Beyond Authorship

Refiguring Rights in Traditional Culture and Bioknowledge

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An "author" in the modern sense is the creator of unique literary, or artistic, "works" the originality of which warrants their protection under laws of intellectual property -- Anglo American "copyright" and European "authors' rights." This notion is so firmly established that it persists and flourishes even in the face of contrary experience. Experience tells us that our creative practices are largely derivative, generally collective, and increasingly corporate and collaborative. Yet we nevertheless tend to think of genuine authorship as solitary and originary.

This individualistic construction of authorship is a relatively recent invention, the result of a radical reconceptualization of the creative process that culminated less than two centuries ago in the heroic self-presentation of Romantic poets. In the view of poets from Herder and Goethe to Wordsworth and Coleridge genuine authorship is originary in the sense that it results not in a variation, an imitation, or an adaptation, and certainly not in a mere reproduction, but in a new, unique -- in a word, "original" -- work which, accordingly, may be said to be the property of its creator and to merit the law's protection as such.[1]

With its emphasis on originality and self-declaring creative genius, this notion of authorship has functioned to marginalize or deny the work of many creative people: women, non-Europeans, artists working in traditional forms and genres, and individuals engaged in group or collaborative projects, to name but a few. Exposure of these exclusions -- the recovery of marginalized creators and underappreciated forms of creative production -- has been a central occupation of cultural studies for several

[1] See Martha Woodmansee, "The Genius and the Copyright: Economic and Legal Conditions of the Emergence of the 'Author'"; rpt. in Woodmansee, The Author, Art, and the Market, 35-55.

decades. But the same cannot be said for the law. Our intellectual property law evolved alongside of and to a surprising degree in conversation with Romantic literary theory. At the center -- indeed, the linchpin -- of Anglo-American copyright as well as of European "authors' rights" is a thoroughly Romantic conception of authorship.[2] Romantic ideology has also been absorbed by other branches of intellectual property law such as the law of patent and trademark; and it informs the international intellectual property regime. In patent it survives today both in figurations of the inventor and in the emphasis, which this body of law shares with copyright, on the "transformative" moment in the creative process.

We suggested above that cultural production necessarily draws upon previous creative accomplishments. For the better part of human history this derivative aspect of a new work was thought to contribute to, if not virtually to constitute, its value. Writers, like other artisans, considered their task to lie in the reworking of traditional materials according to principles and techniques preserved and handed down to them in rhetoric and poetics -- the collective wisdom of their craft. In the event that they chanced to go beyond the state of the art, their innovation was ascribed to God, or later to Providence. Similarly, in the sphere of science, invention and discovery were viewed as essentially incremental -- the inevitable outcome of a (collective) effort on the part of many individuals applying inherited methods and principles to the solution of shared problems.[3]

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[2] See Peter Jaszi, "Toward a Theory of Copyright: The Metamorphoses of 'Authorship.'"

[3] See Christine MacLeod, "Concepts of Invention and the Patent Controversy in Victorian Britain." MacLeod quotes Isambard Brunel's succinct expression of this view in his 1851 memoirs: "I believe that the most useful and novel inventions and improvements of the present day are mere progressive steps in a highly wrought and highly advanced system, suggested by, and dependent on, other previous steps, their whole value and the means of their application probably dependent on the success of some or many other inventions, some old, some new. I think also that really good improvements are not the result of inspiration; they are not, strictly speaking, inventions, but more or less the results of an observing mind, brought to bear upon circumstances as they arise, with an intimate knowledge of what already has been done, or what might now be done, by means of the present improved state of things, and that in most cases they result from a demand which circumstances happen to create" (147). See also Edith Tilton Penrose, The Economics of the International Patent System, esp. 19-41.

It was not until the eighteenth century, and then chiefly in Western Europe, that an alternative vision of creative activity focusing on the endowments and accomplishments of the individual "genius" began to take shape. In a sharp departure from the self-understanding of writers of previous generations, authors in the new Romantic mode viewed their task as one of *transforming* the materials of personal sense experience through the operation of their unique, individual genius. This change of emphasis mystified the writing process, obscuring the reliance of these writers on the work of others. The notion that a technological or scientific breakthrough owes its existence to the "genius" -- the unique creative abilities -- of an individual inventor seems to be even more recent. It appears to date only to the third quarter of the nineteenth century.[4] Borrowed from literary discourse, this notion similarly obscures the collective or collaborative element in scientific invention and discovery. Both misrepresentations of creative activity appear to have fostered and been fostered by modern intellectual property law. Like copyright, modern patent emphasizes individual achievement -- chiefly by rewarding the identification of a single genuinely transformative moment in what in most places through most of human history has been viewed as a collaborative because incremental and continuous process.

As a consequence, this body of law tends to reward certain producers and their creative productions while devaluing others. Especially hard hit in this regard is the creative production characteristic of developing areas of the world. This North-South inequity in the distribution of intellectual property is the subject of the present essay. We aim, first, to bring attention its scope and to the central role of the author/inventor construct in sustaining it. We then turn in Part II to review some of the most visible recent initiatives to redress this inequity. Arguing that such initiatives tend to get dispersed in the "force field" of Romantic proprietorship, we explore in Part III some other ways of thinking and talking about creative production that could prove useful in the coming discussion of an alternative legal order.

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[4] MacLeod, "Concepts of Invention," esp. 150-53. See also MacLeod, Inventing the Industrial Revolution, esp. Chaps. 10 and 11.

I

Consider, first, the way in which our laws of intellectual property dispose of the cultural heritage -- including stories, sounds, and images of all kinds -- of peoples of the so-called developing world as well as of indigenous groups within North American and Western European societies. In 1992, the firm of Ferolito, Vultaggio & Sons, known for its AriZona brand iced teas, introduced a new high-alcohol beverage under the label "Original Crazy Horse Malt Liquor." In addition to the name and purported likeness of the revered Tasunke Witko, or Crazy Horse, the label features a generic Indian in a head-dress, a beadwork design, the sacred Lakota "medicine wheel" symbol, and (on the verso) the text: "The Black Hills of Dakota, steeped in the history of the American West, home of Proud Indian Nations. A land where imagination conjures up images of blue clad Pony Soldiers and magnificent Native American Warriors. . . . A land where wailful winds whisper of Sitting Bull, Crazy Horse, and Custer." When it appeared in stores, the new "niche" beverage, packaged in a large, whiskey-style bottle bearing this label, met resistance from various Native American communities with which Tasunke Witko had been associated. Throughout his life their revered leader had opposed the introduction of alcohol into Indian communities, they protested, and he had also forbidden the representation or reproduction of his image.[5]

Our stores are full of merchandise created by drawing on traditional cultural materials in this way. So accustomed have we become to seeing it that we may fail to notice the problem it poses: the traditional communities in which valued images, patterns, designs, and symbols of this kind originated rarely share in the profit from, and often, as in this example, may not even condone their exploitation by entrepreneurs in the creation of new products of "value."

[5] On this episode, see Nell Jessup Newton, "Memory and Misrepresentation"; Peter Jaszi and Martha Woodmansee, "The Ethical Reaches of Authorship," esp. 961-63; Rosemary Coombe, The Cultural Life of Intellectual Properties, 199-207.

Under our reigning national and international laws of intellectual property traditional communities like the Lakota Sioux do not have rights in their cultural heritage. Were copyright to be recognized in the artwork that constitutes this heritage, doctrines of "economic right" would enable these communities to forbid its commercial exploitation, or to dictate the terms and conditions under which exploitation could occur. In most countries they would also enjoy a measure of additional protection under parallel and independent doctrines of "moral right," giving them (and their successors) legal authority to prevent the misattribution or derogatory distortion of their works -- even by those who have been authorized to exploit the works economically. But in the absence of a "work of authorship" none of these legal doctrines can apply.

Traditional patterns and symbols like those reproduced by Ferolito, Vultaggio & Sons are not "works of authorship" because to qualify, a text must have been created by an identifiable individual or individuals -- or a corporation acting as an individual -- and must exhibit "originality," as copyright doctrine terms the traces of new creativity that are entailed by such a provenance. The source of the "medicine wheel" and other symbols at issue in the collective culture of the Sioux community precludes the identification of individual "authors" and prevents them from qualifying as "original" -- indeed, their cultural value resides in their fidelity to, rather than any divergence from, the age-old symbols that have been transmitted over generations within this community.[6]

From the point of view of intellectual property law, these symbols reside in the "public domain," so in appropriating them to market its new beverage Ferolito, Vultaggio & Sons is legally within its rights. Even as the law offers little or no aid to the indigenous community from which the symbols have been extracted, it rewards such entrepreneurs who "add value" by revising or recontextualizing traditional imagery. Such marginal "value added" constitues original authorship, justifying a copyright in the resulting design as a so-called "derivative work." In consequence, if another distributor

[6] The venerable age of the "medicine wheel," which contributes so much to its cultural value, also weighs against its elibibility for meaningful protection because many of the "rights" awarded to creators under

of beverages were to copy that design, Ferolito, Vultaggio & Sons could bring suit for infringement of its copyright (to say nothing of the additional trademark rights it enjoys above and beyond copyright as a result of its commercial use of the symbols represented on that label). By virtue of the emphasis it places on innovation (however insignificant in quantity or quality), intellectual property law thus not only fails to discourage the appropriation of traditional culture, but actually rewards and promotes it.

Let us turn to the way in which intellectual property law disposes of the scientific heritage of traditional communities.[7] We refer to the appropriation of their bioknowledge by Northern pharmaceutical, biotech, agricultural, and personal care industries in search of newer and better pesticides, cosmetics, and cures for the world's illnesses. The huge number of plant species -- which is estimated at between 250,000 and 750,000 world-wide[8] -- makes random "prospecting" for those with commercial potential unfeasible, so these industries depend on the bearers of traditional knowledge to identify those plants likely to prove useful. According to one estimate, three-quarters of the plants that provide the active ingredients in our prescription drugs first came to the attention of researchers because of their use in traditional medicine.[9] Yet here again, those who led them to these plants -- the communities in which knowledge of the plants' curative potential originated and has been handed down -- do not share in the huge profits that these prescription drugs produce when they are brought to market. To date, such ethnobotanical prospecting has led primarily to the development of "new" compounds, including pharmaceuticals and pesticides, that employ chemicals harvested from plants as their active ingredients. In the future, however, we can expect more and more of these new compounds to employ synthetic versions of the chemicals originally isolated from wild plants, rather than actual derivatives.

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intellectual property law are limited in duration -- "economic rights" under copyright, for example, endure for the lifetime of an author plus 70 years.

[7] On the differences between "science" and "lore," see Arun Agrawal, "Dismantling the Divide between Indigenous and Scientific Knowledge."

[8] These are the figures of Manuel F. Balandrin et al, "Natural Plant Chemicals," ??.

[9] See Steven R. King, "The Source of Our Cures," 19.

Consider the much publicized case of the rosy periwinkle. This plant species was first harvested in Madagascar for pharmaceutical use, and the two complex alkaloids isolated from it (vinblastine and vincristine) now form the basis of compounds used in anti-cancer chemotherapy. Formulations of these active ingredients have proved particularly effective against childhood leukemia and Hodgkin's disease and now earn the Ely Lilly pharmaceutical company an estimated $100 million a year.[10] But while Lilly still harvests the periwinkle to produce these medicines, it has left Madagascar behind.[11] Lilly no longer relies on the island as the primary source of this "raw material." The plant, which grows readily in warm climates throughout the world, is now widely cultivated in the Philippines and Texas. Carrying this process of alienation one step further, in a trend that almost certainly represents the future of drug development, France's Pierre Fabre Laboratories has created an entirely synthetic version of one of the periwinkle-derived alkaloids for the treatment of bronchial and breast cancers.[12]

However the drug is formulated, what has been appropriated in the process of its development and commercialization is not so much the botanical materials as something more abstract and intangible: indigenous peoples' knowledge of the beneficial properties of those materials. Such bioknowledge is exactly the sort of commodity of the mind that intellectual property law values and protects. As "useful" scientific information it falls squarely within the domain of patent law. Yet under patent doctrine it is not eligible for protection. Why?

Much as copyright requires the agency of an individual creative "author," so patent demands the agency of a personalized "inventor" whose genius produces innovations that surpass the "prior art" by virtue of their "novelty." Through his or her

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[10] See Edward O. Wilson, "Threats to Biodiversity," ??.

[11] Ironically, the information about the properties of the rosy periwinkle that first drew Eli Lilly's researchers to Madagascar did not even come from the indigenous knowledge base of that society. As it turns out, the investigation of the periwinkle began because Filipino and Jamaican folklore suggested that a tea brewed from its leaves could be a remedy for diabetes (see Karen Ann Goldman, "Compensation for Use of Biological Resources," 717 n. 131). If anyone deserves compensation for appropriated "bioknowledge" in the case of the periwinkle, then, it is perhaps the Filipino and Jamaican communities in which this folklore was preserved rather than the people of Madagascar.

[12] See Anne Jeanblanc, "Fighting Cancer on Many Fronts," 42-43.

efforts, the inventor transforms known preexistent raw materials -- as traditional bioknowledge would be figured in patent discourse -- into something useful and new. Thus, the people of Madagascar, the custodians of the crucial knowledge of the periwinkle's curative properties, do not count as inventors under patent doctrine any more than do the Lakota Sioux as "authors," and they are not eligible for patent protection. Protection goes rather to the entrepreneurial pharmaceutical, Ely Lilly, which, having relied on their knowlege to identify the promise of the periwinkle, has gone on to engineer its active chemical ingredients so as to "improve" it for commercial application. Such improvements, although marginal, qualify Lilly as an "inventor," justifying the award of a patent. The availability of such patent protection is what makes it possible for the company to reap profits of so large a scale.

> The people of Madagascar, meanwhile, have received nothing of significance in exchange for their knowledge -- not even an assured income from the sale of the plants themselves. The[se] desperately poor islanders are thus rapidly deforesting their country to gain arable land on which to grow subsistence and market crops. Today, less than 20 percent of Madagascar's original forest cover remains. And although ethnobotanical teams of African scientists and students are hurrying to record popular knowledge about the curative properties of other plants, it seems inevitable that much of this lore will be lost with the island's biodiversity.

> Herein lies a further disadvantage of the present intellectual property regime. The developing areas of the world in which most of the as yet untapped plant species are most prevalent, the great tropical forests, are typically also the poorest. With few available sources of income, not even from their valuable bioknowledge -- profits from which go to the Northern drug companies -- the peoples in these areas of the world have no choice but to consume their heritage in an effort to survive. When this occurs, we all lose -- peoples of the developed and developing world alike. For with the disappearance of the great forests, popular knowledge of the curative properties of their diverse flora -- their crucial biolore -- will rapidly disappear as well, leaving the drug companies to prospect randomly in what remains of nature -- a scenario that is not financially feasible.

Such nonoptimal outcomes are the product of our intellectual property regime, and more particularly, of the conception of creative production that lies at its center. This body of law figures creative production as essentially individual and originary. Accordingly, it views the critical creative moment in both of these examples to lie in the transformative activity of the two entrepreneurs -- Ferolito Vultaggio & Sons, and Ely Lilly. Having been handed down by tradition, the designs, images, and lore on which these companies operate lack an identifiable "author" or "inventor." Intellectual property law thus regards them as naturally occurring raw materials which lie available to all for the taking. Not in themselves the locus of value, they acquire value through the creative activity of the entrepreneurs who transform them into beverage brands and internationally marketable drugs.

II

There have been a number of efforts to address this problem over the past three decades. Here we will review only a few of the most visible and suggest why they have foundered. Until recently the primary focus of such efforts has been traditional cultural heritage. Thinking about recognizing legal rights in the scientific heritage of indigenous peoples is, by contrast, still in a very early stage.

An early, tentative effort to address the dilemma of indigenous intellectual property may be seen in the Act of the Berne Convention for the Protection of Literary and Artistic Works (1971). While protection of so-called "folkloric" works -- i.e., "traditional creations of a community such as the so-called folk tales, folk songs, folk music, folk dances, [and] folk designs or patterns"[13] -- is not mandated by the treaty, Article 15(4)(a) does give countries bound by the Berne Convention the option of adopting local legislation to afford protection "in the case of unpublished works where the identity of the author is unknown, but where there is every ground to presume that he

[13] WIPO, "1967, 1982, 1984," 5.

is a national of a country of the Union . . . .” Where it might be extended, therefore, such protection would be available only on the basis of the legal fiction that the work is in fact the creation of one or more “unknown” (but otherwise qualifying) individual authors.

At the most practical level, the difficulty with this invitation to shoehorn traditional culture into national law lies in the potential for resistance in the core copyright concepts which are not addressed in the provision. Though the idea of authorship may bend a little, it will not bend much, with the result that most of the content of traditional culture would fail to qualify (by virtue of its lack of “originality”) even under the fictionalized standard of Article 15(4)(a). It is difficult to imagine, for example, how the fiction could accomodate the Lakota “medicine wheel.” In fact, Article 15(4)(a) does not appear to have inspired any domestic legislation. Nevertheless, its general approach to the problem of inserting traditional culture into the scheme of copyright, and the shortcomings of that approach, are reflected in subsequent proposals to extend intellectual property protection to traditional cultural heritage.

The misfit between copyright and the forms of creative production that are most characteristic of peoples of the developing world found explicit international acknowledgement in 1982, which saw adoption by the World Intellectual Property Organization (WIPO) and UNESCO of a set of recommended “Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Prejudicial Actions." The "expressions of folklore" to which the Model Provisions were designed to apply include "productions consisting of characteristic elements of traditional artistic heritage developed and maintained by a community . . . or by individuals reflecting the traditional artistic expectations of such a community." The terms of the Model Provisions would penalize unauthorized economic exploitation of such materials outside the traditional or customary context, and against what might be thought of as "moral rights" offenses -- e.g., false attribution, or the kind of derogatory distortion of materials drawn from folkloric tradition. The right to enforce these prohibitions might be allocated differently in different national implementations of the

provisions -- in some to the communities that are the custodians of a tradition, and in others to a state agency or state-designated "competent authority."[14]

Unfortunately, however, there has been relatively little significant implementation of the WIPO-UNESCO Model Provisions.[15] The reason, we suspect, is that despite the drafters' recognition that copyright cannot easily be applied to protect traditional cultural materials, the "sui generis" approach of the Model Provisions does not really go far -- or at least not far enough -- to escape the "force field" of copyright. Although the Model Provisions do not employ the terminology of copyright discourse -- terms such as "author," "work," and "originality" -- they preserve the general structure of copyright doctrine, with its conventional subdivisions of "economic" and "moral" rights. The Model Provisions focus exclusively on the thing itself -- the "expression of folklore" -- and by necessary implication on protection of the creative investments that went into its production, rather than on preservation of the cultural processes that gave rise to it and the values it expresses. Although the "author function" of conventional copyright discourse is displaced onto representatives of the community, or a designated "competent authority," it is still recognizable as such. So while the Model Provisions incorporate more sophisticated insights into the nature of the problem of providing appropriate legal protection for traditional cultural materials than does Article 15(4)(a) of the Berne Convention, they ultimately stumble on the same obstacle.

To turn to efforts to craft protection for the scientific heritage -- the bioknowledge -- of indigenous peoples, there has been a recent, if tentative, initiative of significance at the international level: the United Nations Convention on Biological Diversity, concluded at the Earth Summit in Rio de Janeiro in 1992. Article 8(j) of the treaty mandates signatories to take measures to "respect, preserve and maintain knowledge, innovations, and practices of indigenous and local communities embodying traditional

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[14] On the Model Provisions and their limitations, see Christine Farley, "Protecting Folklore of Indigenous Peoples," 44-46.

[15] Darel A. Posey and Grant Dutfield report that "a number of African countries, such as Nigeria, have enacted legislation based, at least in part, on the model provisions" but do not give specifics (Beyond Intellectual Property, 100).

lifestyles relevant for the conservation and sustainable use of biological diversity," and requires governments to assure that such knowledges are used with the approval of the communities in question, and consistent with the principle of "equitable sharing of the benefits" resulting from their use. Whether and how these principles will be implemented, and what role intellectual property rights may play in that implementation, remains to be seen. Clearly, however, they need not be implemented through the adaptation of existing intellectual property rights or by the articulation of new ones. Thus, in the very tentativeness of its approach, which opens a space for the development of new non-intellectual property-based legal mechanisms, the Biodiversity Convention arguably represents an advance over earlier efforts to protect traditional cultural and scientific heritage by incorporating it into Eurocentric models of rights in intangibles -- especially when we compare it to the provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) which constituted Annex IC of the Marrakesh Agreement Establishing the World Trade Organization, concluded in April 1994. TRIPS binds signatory nations to provide enhanced protection for pharmaceutical and chemical innovations of companies that exploit traditional bioknowledge, but it contains no imperative for the protection of that bioknowledge itself.

Specifically, Article 27(1) of TRIPS requires protection for inventions "without discrimination as to the . . . field of technology," a reference designed to assure (among other things) that nations which did not protect pharmaceuticals by patent would be required to do so.[16] But because traditional bioknowledge is not "new" and does not "involve an inventive step," it falls outside the category of mandatory patent subject matter that TRIPS Article 27(1) defines.

In addition**,** TRIPS Article 27(3) requires the protection of "plant varieties either by patents or by an effective sui generis system or by any combination thereof." In other words, national laws must provide for Western-style intellectual property protection,

[16] Article 27(2), which permits states to make limited exclusions from patentability, applies only to inventions which would, if commercialized, threaten public order or morality. The only concessions to less-developed countries on this issue are those found in Articles 65 and 66, which allow such countries four to ten years (depending on their stage of development) to phase in TRIPS-compliant domestic legislation.

premised on “innovation,” in new versions or adaptations of naturally occurring plant species -- a mandate which leaves no space for the protection of traditional bioknowledge.[17] Herein lies the key to the difference between the approach of TRIPS and that of the Biodiversity Convention. As one South African commentator has put it, the TRIPS agreement "sees knowledge as belonging to the public domain [and] views Indigenous Knowledge in terms of Intellectual Property which should be protected within the Intellectual Property Rights regime, based on Western notions of individual ownership. The [Biodiversity Convention] on the other hand, focuses on communal ownership. Accordingly, knowledge is viewed as being owned by the local community in whose customs, practices and traditions it is embedded."[18]

Increasingly, activists in the cause of promoting biodiversity through the protection of traditional knowledge have come to view TRIPS as not merely irrelevant to their objectives but potentially inimical. One recent commentary, for example, asserts that by requiring “life patents” and plant variety protection, TRIPS overrides two basic assumptions of the Biodiversity Convention: “that intellectual property is a matter of national sovereignty and policy, and that life forms are part of the public domain,” because “biodiversity represents a cultural and ecological heritage developed over generations and upon which our collective survival depends. Subjecting this heritage to a legal regime of commercial monopoly rights under TRIPS will destroy the conditions for its conservation and sustainable use, especially by the communities, and thereby destroy society’s access to diverse food and medicine.”[19]

Due in part to the impetus of the Biodiversity Convention, a reconsideration of approaches to the legal protection of indigenous knowledges and traditional cultural materials is underway. Academic literature on the topic is

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[17] Although originally intended to apply to new plant varieties resulting from human manipulation of biological materials, this provision could be vewed as an invitation to enact national laws of a more comprehensive character, applicable to naturally occurring species as well. The problem is that under TRIPS the object of such protection would be the plant varieties themselves, and not human knowledge concerning their properties.

[18] Mongane Wally Serote, “One Fundamental Threshold,” 3.

[19] Genetic Resources Action International.

proliferating,[20] and WIPO has created a new Global Intellectual Property Issues Division, whose charge includes promoting intellectual property rights for "new beneficiaries," and whose jurisdiction cuts across the traditional categories of "expressions of folklore" and "bioknowledge." Notably, representatives of the peoples and communities who are the custodians of such bodies of cultural heritage are directly involved in the discussion -- both at the invitation of international organizations and as the result of their own initiatives. An outstanding example is the Mataatua Declaration of the First International Conference on Cultural and Intellectual Property Rights of Indigenous Peoples, drawn up by an assembly of over 150 delegates from fourteen countries meeting in New Zealand in June 1993. The declaration includes the statement that "indigenous peoples are the exclusive guardians of their knowledge," and as such must be the ones to define it, must be first beneficiaries of it, must be respected for their right to create new knowledge or discover new aspects of traditional knowledge, and must be the ones to decide whether to protect, promote, or develop their knowledge.

Yet another factor contributing to the present sense of urgency surrounding issues of indigenous knowledge and cultural heritage is the coincidence of the fiftieth anniversary of the Universal Declaration of Human Rights. Article 27.2 of the Declaration affirms the right of every person to "protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author." The inadequacy of this formulation -- which may also be found in Article 15.1 of the International Covenant of Economic, Social and Cultural Rights -- will be immediately apparent: it constructs creative activity individualistically, placing the creative production most typical of indigenous peoples squarely outside the scope of the Declaration.[21]

Finally, we would call attention to a fortuituous geopolitical coincidence that has probably done more than any other recent development to put the issue of legal

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[20] See esp. Graham Dutfield's 1400-entry Annotated Bibliography. See also Tom Greaves, ed. Intellectual Property Rights for Indigenous Peoples; Miges Baumann et al, eds. The Life Industry; and Darel Posey and Graham Dutfield, Beyond Intellectual Property.

protection for traditional knowledges and cultural materials on the world agenda and create a real possibility that, sometime within the next five years, a new international treaty addressing rights in cultural heritage may be concluded. This was the procedural linkage of this issue with a substantively unrelated issue -- that of protection for databases -- that occurred at the December 1996 WIPO Diplomatic Conference in Geneva, Switzerland.

The agenda of the Diplomatic Conference called for the delegates of the 127 nations represented in the WIPO to consider three draft treaties. Two of these, dealing primarily with issues of copyright and neighboring rights in the digital environment, were concluded and signed: the WIPO Copyright Treaty and Treaty on Protection of the Rights of Performers and Producers of Phonograms. The third, a proposed agreement on Rights in Collections of Information, which had been injected into the agenda at the last moment by the U.S. and the European Union on behalf of their domestic database industries, was not. This initiative met the resistance of delegates of developing nations who perceived that it would mandate new international and domestic sui generis protection for data compilations which, consisting of non-original facts, have always fallen, by definition, outside the scope of conventional copyright law. In denouncing the initiative, they pointed out that the problem of securing effective protection for traditional cultural materials and knowledges had been under international discussion, without significant progress, for a generation, notwithstanding its importance to developing peoples and nations. Why, they asked, should the conceptually equivalent problem of data rights, in which the developed nations have the chief stake, receive priority?

The Diplomatic Conference concluded without reaching agreement on the merits of the proposed database treaty, but a procedure and general timetable were established for study and resolution of the issues it raised, and an equivalent procedure was mandated for advancing progress on issues related to the protection of indigenous knowledges and traditional cultural materials. This has already led to the convening of the UNESCO-

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[21] Erica-Irene Daes, "Discrimiation Against Indigenous Peoples," 29.

WIPO World Forum on the Protection of Folklore at Phuket, Thailand in April 1997 and the WIPO Roundtable on Intellectual Property and Indigenous Peoples, held in Geneva in July 1998. Having gotten linked to progress toward an international agreement on something as important to the information industries of the developed world as database protection, some kind of treaty protecting the characteristic creative productions of traditional communities, including those in developing countries, now seems likely.

What exactly must such a treaty achieve? There seems to be substantial consensus: Most participants in the discussion agree that what is needed is balance, or, in the memorable phrase of Hong Yongping, a Chinese presenter at the 1997 WIPO Forum, rules assuring "effective protection with reasonable use"[22] -- a scheme of protection that simultaneously reflects the special cultural concerns of indigenous peoples and other custodians of traditional knowledge and at the same time permits continued utilization of their works on reasonable terms as the basis of new cultural productions, pharmaceuticals, crop varieties, and the like. There is also widespread acceptance that any scheme of protection should respond to the principle of "fair sharing of benefits" articulated in the Biodiversity Treaty. The question is how to accomplish such balance between control and access, while assuring equitable distribution of the fruits of exploitation. The terms of the coming discussion -- the dominant metaphors and tropes around which it will be organized -- are crucial.

III

In the past, public discussion about control over and access to productions of the mind has been "personalized" around such metaphorical figures as the author and the inventor. But the figure of the individual creative genius cannot be used to structure discussion about legal rights in traditional knowledges. Still, metaphorization of the discussion seems inevitable, so the choice of an organizing trope matters. Already, a battle for discursive dominance is underway between two, diametrically opposed,

[22] Hong Yongping, “The Experience of Asia and the Pacific Region.”

alternatives drawn from the realm of economic discourse: the notion that “information wants to be free” and the opposing notion of the “tragedy of the commons.” The two tropes have a common starting point in their characterization of traditional knowledge prior to legal intervention, as a "public good" -- a commodity that is not fenced off by any barriers to impede public access and use. For the purpose of both tropes, the original state of this information is figured as a version of the "commons." The tropes part company in the conclusions they draw from this characterization.

The notion that “information wants to be free," familiar to those who read in the history of copyright, has been given a new lease on life by the spread of electronic communication. John Perry Barlow appeals to it when he urges that the Internet be left alone -- unregulated.[23] Barlow, and other commentators who deploy this essentializing trope make the further claim that, especially in the electronic environment, attempts to regulate information are not only unavailing but threaten the good information order. "[T]he increasing difficulty of enforcing existing . . . laws,” he writes, “is already placing in peril the ultimate source of intellectual property -- the free exchange of ideas."[24]

This way of figuring the nature of information is generally associated with progressive positions on issues relating to the legal status of traditional knowlege. In her recent book, Biopiracy: The Plunder of Nature and Knowledge, Vandana Shiva invokes the "free" character of genetic information to denounce Western efforts to reduce traditional knowledge to ownership through the patenting of new derivative pharmaceuticals and plant varieties: “Biotechnology, as the handmaiden of capital in the post-industrial era,” she writes, “makes it possible to colonize and control that which is

[23] Barlow enlists Thomas Jefferson in defense of his cause, quoting Jefferson’s characterization of information as by nature a public good: “If nature has made any one thing less susceptible than all others of exclusive property, it is the action of the thinking power called an idea, which an individual may exclusively possess as long as he keeps it to himself; but the moment it is divulged, it forces itself into the possession of everyone, and the receiver cannot dispossess himself of it. Its peculiar character, too, is that no one possesses the less, because every other possesses the whole of it. He who receives an idea from me, receives instruction hemself without lessening mine; as he who lights his taper at mine, receives light without darkening me” (“The Economy of Ideas,” ??).
[24] Ibid., 86.

autonomous, free, and self- regenerative."[25] The same position was expressed in the much publicized controversy surrounding W. R. Grace's patenting of a pesticide made of ground Neem seeds which critics claim has been used in India for centuries. "The real battle," Jeremy Rifkin, who spearheaded a challenge of the patent, is quoted in the New York Times as saying, "is whether the genetic resources of the planet will be maintained as a shared commons or whether this common inheritance will be commercially enclosed and become the intellectual property of a few big corporations."[26]

However, transnational corporations and governments acting on their behalf also mobilize the trope of "free" information to some effect. A particularly notorious example was the April 14, 1992 memorandum from Vice-Presidential staff members John Cohrssen and David McIntosh to Dan Quayle's Chief of Staff Bill Kristol, written "to alert [Kristol] to serious problems with the draft international convention on biological diversity." In pertinent part, the memo -- which played a significant role in delaying U.S. signing of the treaty -- claimed that under the treaty:

> -- Special legislation would need to be passed for the benefit of indigenous populations, i.e., American Indians, since the draft convention has special provisions for them [and]
>
> -- It would greatly increase litigation because of new compensation legislation [that] would need to be passed[,] as the draft treaty contains a vaguely worded provision to establish liability and a right to compensation for damage to biodiversity.
>
> -- The draft convention proposes to regulate biotechnology, in a manner totally unacceptable to the US: to restrict domestic and international commerce in biotechnology related products . . . .[27]

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[25] Vandana Shiva, Biopiracy, 45.
[26] As quoted by John F. Burns, "Tradition in India vs. a Patent in the U.S.," ??. See also Michael D. Lemonick, "Seeds of Conflict"; and Richard H. Kjeldgaard and David R. Marsh, "Claims Upon Nature."
[27] John Cohrssen and David McIntosh, "Major Problems with the Draft Convention on Biological Diversity."

This text is a powerful invocation of the trope of inherently, essentially, naturally "free" information. But it mobilizes that trope to purposes dramatically different from those of Shiva and Rifkin -- to argue that any interference with the ability of U.S. companies to exploit indigenous bioknowledge represents an unacceptable departure from the status quo.

This bivalent trope clearly has limitations, then, as an organizing structure around which to build discussion about future legal regulation of access to traditional knowledge. Not the least of the trope's limitations is that discussion organized around it will not escape the "force field" of the author/inventor figure that has long exerted such a powerful influence over discussion of rights in information. To figure information -- including traditional knowledge -- as not having been created by anyone at all and thus not susceptible of ownership is simply to invert the trope of authorship.

The notion that information is "free," a "public good" like air and water, which one ought to be able to draw upon at will, also gives rise to a powerful counter-metaphor, the so-called "tragedy of the commons" -- invoked to justify reducing commonly owned (or unowned) things to the status of property. The trope became popular in environmental literature during the 1960s, where it was argued that since one only takes care of things one owns, resources held in common -- unowned and unprotected by anyone -- are (inexorably) doomed to be over-exploited.[28] Although the utility of the "tragedy of the commons" metaphor has been extensively questioned in scientific and economic literature,[29] it appears to be achieving new currency in the law -- including intellectual property law -- where it functions as an easy-to-grasp and poignant shorthand for the larger neoclassical economic principle that, to quote Neil Netanel, "private entitlements can best promote allocative efficiency when would-be users must pay the price agreed upon by the entitlement holder in a voluntary exchange."[30]

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[28] The resurrection of this old idea is generally credited to Garrett Hardin's 1968 article on population ecology, "The Tragedy of the Commons."
[29] See esp. E.P. Thompson, Customs of the Country, 107.

Like its mirror image, the trope of “free” information, this trope too is bivalent. Just recently it was successfully invoked by large corporate copyright owners to argue for a twenty year extension of the term of copyright -- the Sonny Bono Copyright Term Extension Act of 1998. In the congressional testimony of Disney, Time-Warner, etc. the "public domain" -- a commons resulting from the expiration of limited terms of protection in copyrighted works -- was consistently figured as a kind of informational dumping ground, littered with abandoned movies, songs, and the like that, because no owner had an economic motivation to bring them to market, were in practice unavailable for public use.[31] Yet the trope is also being mobilized in defense of what might be viewed as progressive objectives. Thus, one writer has recently invoked it to argue for new legal norms to promote the preservation of cultural heritage by discouraging the black market in stolen artifacts.[32] More emphatically -- and more controversially -- Joseph Henry Vogel has argued from the “tragedy of the commons” that the best hope for the preservation of biodiversity lies in the creation of a comprehensive scheme of intellectual property rights, modelled on existing patent and copyright regimes, in “genetic information.” However, his advocacy of this market model gives cause for suspicion. Among his “Ten Principles for Conserving Genetic Information” is this one: “Endorse legislation giving equal protection to artifical and natural information [and] at the same time attenuate the ability to alienate the new property rights”[33] -- that is, endow indigenous communities with rights in their bioknowledge, but restrict their freedom to commercialize their new property. This extraordinary qualification reflects Vogel’s doubt that indigenous peoples will be able to enact their part as rational profit maximizers in his scheme of conservation-by-priviatization, and indeed his doubt may be well placed. The relationship of the bearers of cultural traditions to their traditions is surely more complex.

Conceptually, this bivalent trope of the“tragedy of the commons” does not escape the gravitational pull of "possessive individualism" any more than the competing

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[30] “Copyright and a Democratic Civil Society,” 319.
[31] See Peter Jaszi’s discussion in “Goodbye to All That,” 611.
[32] Claudio Caruthers, “International Cultural Property.”

argument to the effect that “information wants to be free.” In the mode of analysis associated with the “tradgedy of the commons,” effective social ordering is closely linked to property ownership. In this discourse one of the primary characteristics of the property owner is that his or her relationship to the thing owned is rooted in self-interest. The person in whom rights are vested in an effort to avoid over-exploitation of a resource is presumed to be motivated to put that resource to its best and highest use -- in order to maximize benefits and minimize costs to him- or herself. Similarly, by virtue of his or her creative investment, the "author" of copyright law -- the exemplary “possessive individual” -- is literally responsible for a work, both reaping the benefits of its exploitation and bearing the associated costs (such as the risk of censure or prosecution).[34]

Arguments for protection of the environment through the privatization of "genetic information" ignore the possibility that factors other than immediate self-interest may shape the relationship of indigenous peoples to their intangible heritage. While emphasizing how indigenous groups may promote the conservation of nature as rights holders bargaining with prospective users in a transactional marketplace, such arguments fail to recognize the importance of these groups’ role as the custodians, for the time being, of living traditions. By denying these custodial interests, which escape the market, reliance on the pro-enclosure “tragedy of the commons” metaphor as an organizing trope would seriously distort the coming discussion of new rights regimes for the protection of traditional culture and bioknowledge. Just as inevitably, it would focus attention on the cultural or informational objects to be protected, and away from the processes which produce or sustain them.

We conclude by sketching the outlines of an alternative metaphor for organizing discussion of future law governing access to traditional knowledge and cultural heritage -- that of “sustainable development,” familiar from the environmental literature of the last

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[33] Joseph Henry Vogel, Privatisation as a Conservation Policy, 123.

three decades. Simply put, this notion addresses the observation that the environment cannot sustain the current pace and manner of economic expansion, that this pattern of development is, in a word, "unsustainable." But it does not address this problem of environmental degradation by prioritizing environmental protection pure and simply; rather, acknowledging the continuing need for development -- for industrialization of impoverished parts of the world especially -- it urges instead the "balanced" approach captured in the notion of "sustainable development": a"process of change," to quote from Our Common Future, the 1987 report of the World Commission on Environment and Development that first brought global attention to the idea, "in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations"[35]

Since the appearance of this report there has emerged a substantial body of interdisciplinary literature devoted to defining and developing political, economic, and legal instruments to achieve this goal of continued, but "sustainable" development. The notion vaulted into prominence, however, at the Rio summit that led to the United Nations Convention on Biological Diversity -- because it seemed a useful vehicle for harmonizing North - South political differences.

How might interdisciplinary conversation about the development of norms and practices for the protection of traditional knowledge and cultural heritage be advanced by adopting "cultural sustainability" as the organizing metaphor? What advantages does this trope have over "authorship" (and other cognate concepts) around which intellectual property law historically has been organized? And why might it be a more fruitful basis for discussion than either "free information" or the "tragedy of the commons," the new economic tropes that we have identified as false alternatives to "authorship" as

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[34] The disciplinary roots of copyright are explored in Carla Hesse, "Enlightenment Epistemology." The same impulse to discipline by assigning responsibility for texts is explored by Mario Biagioli with regard to the conventions of attribution in contemporary science ("The Instability of Authorship").

[35] World Commission on Environment and Development, Our Common Future, 46. See David Hunter et al, International Environmental Law, esp. Chap 3.

controlling metaphors, ineffective precisely because they fail to escape the gravitational pull of the “authorship” concept itself?

However tentatively, we would suggest that a discussion refracted in terms of "cultural sustainability" might succeed -- where one organized by means of other metaphors ultimately would fail -- in transcending the near-exclusive emphasis on the nexus between the maker and the specific products of his or her creative efforts that dominates conventional intellectual property discourse. As we have argued, that discourse is marked by a strong individualistic emphasis, which makes it difficult to think and talk clearly about instances in which cultural work is carried forward by or within groups. Just as characteristically, intellectual property law thinking tends to approach issues of cultural policy by defining issues and solutions in terms of” “things” to be (or not to be) protected; in doing so it risks missing what is both most valuable to, and most valuable about, the cultural work of indigenous communities: the means by which their custodianship over various cultural objects and bodies of information is carried forward. Thus, for example, the larger question raised by the case of the rosy periwinkle is not how the bearers of a specific item of knowledge about the properties of a specific plant might have been afforded some economic return in connection with its exploitation, but what measures would have been necessary to maintain the systems within which that item of knowledge and others like it were preserved, to assure their continued availability to the human community at large.

Adoption of the metaphor of “cultural sustainability” would represent an acknowledgment that maintenance of traditional knowledge systems within living communities should be the first-order goal of any new legal initiatives to safeguard traditional culture, and that, compelling as are “equity arguments” for compensation to indigenous peoples whose knowledge is commercialized, such compensation is only a means -- and only one means -- by which to accomplish that goal; in some situations, it will be better served by affording greater rights to traditional communities, endowing them (for example) with the absolute authority to withhold sacred knowledge from the marketplace. By the same token, however, because (like other invocations of the

“sustainability” concept) “cultural sustainability” is premised on balancing the need to use resources with the need to assure their continued availability, the metaphor also inherently recognizes the potential risk of overrprotection: a potential rights regime which gave traditional communities the ability to bar dissemination of the proverbial botanical AIDS cure would be subject to criticism within the discursive framework established by adopting the proposed metaphor. Indeed, as we have suggested, the central tension in the policy discussion concerning indigenous cultural rights -- as with that relating to any system of knowledge regulation -- is between the impulse toward "control" and the impulse toward "access." Unlike other available metaphors, "sustainability" has the important advantage of containing a "built-in" recognition of both of these conflicting impulses.

Specifically, a "sustainability"-based approach might help everyone engaged in the discussion of initiatives to safeguard traditional culture to:

-- Recognize more fully the critical custodial role that indigenous peoples play in maintaining valuable traditions and bodies of knowledge, and acknowledge the ways in which that complex role differs from one of conventional “ownership” or “proprietorship”;

-- Ask and answer questions about how a wide range of possible social or legal policies (including, but not limited to, new rights regimes) might encourage desirable forms of collective social behavior in relation to traditional knowledge and cultural heritage;

-- Refocus attention in connection with legal measures and initiatives away from the consideration of individual entitlements, and towards an accounting of the cultural requirements of particular traditional communities;

-- Avoid the unfruitful binary of "ownership - no ownership" in

considering whether (and if so, what) regulation of the use of traditional knowledge and cultural heritage may be appropriate;

-- Take into account the collective interests of re-users and consumers of information, both outside traditional communities and within them.

A discussion conducted in terms of "cultural sustainability" would be appropriate to the consideration of new rights regimes, such as the proposals for "Community Intellectual Rights" (CIR) which were first proposed by the Third World Network in 1994 and now are gaining currency in Latin America and parts of Africa.[36] Likewise, it could guide further discussions of initiatives to mobilize the content of existing legal regimes (including, but not limited to those of intellectual property) into "bundles of rights" which could be deployed by traditional communities to protect their knowledge -- the so-called "Traditional Resource Rights" (TRR) approach.[37]

Moreover, the lens of "cultural sustainability" could be profitably employed to examine proposals and projects to address the gaps in national and international legal safeguards for traditional culture through private legal ordering, such as the well-publicized 1992 agreement between Costa Rica's National Institute of Biodiversity

[36]Under a CIR regime, local communities which were the custodians of particular bodies of knowledge would be required to share that knowledge with other like communities so long as it is not sought for commercial purposes; commercial users would be required to pay the local community (if registered) or the state (as trustee, in lieu of such registration) a stipulated royalty on sales, or a non-monetary equivalent to be determined by local custom, practice and usage; where more than one community is the custodian of a particular body of knowledge, payments in connection with its commercialization would be shared among them; and firms commercializing local knowledge would be barred from seeking to control it through the exercise of Western intellectual property rights such as patent. See Gurdial Singh Nijar, In Defense of Local Community Knowledge and Biodiversity; the draft Community Intellectual Rights Act; and Manuela Carneiro da Cunha, "The Role of UNESCO in the Defense of Traditional Knowledge." The effect of such legislation would be to create for traditional culture a version of a mechanism much discussed but little implemented in connection with conventional intellectual property law: the so-called "domaine publique payant." See Christine Farley, "Protecting Folklore of Indigenous Peoples," 49-50.

[37] The TRR approach draws on "basic human rights; the right to self-determination; collective rights; land and territorial rights; religious freedom; the right to development; the right to privacy and prior informed consent; environmental integrity; intellectual property rights; neighboring rights; the right to enter into legal agreements; rights to protection of cultural property, folklore and cultural heritage; the recognition of cultural landscapes; recognition of customary law and practice; and farmers' rights" (Programme for

(INBio) and the Merck pharmaceutical company.[38] Likewise, it could be applied in assessing the benefit-sharing approach adopted in the mid-1990's by the Shaman Pharmaceuticals firm,[39] or the more recently-announced contract between an Indian government research institute and a local traditional community to share the benefits of a medicine based on the active ingredient of a plant to which its members directed research scientists.[40]

In addition, and perhaps most importantly, any discussion of the future of legal measures to safeguard traditional heritage conducted in terms of the metaphor of "cultural sustainability" would, by its nature, be one in which traditional communities and their representatives would be full participants. Only through the fullest possible

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Traditional Resource Rights, "What are Traditional Resource Rights?"). See also generally Darrell A. Posey and Graham Dutfield, Beyond Intellectual Property.

[38] According to one recent account, "In return for plant and insect extracts and other samples, Merck gave INBio a 1.14 million dollar research and sampling budget, undisclosed royalties on any new drugs that emerge, and technical assistance and training for Costa Rican scientists. In turn, INBio agreed to donate 10 per cent of the upfront payment and half of any royalties they receive to conservation efforts in Costa Rica" (Mary Parlange, "Eco-nomics," ??). The Merck-INbio agreement has been criticized for failing to take into account the interests of indigenous peoples within Costa Rica as well as the collective national interest in ecological conservation, and for promoting secrecy and exclusivity rather than information sharing.

[39] See Peter Jaszi and Martha Woodmansee, "The Ethical Reaches of Authorship," 967-68. For a somewhat jaundiced view of Shaman's later fortunes, see "Ethnobotany: Shaman loses its magic," 77.

[40] The plant, Trichopus zeylanicus, is "found in the tropical forests of southwestern India and collected by the Kani tribal people. Scientists at the Tropical Botanic Garden and Research Institute (TBGRI) in Trivandrum, Kerala, isolated and tested the ingredient and incorporated it into a compound, which they christened 'Jeevani' giver of life. The tonic is being manufactured by the Aryavaidya Pharmacy Coimbtore Ltd., a major Ayurvedic drug company. The process marks perhaps the first time that cash benefits have gone directly to the source of the knowledge of traditional medicines, says Graham Dutfield, an ecologist with the Working Group on Traditional Resource Rights at the University of Oxford, U.K. 'It is a replicable model because of its simplicity,' he says about a chain of events that began well before the international biodiversity treaty was signed.

TBGRI scientists learned of the tonic, which is claimed to bolster the immune system and provide additional energy, while on a jungle expedition with the Kani in 1987. A few years later, they returned to collect samples of the plant, known locally as arogyapacha, and began laboratory studies of its potency. In November 1995, an agreement was struck for the institute and the tribal community to share a license fee and 2% of net profits. Another agent from the same plant is undergoing clinical tests for possible use as a staminabuilding supplement for athletes.

The first $ 21,000 payment, to be shared by the tribal community and the institute, is due later this month. P. Pushpangadan, until last month the institute's director, predicts that the deal will 'not only generate mass employment but also be a money spinner for the poverty-stricken tribals.' He compares its potential value to the booming market for ginseng, cultivated in Southeast Asia" (Pallava Bagala, "Indian Deal Generates Payments," 1614).

consultation will it be possible for policy-makers to determine what legal measures actually will function to help maintain the processes by which culture is conserved, transmitted, and elaborated within those communities -- as any inquiry based on "cultural sustainability" requires. Perhaps because conventional intellectual property rights constitute part of the conventional framework of Western law, legal experts in developed countries have long been ready to prescribe intellectual property rights-based approaches to traditional culture and traditional science. Not surprisingly, as we have detailed above, these proposals have been largely ineffective. Increasingly, however, traditional communities are finding their own voices. The deep logic of "cultural sustainability" would help to reinforce their demands to be heard.

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