

**“La lógica debe prevalecer:
un nuevo marco teórico y operativo para el RI de ABS”**

Manolo Ruiz, Joseph Henry Vogel, Teodora Zamudio



WG-ABS9 Side Event

**KEY ISSUES ON THE FINAL
STAGE OF IR NEGOTIATIONS:
REFLECTIONS AND
ROPOSALS**

AND PROPOSALS

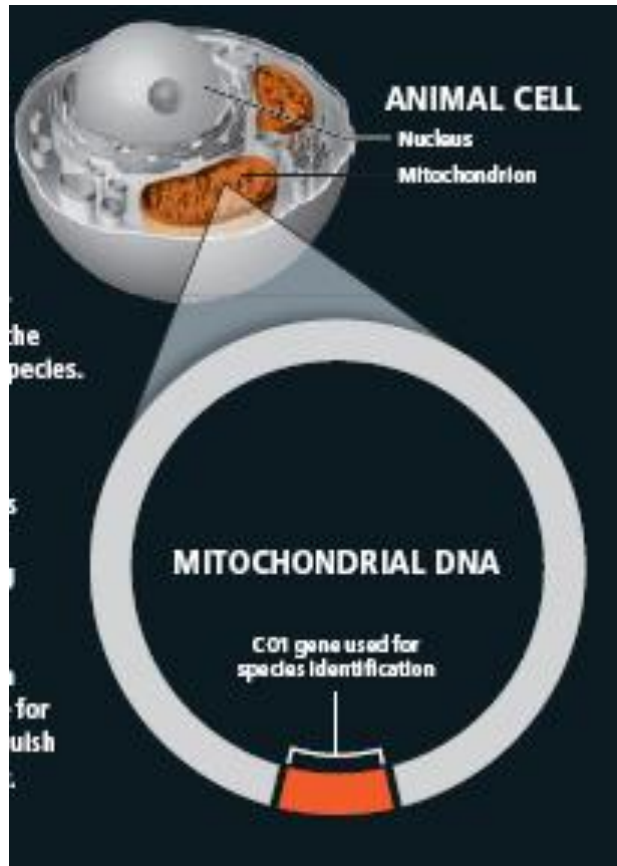
24 March 2010, Calí, Colombia

**Monografía disponible en línea
en español e inglés**

**[http://www.spda.org.pe/portal/
er-publicacion.php?id=162](http://www.spda.org.pe/portal/er-publicacion.php?id=162)**



La tecnología iBOL del marco operativo posibilita el marco teórico, o sea, el cartel de biodiversidad que posibilita ABS.



Analogías, homologías, y metáforas: despejando el lenguaje

Scientific American October 2008

Mark Y. Stoeckle and Paul D.N. Hebert

LIFE SCIENCE



BARCODE OF
LIFE

Inspired by commercial barcodes, DNA tags could provide a quick, inexpensive way to identify species

BY MARK Y. STOECKLE AND PAUL D. N. HEBERT

KEY CONCEPTS

- Traditional methods for classifying plants and animals demand great skill and time. Examining a small portion of the DNA is faster and easier.
- This new method is called barcoding, because it was inspired by the barcode on products.
- The authors propose that a segment of mitochondrial DNA can be used to identify

to the task. But both classical and modern genetic methods demand great expertise and eat up huge amounts of time. Using just a small section of the DNA—something more akin to the 12-digit barcode on products—would require far less time and skill.

So we set a challenge for ourselves: to find a

would be relayed instantly to a reference database, a public library of DNA barcodes, which would respond with the specimen's name, photograph and description. Anyone, anywhere, could identify species and could also learn whether some living thing belongs to a species no one has ever recognized before.

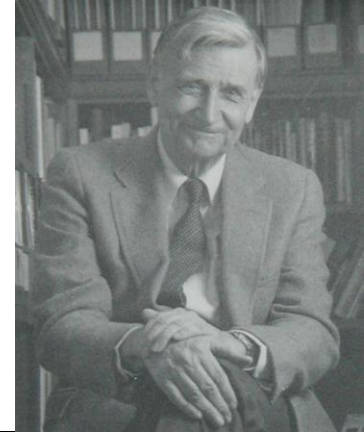
Traducido del The Free Dictionary.com

Metáfora: Una figura de discurso que se refiere a una cosa como si fuera otra: *La vida es sueño*

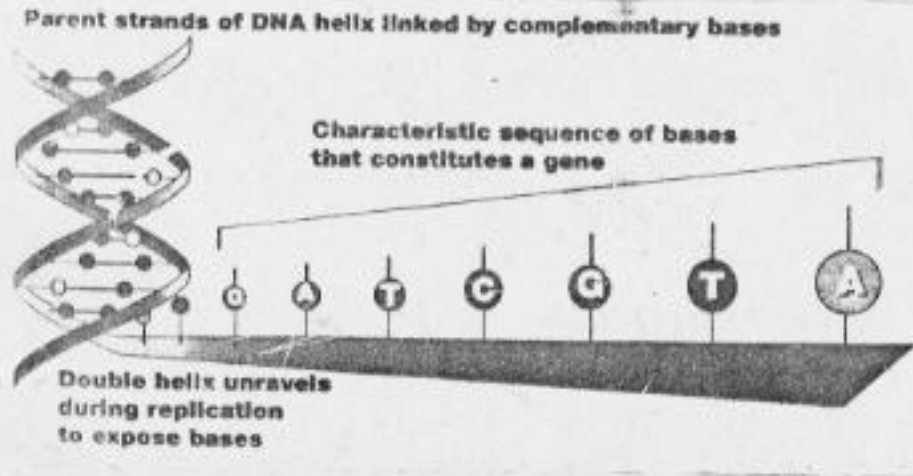
Analogía: 1. Semejanza en algunos aspectos entre cosas que son disímiles. **2. *Biología*** Correspondencia en función o posición entre órganos de origen evolucionario disímil o estructura.

Homología: Semejanza en forma o estructura en dos o más organismos debido a una descendencia común.

“El primer paso hacia la sabiduría, como dicen los chinos, es llamar a las cosas por su nombre correcto.” E.O. Wilson



How can you patent a gene?



The diagram illustrates the structure of a DNA double helix. On the left, the two parent strands are shown as intertwined ribbons, connected by horizontal rungs representing complementary base pairs. A label reads: "Parent strands of DNA helix linked by complementary bases". An arrow points from a specific section of the helix to a larger, detailed view of a single strand on the right. This strand is shown as a thick black line with several vertical lines extending upwards to circular bases labeled with their chemical symbols: G, A, T, C, G, T, A. A label above this strand reads: "Characteristic sequence of bases that constitutes a gene". Below the strand, a label reads: "Double helix unravels during replication to expose bases".

The gene is the basic unit that transmits genetic information. Genes are made up of DNA (deoxyribonucleic acid), which occurs as a double-stranded helix built up of four different kinds of chemical base, joined in a characteristic sequence. This sequence is a code that stores the genetic information needed for an organism to grow and function. Plant DNA molecules are made up of millions of bases strung together. Each group of three bases on a DNA strand codes for a particular amino acid, which are the building blocks of proteins. It is the particular order of bases, and hence the amino acids, that gives a gene its particular properties. Modern technical methods and machines are making it easier to determine these sequences. The series printed below illustrates five lines of a 20-line sequence of bases for a protein that protects plants from virus attack. Although there is widespread and deep concern by many over the use of genetic engineering for any life form, it is the patenting of sequences such as the one here that lies at the heart of the current debate.

```
GATGAAGTCGATGCTGTGGTGACAAATATCAATATGGCTCATTCTTGCACCA  
TTGGGCTGTGAATACAATCATCTACAATGTTGGAAGTACCACCATTACCAAA  
TTTTCTGAATGATCTTCGTAATGAAGCGAAAGATCCAAGTTTAAAATGCTAT  
AATGCTGCCC/ATACAAATACAAATCCAAAGTACGTGTTGGTTGAGCTCCAA  
TAAAAAACCATCACACTAATGCTGAGACGAAACAATTTGTATGTGATGGGT
```

Para fines del diseño de políticas públicas con respecto a la biotecnología, debemos considerar la biodiversidad como información natural

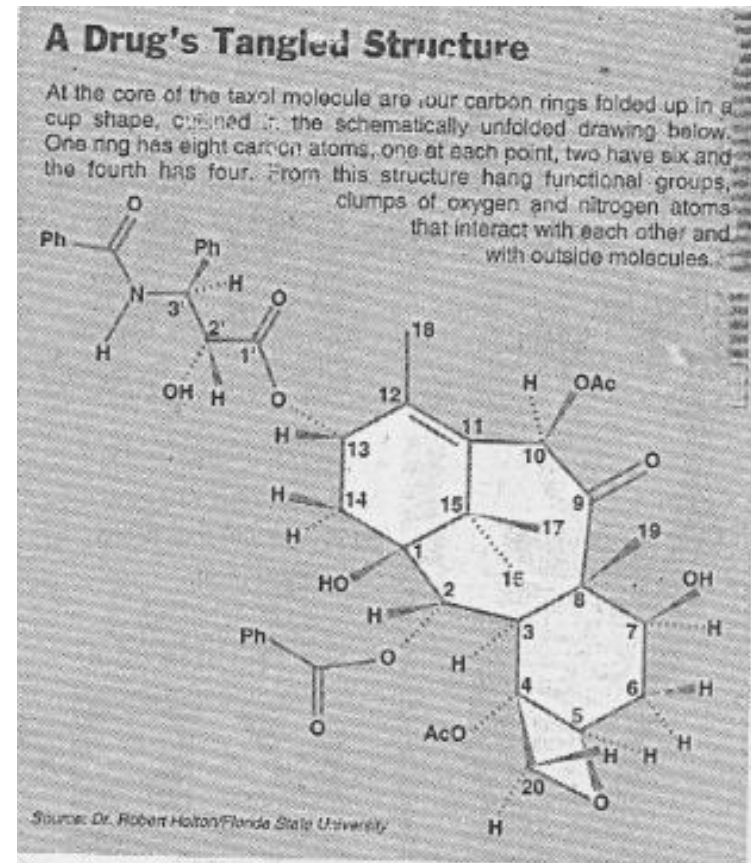
La implicación de dicho reduccionismo no es nada nuevo ---- Flash-back

Cumbre de las Américas 1996

“Case VI: Bioprospecting : The Impossibility of a Successful Case Without a Cartel” in “White Paper: The Successful Use of Economic Instruments to Foster the Sustainable Use of Biodiversity: Six Cases from Latin America and the Caribbean”.
Biopolicy Journal, volume 2, Paper 5 (PY97005), 1997

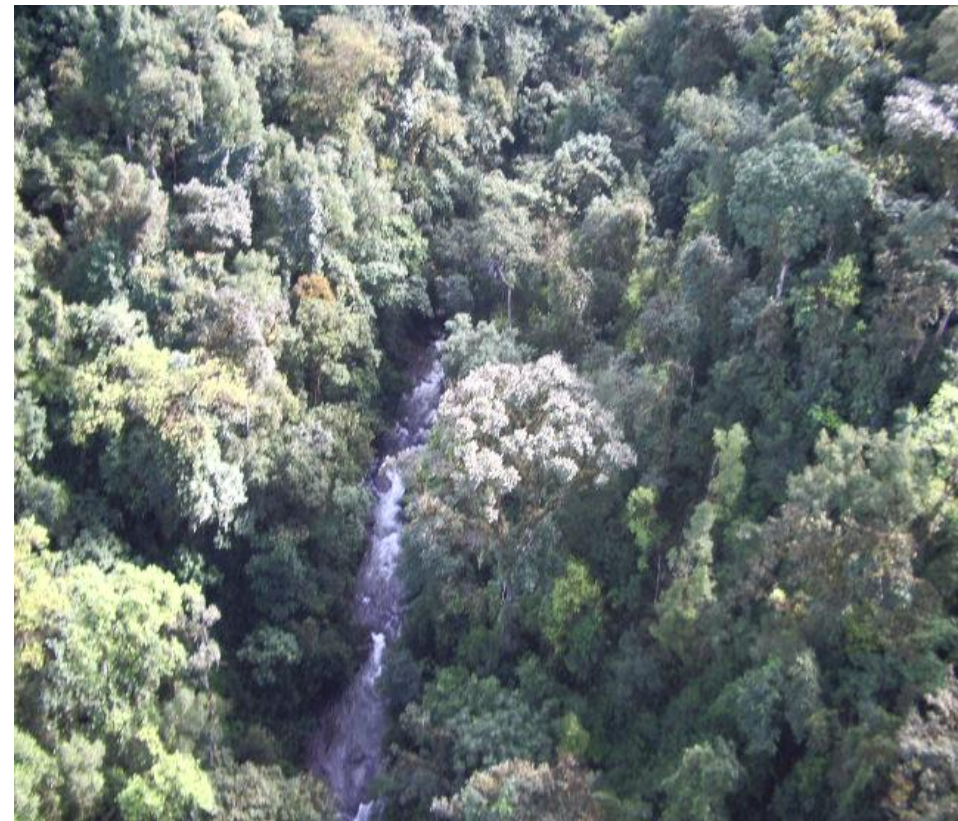


Voucher de *Taxus brevifolia*, y la estructura molecular de paclitaxel, sustancia activa del fármaco TAXOL



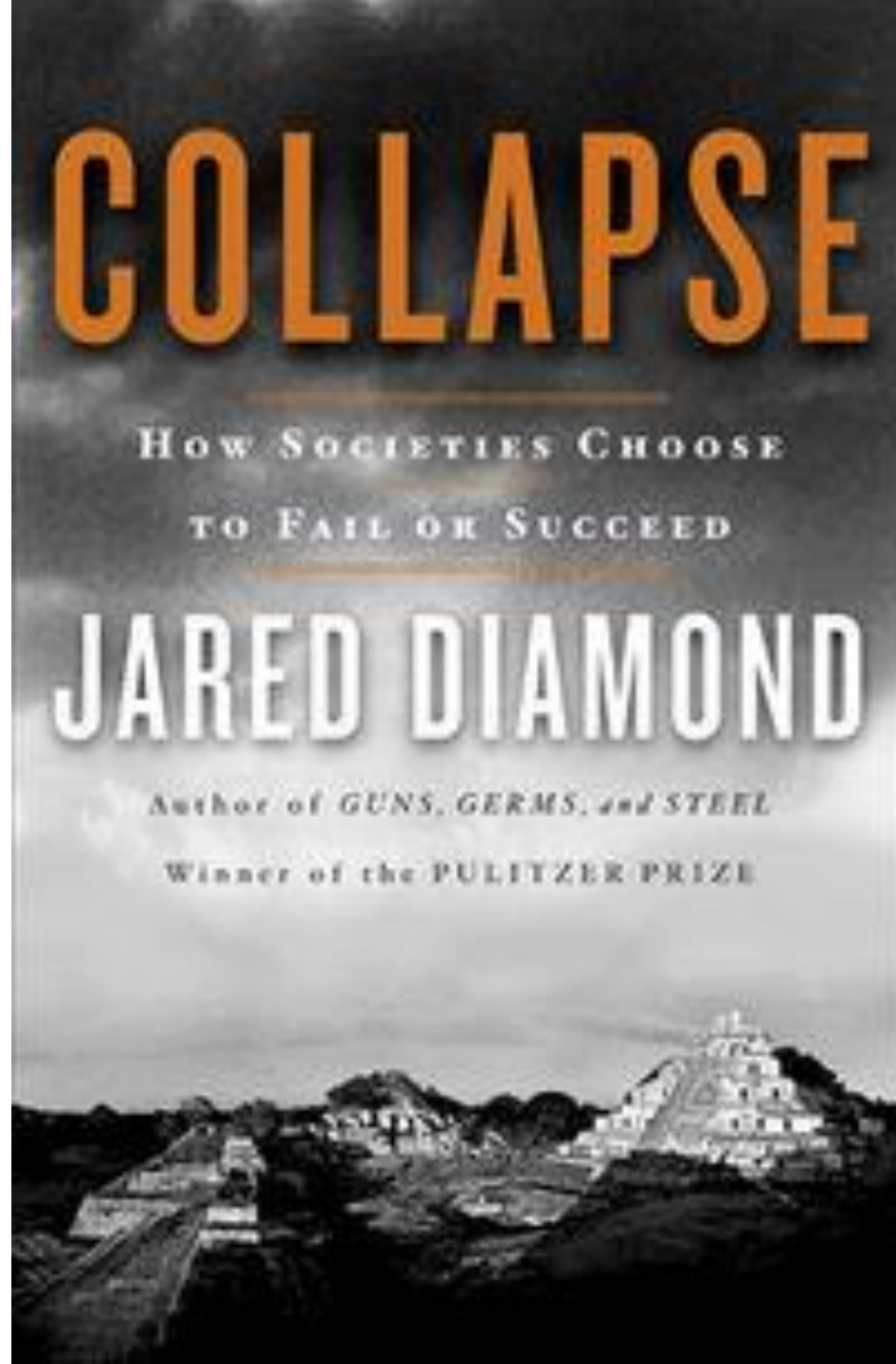
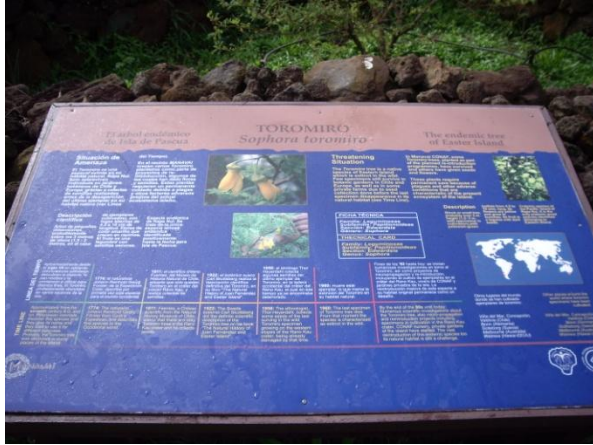
Información natural no goza de ninguna protección jurídica, mientras que la información artificial goza de varios derechos de propiedad intelectual:

1. PATENTE
2. COPYRIGHT
3. MARCAS
REGISTRADAS
4. SECRETOS
COMERCIALES
5. LEGISLACIÓN *sui generis*



Todos los derechos de propiedad intelectual son monopolios y extraen rentas económicas por medio de regalías. Sin embargo, la piratería está esparcida en muchos países en vías de desarrollo a pesar de su ratificación de ADPIC





THE ECONOMICS OF THE YASUNÍ INITIATIVE

CLIMATE CHANGE AS IF THERMODYNAMICS MATTERED



JOSEPH HENRY VOGEL

FOREWORD BY GRACIELA CHICHILNISKY
FILMOGRAPHY BY JANNY ROBLES ET AL.



JOSEPH HENRY VOGEL IS PROFESSOR OF ECONOMICS AT THE UNIVERSITY OF PUERTO RICO-RIO PIEDRAS AND SERVES ON THE INTERNATIONAL TRIBUNAL OF CLIMATE JUSTICE.

GRACIELA CHICHILNISKY HAS WORKED EXTENSIVELY IN THE KYOTO PROTOCOL PROCESS, CREATING AND DESIGNING THE CARBON MARKET THAT BECAME INTERNATIONAL LAW IN 2003.

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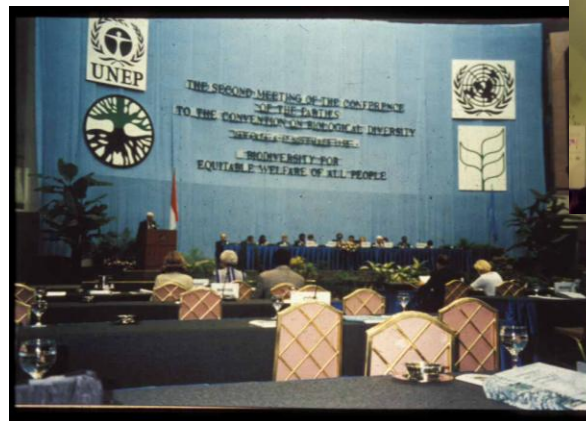
EBOOK £0.00 / \$0.00 • PAPERBACK £12.50 / \$20.00 • HARDBACK £25.00 / \$40.00

EARTH AND VENUS IN THE GEOLOGIC EPOCH OF HOMO SAPIENS
COURTESY OF [HTTP://COMMONS.WIKIMEDIA.ORG/WIKI/VENUS](http://commons.wikimedia.org/wiki/Venus)

La Convención de la Diversidad Biológica
es el mecanismo para internalizar las externalidades
de la conservación de la información natural
(acabar con el acceso abierto).

Bajo varios artículos 3, 15, 16,
se requiere una distribución de los beneficios
de las biotecnologías patentadas en una manera
“JUSTA Y EQUITATIVA”

Bahamas	94
Indonesia	95
Argentina	96
Rep. Slovaca	98
Kenia	01
Holanda	02
Malaysia	04
Brasil	06
Alemania	08



Res Nullius = Patrimonio Común de la Humanidad
o sea, Acceso Abierto *DE JURE*

La soberanía sobre los recursos genéticos,
otorgada por la Convención, fomenta una guerra
de precios

Acuerdos de Transferencia de Materia (ATM)
se celebran, típicamente por regalías de 0.5%,
es decir, la mitad de uno por ciento.

ATM = *Res Nullius* (Acceso Abierto) *DE FACTO*
0.5% ¿Es JUSTO? ¿Es EQUITATIVO?

A la luz del marco económico,
podemos entender los
Acuerdos de Transferencia de
Materia

Es ¿Bioprospección
(Biodescubrimiento)?

○

¿**Biopiratería**?

○

¿**Biofraude**?

La pregunta se reduce a una
cuestión de regalías:



Cuestión de escala
(típica de raciocinio ecológico) :

- 0.0% BIOPIRATERIA
- 0.5% BIOFRAUDE (¡lo peor!)
- 15.0% BIOPROSPECCIÓN



COPIX - La delegación de Brasil (a la izquierda) y la del Ecuador (a la derecha), son miembros del Grupo de Países Megadiversos Afines



Tenemos que reinterpretar lo que significa soberanía con respecto a recursos genéticos (o sea, información natural):

Para los criterios de eficiencia y equidad de la economía, la soberanía debe ser vista como el derecho de participar en un oligopolio y no como el derecho de socavar la capacidad de recaudar rentas.

ECUADOR SOBERANO ALCA

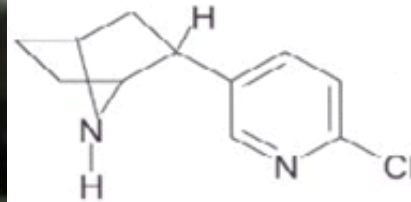


Los pasos para realizar un oligopolio sobre la información natural, o sea, un cartel de biodiversidad:

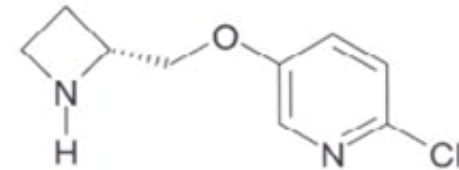
1. Crear un Protocolo Especial a la Convención de la Biodiversidad.



2. Enmendar las leyes nacionales sobre propiedad intelectual para exigir una identificación de la especie bioprospectada al momento de tramitar una patente.



Epibatidine



ABT-594

Epipedobates tricolor

En peligro de extinción

Hábitat: la frontera entre el Ecuador y el Perú

www.bioetica.org

3. Que el “Mecanismo de Cooperación” del Secretariado de la Convención encomiende un análisis científico que identifique en qué nivel taxonómico se encuentra la substancia activa de la biotecnología, o sea; ¿al nivel de la población, de la especie, del género, o de la familia?



Epipedobates boulengeri *Epipedobates zaparo*

www.poison-frogs.com

4. Establecer un fondo dentro del Secretariado para recibir 13% de las ventas brutas de la biotecnología que se ha desarrollado a base del recurso genético. La distribución entre los miembros del cartel será según la representación de hábitat en el taxón donde se encuentra la sustancia activa.

5. El país que suple las muestras biológicas para la bioprospección recibirá lo que determine el mercado (típicamente entre 0.5%-2%).

6. Una vez una patente resulte en una biotecnología rentable, los países biodiversos pueden reivindicarse por su participación en la regalía de 13%.

En casos donde el metabolito está tan esparcido que los costos de transacción de distribución son mayores de las regalías, se deberían dedicar a iBOL



¡Demos la bienvenida a iBOL! international Barcodes Of Life

Scientific American October 2008

LIFE SCIENCE



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- The authors propose that a segment of mitochondrial DNA can be used to identify

Imagine...

a world in which you can know the name of

any animal



any plant



any fungus



any organism



on the spot

in an instant

anywhere on our planet

This is the world that iBOL will build



*International Barcode of Life Project
Assembling the DNA barcode library of life*

iBOL
 posibilita
 ABS por el
 cártel
 y
 el ABS
 posibilita
 iBOL por el
 cártel

Imagine...

un mundo donde los países de origen puedan participar de un beneficio por una patente que deriva de acceso a cualquier

a world in which you can know the name of

animal*
 any animal
 planta
 any plant
 hongo
 any fungus
 organismo
 any organism

después de la transnacional haber divulgado la especie en una patente solicitada sin el PIC tampoco un MTA

on the spot
 anywhere on our planet

Ésto es el ABS "justo y equitativo" que requiere iBOL

This is the world that iBOL will build


 International Barcode of Life Project
 Assembling the DNA barcode library of life

El cártel de biodiversidad se podría formar bajo otro nombre:

“El Grupo de Países Mega-diversos Afines” y “El Regimen Internacional [Multilateral] de ABS”,
COPX Nagoya, Japón 2010

BOLIVIA
BRASIL
COLOMBIA
COSTA RICA
CHINA
ECUADOR
FILIPINAS
INDIA
INDONESIA
KENYA
MALASIA
MEXICO
PERU
SUDAFRICA
VENEZUELA

LEGISLACION AMBIENTAL SOBRE ACCESO A RECURSOS GENETICOS, CONOCIMIENTO TRADICIONAL Y DERECHOS DE PROPIEDAD INTELECTUAL


ENVIRONMENT LEGISLATION ON ACCESS TO GENETIC RESOURCES, TRADITIONAL KNOWLEDGE AND INTELLECTUAL PROPERTY RIGHTS

MEGADIVERSE

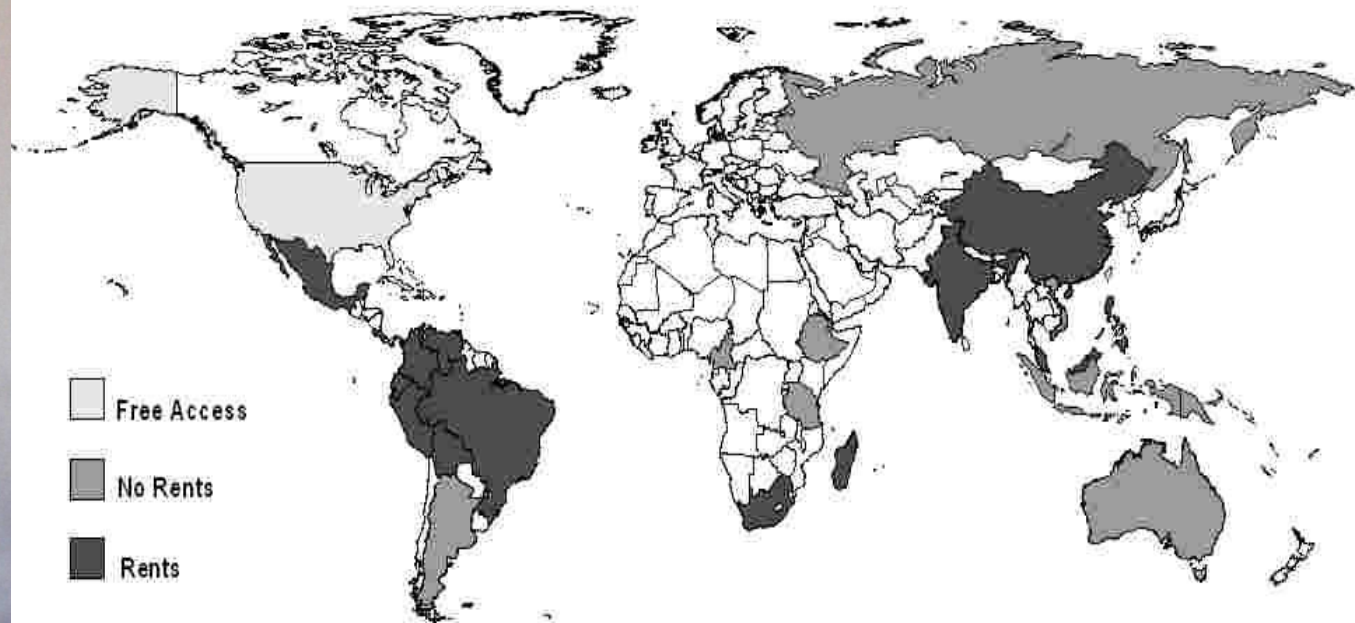
PNUMA

CONAM

Valle del Urubamba-Cusco
27, 28 Y 29 de noviembre de 2002



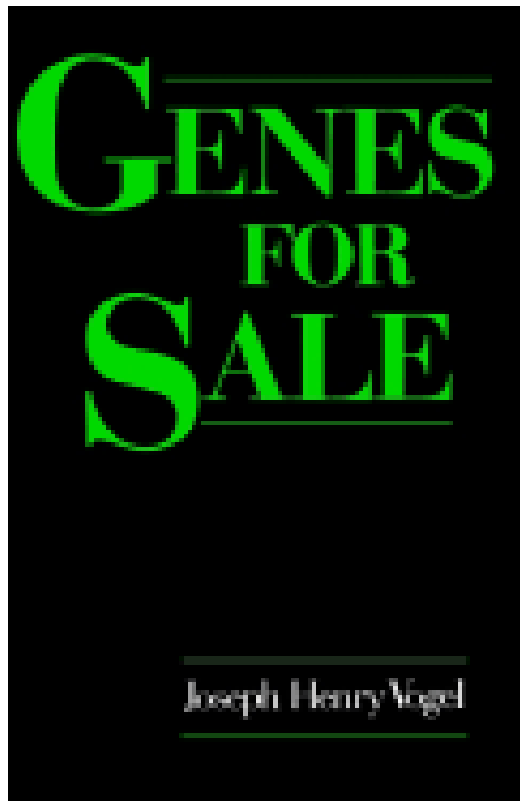
The 25 Most Biodiverse Countries



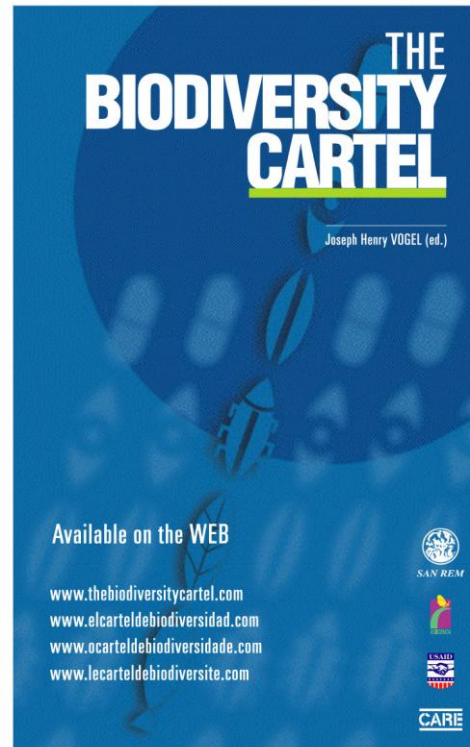
“The Unspeakable Economics of ABS”

Bridges, 2008

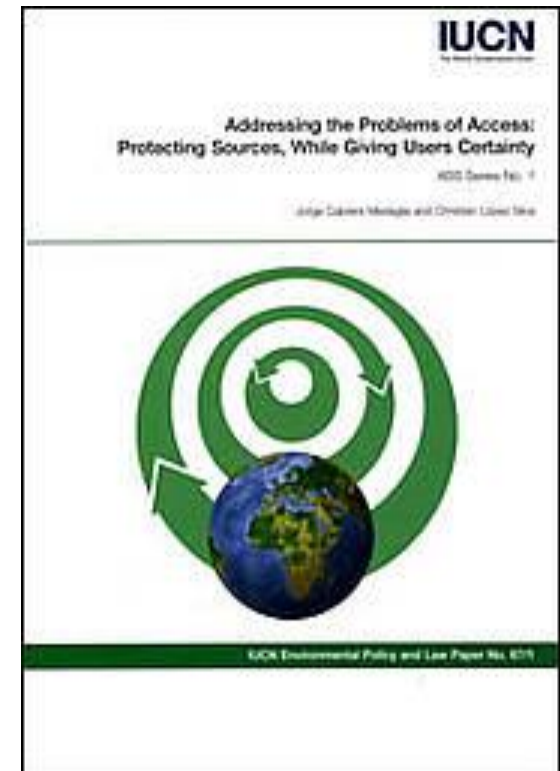
lanzado durante COPIX



Vogel, Oxford, 1994



Vogel (ed.) CARE, 2000



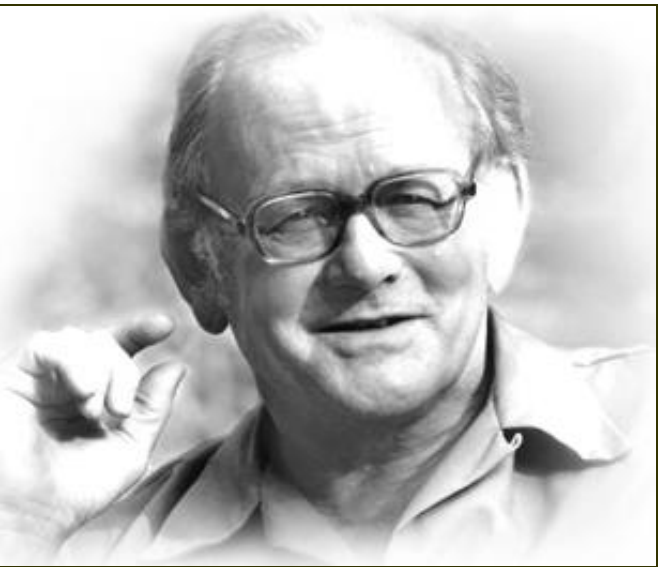
Vogel in Ruiz y Lapeña, IUCN, 2007

El argumento medular para un cártel de biodiversidad ya tiene 18 años (Vogel, 1992, 1994, 1997, 2000, 2004, 2005, 2006, 2007, 2009, 2010)



“ De acuerdo con nuestro ponderado juicio profesional, este dilema no tiene solución técnica”.

(Wiesner y York, citado por Garrett Hardin)



(Wiesner and York, quoted by Garrett Hardin
1968 “The Tragedy of the Commons”)

“la educación puede contrarrestar la tendencia natural de hacer las cosas mal, sin embargo la sucesión inexorable de las generaciones requiere que dicha base sea constantemente refrescada.

Un “Museo de Bioprospección, Propiedad Intelectual, y el Dominio Público”

...es un vehículo para lograr los pisos más altos de aprendizaje y discusión de ABS

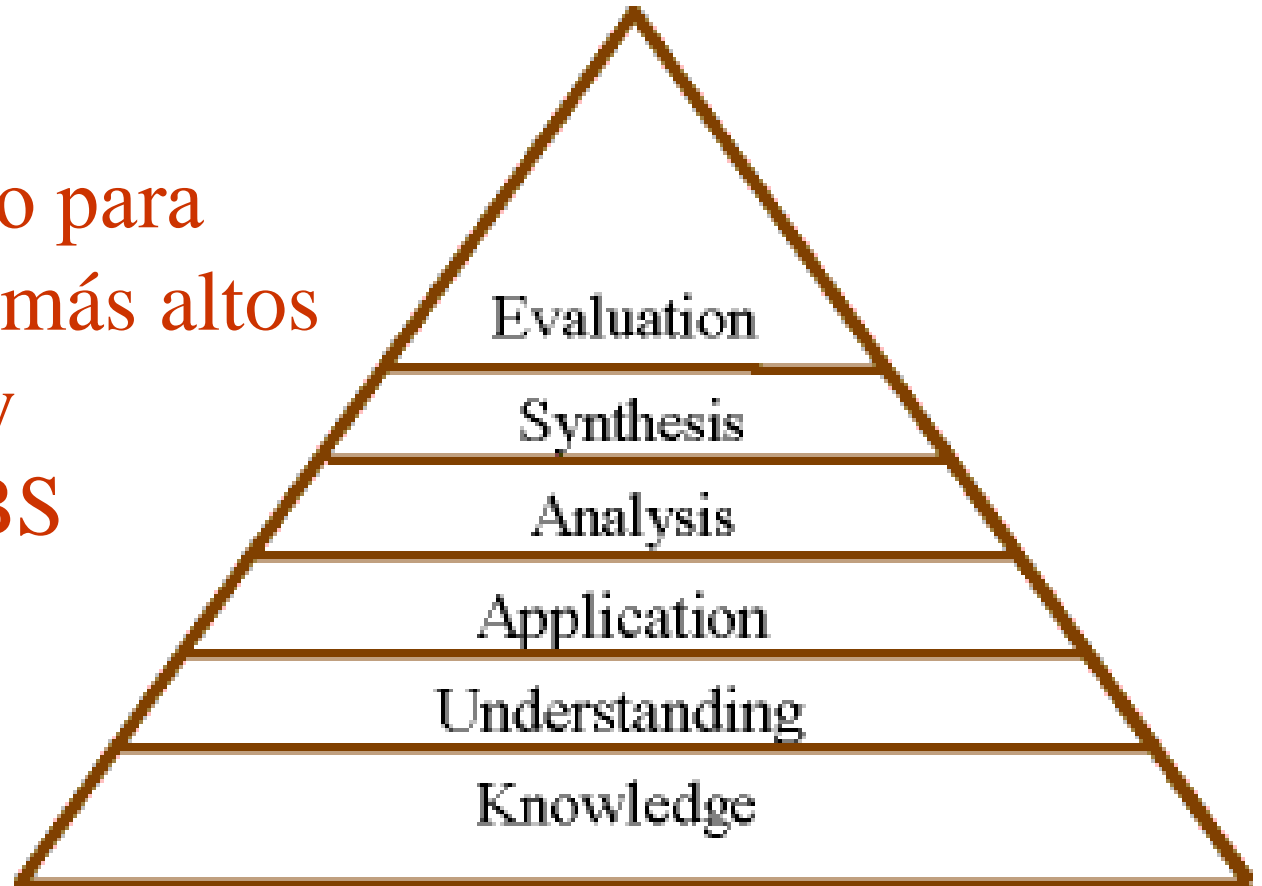


Fig. 1.1 Pyramide de Benjamin Bloom, *Taxonomy of Educational Objectives* (New York: David McKay Company, Inc, 1956).

Sin embargo, generalmente el debate no es el fin de los museos

La mayoría son templos.



(algunos, ¡literalmente!)

Synagoga portuguesa, Amsterdam



Apenas algunos pocos son conceptualizados como foros



Viñetas sobre la Libertad de Discurso y votación del público.



Pero aún aquí los visitantes no se interrelacionan para debatir cuestiones que “no tienen soluciones técnicas”.

El Rol de Puerto Rico en una Red de Museos dedicados a la “Bioprospección, Propiedad Intelectual, y el Dominio Público”



September 17, 1787-[Today's date]

[Tomorrow's date]- ?

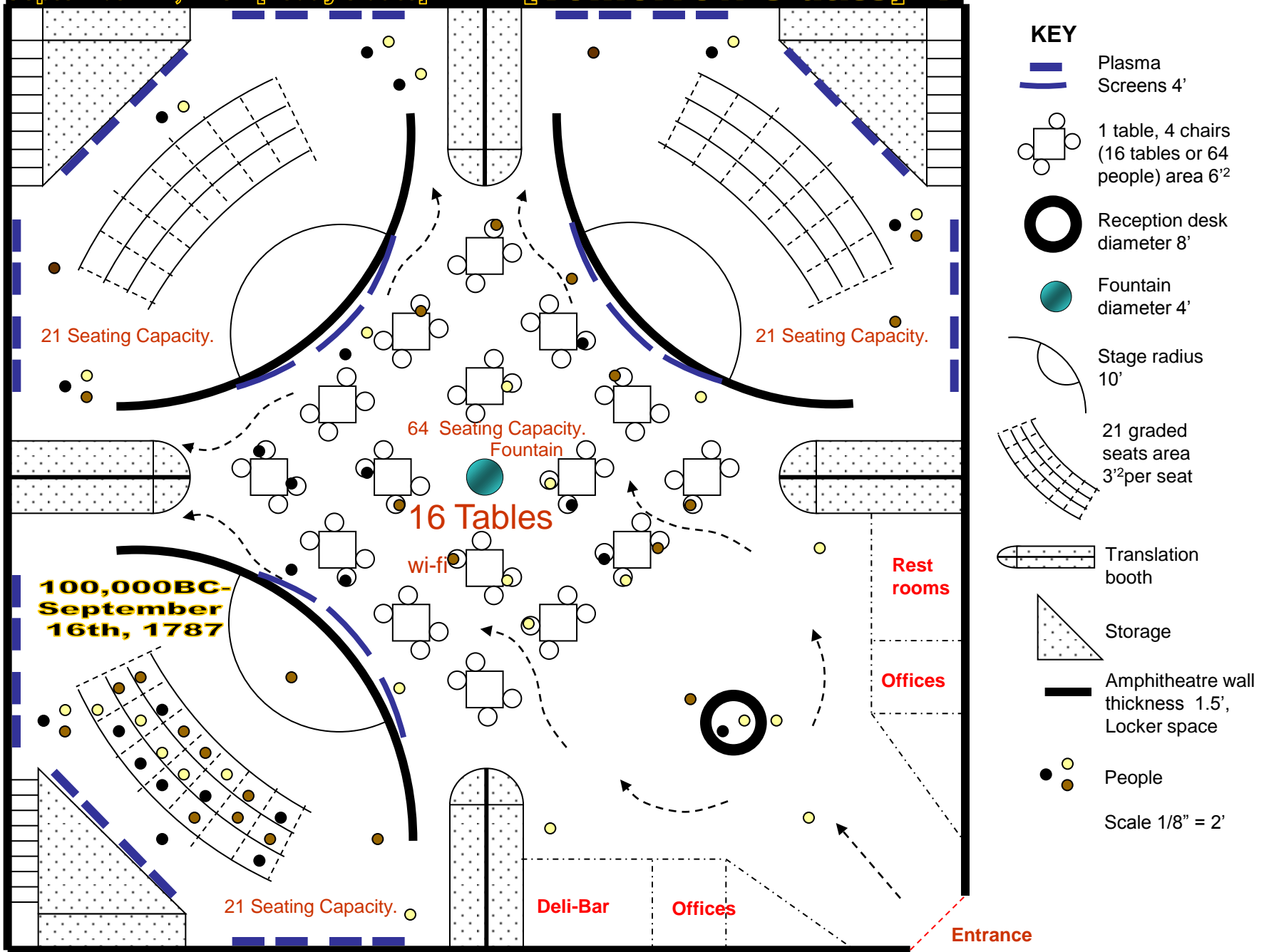


Fig. 1.4. Museum of Bioprospecting, Intellectual Property, and the Public Domain/ Conceptual blueprint / Scale-1/8"=2' / Design: JHVOGEL, Digital rendition: CMO / 10 May-07



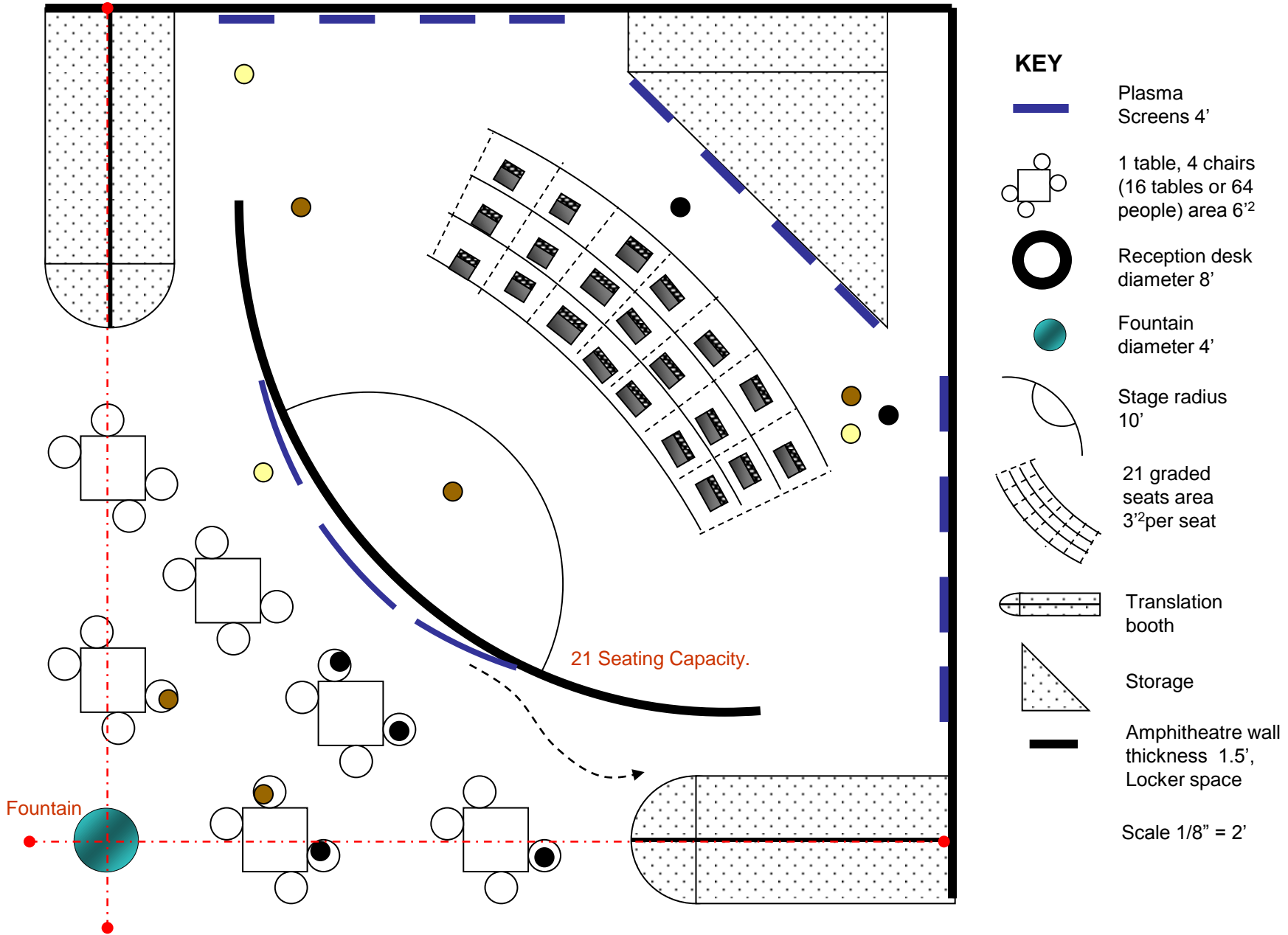


Fig. 1.3. Museum of Bioprospecting, Intellectual Property, and the Public Domain/ Conceptual blueprint / Scale-1/8"=2' / Design: JHVOGEL, Digital rendition: CMO / 10 May-07



The Museum of Bioprospecting, Intellectual Property, and the Public Domain

A Place, A Process, A Philosophy

Edited by Joseph Henry Vogel

Pub Date: May 2010

Binding: Hardback

Price: £60 / \$99

ISBN: 9781843318620

Category: SOCIAL SCIENCE /

Sociology / General

BISAC code: SOCo26000

BIC code: JF

Extent: 175 pages

Size: 229 x 152mm / 9 x 6

Illustrations: 5+ tables

Rights Held: World

Description

This anthology injects much-welcome humor into a dialogue on the otherwise serious debate of access to genetic resources and the fair and equitable sharing of benefits.

The Museum of Bioprospecting, Intellectual Property, and the Public Domain addresses one of the most heated policy debates of our day: access to genetic resources and the fair and equitable sharing of benefits. Seven scholars (an anthropologist, an economist, a sociologist, and four lawyers) discuss how a museum can flesh out the relevant ethical issues that frustrate any purely technical solution. The visitors to the proposed museum become a source of considered judgments. Commercial movies are screened and discussion follows about some aspect of bioprospecting, intellectual property, and the public domain, suggested in the films. Both the screenings and discussions occur in small amphitheatres named according to the uneven chronology in the management of information: 100,00 BC to 16 September 1787 (public domain); 17 September 1787 to today's date (intellectual property); and today's date to (?) (legislation *sui generis*). The three amphitheatres surround a courtyard café which is a metaphor for the mission of the museum: conversation. The museum: conversation. The scholars vet the blueprint before an imaginary octogenarian who is not at all impressed and will "say the damndest things." As this 21st century Don Quixote moseys across the chapters and pokes fun at the scholarly ruminations, the reader begins to understand how the proposed museum is indeed a forum for the nuanced ethics over bioprospecting, intellectual property, and the public domain. The dialogue-within-a-dialogue is highly original and entertaining.

Readership: Professors and students of anthropology, environmental studies, law, and public policy.

Contents

Preface; Acknowledgments; The Bauplan; Looking the Gorgon in the Face: The Ubiquity of Propaganda and the Business of Debate; Museums as Venues for Polemics: Exhibits that Provoke Controversy, Argumentation or Refutation; The Museum as a Vehicle for Considered Judgments on Access and Benefit Sharing; Clearing the Air: Applying the Intellectual Property Framework to National, Community, and Individual Rights in The Convention on Biological Diversity; The Tragedy of the Anti-commons Threat to Farmers' Rights: The Case of Crop Germplasm; The Moral Foundations of Intellectual Property and Conservation through Access and Benefit-Sharing; The Nameless Interloper in The Museum of Bioprospecting, Intellectual Property, and the Public Domain: A Place, A Process, A Philosophy; Appendix: The Original Essay

About the Editor

Joseph Henry Vogel is professor of economics at the University of Puerto Rico-Río Piedras and has served as a technical advisor to the Ecuadorian delegation to the Conference of the Parties of the Convention on Biological Diversity.

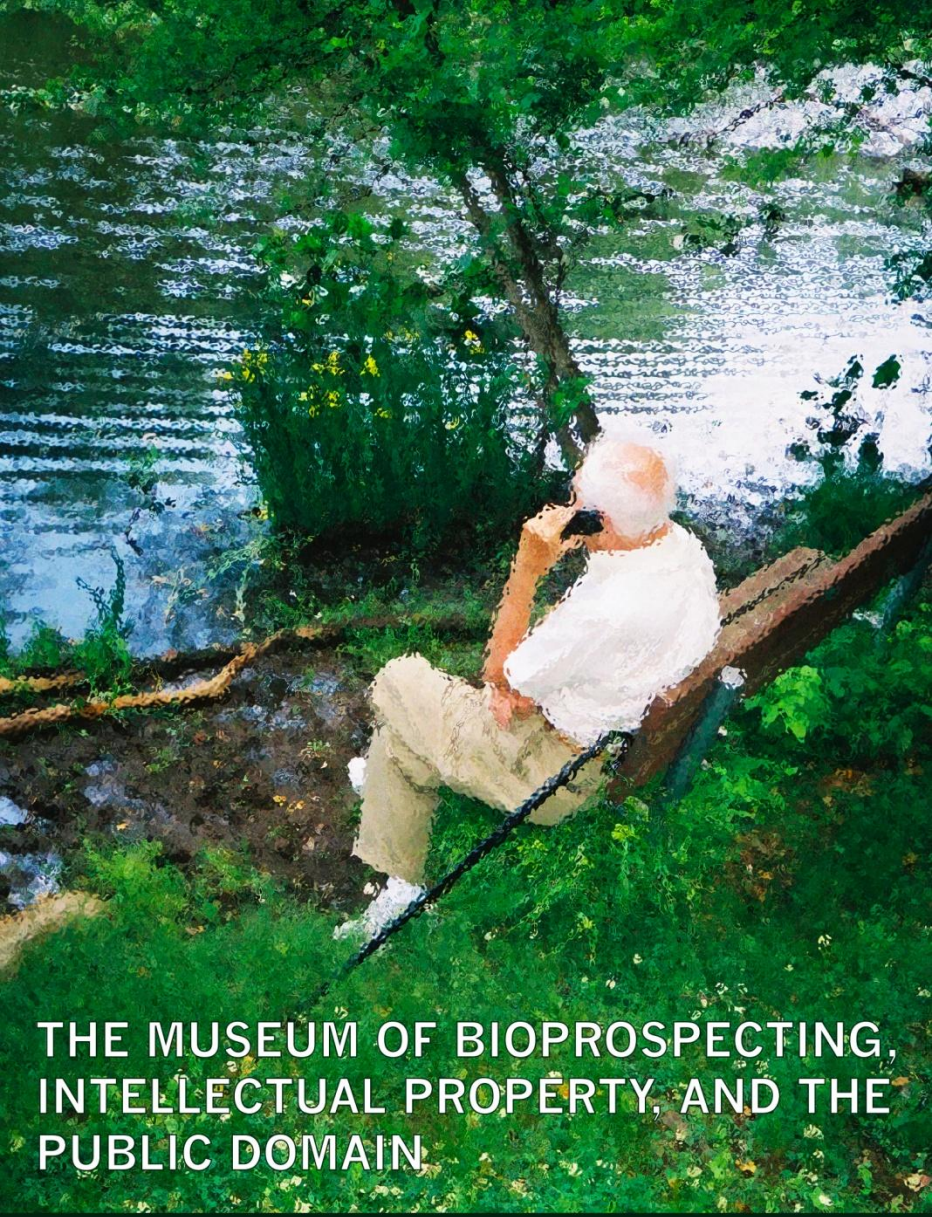
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PUBLIC DOMAIN**

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