, Mexican farmers cultivating the yellow bean have experienced a great deal of unfair competition in recent years. Mexican farmers have seen a decline in their exports primarily as a result of a patent filed and won by Larry Proctor of POD-NERS, a seed company based in Colorado. Approximately a decade ago, Mr. Proctor traveled to Mexico, purchased a bag of yellow beans, and soon after filed for a patent on the beans. He went on to cultivate them in the United States, and later claimed that the varieties that he had produced and grown were unique and, thus, deserved protection. As a result, he claimed ownership over the "Enola" bean, stating that he had a monopoly over any yellow bean grown in the United States, even though he had bought them elsewhere and transported them to his home country. He obtained patent protection for Phaseolus vulgaris (dry bean) in April of 1999, and then filed a case against two different Mexican companies claiming that they had no right to export their beans to the United States because of his monopoly rights over them. Additionally, he received a U.S. Plant Protection Certificate (No. 9700027) on the Enola bean that same year.

The reaction to this patent certainly was not positive, particularly in Mexico. In December of 2000, the International Center for Tropical Agriculture in Colombia presented a case against the Enola bean patent, declaring, like many other rural development organizations, that is was a case of biopiracy, and unfair as a result. As one spokesperson from the Agricultural Association of Rio Fuerte in Mexico stated, "this patent has caused great economic hardship for farmers in northern Mexico."[32] Because the majority of farmers in northern Mexico are dependent on growing and selling this bean, both domestically and internationally, they have lost their place in the market as sales have decreased. CIAT declared that the bean had been "misappropriated" in that Mexico had a right over its genetic resources. Likewise, the Rural Advancement Foundation International articulated that, "the Enola bean patent is predatory on the rights of indigenous peoples and farming communities."[33] As of yet, the case, which was brought against Larry Proctor and his organization, has not been resolved. Interestingly enough, Mexico's National Research Institute for Agriculture, Forestry, and Livestock carried out a scientific study on the Enola bean. It was found that the yellow bean that Mr. Proctor had patented was the same genetically as the "Azufrado" bean that grows in northern Mexico.

Given the current issues surrounding the yellow bean and its geographic origin, it certainly is possible to make the case that geographical indications would be of use here as well. Many scholars have asked: why have indigenous communities not taken it upon themselves to patent their own plants and crops? Clearly, patents are not an option in this case, or in the case of many

[31] US-Mexico Legal Battle Erupts over "Enola" Bean, Rural Advancement Foundation International (RAFI) Release, http://web.greens.org/s-r/22/22-21.html.
[32] Enola bean patent challenged, RAFI Press Release, January 5, 2001, www.biotech-info.net/enola_bean.html.
[33] US-Mexico Legal Battle Erupts over "Enola" Bean, Rural Advancement Foundation International (RAFI) Release, http://web.greens.org/s-r/22/22-21.html.

products and goods associated with tribal communities for a number of reasons. As Global Exchange has stated, "for indigenous peoples whose traditional values and lifestyle are rooted in communal living, shared resources, and the interdependence of all living things, patenting life is an anathema to the very societies and reflect values of private ownership and the pursuit of wealth, which are not paramount in indigenous cultures."[34] For this reason, geographical indications are potentially a better solution. They would allow for communal ownership, which, in turn, would be much more beneficial to indigenous farmers in Mexico.

As the Commission on Intellectual Property Rights has articulated in its report on Traditional Knowledge, Access and Benefit Sharing, and Geographical Indications, geographical indications are geared towards a number of issues: 1) equity considerations, 2) conservation concerns, 3) preservation of traditional practices and culture, and 4) prevention of misappropriation."[35] In this sense, the case of the yellow bean from Mexico applies perfectly, particularly when the latter two issues are addressed. Given that it has been found that the Enola bean variety marketed in the United States has the same genetic make-up as the yellow beans found and grown in Mexico, Mexican farmers could make the case that in order for the true and original "Azufrado" to be sold on the international market, it must originate in northern Mexico. That is, it must be grown in the region, under certain circumstances, utilizing very specific harvesting techniques, and by a certain group of Mexican producers and farmers. Here, the French notion of terroir could be used as a model for understanding the importance of all the factors associated with the geographical origin of the yellow bean, which define the flavor and quality of the bean. Only when these requirements were met could the bean be marketed under the "Azufrado" variety. In general, though the process of gaining such protection would be complex, the protection itself would be extremely beneficial to Mexican farmers, as it would ideally prevent outside individuals or groups from claiming unlawful ownership over their crop.

CONCLUSION

Geographical indications are an important means by which traditional plants and crops can be protected from outside exploitation, generic imitations, and unfair patenting. Though the current intellectual property regime tends not to take into consideration indigenous concerns specifically, geographical indications are certainly a valuable protective instrument for a number of reasons:[36]

- Geographical indications are based on collective traditions and a collective decision-making process.
- Geographical indications protect and reward traditions while allowing evolution.
- Geographical indications emphasize the relationship between culture, land, resources and environment.
- Geographical indications are not freely transferable from own owner to another.
- Geographical indications are not subject to unconditional control by a private owner.
- Geographical indications can be maintained as long as the collective tradition is maintained.

[34] Biopiracy: a new threat to indigenous rights and culture in Mexico, www.globalexchange.org/campaigns/mexico/biopiracyReport.html.
[35] CIPR report, Chapter 4: Traditional Knowledge and Geographical Indications, http://www.iprcommission.org/papers/text/final_report/chapter4htmfinal.htm/
[36] David R. Downes and Sarah A. Laird, Innovative Mechanisms for Sharing Benefits of Biodiversity and Related Knowledge: Case Studies on Geographical Indications and Trademarks, UNCTAD, 1999.

Because of their emphasis on tradition, culture, and origination, they are different from other intellectual property rights. Geographical indications are geared towards community rights. Protection is not based on a single inventor, but rather on the region in which the product or plant was produced or grown. For this reason, geographical indications are much more community-oriented. In turn, this means that knowledge about cultivation and harvesting of certain plants and crops that are indigenous to certain regions and consumed by certain populations can be passed down from generation to generation while, in the meantime, be protected. Following the example of the European Union, geographical indications and designations of origin have given local producers in Europe a greater piece of the regional, national, and international markets, the focus being on rural development through recognition of quality and reputation based on locality. This would certainly benefit tribal populations in rural areas who tend to be more marginalized.

Clearly, the next stage of the IPR movement should involve a number of components, including expanding on the already existing regulations regarding geographical indications so as to focus more on indigenous and cultural concerns. As both the Hopi and Mexican cases have demonstrated, a great number of traditional plants and crops have faced unfair exploitation and patent challenges in recent years. Those within the IPR movement must note these transformations in their revisions and modifications of the current system. It will also be important to make use of successful models that are already in existence. Both the European and French models have been effective in terms of protecting the interests and resources of local farmers and producers from imitation goods. As was mentioned above, the significance of producer organizations in France is one way for local producers to mobilize and develop a common set of standards and requirements for their own traditional plants and crops, as well as to resolve any disputes and challenges they may face as a group. In the case of resources indigenous to parts of the Americas, the structure and organization of the French system should be recognized and perhaps imitated in the future. Lastly, it will be important to educate tribal communities about how their resources (and culture) can potentially be protected through intellectual property rights, and, more specifically, through geographical indications. A good majority of tribal peoples are very familiar with the predicament in which they find themselves, and yet they are not familiar with the regime that has been set up to protect them. Thus, it will be crucial to help tribal leaders understand how they can maintain a more sustainable livelihood through intellectual property law, while preserving their cultural heritage in the long run.