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PROTECTION OF INDIGENOUS OR TRADITIONAL KNOWLEDGE UNDER INTELLECTUAL PROPERTY LAWS: AN EXAMINATION OF THE EFFICACY OF COPYRIGHT LAW, TRADE SECRET AND SUI GENERIS RIGHTS

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Abstract: The article deals with the rules for a grant of interim measures in the context of EU law and its application in national judicial proceedings. It covers the key case-law of the Court of Justice of the EU related to the regime, conditions and limits of the interim measures and adds a reflection of practice of Czech courts. Article pays particular attention to the conditions for suspension ofn the application of national law measures.

Keywords: EU Law, national courts, national procedural rules, interim measures

Part I

1. Introduction. Definition of Intellectual Property

Intellectual property rights (IPRs) are the legal protections given to persons over their creative endeavours and usually give the creator an exclusive right over the use of his/her creation or discovery for a certain period of time.[2] Intellectual property protections may include patents, copyrights, trademarks, and

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2 TRIPs Material on the WTO Website, World Trade Organization. Available at: http://www.wto.org/english/tratop_e/trips_e/trips_e.htm visited 2 January, 2012

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trade secrets. Intellectual property is codified at an international level through a series of legally binding treaties.[3]

Indigenous intellectual property includes the information, practices, beliefs and philosophy that are unique to each indigenous culture. Once traditional knowledge is removed from an indigenous community, the community loses control over the way in which that knowledge is used. In most cases, this system of knowledge evolved over many centuries and is unique to the indigenous peoples' customs, traditions, land and resources. Indigenous peoples have the right to protect their intellectual property, including the right to protect that property against its inappropriate use or exploitation.[4]

"Intellectual Property" is a generic term that probably came into regular use during the twentieth century. This generic term is used to refer to a group of legal regimes, each of which, to different degrees, confers rights of ownership in a particular subject matter. Copyright, patents, designs, trademarks and protection against unfair competition form the traditional core of intellectual property.[5] The subject matter of these rights is disparate. Inventions, literary works, artistic works, designs and trademarks formed the subject matter of early intellectual property law. One striking feature of intellectual property is that, despite its early historical links to the idea of monopoly and privilege, the scope of its subject matter continues to expand. The twentieth and twenty-first centuries has seen new or existing subject matter added to present intellectual property systems (for example, the protection of computer software as part of copyright, the patentability of micro-organisms as part of patent law), and new systems created to protect existing or new subject matter (for example, plant variety protection and circuit layouts). The strongly expansionary nature of intellectual property systems shows no sign of changing. Internationally, for example, special legal protection for databases remains part of the work program of the World Intellectual Property Organization (WIPO).

Above all, Intellectual Property has been described as the driving force of modern Western economic policy, trade, commerce and economic development. A well articulated focused and appropriately enforced intellectual prop-

3 Hansen, Stephen and VanFleet, Justin., *Traditional Knowledge and Intellectual Property: A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting their Intellectual Property and Maintaining Biological Diversity*., Washington, DC: American Association for the Advancement of Science (AAAS), 2003, at 4

4 Leaflet No. 12: "WIPO and Indigenous Peoples", Geneva: Global Intellectual Property Issues Division of World Intellectual Property Organization (WIPO) *indileaflet12.doc* at 1. Available online at www.ohchr.org/Documents/Publications/GuideIPleaflet12en.pdf Visited 7th January, 2012

5 Peter Drahos., "The Universality of Intellectual Property Rights: Origins and Development", University of London, Herchel Smith Senior Fellow, Queen Mary Intellectual Property Research Institute, Queen Mary and Westfield College (London, United Kingdom) at 1-2

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erty system could provide the required push in any process of economic reform, liberalisation of economic, industrial and trade policies, restructuring of the industrial and public/private investment sector in the process of economic and technological development.[6]

2. Indigenous Cultural and Intellectual Property Rights

This includes the right to: own and control Indigenous cultural and intellectual property; ensure that any means of protecting Indigenous cultural and intellectual property is based on the principle of self-determination; be recognised as the primary guardians and interpreters of their cultures; authorise or refuse to authorise the commercial use of Indigenous cultural and intellectual property, according to Indigenous customary law; maintain the secrecy of Indigenous knowledge and other cultural practices; full and proper attribution; control the recording of cultural customs and expressions, and particular languages which may be intrinsic to cultural identity, knowledge, skill, and teaching of the culture.[7]

Indigenous intellectual property is an umbrella legal term used in national and international forums to identify indigenous peoples' special rights to claim (from within their own laws) all that their indigenous groups know now, have known, or will know.[8] It is a concept that has developed out of a predominantly western legal tradition, and has most recently been promoted by the World Intellectual Property Organisation, as part of a more general United Nations push[9] to see the diverse wealth of this world's indigenous, intangible cultural heritage better valued and better protected against probable, ongoing misappropriation and misuse.

The dominant model for recognising and protecting knowledge and cultural expressions is the intellectual property rights regime. This regime, which is based on Western legal and economic parameters as well as on Western property law, emphasizes exclusivity and private ownership, reducing knowledge and cultural expressions to commodities that can be privately owned by an individual or a corporation. The intellectual property rights regime is widely recognized as the primary mechanism for determining ownership and property rights over knowledge, processes, innovations, inventions, and even naturally occurring phenom-

6 J.A. Ekpere., "Nigerian Copyright Law and National Development: Philosophical and Economic Paradigm for the Next Millennium" in J.O Asein and E.S. Nwauche, *A Decade of Copyright Law in Nigeria*, Abuja: Nigerian Copyright Commission, 2002 at 67

7 Michael Crayford and John Waight, "Connections Indigenous Cultures and the Australian National Maritime Museum", Sydney: Australian National Maritime Museum, 2005 at 23

8 Rainforest Aboriginal Network,. "Julayinbul: Aboriginal Intellectual and Cultural Property Definitions, Ownership and Strategies for Protection" Rainforest Aboriginal Network Cairns. 1993, at 65

9 Office of the United Nations High Commissioner For Human Rights "Indigenous peoples" Office of the United Nations High Commissioner of Human Rights, Geneva, 2007

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ena such as plants, animals and genetic material. This form of ownership is protected by states and promoted by the World Trade Organization (WTO)[10] and the World Intellectual Property Organization (WIPO). The intellectual property rights (IPRs) regime and the worldview, in which it is based on, stand in stark contrast to indigenous worldviews, whereby knowledge is created and owned collectively, and the responsibility for the use and transfer of the knowledge is collectively owned and guided by traditional laws and customs.[11] What is often overlooked by the wider society is the fact that, within indigenous societies, there are already laws governing the use and transmission of their knowledge systems that often do not have any formal recognition in the wider legal system. These internal regimes have operated within indigenous communities since time immemorial and have been developed from repeated practices, which are monitored and enforced by the elders, spiritual and community leaders. The international property rights regime, however, often fails to recognize indigenous customary law.

There are therefore concerns that the intellectual property rights regime, grounded in western concepts of individualism and innovation, does not have the ability to protect the collective or perpetual interests of indigenous forms of cultural expression.[12] Hence the author examined these western concepts of intellectual property rights regime by comparing the efficacy of copyright law, trade secret, or *sui generis* rights to see how best they can protect indigenous knowledge which are held as collective rights.

3. Traditional Knowledge and Indigenous Peoples

3.1 Concept of Knowledge

Knowledge refers to the sum of what has been perceived, either through a theoretical data base or through practical experience, which leads to an in-depth understanding of the issue at hand. Knowledge has always been a coveted possession, beginning in the Old Stone Age when mankind evolved. However, the impact of technology and its importance was highlighted during and after World War II. This resulted in the realization that certain types of knowledge require

10 Agreement Establishing the World Trade Organization, Marrakesh Declaration of 15 April, 1994. Available online at http://www.wto.org/english/docs_e/legal_e/legal_e.htm#wtoagreement visited 18 January, 2012

11 The United Nations Permanent Forum on Indigenous Issues, at its Fifth Session, appointed Mick Dodson, Member of the Forum, to prepare a study on customary laws pertaining to indigenous traditional knowledge. This study was presented to the Permanent Forum at its Sixth Session. See UNPFII (2007b).

12 United Nations., "State of The World's Indigenous Peoples", Department of Economic and Social Affairs United Nations: Secretariat of the Permanent Forum on Indigenous Issues, 2009 at 75

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protection for the benefit of the greater good, thus leading to rights over such knowledge[13].

3.2 Traditional Knowledge

The term "traditional knowledge"[14] refers to knowledge, possessed by indigenous people, in one or more societies and in one or more forms, including, but not limited to, art, dance and music, medicines and folk remedies,[15] folk culture, biodiversity,[16] knowledge and protection of plant varieties, handicrafts, designs and literature.[17] Traditional knowledge of biological diversity can be defined as the ideas, reasoning, methodological processes, explanatory systems and technical procedures developed by ethnic groups and local communities relating to the biodiversity of the environment they live in. This knowledge is collective in nature and is held by such groups and communities as a birthright; it may be written down or communicated between generations orally.[18] Traditional knowledge is the information that people in a given community, based on experience and adaptation to a local culture and environment, have developed over time, and continue to develop. This knowledge is used to sustain the community and its culture and to maintain the genetic resources necessary for the continued survival of the community. Indigenous knowledge under intellectual property law includes the information, practices, beliefs and philosophy that are unique to each indigenous culture.

13 Srividhya Ragavan, "Protection of Traditional Knowledge", 2 *Minnesota Intellectual Propert Review* 1(2001); Available online at www.law.ou.edu/faculty/.../protection_of_traditional_knowledge.pdf Visited 3rd January, 2012.

14 In the course of this research, the term Indigenous Knowledge and Traditional Knowledge will be used interchangeable. Though, Article 8(J) of the Convention of Biological Diversity defines this term as "knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity." Convention on Biological Diversity, June 5, 1992, Art. 8, 31 I.L.M. 818, 825-826.

15 Medicines and folk remedies have a direct bearing on the product patent regime that TRIPS stands for. Most of the countries that will be subject to the product patent regime are economies that cannot and will not be able to afford the high prices for the drugs. Where the folk medicines or knowledge about these plants are taken to be used in pharmaceutical research, it is argued that the people who first possessed this knowledge should benefit in some form.

16 David Downes, *How Intellectual Property Could Be a Tool to Protect Traditional Knowledge,* 25 *Columbia Journal of Environmental Law* 253, 254-57 (2000)

17 *Ibid., at 254-255*

18 María del Pilar Pardo Fajardo, "Protection of Traditional Knowledge, Access and Benefit Sharing, and Intellectual Property Rights: The Colombian Experience", in Sophia Twarog and Promila Kapoor, (eds) *Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International*, UN Conference on Trade and Development, United Nations: New York and Geneva, 2004 at 223

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Traditional knowledge, indigenous knowledge, traditional environmental knowledge and local knowledge generally refer to the long-standing traditions and practices of certain regional, indigenous, or local communities.[19] Traditional knowledge also encompasses the wisdom, knowledge, and teachings of these communities. In many cases, traditional knowledge has been orally passed for generations from person to person. Some forms of traditional knowledge are expressed through stories, legends, folklore, rituals, songs, and even laws. Other forms of traditional knowledge are expressed through different means.[20]

Traditional knowledge includes mental inventories of local biological resources, animal breeds, and local plant, crop and tree species. It may include such information as trees and plants that grow well together, and indicator plants, such as plants that show the soil salinity or that are known to flower at the beginning of the rains. It includes practices and technologies, such as seed treatment and storage methods and tools used for planting and harvesting. Traditional knowledge also encompasses belief systems that play a fundamental role in a people's livelihood, maintaining their health, and protecting and replenishing the environment. Traditional knowledge is dynamic in nature and may include experimentation in the integration of new plant or tree species obtained through natural selection, budding and cross fertilisation into existing farming systems or a traditional healer's tests of new plant medicines. The term "traditional" used in describing this knowledge does not imply that this knowledge is old or untechnical in nature, but "traditional based." It is "traditional" because it is created in a manner that reflects the traditions of the communities, therefore not relating to the nature of the knowledge itself, but to the way in which that knowledge is created, preserved and disseminated.[21] Traditional knowledge is collective in nature and is often considered the property of the entire community, and not belonging to any single individual within the community. It is transmitted through specific cultural and traditional information exchange mechanisms, for example, maintained and transmitted orally through elders or specialists (breeders, healers, etc.), and often to only a select few people within a community.[22]

Human communities have always generated, refined and passed on these knowledge from generation to generation. Such "traditional" knowledge" is often

19 See, "Traditional knowledge" From Wikipedia, the Free Encyclopedia.

20 Acharya, Deepak and Shrivastava Anshu: Indigenous Herbal Medicines: Tribal Formulations and Traditional Herbal Practices, Aavishkar Publishers Distributor, Jaipur- India. 2008 at 440

21 Elements Of A Sui Generis System For The Protection Of Traditional Knowledge, World Intellectual Property Organization, Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, 3rd session., 2002, WIPO/GRTKF/IC/3/8

22 Hansen, Stephen and VanFleet, Justin., Traditional Knowledge and Intellectual Property: A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting their Intellectual Property and Maintaining Biological Diversity., Washington, DC: American Association for the Advancement of Science (AAAS), July 2003, at 3

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an important part of their cultural identities. Traditional knowledge has played, and still plays, a vital role in the daily lives of the vast majority of people worldwide. Traditional knowledge is essential to the food security and health of millions of people in the developing world. In many countries, traditional medicines provide the only affordable treatment available to poor people. In developing countries, up to 80% of the population depend on traditional medicines to help meet their healthcare needs.[23] In addition, knowledge of the healing properties of plants has been the source of many modern medicines.[24]

Intellectual property is a regulatory discipline that protects intellectual creations derived from human effort, work or skill that warrant legal recognition. The creations of the human mind, unlike tangible objects, cannot be protected against use simply by possession. Once the intellectual creation takes place, the creator cannot control the use that others make of it. In other words, protecting something in a way other than through the mere possession of an object is what underlies the global concept of intellectual property rights.[25]

A number of cases relating to traditional knowledge have attracted international attention. As a result, the issue of traditional knowledge has been brought to the fore of the general debate surrounding intellectual property.[26] These cases involve what is often referred to as "biopiracy".[27] The examples of turmeric, neem

23 WHO Fact Sheet No. 271, June 2002. Available online at www.who.int/medicines/organization/trm/factsheet271.doc or www.who.int/uv/publications/en/Intersunguide.pdf visited 11 January, 2012

24 Traditional Knowledge and Geographical Indications., Chapter 4 at 73 Available online at www.iprcommission.org/papers/pdfs/final_report/ch4final.pdf Visited 11 January, 2012

25 María del Pilar Pardo Fajardo, *op. cit.*, at 225

26 "Traditional Knowledge and Geographical Indications". Chapter 4 at 75, 78. Available online at www.iprcommission.org/papers/pdfs/final_report/ch4final.pdf Visited 11 January, 2012

27 Biopiracy There is no accepted definition of "biopiracy." The Action Group on Erosion, Technology and Concentration (ETC Group) defines it as "the appropriation of the knowledge and genetic resources of farming and indigenous communities by individuals or institutions seeking exclusive monopoly control (usually patents or plant breeders' rights) over these resources and knowledge." The following have been described as "biopiracy": (a) The granting of 'wrong' patents. These are patents granted for inventions that are either not novel or are not inventive having regard to traditional knowledge already in the public domain. Such patents may be granted due either to oversights during the examination of the patent or simply because the patent examiner did not have access to the knowledge. This may be because it is written down but not accessible using the tools available to the examiner, or because it is unwritten knowledge. A WIPO led initiative to document and classify traditional knowledge seeks to address some of these problems. (b) The granting of 'right' patents. Patents may be correctly granted according to national law on inventions derived from a community's traditional knowledge or genetic resources. It could be argued this constitutes "biopiracy" on the following grounds: Patenting standards are too low. Patents are allowed, for instance, for inventions which amount to little more than discoveries. Alternatively, the national patent regime (for example, as in the US) may not recognise some forms of public disclosure of traditional knowledge as prior Art.4 Even if the patent

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and ayahuasca illustrate the issues that can arise when patent protection is granted to inventions relating to traditional knowledge which is already in the public domain. In these cases, invalid patents were issued because the patent examiners were not aware of the relevant traditional knowledge. In another example, a patent was granted on a plant species called Hoodia. Here, the issue was not whether the patent should or should not have been granted, but rather on whether the local people known as the San, who had nurtured the traditional knowledge underpinning the invention, were entitled to receive a fair share of any benefits arising from commercialisation. Partly as a knowledge, and campaigning organisations are pressing in a multitude of fora for traditional knowledge to be better protected. Such pressure has led, for example, to the creation of an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore in WIPO[28]. The protection of traditional knowledge and folklore is also being discussed within the framework of the CBD and in other international organisations such as UNCTAD, WHO, FAO and UNESCO.[29] In addition, the Doha WTO Ministerial Declaration highlighted the need for further work in the TRIPS[30] Council on protecting traditional knowledge.[31]

represents a genuine invention, however defined, no arrangements may have been made to obtain the prior informed consent (PIC) of the communities providing the knowledge or resource, and for sharing the benefits of commercialisation to reward them appropriately in accordance with the principles of the CBD. Bio-piracy" has been defined as the process through which the rights of indigenous cultures to genetic resources and knowledge are "erased and replaced for those who have exploited indigenous knowledge and biodiversity. (See, Vandana Shiva, Afsar Jafri, Gitanjali Bedi, and Radha Holla-Bhar, *The Enclosure and Recovery of the Commons, Research Foundation for Science, Technology and Ecology*, New Delhi, 1997, p 31 in Carlos M Correa, "Traditional Knowledge and Intellectual Property: Issues and options surrounding the protection of traditional knowledge A Discussion Paper" The Quaker United Nations Office (QUNO), Geneva, November 2001 at 7)

28 Convention Establishing the World Intellectual Property Organization (Signed at Stockholm on July 14, 1967 and as amended on 28 September, 1979). Available online at http://www.wipo.int/treaties/en/convention/trtdocs_wo029.html Visited 20 January, 2012. WIPO was established by the WIPO Convention in 1967 with a mandate from its Member States to promote the protection of IP throughout the world through cooperation among states and in collaboration with other international organizations. Its headquarters are in Geneva, Switzerland.

29 For more information of the various ongoing debates, see for example *"The State of the Debate on TK ",* Background note prepared by the UNCTAD secretariat for the International Seminar on Systems for the Protection and Commercialisation of traditional knowledge, in particular traditional medicines, 3-5 April 2002, New Delhi. Available online at http://www.unctad.org/trade_env/test1/meetings/delhi/statedebateTK.doc visited 13 January, 2012

30 Agreement on Trade-Related Aspects of Intellectual Property Rights The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994. Available online at http://www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm Visited 17 January, 2012

31 Paragraph 19 of Doha WTO Ministerial Declaration (WTO Document No. WT/MIN(01)/DEC/1) adopted on 14 November, 2001, calls for the TRIPS Council to examine the issue of protection of traditional knowledge

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3.3 Meaning of Indigenous Peoples in the context of Intellectual Property Law

There are several definitions for "indigenous people," but it essentially refers to people existing under relatively disadvantageous socio-economic conditions. Their cohesiveness as communities damaged or threatened, and the integrity of their cultures undermined.[32] Typically, the following are characteristics of indigenous people. (a) They live in small societies and may not have access to formal education. They are unaware of the worth of the knowledge they possess. Such communities are often found in developing and underdeveloped countries where there is a concentration of ethnocentric societies. (b) Most often, the knowledge in question will be known to the entire community and remains exclusively within it. However, within the society, the knowledge is in the public domain. (c) Occasionally, knowledge of a special skill or art is limited to a few members of the community. (d) The knowledge and its components are normally required for a regular lifestyle within the society. It is passed down through generations while still retaining its original individuality. (e) Knowledge present in one form, such as art, music, or folklore, can be developed into other forms more understandable to the rest of the world. However, these informal innovations do not get formal recognition.[33] (f) Indigenous people often believe that intellectual property law is neither a necessary, nor a desirable, means of encouraging innovation within their communities. As a consequence, they are sometimes easily willing to share this knowledge, which leads to its exploitation. This situation gives raise to concern because, although the original holders have not acquired any benefit, the exploiters have enormously benefited from the knowledge.[34]

Part II

In Part II, this paper examined the nature of traditional knowledge and the purposes of their protection, the concept of cultural and intellectual property rights of indigenous peoples, what sort of violations are suffered by these people as considered under intellectual property rights regimes, what is considered to be cultural and intellectual property rights, nature of violations and protection of intellectual property rights of indigenous peoples which is basically the misappropriation of their traditional knowledge by individuals, groups and corporate

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and folklore. Available online at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.doc visited 13 January, 2012

32 James Anaya, indigenous Peoples in International Law 3 Oxford: Oxford University Press 1996

33 Anil Gupta, "Building Upon What Poor are Rich in: Honey Bee Network Linking Grassroots Innovations, Enterprise, Investments and Institution", Available at http://csf.Colorado.edu/sristi/papers/building.html visited 3rd January, 2012

34 Naomi Roht-Arriaza, "Of Seeds and Shamans: The Appropriation of the Scientific and Technical

Knowledge of Indigenous and Local Communities", 17 *Michigan Journal of International Law* 919, 926 (1996)

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organisations and some governments for commercial reasons without recourse to the original owners and at the end, the author offered an explanation of the conditions under which indigenous or traditional knowledges can be lost.

4. Nature of Traditional Knowledge and the Purpose of Protection

The nature of the knowledge is also diverse: it covers, for example, literary, artistic or scientific works, song, dance, medical treatments and practices and agricultural technologies and techniques. Whilst a number of definitions for traditional knowledge and folklore have been put forward, there is no widely acceptable definition for either of them. It is not only the broad scope of traditional knowledge that has confounded the debate so far. There is also some confusion about exactly what is meant by "protection" and its purpose. It should certainly not be equated directly with the use of the word "protection" in its intellectual property sense. In its report on a series of fact-finding missions, WIPO[35] sought to summarise the concerns of indigenous knowledge holders as follows: (a) concern about the loss of their traditional life styles and of traditional knowledge, and the reluctance of the younger members of the communities to carry forward traditional practices; (b) concern about the lack of respect for traditional knowledge and holders of traditional knowledge; (c) concern about the misappropriation of traditional knowledge including use of traditional knowledge without any benefit sharing, or use in a derogatory manner; (d) lack of recognition of the need to preserve and promote the further use of traditional knowledge. Another source more succinctly classified these and other possible reasons for protecting traditional knowledge as: (e) equity considerations the custodians of traditional knowledge should receive fair compensation if the traditional knowledge leads to commercial gain; (f) conservation concerns the protection of traditional knowledge contributes to the wider objective of conserving the environment, biodiversity and sustainable agricultural practices; (g) preservation of traditional practices and culture protection of traditional knowledge would be used to raise the profile of the knowledge and the people entrusted with it both within and outside communities; (h) Prevention of appropriation by unauthorised parties or avoiding "biopiracy"; and (i) promotion of its use and its importance to development.

5. Cultural and Intellectual Property Rights of Indigenous People

Copyright includes intellectual property rights of Indigenous Peoples which protect their expression of information, ideas or other intangibles associated with creative and artistic works, patents, trademarks, industrial design and trade secrets. However, while this protects the individual creator for a limited period

35 WIPO., "Intellectual Property Needs and Expectations of Traditional Knowledge Holders", WIPO Report on Fact-Finding Missions 1998-1999, WIPO, Geneva (Publication Number 768E) (1999) Available online at www.wipo.int/globalissues/tk/report/final/index.html visited 20 January, 2012

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of time, it does not protect the expression of cultural information, knowledge or ideas which may have originated outside the time period protected by copyright law. These may also be owned and used collectively, for example, prayer, dance, oral stories, images of ancestors, objects of material and traditional culture. Without copyright protection, the digitised forms of such information easily become vulnerable to misappropriation.[36]

Culturally, the African concept of copyright right is communalistic, socialistic and collectivistic long before colonisation some of the works that are now eligible for copyright were actively practiced or performed. For example, weaving, pottery, sculpture, crafts arts, drama, music, dance, smithy, etc. There were no copyright law to protect creators and innovators of these varieties of copyrightable works and if there existed had no impact on the society. This doubt is expressed because of the total lack of economic motive or interest by the creators, innovators and inventors of these works which are now protected by intellectual property law. To the owners of such works, e.g musical or artistic, the product of their labour was to provide happiness to the maximum number of people. It was for entertainment and pleasure, it was socialistic rather then economic. This notwithstanding the gifts which the participants of such social gatherings poured on singers, dancers, drummers whenever there were ceremonies for example, marriages, naming, burial and harvests.[37]

Its noteworthy that Article 29 of *The Declaration on the Rights of Indigenous Peoples* addresses Cultural and Intellectual Property rights, and states that: Indigenous peoples have the right to own and control their cultural and intellectual property. They have the right to special measures to control and develop their sciences, technologies, seeds, medicines, knowledge of flora and fauna, oral traditions, designs, art and performances.[38]

6. Violations of Indigenous Peoples' Right of Intellectual Property

A broad range of abuses inflicted on indigenous people's intellectual property rights can be viewed as violations of their right to be informed. Among these are the following: unauthorized use of tribal names. For example, an automobile manufacturer has name one of its trucks "Cherokee." Also, the words "Hopi" and "Zuni" have been incorporated into trademarks without permission from

36 Jennifer Hobson, "Copyright, Licensing And Indigenous Rights in a Digital World" *MAI Review*, 2009, 3, Library Workshop 7 at 4. Available online at http://www.review.mai.ac.nz visited 20th January, 2012

37 Yusuf Aboki., "Economic and Cultural Bases for Copyright Protection in Nigeria" in J.O Asein and E.S. Nwauche, *A Decade of Copyright Law in Nigeria*, Abuja: Nigerian Copyright Commission, 2002 at 84-85

38 UN., United Nations Declaration on the Rights of Indigenous Peoples Resolution adopted by the General Assembly 61/295. 107th plenary meeting 13 September 2007 Available online at www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf Visited 5th January, 2012

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the tribes concerned. Unauthorized commercialization of indigenous peoples knowledge, seeds, and plants, and extraction of their own biogenetic material without their informed consent.[39]

This can be regarded as a form of piracy, and in the case of biogenetic resources, is nowadays being referred to as "biopiracy." Others are public disclosure and use of secret knowledge, images, and other sensitive information. This is commonly practiced by museums. For example, an Australian anthropologist wrote a book containing information divulged in confidence by tribal elders. Filming and taking photographs without permission. Video images of indigenous peoples are sometimes used for commercial purposes, such as advertising by companies like Shell and American Express. Whether this is inherently exploitative is for indigenous peoples themselves to decide and may depend on the context. Advertising aimed at attracting foreign tourists to a country sometimes depicts indigenous people; for example, Australia, Canada, the United States, Indonesia, and many Latin American countries have featured indigenous people in tourism promotion literature. Guatemala has used photographs of Mayan people and their arts and crafts to attract tourists in spite of the fact that these people have often suffered brutal repression at the hands of Guatemalan governments over many years.[40]

7. Protecting Traditional Knowledge

Several arguments on the pros and cons of protecting traditional knowledge within the prevailing regime of intellectual property laws have been raised.[41] These arguments have essentially been either moralistic or emotive in nature. The moralistic arguments focus on the western impression that every person has a moral right to control the product of his or her labour or creativity.[42] The

39 D.A. Posey and G. Dutfield., "Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities", Ottawa ON: International Development Research Centre 1996, Ch. 4 at 39

40 *Ibid*

41 The perception of intellectual property is different in the West, which has a more capitalist orientation than developing countries, and believes in the preservation of intellectual property with the idea that it will benefit the public later. The societies that hold this knowledge strongly believe in sharing knowledge and consider it a part of the public domain. See also Ruth L. Gana, *Prospects for Developing Countries Under the TRIPS Agreement,* 29 *Vanderbilt Journal of Transnational Law* 735, 757 (1996) (Ms. Gana states that the developing countries have remained in the periphery and that the relationship between the developing countries and the West has been one of deep mistrust with the developed world). However, both of these articles point out that the developing and least-developed nations were not ready to shoulder the responsibilities of the Western world while crying for benefits from the Western world in return for colonialism. Carlos M. Correa, Intellectual Property, The WTO and Developing Countries: The TRIPS Agreement and Policy Options 3-4 (Third World Network 2000). Discussing the factors that lead to the mistrust between the developing countries and the West)

42 Professor Downes states that based upon the moralistic argument intellectual property

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developing countries have argued that their traditional knowledge has been the basis for the research leading to high-priced inventions, the benefit of which is reaped by developed nations.[43] Interestingly, the core of the western moralistic theory focuses on providing limited incentives to private inventors in exchange for creativity that benefits the greater public good.[44] In any case, the intellectual property laws have developed into a technical, rather than a moralistic, area of law. The emotive arguments have focused on the economic realities of the developing countries, with both developed and developing nations accusing the other of pirating information.[45]

Incidents have occurred which developing countries describe as unauthorized appropriation of their knowledge.[46] These countries find this appalling, especially since most of such indigenous people are living in conditions devoid of human rights, which the UN Charter regards as a condition for living with human dignity. These incidents are often viewed in the developing counties as instances where third parties steal information to expand their own industries and increase profit margins. That the developed nations are aware that if the holders were given even a portion of the profits, it would greatly improve their

rights are a balance between private benefit and public good, and that in the case of traditional knowledge the clear calculation to determine whether there has been inequality is not easy. David Downes, *How Intellectual Property Could Be a Tool to Protect Traditional Knowledge,* 25 *Columbia Journal of Environmental Law* (2000) at 261-64. *See also* Lakshmi Sarma, " Piracy: Twentieth Century Imperialism in the Form of International Agreements", 13 *Temple International and Comparative Law Journal* 107 (1999)

43 A strong case has been made that compensation should be received for traditional biocultural knowledge due to the value created and time saved in identifying plants used in medicine or by cultivating specific crop varieties obtained through the labour and time invested in selecting, nurturing, conserving, and improving traditional varieties over a long period of time. Professor Jacoby argues that traditional biocultural knowledge not only guides researchers, but also provides them with unique sources and materials. He also points out that several companies in the United States currently take ethno-botanical data as part of their research. Craig D. Jacoby & Charles Weiss, "Recognizing Property Rights in Traditional Biocultural Contribution", 16 *Stanford Environmental Law Journal* 74, 75-81 (1997), at 85.

44 James Boyle, Shamans, Software, and Spleens: Law and the Construction of the Information Society 124 (1996)

45 The developing countries felt their traditional knowledge has been pirated by the developed nations while the developed nations accused the developing countries of pirating their intellectual property. David Downes, *How Intellectual Property Could Be a Tool to Protect Traditional Knowledge,* 25 *Columbia Journal of Environmental Law* (2000) at 261-64

46 Many LDCs view the use of their biocultural contributions to biotechnology companies in developed countries to create commercial products as an example of the traditional colonial paradigm of exchanging their natural resources for manufactured goods. (detailing the general sentiments of these people). *See* Craig D. Jacoby & Charles Weiss, "Recognizing Property Rights in Traditional Biocultural Contributions", 16 *Stanford Environmental Law Journal* 74, 75-81 (1997), at 74 (discussing the various bio-cultural knowledge that has been misused by the West).

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living conditions, only enhances the feelings of bitterness. This has led the indigenous people to organize themselves to protect their knowledge and resources by various means.

8. Values and Importance Attached to Traditional Resources and Knowledge

"Traditional resources include plants, animals, and other material objects that may have sacred, ceremonial, heritage, or esthetic qualities. "Property" of indigenous peoples frequently has intangible, spiritual manifestations, and, although worthy of protection, can belong to no human being. Privatization or commoditization of their resources is not only foreign but incomprehensible or even unthinkable. Nonetheless, indigenous and traditional communities are increasingly involved in market economies and, like it or not, are seeing an ever-growing number of their resources traded in those markets. Traditional resources is an integrated rights concept that recognizes the inextricable link between cultural and biological diversity and sees no contradiction between the human rights of indigenous and local communities, including the right to development and environmental conservation. Indeed, they are mutually supportive since the destiny of traditional peoples largely determines, and is determined by, the state of the world's biological diversity. Traditional resources include overlapping and mutually supporting bundles of rights.[47]

It is probably impossible to estimate the full market value of traditional knowledge, but it is certainly enormous and may increase as advances in biotechnology broaden the range of life forms containing attributes with commercial applications. By one estimate, though old, the market value of plant-based medicines alone (many of which were used first by indigenous peoples) sold in developed countries amounted to $43 billion in 1985.[48] However, only a tiny proportion of this (much less than 1 percent) has ever been returned to the source communities.[49] In a recent report which stated that of the 119 developed from higher plants and on the world market today, it is estimated that 74% was discovered from a pool of traditional herbal medicines. In 1990 Posey estimated that the annual world market for medicine derived from medicinal plants discovered from indigenous people amounted to USD $43 billion. A report prepared by the Rural Advancement Fund International (RAFI) estimated that at the beginning of the 1990s, worldwide sales of pharmaceuticals amounted to more than USD $130 million annually. African countries and their traditional peoples have con-

47 D.A. Posey and G. Dutfield*., op. cit.* Ch. 9 at 80

48 *Ibid*.,, Ch. 3 at 32 See also P.P. Principe, "Valuing the Biodiversity of Medicinal Plants. In Akerele, O.; Heywood, V.; Synge, H., (eds)., *The Conservation of Medicinal Plants* Cambridge: Cambridge University, 1989 at 79-124

49 D.A. Posey, Intellectual Property Rights and Just Compensation for Indigenous Peoples. *Anthropology Today*, 6(4), 1990 at 13–16

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tributed significantly to global drugs industry. 20 plants species from the tropics generated about USD $4 billion to the United States economy.[50]

Modern agricultural practices depend upon crop species with characteristics of productivity and disease resistance that can only be maintained and improved with the continuous input of new germplasm. Most of this new germplasm comes from landraces (or folk varieties) bred and conserved by traditional communities over millennia. Agriculture also benefits from plant-based pesticides some of which may first have been used by traditional communities, indigenous and other traditional cultivators subsidize modern agriculture but receive no payment in return except, perhaps, for small payments from local people who agree to supply seeds and other samples to outside organizations. Again the pharmaceutical industry continues to investigate (and confirm) the efficacy of many medicines and toxins used by indigenous peoples. Other industries manufacturing personal care products, foods, and industrial oils also benefit from the knowledge and resources of indigenous peoples. However, few companies making such products have shown concern to the fact that traditional knowledge is sometimes lost and resources disappear when land is converted, sometimes to produce more raw materials for these same companies.

It is noteworthy that personal care and food industries have both led and responded to a rise in consumer interest in "natural" products and ethically sound harvesting practices. As a result, a number of companies and non-profit organizations have begun to work with indigenous communities to acquire information leading to the development of new products and to create socially and environmentally sound strategies for acquiring raw materials.

However, on occasion companies obtain knowledge and biological material by deception for example, by sending employees to communities who do not admit that their purpose is to search for knowledge or biological resources that will be of financial benefit to their company. Traditional knowledge produces more than commercial benefits for others. For example, academics and scientists rarely become rich by recording traditional knowledge, yet their academic careers may be enhanced considerably by doing such research in terms of improvements in both their status and their salaries.[51]

50 J. Mugabe, P. Kameri- Mbote and D. Mutta, *Intellectual Property Protection: Towards a New International Regime*, IELRC Working Paper, 2001-5 Geneva: International Environmental Law Research centre, 2001 at 3 Available online at www.ielrc.org/content/w0105.pdf visited 10 January, 2012

51 D.A. Posey and G. Dutfieldm, *op. cit*.

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9. Conditions for the Loss of Traditional Knowledge: Public Domain and Publication of Findings

9.1 Public Domain

When the knowledge of a traditional community is passed on to an outsider who subsequently publishes it, it becomes difficult for the community to control how the knowledge is used and who else receives it, because it falls into the public domain (it is not secret or protected by law and can be used freely by anyone, including companies that find the knowledge useful and valuable). Even though most visitors to communities are probably not interested in commercially exploiting traditional knowledge, they may unwittingly or deliberately pass on information to people who are. Results of academic research may be passed on through publication or by contributing to a germplasm collection.

Literary and artistic works based upon, derived from or inspired by traditional culture or folklore may incorporate new elements or expressions. Hence these works may be "new" works with a living and identifiable creator, or creators. Such contemporary works may include a new interpretation, arrangement, adaptation or collection of pre-existing cultural heritage that is in the public domain. Traditional culture or folklore may also be "repackaged" in digital formats, or restoration and colorization. Contemporary and tradition based expressions and works of traditional culture are generally protected under existing copyright law, a form of intellectual property law, as they are sufficiently original to be regarded as "new" upon publication. Once the intellectual property rights afforded to these new works of traditional knowledge expire, they fall into the public domain.[52]

The public domain, as defined in the context of intellectual property rights, is not a concept recognised by indigenous peoples. As much of traditional knowledge has never been protected under intellectual property rights, they cannot be said to have entered any public domain. On this point the Tulalip Tribes of Washington state has commented that"...open sharing does not automatically confer a right to use the knowledge (of indigenous people)... traditional cultural expressions are not in the public domain because indigenous peoples have failed to take the steps necessary to protect the knowledge in the Western intellectual property system, but from a failure of governments and citizens to recognise and respect the customary laws regulating their use".[53]

9.2 Publication

Academic researchers are expected to publish their research findings, and companies have been able to acquire useful information by reading these research

52 Graber, Christoph Beat; and Mira Burri Nenova, "Intellectual Property and Traditional Cultural Expressions in a Digital Environment", Edward Elgar Publishing. 2008 at 174

53 *Ibid*

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reports. In fact, academic literature is commonly consulted by industry researchers, and valuable knowledge (such as ethnobotanical information) can quietly become part of the research and development efforts of commercial enterprises. The drug company, Merck, for example, decided to investigate the commercial potential of a tree bark extract used in hunting by the *Urueu-Wau-Wau* of Brazil after learning about the plant and its characteristics from a magazine article.[54]

An even better known example is that of the rosy periwinkle (*Catharanthus roseus*), which had been used for centuries as a treatment for diabetes by several indigenous peoples around the world. Research into this plant began following a literature search by a US drug company (Eli Lilley) and a Canadian university. This then led to the discovery of two compounds, vinblastine and vincristine, which have since been used to treat certain cancers. Another common outcome of publication is that even though the book or research report resulted from information provided freely by indigenous people, the researcher, writer, publishing company, or sponsor of the research claims copyright. Government or university sponsors often justify holding copyright because public funds were used to support the research project. For example, a project funded by the European Union to survey the ethnobotany of the Topnaar people of Namibia resulted not only in the export of medicinal plants by the researchers but also in the claim by the European Commission that it owned all research results.[55] Although plant samples were deposited in Namibia's national herbarium and research results were passed on to the Namibian authorities, these are more likely to benefit the Namibian government than the people whose cooperation made the project successful.[56]

Failure to acknowledge indigenous sources is an issue of which some indigenous peoples have become aware. For example, the New Zealand government published and claimed copyright for two documents on Maori resource management without acknowledging the many Maori informants.[57] Sometimes such problems can be solved easily by making local people principal or co-authors of papers and books, or co-producers of films and videos. Warning readers of their obligations may be somewhat effective in guaranteeing the proper use of

54 J.W. Jacobs, Petroski, C.; Friedman, P.A.; Simpson, E. "Characterization of the Anticoagulant Activities from a Brazilian Arrow Poison", *Thrombosis and Haemostasis*, 63(1), 31–35. (1990) and L. McIntyre, "Last days of Eden", *National Geographic*, 174(6), 800–817, (1989)

55 A.B. Cunningham, Conservation, knowledge and new natural products development: partnership or privacy? Paper Presented at the Workshop on Intellectual Property Rights and Indigenous Knowledge, 5–10 October 1993, Granlibakken, Lake Tahoe, CA, USA. National Science Foundation, Society for Applied Anthropology, and American Association for the Advancement of Science, Washington, DC, USA. (1993)

56 *Ibid*

57 A.T.P., Mead, "Delivering Good Services to the Public Without Compromising the Cultural and Intellectual Property Rights of Indigenous Peoples: the Economics of Customary Knowledge", New Zealand Institute of Public Administration Research Papers, 10(3), 31–34. (1993)

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published material. For example, in a Ciba Foundation publication, the authors [58] inform readers that the information contained in their article was authorized and freely given by indigenous leaders. In the paper's opening paragraph, readers are advised that by reading the paper they are ethically and morally bound to respect the source of the information and to share any benefits, economic or otherwise, with the indigenous community. Although such a warning may not have legal force in some countries, it nonetheless carries a universal force of moral and ethical standards and obligations. Another possibility is defensive publication, which is a means of blocking patenting[59].

Part III

This is the focal point of this article as it will examine the different Intellectual Property Rights regime to see how best the Indigenous Knowledge can be protected considering the fact that prevailing intellectual property regimes protect the right of the individual authors as against the collective rights of traditional knowledge holders under indigenous customary law. Among the issues to be considered are copyright law, trade secrets and sui generis rights and to consider the one that is more efficacious in protecting indigenous or traditional knowledge. The author paid deep attention in terms to definitions of theoretical concepts, facts, case studies, examples, arguments and analysis to this part.

10. Copyright

The term copyright[60] like most legal concept is a complex phenomenon which has defied an all embracing, comprehensive and universally acceptable definition. Copyright is depicted as a right of action given to the proprietor of certain sort of "works" to prevent certain acts, to vary according to the sort of work, but which always centre around reproducing the work and (where

58 E. Elisabetsky, & D.A. Posey, "Ethnopharmacological Search for Antiviral Compounds: Treatment of Gastrointestinal Disorders by kayapó Medical Specialists", *In Ethnobotany and the Search for New Drugs*, Chichester, UK: John Wiley and Sons, Symposium 185, 1994 at 77–94

59 *Ibid*

60 Copyright law is a branch of that part of Intellectual Property Law which deals with the right of Intellectual Creators. Such rights are respected by the laws of different nations and international law. The reason for this respect is that the rights of creators are the need to stimulate and forester the creativity of men and women and the need to make the result of that creativity available by disseminating it on the widest possible scale. The essence of copyright is that this branch of law grants authors and other creators of works of the mind (literature, music, art) certain rights to control, for a limited time, certain uses made of their works. Protecting the rights of these creators is not only fair and just, it also encourages creative activity. (See Shahid Alikhan "International Dimensions of Copy Right Protection-The Global Perspective", in E.E. Uvieghara (ed) *Essays on Copyright Law and Administration In Nigeria*, Ibadan: Y-Books, 1992 at 15

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applicable) "performing" the work in public.[61] Copyright is the exclusive right belonging to the owners of certain works which qualify for protection within a limited number of years under copyright to reproduce, communicate to the public or broadcast, adapt, or translate the whole work or substantial part of the work wither in its original form or in any other form recognisably derivable from the original, except for certain limited purpose.[62] Works protected by copyright include: literary works; musical works; artistic works; cinematograph films; sound recording and broadcasts and by legal implication, the translation, adaptation or new versions or arrangements of any of the above works attract distinct copyright protection.[63]

Copyright vests the right of authorship in the creator of a work and enables him to prevent the misuse of his work.[64] Whether protection of traditional or indigenous knowledge should take the sacredness of the art and other factors into consideration is another issue to be decided. On the one hand, this may be very desirable theoretically however; this has the danger of making the issue very subjective.[65]

Copyright can be used to protect the artistic manifestations of Traditional Knowledge holders, especially artists who belong to indigenous and native communities, against unauthorised reproduction and exploitation. It could include works such as: literary works, for example tales, legends and myths, traditions, poems; theatrical works; pictorial works; textile works, fabrics, garments, textile compositions, tapestries, carpets; musical works; and, three-dimensional works, like pottery and ceramics, sculptures, wood and stone carvings, artifacts of various kinds. Related rights to copyright, such as performing rights, could be used for the protection of the performances of singers and dancers and presentations of stage plays, puppet shows and other comparable performances.[66]

61 J.O Asein and E.S. Nwauche, *op. cit*., at 89

62 *Ibid*., at 90-91

63 Peter. A. Ocheme, *The Law and Practice of Copyright in Nigeria*., Zaria: Ahmedu Bello University, 2000, at 44

64 See the Berne Convention for the Protection of Literary and Artistic Works, Paris Text, 1971

65 J. Anaya, "Indigenous Peoples in International Law" 3 Oxford: Oxford University Press 1996. In surveys conducted it has been revealed that the existing protection of traditional knowledge and folklore, a number of countries have provided further examples of how IP tools have been utilised to promote and protect traditional knowledge and folklore. These include the use of copyright protection in Canada to protect tradition-based creations including masks, totem poles and sound recordings of Aboriginal artists; the use of industrial designs to protect the external appearance of articles such as head dresses and carpets in Kazakhstan and the use of geographical indications to protect traditional products such as liquors, sauces and teas in Venezuela and Vietnam. (Traditional Knowledge and Geographical Indications., Chapter 4 at 79. Available online at www.iprcommission.org/papers/pdfs/final_report/ch4final.pdf Visited 11 January, 2012)

66 Carlos M Correa, "Traditional Knowledge and Intellectual Property: Issues and Options Surrounding the Protection of Traditional Knowledge, A Discussion Paper" The Quaker

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On the contrary, copyright is also inadequate to protect arts of the indigenous people.[67] For example, in a dance, the performer has a style manifested in several ways but as a sequential unique style over several performances.[68] Where the dance is removed from the main theme and song, and incorporated, for example, into western music, there is no protection if the dance was copied without permission, as the dance will be deemed to be in the public domain. Similarly, where a tribal painting is copied with minor modifications, the indigenous tribes will have no rights under copyright law. The copy can depicts a subject in a different manner, thereby conveying a meaning different from what was intended. In the long run, such activity will dilute the tribal customs. So far, the courts have tended to deviate from established principles to decide such cases. Alternatively, they choose to carve out an exception to afford protection especially where the modus does not fall strictly within the definition of copyright violation but there is a clear violation of the rights of the indigenous people. Some cases are settled outside courts; for example, in 1989, John Bulun, an aboriginal artist, discovered some of his paintings were reproduced on T-shirts without permission. He sued for copyright violation.[69] The court was considering the possibility of *breach of confidence* when the company withdrew the T-shirts from sale and decided to settle the dispute. This resulted in other artists suing the same company, which proved the extent of violation. There is also a strong possibility that the artists did not go to court earlier as they were not aware of their rights over the art. [70]

The decision in *Yumbulul v. Reserve Bank of Australia*,[71] is another case demonstrating the inadequacy of copyright law. The court considered customary rights. However, the decision was eventually based on a very technical interpretation of the prevailing western intellectual property law. The decision exhibited a lack of appreciation of subtle, but apparent, forms of exploitations. In some cases the court seems to have struggled to bridge the differences between the two systems.[72] Professor Long argues that fixation and identification of the author are the concerns preventing the use of copyright law for protecting folk material.[73] She concludes that fixation is not a mandatory requirement under TRIPS, and highlights the "work for hire" concept as evidence that the standards in modern

United Nations Office (QUNO), Geneva, November 2001, at 11

67 Michael Blankley, *Milpurrurru & Ors v. Indofarm &Ors: Protecting Expressions of Aboriginal Folklore Under Copyright Law,* E Law, Vol. 2, NO. 1, (April 1995) (arguing that copyright laws cannot protect designs that have been around for several hundreds of years and can therefore be considered as a part of the prior art).

68 Dieter Dambiec, *The Indigenous People's Folklore and Copyright Law* , Available online at http://ozemail.com.au visited 10 January, 2012

69 *Bulun Bulun v. Nejalm Pty Ltd, Golvan,* E.I.P.R. 346 (1992)

70 Carlos M Correa, *op. cit*.

71 *Yumbulul v. Reserve Bank of Australia*, 21 I.P.R. 481 (1991)

72 *Milpurrurru v. Indofurn Pty. Ltd.,* 30 I.P.R. 209 (1994)

73 Doris Estelle Long, *The Impact of Foreign Investment on Indigenous Culture: An Intellectual Property*

Perspective, 23 N.C. J. Int'l L. & Com. Reg. 229 (1998)

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copyright law have expanded the strict definition of an author. Copyrights can still be easily infringed expanded definition of author. However, this will be a beginning and is infinitely better than no protection at all. The issue whether this can be a permanent solution is arguable because ... in addition to fixation and identification of the author, copyright law requires "originality," which will not protect folk art as it will fall within public domain.[74]

Another argument of its inadequacy to protect indigenous knowledge is that copyright cannot be vested over the entire tribe or community as the law does not recognize communal ownership of copyright.[75] Lastly, copyright will not recognize any form of perpetual protection that is needed to protect the originality of the folk materials. One option is to consider and give primacy to customary rights. Certainly this should be considered in a dispute involving indigenous people. Interestingly, customary laws distribute rights fairly within the community. Ownership of designs or imagery is vested in the clan, and the right to use or make and sell a work or create a facet of the work is vested within certain members of the clan. These rights can only be inherited or gained by reputation. The Maori society in New Zealand is one example of a society that managed property through customary rights.[76]

A copyright is born and is the object of protection by legal channels from the moment that the creation of the human mind materializes; in other words, as long as a set of ideas that constitutes a creation is not produced in a way that can be perceived by the senses, the right that its creator has over the produced work does not exist.[77]

Indigenous knowledge can be protected by copyright as long as it is brought into being in a tangible manner, and this depends on the strategy adopted by the community interested in

protecting its intellectual creations. This system of protection forces others to comply with some of the formalities of western culture. Indigenous, Afro-American or peasant communities can protect their interests and prevent third parties from making unauthorized use of traditional knowledge by means of:; A copyright protection system, forcing the usurper of the knowledge to acknowledge the author; and/or use of another type of tool that enables traditional knowledge

74 Srividhya Ragavan., *op. cit*. at 1-19

75 Michael Blankley, *op. cit*.

76 L.M. Moran, *Intellectual Property Law Protection for Traditional and Sacred "Folklife Expressions"—Will Remedies Become Available to Cultural Authors and Communities?,* 6 *University of Balt Intellectual Property Law Journal* 99 (1998)

77 María del Pilar Pardo Fajardo, "Protection of Traditional Knowledge, Access and Benefit Sharing, and Intellectual Property Rights: The Colombian Experience", in Sophia Twarog and Promila Kapoor, (eds) *Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International*, UN Conference on Trade and Development, United Nations: New York and Geneva, 2004 at 226

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to be used, sold and/or released into the market and be available for transactions. Another element that is important to keep in mind is that traditional knowledge is held collectively and there is no clear uniquely identifiable titleholder for whom the copyright system may be used as a property protection system. For this method to be used, it is necessary for the community to establish a legal entity to protect the interests of each individual member of the community,[78] and this is legally impossible in a regime that advocates collective ownership.

11. Trade Secrets

Trade secrets protect undisclosed knowledge through secrecy and access agreements, which may also involve paying royalties to knowledge holders for access to and the use of their knowledge. Three elements are required for knowledge to be classified as a trade secret.[79] The knowledge: must have commercial value, must not be in the public domain, and is subject to reasonable efforts to maintain secrecy. Traditional knowledge that is maintained within a community could be considered a trade secret. But once the knowledge is diffused to the public, this option no longer exists. A trade secret is only enforceable as long as it remains a secret. Trade secrets have no legal protection except in cases of "breach of confidence and other acts contrary to honest commercial practices."[80] This means that one must be able to prove some form of malicious intent on the part of a contracting party as the cause for a trade secret's diffusion to the public in order to be compensated for the loss of secrecy. Trade secrets are commonly combined with contractual agreements.[81] This is a way to profit from royalty payments for the use of knowledge.[82] If a trade secret happens to enter the public domain, contractual royalty payment agreements may still remain in effect throughout the life of the agreement. It is important to note that knowledge that is considered a trade secret can be used by anyone if the knowledge leaks into

78 *Ibid*

79 Hansen, Stephen and VanFleet, Justin. (eds), Traditional Knowledge and Intellectual Property: A Handbook on Issues and Options for Traditional Knowledge Holders in Protecting their Intellectual Property and Maintaining Biological Diversity., Washington, DC: American Association for the Advancement of Science (AAAS), July 2003, at 18-19

80 *Trading Into the Future: The Introduction to the WTO, Intellectual Property Protection and Enforcement*, World Trade Organization, August 2002. Available at: http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm6_e.htm visited 12 January, 2012

81 Trade Secrets are protected under Article 39 of the Agreement on Trade Related Aspects of Intellectual Property (TRIPs)

82 Note the distinction between Trade Secrete and Trade Mark A trade mark is 'a sign used, or intended to be used, to distinguish goods or services dealt with or provided in the course of trade by a person from goods or services so dealt with or provided by any other person. A sign includes 'any letter, word, name, signature, numeral, device, brand, heading, label, ticket, aspect of packaging, shape, (See Terri Janke and Robynne Quiggin, Indigenous Cultural and Intellectual Property and Customary Law, Background Paper 12 at 475) (See also Janke, *Looking Out For Culture: Introduction to Indigenous Arts and Culture and Copyright, Trademarks and Designs,* Workshop Paper (Sydney, 2004) at 14)

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the public domain, and is independently discovered by another individual, or reverse engineered. It is difficult to protect trade secrets against misappropriation due to lack of legal entitlement to the bearer of the secret. When applied to indigenous knowledge belonging to a community, the community must make a reasonable effort to maintain the secrecy of the knowledge. If there is no reasonable effort to maintain the indigenous knowledge's secrecy, then trade secret protection is not applicable to the indigenous knowledge.[83]

The knowledge or know-how of an individual or the whole community might be protected as a trade secret as long as the information has commercial value and provides a competitive advantage, whether or not the community itself wishes to profit from it.[84] If a company obtains such information by illicit means, legal action may be used to force the company to share its profits.[85] Conceivably, a considerable amount of indigenous peoples' knowledge could be protected as trade secrets. Restricting access to their territories and exchanging information with outsiders through agreements that secure confidentiality or economic benefits would be an appropriate means to this end. Trade secret law can be used to facilitate the drafting of contracts with companies that oblige "recipients to obtain regular patent protection and to share royalties". Though it has been argued that knowledge shared by all members of a community may not qualify as a trade secret, but "if a shaman or other individual has exclusive access to information because of his status in the group, that individual or the indigenous group together probably has a trade secret".[86]

Trade secret law is possibly the best form of protection for the indigenous knowledge amongst the prevailing regimes of intellectual property rights. *A trade secret can consist of any pattern, device, compilation, method, technique,*

83 Hansen, Stephen and VanFleet, Justin., *op. cit*.

84 D.A. Posey and G. Dutfield*., op. cit.* Ch. 8 at 71

85 M.A. Gollin, "An Intellectual Property Rights Framework For Biodiversity Prospecting". *In* W.V. Reid, S.A. Laird, C.A. Meyer, R. Gamez, A. Sittenfeld, D.H. Janzen, M.A. Gollin, C. Juma, (ed.), Biodiversity Prospecting: Using Genetic Resources for Sustainable Development. World Resources Institute, Washington, DC, USA; Instituto Nacional de Biodiversidad, San José, Costa Rica; Rainforest Alliance, New York, NY, USA; African Centre for Technology Studies, Nairobi, Kenya,1993 at 164

86 J.R. Axt., M.L. Corn, M. Lee, D.M. Ackerman, "Biotechnology, Indigenous Peoples and Intellectual Property Rights". Congressional Research Service, Library of Congress, Washington, DC, USA. 1993. The world may be experiencing mass extinction of species. There is now an increase in biodiversity prospecting, but concerns are being expressed that indigenous peoples should be involved in the selection of species for collection. Some such arrangements have been implemented by the *Instituto Nacional de Biodiversidad* of Costa Rica, the National Cancer Institute, and Shaman Pharmaceuticals, but a debate is emerging over indigenous peoples' rights and their possible entitlement to protection of their knowledge under IPR laws. The authors suggest that the most promising avenues for compensating indigenous peoples while promoting biodiversity conservation are not through IPR, but through contracts between such peoples and companies and research organizations.

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or process that gives a competitive advantage.[87] In corporate terms, even items or data such as customer lists, financial information, recipes for food or beverage products, and technical subject matter of a patent, marketing procedures, or a professional questionnaire can be protected by trade secrets. For example, trade secrets can vest an implied duty on a photographer not to sell or exhibit copies of a photograph without the consent of the photographed.[88] Trade secrets are also the best form of intellectual property rights for protecting any kind of undisclosed information. The object is to lawfully prevent information (which is a secret having commercial value) within the control of a person from being disclosed to, acquired by, or used by others without consent, in a manner contrary to honest commercial practices.[89]

The first step towards trade secret protection of the knowledge of indigenous people is the realization of its value by the holders. The awareness of the rights and long term benefits that will be gained if protected as a trade secret is also essential. Normally, knowledge limited to and secured by an identifiable number of people is subject to trade secret protection provided there is a clear intention to treat it as a secret. Corporate trade secrets have been protected by well-drafted agreements with specific employees in a department, or the entire company may have knowledge of the confidential information. There are instances where indigenous people have also tried to adopt the same strategy. For example, a small tribe in Peru adopted this methodology to protect its property from the California based Shaman Pharmaceuticals Inc. Shaman is a company based in San Francisco. It focuses on isolating bioactive compounds from tropical plants having a history of medicinal use. The company's research team collects information on the use of plant medicines to treat various illnesses. Shaman, as a part of its program, approached a particular tribe in Peru. The tribe or community demanded that they enter into an agreement with the company to get short and long-term benefits. The terms in the agreement addresses reciprocity from the company to the tribe in three stages. The short-term reciprocity addresses immediate needs of the community, like public health, forest conservation, and medical care. The medium-term reciprocity consists of benefits not immediately apparent, but nonetheless provides benefits before profit sharing might. These include providing equipment, books, and other resources. The long-term reciprocity involves returning a portion of the profits to the indigenous communities once a commercial product is realized.[90] However, the company does *not* share

87 Emphasis Mine

88 G. Lakotia, *Trade Secret Laws: Do We Need Them in India A Comparative Analysis*., Available online at http://www.iprlawindia.org/law/contents/…ts/Articles/trade_sec_laws_glakhotia.htm Visited 10 January, 2012

89 *Ibid*

90 Donald E. Bierer, Thomas J. Carlson, and Steven R. King, "Shaman Pharmaceuticals: Integrating Indigenous Knowledge, Tropical Medicinal Plants, Medicine, Modern Science and Reciprocity into a Novel Drug Discovery Approach", Available online at http://www.netsci.org/science/special/feature11.html visited 10 January, 2012

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the patents or part of the proceeds from the patents with the indigenous people who provided the initial material. Long-term benefits will accrue in absolute terms only from intellectual property rights and not from the facilities that may be provided to the tribes. Nevertheless this is a good approach involved in using trade secret to protect indigenous knowledge.[91]

Though for intellectual balance, despite the beautiful arguments in favour of protection of Indigenous or Traditional Knowledge using Trade secret, Meghana RaoRane argued against it as a viable option among the existing IPRs regimes because of its commercial basis. He claimed that: Trade secret law, proposed as a solution for protecting Traditional Knowledge or Traditional Cultural Expressions, attempts to protect valuable commercial information that has been conveyed in confidence.[92] A trade secret is a piece of information that has commercial value, is necessary to carry out the business of the organization, and is conveyed to employees or others in confidence.[93] The owner of the trade secret is required to have made reasonable efforts to protect it.[94] However, trade secrets may be protected indefinitely.[95] Despite its seemingly expansive range of protection, trade secret law cannot satisfactorily protect Traditional Knowledge of indigenous peoples. At first, this body of law may be considered useful to protect sacred or secret Traditional Knowledge.[96] However, it requires that the information protected be of a commercial nature, which is not always the case with Traditional Knowledge. Moreover, it only protects information so long as it is not already public, and many Traditional Knowledge do not meet this criterion.[97] Finally, it provides remedies only once the secret has been disclosed. Traditional Knowledge is secret and sacred and their very disclosure to the uninitiated persons violates their sanctity.[98] Therefore, providing a remedy after the expression has been disclosed and the damage done does not satisfactorily protect the Traditional Knowledge. [99]

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91 *Ibid*

92 *Ibid*., See also Meghana RaoRane., "Aiming Straight: The Use Of Indigenous Customary Law To Protect Traditional Cultural Expressions", *Pacific Rim Law & Policy Journal Association* Vol. 15, No.3, 838-839 (2006). See also., Robert K. Paterson & Dennis S. Karjala, *Looking Beyond Intellectual Property in Resolving Protection of the Intangible Cultural Heritage of Indigenous Peoples*, 11 *Cardozo Journal of International and Comparative Law* at 633, 665 (2003)

93 *Ibid*, See also, Robert K. Paterson & Dennis S. Karjala, at 665-666

94 Michael Hassemer, *Genetic Resources*, *in* Indigenous Heritage and Intellectual Property: Genetic Resources, Traditional Knowledge and Folklore, 151, 176 (Silke von Lewinski ed., 2004)

95 *Ibid*

96 Silke von Lewinski, *The Protection of Folklore*, 11 *Cardozo Journal of International and Comparative Law* 764 (2003)

97 *Ibid*

98 Justice Ronald Sackville, *Legal Protection of Indigenous Culture in Australia*, 11 *Cardozo Journal of International and Comparative Law* 724 (2003)

99 Meghana RaoRane., *op. cit*.

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12. Arguments of Trade Secrets, and the UN Convention on Biodiversity as Viable means of Protecting Traditional knowledge

Protection as a trade secret is cheaper, quicker, and easier to implement than a patent. A trade secret can also be maintained perpetually, unlike other forms of intellectual property. The legal requirements for proving that a trade secret exists are more flexible than that for obtaining other forms of intellectual property like a patent. Information not susceptible to patent or copyright protection can be protected under trade secrets.[100] Infringement like using information without permission of the community can be effectively prevented by suing for misappropriation of trade secrets, benefiting the community.[101]

There is also an additional benefit in deciding to protect the traditional knowledge as a trade secret. If traditional knowledge is a trade secret, the holders will retain the right to decide whether or not to disclose the information. However, the Convention on Biodiversity (CBD), 1992[102] mandates sharing of genetic resources for the benefit of general good subject to prior informed consent. It will be interesting to see whether the rights under trade secret law will prevail over the obligations under the CBD. On the other hand, the UN Draft Declaration on the Rights of the Indigenous People provides for the right to protect cultural property. Under the prevailing intellectual property regime, an inventor cannot be forced to disclose his invention under patent law, nor can an author be forced to publish his work under copyright law. Applying the same analogy, the indigenous people must also be given the right to keep their knowledge a secret. It will be interesting to see whether the rights of trade secrets and those detailed in the UN Declaration must prevail over the CBD.[103]

The 2007 United Nations Declaration on the Rights of Indigenous Peoples[104] explicitly addresses these as urgent and legitimate issues in Articles 11, 12 and 31. Article 31 states: *Indigenous people have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control and protect and develop their intellectual property over such cultural heritage, traditional knowledge and traditional cultural expressions.*

100 G. Lakotia, *op. cit*.

101 Srividhya Ragavan., *op. cit*. at 24

102 U.N. Doc. Biodiversity Na 92-7807 Available online at http://www.biodiv.org visited 20 January, 2012

103 *Ibid*

104 *United Nations Declaration on the Rights of Indigenous Peoples* GA Res. 61/295 (Annex), UN GAOR, 61st Sess., Supp. No. 49, Vol. III, UN Doc. A/61/49 (2008) 15

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The 2007 Declaration also highlights that indigenous peoples have the right to access, practice and revitalize their cultural traditions. Article 12 (1) states: *Indigenous peoples have the right to manifest, practice, develop and teach their spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to their religious and cultural sites; the right to the use and control of their ceremonial objects; and the right to the repatriation of their human remains.*

13. Sui generis Protection of traditional knowledge under Intellectual Property Regimes

Another approach, that has been strongly advocated by some academics and many NGOs, would be the development of a *sui generis* regime of IPRs, that is, a legal regime "of its own kind" which is specifically adapted to the nature and characteristics of traditional knowledge. A model of *sui generis* national legislation that would give communities property-like rights over their collective knowledge was developed by the Third World Network (Community Intellectual Rights Act) in 1994.[105] Although this approach has received considerable attention in the literature, little progress has been made in terms of actually implementing this kind of protection. The establishment of a *sui generis* regime poses, many complex conceptual and practical issues. Briefly these are:[106] definition of

105 FTAA.TNC/w/133/Rev 1; See also COICA, 1999. The Organisation of African Unity's African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources covers community rights: "Community rights recognise that the customary practices of local communities derive from a priori duties and responsibilities to past and future generations of both human and other species. This reflects a fundamental relationship with all life, and is imbued with an innate demand for respect. Despite the fact that this worldview is not commonly understood by the dominant western world, the purpose of these rights is to recognise and protect the multi-cultural nature of the human species. Community rights and responsibilities that govern the use, management and development of biodiversity, as well as the traditional knowledge, innovations and practices relating to them, existed long before private rights over biodiversity emerged, and concepts of individual ownership and property arose. Community rights are thus regarded as natural, inalienable, pre-existing or primary rights. The OAU's Model Law recognises this a priori character of rights in its Preamble. The rights of local communities over their biodiversity leads to the formalisation of their existing communal control over biodiversity. This system of rights, which enhances the conservation and sustainable use of biological diversity and promotes the use and further development of knowledge and technologies, is absolutely essential for the identity of local communities and for the continuation of their irreplaceable role in the conservation and sustainable use of this biodiversity". (See also J A Ekpere, *The OAU's Model Law*, Organisation of African Unity; Scientific, Technical & Research Commission, Lagos, 2000 in Carlos M Correa, "Traditional Knowledge and Intellectual Property: Issues and options surrounding the protection of traditional knowledge A Discussion Paper" The Quaker United Nations Office (QUNO), Geneva, November 2001)

106 Carlos Correa, "In situ conservation and intellectual property rights", Stephen Brush (ed), *Genes in the Field: On-Farm Conservation of Crop Diversity*, IPGRI/IDRC/Lewis Publishers, 2000

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the subject matter of protection; requirements for protection; extent of rights to be conferred (rights to exclude, to obtain a remuneration, to avoid misappropriation); title-holders (individuals/communities); modes of acquisition, including registration; duration; enforcement measures.[107]

Sui generis literally means "of its own kind" and consists of a set of nationally recognized laws and ways of extending plant variety protection (PVP) other than through patents. TRIPs itself does not define what a *sui generis* system is or should be.[108] Potentially, a *sui generis* system could be defined and implemented differently from one country to another[109] and the system might be defined to create legal rights that recognize any associated traditional knowledge relating to genetic resources and promote access and benefit sharing. The government may choose to extend protections to genetic resources and/or knowledge to a community in the form of patents, trade secrets, copyrights, farmers' and breeders' rights, or another creative form not currently established in the intellectual property regime. [110]

In addition, a *sui generis* system may adopt measures of protection specific to traditional knowledge in order to nullify inappropriate patents. For example, the Andean Community's Decision 486 states: "patents granted on inventions obtained or developed from genetic resources or traditional knowledge, of which any member state is the country of origin, without presentation of a copy of the proper access contract or license from the community shall be nullified".[111]

Under a *sui generis* system and as called for by the *Convention on Biological Diversity*, any person interested in gaining access to a community's biological resources or knowledge for scientific, commercial or industrial purposes would need to obtain the prior informed consent of the indigenous peoples who possess the knowledge in question, unless the knowledge is already in the public domain. This would allow the community to decide on access to and use of its genetic resources and knowledge, with the option to share or not to share them. If consent is granted, the person or persons wishing access to lands held by indigenous communities or a conservation area, its biological resources, and knowledge associated with either would need to present evidence of this consent to the intellectual property office or proper authority.[112]

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107 Carlos M Correa, "Traditional Knowledge and Intellectual Property: Issues and options surrounding the protection of traditional knowledge A Discussion Paper" The Quaker United Nations Office (QUNO), Geneva, November 2001, at 14

108 *TRIPs, Plant Variety Protection and UPOV*, The South Centre, Available online at http://www.southcentre.org/southletter/sl34/sl34-10.htm. visited 20 January, 2012.

109 Hansen, Stephen and VanFleet, Justin. (eds), *op. cit*. at 26-28

110 *Ibid*

111 Florez, M.*, Andean Community Adopts New IPR Law*, Ag BioTech InfoNet, October 5, 2000. Available online at http://biotech-info.net/IPR_law.html. visited 20 January, 2012

112 Hansen, Stephen and VanFleet, Justin. (eds), *op. cit*.

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Sui generis rights are alternate models created outside the prevailing intellectual property regime. Protection by such *sui generis rights has* been considered as an option to protect plant variety and traditional knowledge, though very little has evolved on account of the nature of the property sought to be protected. Article 27(3) of TRIPS allows countries to exclude plants and animals from patenting. This clause also provides protection by *sui generis* systems.[113] The issue, however, is that the contours of *sui generis* rights are unclear and the mechanism for enforcement uncertain. Moreover, whether developed nations and the WTO will agree about rights that are defined by individual countries remains a question. Given that developed nations use trade sanctions to force countries to tune in with TRIPS,[114] it is uncertain whether a flexible right will be acceptable. The extent of flexibility will depend on whether the western intellectual property system can accommodate rights that are not beneficial to local industries.

Meghana RaoRane despite his contrary position on trade secret, argued in favour, of Sui generis regime though with some reservations as well, as a more viable option for the protection of Traditional Knowledge among the existing IPRs regime because there are more progressive in protections.[115] He claimed that Sui generis solutions are approaches that create new intellectual property categories for the protection of Traditional Knowledge.[116] They aim to protect Traditional Knowledge by working in conjunction with existing IPRs or by replacing them. Although most countries have created and implemented sui generis solutions within their copyright laws, some have established them as stand-alone Intellectual Property like systems.[117] Some sui generis solutions recognize and incorporate indigenous customary laws within their mechanisms of protection.[118] He further explained that although sui generis solutions afford

113 Srividhya Ragavan., *op. cit*. at 28

114 For example, the U.S. complained that Argentina's new patent law delayed extension of patents to pharmaceuticals until the year 2000 even though developing countries do not have to phase-in patent protection of new product types under TRIPS until a total of ten years after TRIPS enters into force, which is well after 2000. Similarly, in India, the Patent Second Amendment Bill has a provision that is similar to the polar provision of the U.S. (The stockpiling exception states that before the expiration of the patent, a third party cannot pile up his stock so that he can enter the market as soon as the patent holder's term expires.) The U.S. is seeking legislative intervention to prohibit the approval of a generic version of the local drugs before the expiry of the term of the patent. Typically, the implication is that before a generic version is approved, the original patent holder, which is more often a U.S. multinational, will get to be the exclusive seller in the market for a period of easily three to four years.

115 Meghana RaoRane., *op. cit*., at 839-840

116 Daniel Wuger, *Prevention of Misappropriation of Intangible Cultural Heritage Through Intellectual roperty Laws*, *in* Poor Peoples Knowledge: Promoting Intellectual Property in Developing Countries 183, 191 (J. Michael Finger & Philip Schuler eds., 2004)

117 *See Information Booklet on Intellectual Property and Traditional Cultural Expressions/Folklore*, 19, WIPO Publication No. 913, Available online at http://www.wipo.int/freepublications/en/tk/913/wipo_pub_913.pdf Visited 21 January, 2012

118 *See Cultural Expressions/Expressions of Folklore: Legal and Policy Options*, 10, WIPO Doc.

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greater protections to Traditional Knowledge when compared with existing IPRs, they still fall short of providing an adequate level of protection. Some sui generis solutions take a step in the right direction by incorporating indigenous customary laws, and thus, recognize the ability of indigenous customary laws to provide adequate protection to Traditional Knowledge.[119] However, sui generis solutions are based on existing IPRs, and therefore suffer from many of the same limitations of existing IPRs. It has also been suggested that sui generis solutions have no more than a regional reach and that the WIPO-UNESCO Model Provision, for instance, has become "de-facto, a strictly regional instrument."[120]

Indigenous peoples' customary legal systems pertaining to traditional knowledge and genetic resources existed prior to the emergence of the conventional intellectual property rights system. Traditional knowledge and genetic resources were hence not unregulated areas before the coming into being of the Intellectual Property Rights (IPR) system. Subsequently the IPR system has not set aside indigenous peoples' customary legal systems. Indigenous customary laws continue to exist parallel to conventional IPRs, and, as far as indigenous rights are concerned, take precedence over conventional Intellectual Property Rights. To the extent indigenous peoples' customary laws and protocols provide protection of genetic resources and traditional knowledge, such elements therefore do not fall into the so-called public domain, even though conventional Intellectual Property Rights systems fail to protect these genetic resources or traditional knowledge in question. While acknowledging that from a conventional Intellectual Property Rights perspective, indigenous peoples' various customary legal systems could be called *sui generis* systems for the protection of genetic resources and traditional knowledge, these are indigenous peoples' own laws which are fundamental in the protection of indigenous cultural heritage.[121]

14. Conclusion

From the analysis of the different regimes of intellectual property rights, the protection of the indigenous knowledge cut across copy rights law, trade secrets,

WIPO/GRTKF/IC/6/3, (Dec. 1, 2003), Available online http://www.wipo.int/documents/en/meetings/2004/igc/pdf/grtkf_ic_6_3.pdf; Visited 21 January, 2012 See also von Lewinski, *op. cit*, at 765. Examples of sui generis systems include the Tunis Model Law on Copyright, the Model Provisions, the Bangui Agreement of OAPI, the Panama Law No. 20, and the South Pacific Model Law for National Laws.

119 *see also* von Lewinski, *op. cit*, at 765

120 Erica-Irene Daes, *Intellectual Property and Indigenous Peoples*, 95 *AM. SOC'Y INT'L L. PROC.* 143, 145 (2001).

121 Joji Carino., "Indigenous Peoples' Rights and the International Regime on Access and Benefit-Sharing" Available online at www.twnside.org.sg/title2/resurgence/206/cover9.doc visited 21 January, 2012. Note that Joji Carino is the European Desk Coordinator of Tebtebba Foundation and a leading activist in the International Indigenous Biodiversity Forum.

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and sui generis regime among others which are the common law approach for protecting intellectual property rights. But this research has shown that trade secret has been isolated to provide a profound protection for Indigenous knowledge considering the avalanche of protective avenues possible under it since the object of trade secret is to lawfully prevent information (which is a secret having commercial value) within the control of a community from being disclosed to, acquired by, or used by others without their consent, in a manner contrary to honest commercial practices. It was also argued that even if a trade secret happens to enter the public domain, contractual royalty payment agreements may still remain in effect throughout the life of the agreement.

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