

After The Fact

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Global Swarming in Iceland:

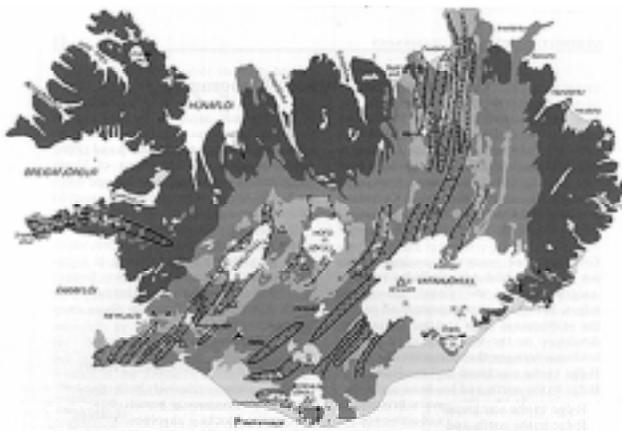
Genes, Fish, Journalists, Whales, Medical Records, & the Contested Identity of a Nation

By Mike Fortun

The following is the edited text of a paper presented by ISIS Founding Fellow Mike Fortun in the panel "Where IT's At: Information Technologies and the Production of Identities," at the Annual Meetings of the Society for the Social Studies of Science, San Diego, CA, Oct. 27-30, 1999.

The fissure swarms – that's a precise geological term, not some metaphor I dreamed up – the fissure swarms that are mapped by these little black lines across Iceland suggest a country constituted by eruptions, crustal upheavals, subglacial shifts, lacustrine sedimentations, and other kinds of multiple flows that swarm over and into each other in inscrutable folds and crazy eddies. Iceland is always already swarmed. So what's the relationship between a swarm and information? Is a swarm some murmuring precursor, submerged beneath the surface of information like the ridges on the floor of the Atlantic

Continued on page 4



Secoya, Occidental Sign Code of Conduct



Bolívar Beltrán & Humberto Piaguaje at the negotiations

By Jim Oldham

On the 29th of October, the Secoya Indigenous Organization of Ecuador (OISE) celebrated an important success in the struggle to defend their rights and their territory as oil development encroaches on both. On that day, in Quito, Ecuador, leaders of OISE and top officers of Occidental Exploration and Production Company (OEPC, subsidiary of Occidental Petroleum Corporation, AKA OXY) signed a code of conduct that establishes "principles, procedures, requirements, responsibilities, and obligations with which OISE and OEPC must comply" during their "dialogue related to oil activities of OEPC in territory of the Secoya Nation..." It is a document dedicated to ensuring recognition of the Secoya's constitutional rights and establishing for them a more equal relationship with the powerful multinational oil company.

Much of Secoya territory lies within Block 15, an oil exploration concession OEPC has contracted with the

Continued on page 10

Rainforest "Photoshoot" Page 3

New Air for MilWaste Project

By Peter Haas

The Military Waste Cleanup Project has been in existence since ISIS's inception. Looking back at the past seven years, our biggest activity has been our mediating and technical advisory role at the federally-mandated Restoration Advisory Board (RAB) at nearby Westover Air Reserve Base (WARB) in Chicopee, Mass. ISIS was chosen by WARB to help local citizens form the RAB, and the Air Force turned the floor over to ISIS at that initial meeting. Over 50 citizens were present. They reached the most democratic result: everyone present became a member of the RAB and David Keith, president of the activist Valley Citizens for a Safe Environment (VCSE), was elected community co-chair by acclamation. We've been on the RAB ever since.

Over the years, we've worked closely with VCSE and other citizen members, sharing experience and advice to make the RAB more effective. For that purpose, the Massachusetts Department of Environmental Protection has awarded us and VCSE five Technical Assistance Grants (TAGs) in as many years to help interpret the vast amount of technical data and reports produced by the engineers and consultants at Westover. These grants, although modest, have enabled us to be much better advisors to the RAB. Thanks to the TAGs we have received, we developed a GIS (geographical information system) database on the environmental contamination at Westover; we've reviewed and criticized numerous technical reports which have influenced cleanup decisions; we have involved local students and faculty from the

Five College Consortium in the cleanup process through course projects and internships, and we've worked to involve a broader citizen base in the RAB so that stakeholders can voice their concerns directly to the officials responsible for cleanup at the base.

A problem we and VCSE have encountered at Westover is the lack of citizen involvement with the ongoing cleanup process there. In spite of the interest and the huge turnout of base neighbors and stakeholders when the RAB was initially convened a few years ago, interest in the RAB process has steadily declined over time. Many of the citizens initially interested in the RAB had sued the Air Force over noise and to prevent night flights. Once that lawsuit was won (a unique case in the US!) they stopped attending the RAB meetings, which were not so pressing as the litigation. Others got frustrated at the fairly insignificant powers of citizens at the RAB, since by definition it only is *advisory*, and consequently the Air Force always has the decision power in the end. Furthermore, many of the RAB members are retired military personnel who don't want negative publicity for the base (or the military in general) and tend to downplay and sometimes ridicule citizens' concerns. Hence, the citizen/stakeholder/activist base at the Westover RAB has diminished to a few VCSE members and ISIS.

After some consultation, VCSE has advised us to contact Clean Water Action, an activist organization working nationwide to fight water

pollution and enforce drinking water standards, to collaborate with them in the next round of TAG funding. They have an ample local member-



Contractors take soil samples at Westover (photo courtesy Montgomery Watson)

ship and have offered us to include materials on Westover in their periodic canvassing and outreach campaigns, helping us build a stronger citizen base at the RAB. It is our hope to attract more stakeholders into the RAB to make sure that the cleanup at Westover is comprehensive and satisfies community needs and doesn't just minimally comply with regulatory requirements. We look ahead with optimism to working with Clean Water Action, and active citizen participation at Westover.



Local students learn hands-on testing water at WARB

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We invite you to submit your comments and writing to *After the Fact*. Contributions may be made on paper or disk (preferably MS Word formatted) addressed to the editors at:

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FAST FOOD: Fish Delivery in the Rainforest



The Secoya Survival Project has helped dozens of Secoya and Siona families to build and stock their own fish ponds and to learn how best to manage them. At left, a new batch of 10,000 juvenile fish (fingerlings) arrives by canoe. The fish, the fruit-eating cachama (*Colossoma macropomum*), are delivered to fish farmers--200 fingerlings per family--in plastic bags of water and oxygen (below left). They are then released into their new homes in the ponds (below right) where, over the next months, they will grow to harvest size. Project evaluations will take place at Secoya dinner tables.



Icelandic Swarming & deCODEd Genes

Continued from page 1

Ocean that channel warm and cold currents into what we call Iceland's national waters, in turn spawning enormous multiple swarms of cod, haddock, and far more obscure but nevertheless profitable fish that have been the mainstay of Iceland's economy, fish-swarm spawning capital-swarm, and the swarm of capital gets informed into social inequalities, as the technology-intensified fishing fleet depletes the stocks over decades and the Icelandic parliament, the Althingi, installs fishing quotas that turned the murmuring schools of fish into a form of property that, imagine this, got distributed unequally and continues to cause social and political upheaval, but the only fish I saw when I was in Iceland in September 1998 was on my dinner plate, since I was there to learn about Iceland's newest and so far only genomics company, deCODE Genetics, and its effort to organize the whole swarming population of Iceland and its seething tissues and its ever-branching millennial genealogies into a database for drug discovery and health-care management –

— a story which will soon be familiar, if it isn't already, since Iceland has been swarming with ethnographers and ethicists and other agents of science studies: I went, the anthro-

pologist Paul Rabinow went, Hilary Rose went, some drone from that hive of bioethicists at the University of Pennsylvania went – ethnographer swarms, fish swarms, gene swarms, and this swarm of words that you're probably wondering if there's any INFORMATION in here or is this just gonna be some Kerouwhacked riff on Iceland and genomics...

Allow me to informate my words, then. deCODE Genetics is an Icelandic company, although it's incorporated in Delaware, and beginning with 14 million dollars in venture capital and a 200 million dollar promise sworn by that megaswarm Hoffman LaRoche in February 1998, deCODE embarked on a project of multiple identity production that has caused multiple social, scientific, and medical controversies.

First, deCODE is producing itself as an Icelandic-identified corporation, staffed by Icelandic scientists returning to their homeland, to revitalize the Icelandic national economy that's been so dependent on fish and reorienting it around another kind of biomass, DNA. deCODE promises to accomplish this by exploiting two peculiarly Icelandic resources: an extensive and detailed set of genealogies assembled over this past millenium by ordinary Icelanders and more recently by medical and scien-

tific institutions; and the quite homogeneous Icelandic population itself, who are being sampled like this music, run through DNA sequencers and other robotic genomic assemblages, and organized into a database that will enable deCODE, in the words of their corporate summary, "to design comprehensive approaches to the management of patients with a particular disease or a constellation of diseases [and] to examine the impact of genetics in various aspects of diseases or predisposition to the development of diseases... The database will provide an excellent opportunity to design approaches to preventive health care that will be based on detailed phenotypic, genotypic, and genealogical information. Furthermore, it will allow for the design of approaches to cost cutting in the management of health and disease."

All this as a counter to the phenomenon called "helicopter research," whereby the major pharmaceutical companies and other genomics actors swarm over the biore-sources of less advantaged nations, usually below the equator rather than near the Arctic Circle. Icelandic company of Icelandic scientists using Icelandic genes and genealogies to build Iceland's economy and manage Iceland's health resources. And develop drugs for the Swiss swarm Hoffman LaRoche, drugs which Icelanders are promised a free lifetime supply of, should they ever materialize.

"'For a thousand years our nation has suffered because of its isolation,' says Dr. Kari Stefansson, one of Iceland's leading medical specialists. 'Now, at last, modern science will enable us to take advantage of our isolation.'" That's according to the *Iceland Investment News*. Kari – everybody goes by first name in Iceland – is the founder and CEO of deCODE, and is certainly making an



deCODE Genetics in Iceland

identity for himself, having been cutely caricatured in *The New Yorker* by David Levine, and photographed more menacingly in *Discover* magazine and many other venues. Kari has brought new life to the word “Viking.”

And angered many Icelandic scientists, physicians, and other citizens in the process. A bill was introduced into the Althingi on March 31, 1998, near the very end of the legislative session, called simply “A Bill on Medical Databases.” To the complete surprise of Iceland’s scientific and medical community, the bill proposed that an unnamed licensee, which everyone knew to be deCODE, would be given the right to install a computer terminal in every physician’s office in Iceland, collect disease and prescription information on each patient who visited, combine this information with their medical history as maintained by the national health care system, which deCODE would also be given access to, and build a centralized database that took these medical histories; and combined them with deCODE’s computerized genealogies and their newly throughputted genotypes; and deCODE would have exclusive, monopoly rights to this database for twelve years.

To continue making a very long and tangled story very short and straight: the initial bill was stopped by a group of scientists, physicians, and psychiatrists who worked at the university and the national hospital, and the legislation was to be redrafted and reconsidered by the Althingi in October 1998. I went to Iceland in early September for two weeks, just as a summer of constant debate and argument was escalating into a daily onslaught of newspaper, radio, and television stories and commentaries. After more delays, political maneuvering, and supposedly democratic debate, Iceland’s Althingi passed the



Keiko, the "Free Willy" Whale

database bill on December 17, 1998, 37 in favor to 20 against, with 6 members absent.

At this point in our program a whale swims into view. Like many Icelandic computer scientists and molecular biologists, the Icelandic killer whale movie star Keiko returned “home” while I was there. I was interested in Keiko not only because it was the only other daily media story that could preempt commentary on deCODE, but because Keiko was this constant metaphorical referent, always linked somehow to Kari and deCODE.

Although Keiko doesn’t swim into view here so much as he flies. Keiko flew in on a US Air Force C-17 (at the expense of the Free Willy Foundation whose donors include TimeWarner and Mattel), a reminder of fifty years of U.S. military presence and what some Icelanders still call the “selling out” of the nation to NATO. Keiko is now in his new football-field sized floating sea-pen that will allow “Keiko to be introduced gently to his native environment,” as my in-flight magazine on IcelandAir informed me. “Foam-filled pipes keep the enclosure afloat, which includes, among other things, a medical pool, food preparation area, dive

locker and generator room, not forgetting sixteen underwater cameras that will allow the rest of the world to follow Keiko’s progress.”

Keiko’s progress?! Whales too, it seems, are pilgrims now, embarked on a technoscientific becoming, sampled and monitored in the name of some monstrous combination of preservation and evolution.

But are whales democratic? This was the odd question I kept asking myself in Husavik, on the north coast of Iceland, where I flew with Kari and other members of the deCODE team for a town meeting where they were going to present and defend their controversial database legislation. There were about 45 people here, from a town of 2,500, crowded into what used to be an exhibit room in what used to be some kind of whaling museum. There would have been more, I’m told, if it weren’t for the big annual sheep round-up, which includes much singing and drinking. Definitely the preferable event, I thought. A local dentist introduced Kari at great length, and out of the alien Icelandic language I recognized one word: Keiko. Everyone laughed. I sat through hours of incomprehensible discourse.

With my ethnographic brain necessarily off-line, my ethnographic eyes wandered to a fragment of text in the upper corner of the front wall, the trace of some former exhibit: “*Uppruni hvala,*” which I was told translates into “whale evolution.” As Kari continued speaking, I hallucinated the merger: Kari *is* Keiko. Surely their genomes are, what, like 95 percent homologous? Abetted by the fact that I couldn’t understand a word of what anybody was saying, I registered everything on a biological level: a roomful of mammals, whalekin, swimming and filtering the krill of language. Kari/Keiko cracked a joke; I could tell because the other

Continued on page 8

The Revolution Will *Have to* Be Televised

By Scott Tundermann

Do you know the Keebler elf's first name? Can you picture the icon of the shoe company whose motto is "Just do it?" Can you tell the difference between "driving excitement" and "a new kind of car company?"

If not, you're a rare find in late-20th-Century America. The vast majority of our people, rich or poor, young or old, of any color or gender, are experts on the subject of consumer product marketing. They may not know their mayor or the factual accuracy of their kids' textbooks or where the nation's military is at work, but they can recite jingles and they recognize the Nissan guy as readily as their grandfathers. Advertising is a huge and far-reaching industry—indeed, it is the primary channel of communication in our culture. It stands to reason, therefore, to use advertising to communicate any message to America. And that is just what ISIS's Energy Choices Project is doing.

Perhaps you've come across the magazine *AdBusters* or other work by the Media Foundation in Vancouver (www.adbusters.org). Their work exemplifies the radical use of conventional marketing techniques to pro-

mote alternative messages. The Energy project will do the same kinds of work, focused on green energy. The goal is to *reposition* green energy, currently an esoteric and uninspiring topic, out of sight and mind in these days of cheap oil. Repositioning green energy means showing it as not only a real alternative to conventional energy but also the smarter, safer, sexier, and more fun choice to make.

A number of experts, many of them engineers and economists, have argued that the path to sustainability requires that the technology be made cost-effective through R&D programs and ramp-ups, at which point the market will embrace it and the green revolution will come. This analysis is a classic theme of the conventional way of thinking, and indeed, it would be possible to make renewable energy viable that way. But what would it take? A major commitment of finances, first to R&D programs and then to pilot manufacturing facilities and so on. And from where would that commitment come? There's the rub. The nuclear industry got its ticket from the "defense" interests, but no one has yet come forth with both the commitment and resources to do the same for renewables. Without political (a.k.a. socio-cultural) will, such support can never happen, whether or not renewables benefit the public Good, the domestic economy, national security, and both the natural and man-made environments.

Besides, that analysis makes a fundamentally erroneous assumption: that green energy is just about new technologies. What about all the existing technologies we don't see used? What about utility and government programs that subsidize said existing technologies, even install

them? Green energy is not about the search for cold fusion. Along with different energy sources, it includes such mundane elements as public transit, lightswitches, bicycles and bike lanes, windows, and sweaters. Right now, today, there is huge cost-effective and technically feasible potential for a cleaner energy profile in the United States. So we may conclude that technology and economics are not the primary impediments to energy sustainability.

It may be the case that simple human laziness is the primary impediment, and that only ultra-convenient technologies will ever have a chance of changing America's energy profile. That's a rather cynical perspective, though, and there is some evidence to the contrary. Take recycling: curbside recycling programs have gained surprising popularity in a culture noted for using five remote controls in one room. It's not as convenient to recycle, but people still do it—why?

Presumably because it's easy enough and it gives them a very tangible way to fulfill their sense of environmental obligation. Studies report that some 70% of Americans consider themselves environmentalists, even if that doesn't quite keep them from driving an SUV and leaving their computer on around the clock. But they're able to envision teeming landfills and they're able to make a simple choice to help avoid them. With some persuasiveness, we may just get them to do the same with their energy use.

Back to the question of *how* to persuade them, which is where the advertising approach comes in. The science of advertising has developed rather like the science of nuclear energy: quite impressively thanks to the huge financial stakes of those behind



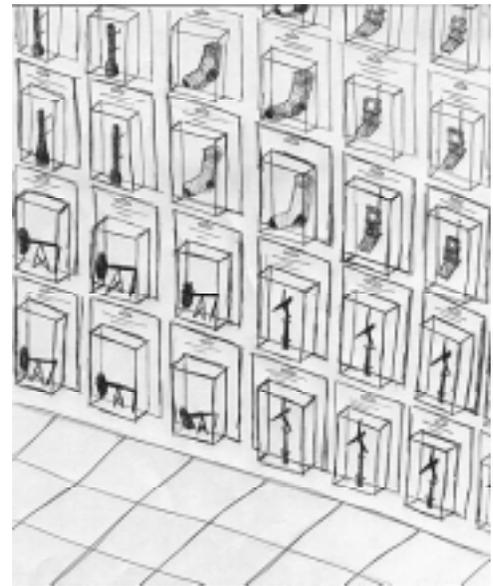
it. We can capitalize on their investment and the resulting expertise to our own benefit, and there's something very appealing about using the opposition's weapons against them. Moreover, the arena of advertising is where our daily "choices" are most influenced—the audience sees sales pitches for cars and trucks, computers and home appliances, faster meals or bigger meals or less fattening meals, all with the promise that you can buy not only convenience but happiness, self-worth, and satisfaction for the low, low price of \$19.95. The ISIS energy project aims to get up on the same soapbox but to present a very different message.

Now that we've established our target and our weapon, we'll have to decide on ammo. Thankfully, the advertising industry (and the corresponding academic fields) have done volumes of fire testing, so we know about affective associations (connecting your product with feelings of happiness, companionship, status, comfort, etc.), mnemonic techniques

(jingles, repetition, catch-phrases, and other memorable gimmicks), sound and color environments, use of humor and clever tricks and gags, cost presentation, fear-selling vs. life-selling, and so on. All that remains is to judge the right shot for the target, load, aim, and fire.

The energy project is fortunate this fall to have the efforts of Hampshire College design students Andrew Beck and Colin Sagan. Under coordinator Scott Tundermann's supervision, they have been busy brainstorming and drafting both print and video media presentations. Their ideas borrow from and parody the work of consumables marketing as well as taking off on their own direction with the unique appeals of green energy. They've drafted a number of spots, sampled on these pages, and they'll continue to create bigger and better ads in the coming months.

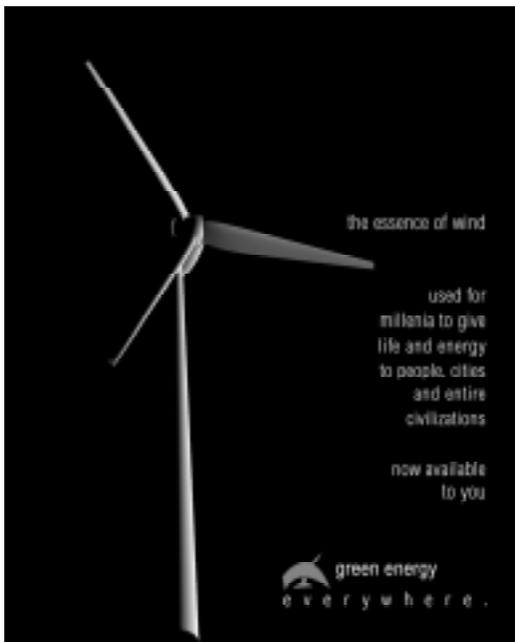
But producing these swank ads is just fun with Photoshop unless they have some way to reach their audience, so we're also developing opportunities for public dissemination. Postering the local campuses and communities and publishing on the web are easy and relatively cheap but fairly limited in scope. Local print media, including the newspapers and the arts weeklies, are much better fora but also exponentially more expensive. And our long-term plans for television access are really going to need financial backing. As the new year dawns and our computers shudder at the brink of catastrophe, phase two of the plan will commence. With examples of our work in hand, we'll approach



A sketch of a concept to put energy "products," like windmills and oil derricks, on a store display rack like other consumer choices

prospective funders with more credibility than we'd have with just a basic proposal for a future project. Rather than offering what work we would be doing, we'll show them what we have and point out that with funding we'd be able to do even better work and distribute it much more widely and effectively. This approach of fundraising for the expansion of existing work has served ISIS's other projects in the past so we hope to have the same success in this case. What remains is to identify the ideal funders, with one foot in green energy and the other in media/marketing activities.

Green energy un-commercials are, if nothing else, an unusual approach to the problem. And since technology and classical economics are insufficient for the challenge, we have nothing to lose and everything to gain by pursuing the *culture* of energy choices. With some smart, funny, memorable messages, we might just create the public awareness and interest never generated by "conventional" green energy efforts. 🐱



Inspired by cologne ads, a sleek and elegant 3D wind turbine with a sort of bandwagon green energy message

Check <http://isis.hampshire.edu/energy/> for updates!

Icelandic Swarming & deCODEd Genes

Continued from page 5

whales responded appropriately, leaping at the words like a tasty fish. The mammals took a symbolic vote: unanimously in favor of deCODE. It was democracy as Sea World: a scripted performance of trained animals, somersaulting and squeaking to



Uppruni Hvala with Dr. Kari Stefansson

the gestures of the ones who have arrogated for themselves the title More Evolved.

If my bad attitude about democracy generally extends easily to democracy in Iceland it's partly because liberal commentators are now falling all over themselves to extol the democratic process to which genomics and its databases were supposedly subjected in Iceland. Paul Billings, a very responsible geneticist by all our usual metrics of responsibility, reassured readers of *American Scientist* that "after a broad-based public debate, employing democratic institutions including a free press and independent legislature, the country imposed limits on this new biomedical effort...[T]he construction of science and its associated enterprises by the people of Iceland is paradigmatic; it represents an example of the assertion of national principles and sovereignty over international science and biotechnology. The outcome of gene hunting in Iceland may be better in the end than in North America or

Europe."¹

To which the best response might be the double positive: yeah, right. This Icelandic coporation is already incorporated, literally, into the North American corporate and legal genome, and Roche's promised \$200 million is like a futural viral vector of Europe quietly reproducing itself in the Icelandic economy. (A promised \$200 million which comes in part, no doubt, from the price fixing of vitamins for which Roche and other European whale corporations just got busted.)

What exactly does national sovereignty mean in the biotech and genomic world, a world in which the Prime Minister of Iceland, in a public ceremony, passed a pen between the representatives of deCODE and Roche? The former President of Iceland was on deCODE's board of directors until shortly before the health database bill was passed. deCODE practically wrote the government's legislation for the health sector database and – let's remember our history in this ethnography – tried its best to cram that legislation through late in the spring 1998 parliamentary session, tried its best to avoid not only public debate, but any discussion at all within the scientific and medical professional communities. And if the unwanted debate sometimes took on ridiculous proportions, Kari Stefansson bears much of the responsibility, with the astoundingly large ego and susceptibility to arrogance that genomics corporations seem to screen for in their CEOs. He consistently trivialized serious issues and gave his critics little more than a dismissive sneer.

And as long as we're speaking about democracy let's also not forget to mention, at least in passing, that the honored liberal ethical biomedical principle of informed consent was stood on its head with its ass in the chill Icelandic air, since all citizens were presumed to consent to be in the database until they exercised their new right to opt out – which 13,000 have done to date. Not that I place a lot of faith in the redeeming powers of informed consent, but I sure don't like to see corporation-nation assemblages toss it aside with the lame excuse that it would be too complicated, time-consuming, and cumbersome. We're talking about a democracy of 275,000 people here.

I'm also no big fan of bioethics committees, but "unjust" and "undemocratic" are the only words appropriate for the Icelandic government's dismissal this summer of the bioethics committee that would have been involved with the health sector database. The ethics committee whose seven members were selected by the government from nominations by Iceland's major health and scientific institutions, was summarily dissolved by the government under some pressure from deCODE, and reformed as a five-member body selected solely by government officials – officials of an Icelandic government, it should be added, which formally owns and will use the database it is supposedly regulating, AND an Icelandic government which, through its state banks, is itself a major investor in deCODE Genetics.

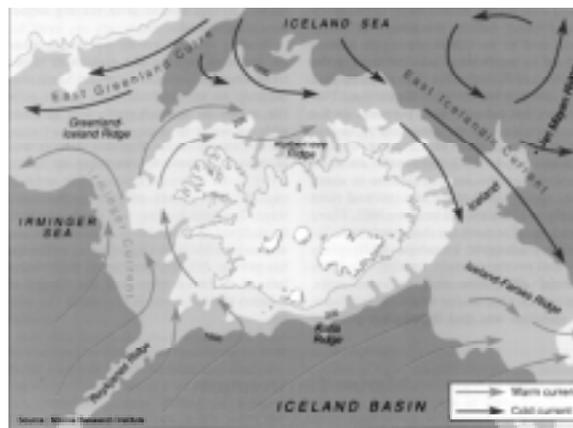
"Broad-based public debate"? I don't quite know what I would call what went down in Iceland in 1998, but that is the palest expression possible, and I not only observed it, I got sucked into producing it. For a brief time I linked up with a variety of Ice-

landic information technologies, abetted by my key informant Skuli, who also scheduled me for three public talks and a seemingly endless series of media encounters. I had microphones jammed repeatedly in my face, film and video cameras pointed at my head, my voice went out multiple times over the public radio frequencies. Believe me, it was an “experimental moment in the human sciences,” to use Marcus and Fischer’s phrase. No scholar, no activist, no scientist, no corporate executive, no citizen has yet developed a language or a politics that will meet up with the swarms of genomics in a productive, just way. “Democratic debate” is perhaps the most ill-fitted and misleading phrase of all.

While the Icelanders were understandably hoping for some kind of resolution to this coalescence of swarm-effects, some numbered and lettered democratic script to follow, my first job as ethnographer, I theorized, was to intensify the swarm effects. Thus I found myself in, to put it mildly, a double-bind: responsible to an evocation and intensification of the quasi-infinite, monstrous complexities of the sciences, political economies, cultures, and languages of genomics, AND responsible for the responsible production of responsible sound bites in the midst of a monstrously serious and monstrously urgent event in a nation whose language was utterly foreign to me. One of the things I was asked to speak about was ethics and genomics, and while it would have been unethical for me not to round up the usual ethical suspects — genetic screening, privacy and databases, conflicts of interest, idiotic reductionist arguments — I also believed it would be unethical not to do something beyond that as well, or at least *other* than that.

So I read the crowd some litera-

ture. Specifically, a long passage from *The Atom Station*, that black-humored novel about democracy as joke, written by Iceland’s Nobel laureate Halldor Laxness, with the sale of Iceland to NATO and U.S. military presence during the Cold War as background. More specifically, a section called “Buying an anemone” in a chapter titled “Orgy.” It seemed appropriate. It’s an incredibly rich passage and it took me like ten minutes to read the whole thing, and I think even the Icelanders were puzzled as to why I read it and I had much more time then to try to explain than I do now, but trust me: it was utterly ap-



propriate. One never knows how literature works, what exactly it performs, but I trust that it’s part of an ethics not of the restricted economy of the moral code, but a much crazier and more difficult ethics of the gift, of openness to unknown others and an unknown future.

So where’s IT at in Iceland? Right where it always is, and right where the ethnographer is: in the midst of multiple swarms, biological, genealogical, financial, institutional, personal, and cultural. The health sector database sits uneasily at the intersections of these swarms, a complex sociotechnical machine informing these unruly flows into usable forms. If on some occasions I deem my ethnographic job to be a swarm-intensifier, trusting in the performative qualities of literature,

it’s also the case that a democracy yet to come, in Iceland or elsewhere, will have demanded some decisions and judgments. It will have been necessary to make statements containing the phrase “it is necessary.”

So here we go: commercial genomics is a sociopolitical-scientific experiment that it is necessary that Iceland undertake. The current social, political, economic, cultural, and scientific protocols for that experiment suck, and are utterly inappropriate for the swarming complexities with which it engages. It is necessary to invent democratic institutions, procedures, and forms of debate that are more than some folk-song veneer. It is necessary that the leaders of genomics enterprises *not* be volcanic, volatile, ambitious, impatient, arrogant, or snide. It is necessary that there be some kind of independent, third-party, oversight mechanism of criticism, regulation, and continual reevaluation.

It is necessary that there be multiple genomics enterprises in Iceland, public and private. Personally, I’d like to see 275,000 genomics companies in Iceland, kind of like the stock market’s day-traders: on-line, real-time gene traders armed with strong cryptographic tools, looking for the best percentage they can get for the information that they *are*, but oddly, don’t as yet *own*. Or maybe that isn’t such a great idea; it’s hard to tell in these situations. In any case, monopolies like the one deCODE is seeking to establish are unacceptable in a situation which requires a swarm of researchers in a swarm of profit-making and non-profit making institutions, to meet up productively and justly with the swarms of molecules, organs, and other languages that constitute bodies in health and illness.

¹ Paul Billings, “Iceland, Blood & Science,” *American Scientist* 87 (May-June 99), p 199

Code of Conduct

Continued from page 1

Ecuadorian government to develop. Since 1995, OEPC has been intermittently active in Secoya territory, doing seismic and topographic studies in various parts of the territory. To gain Secoya permission to carry out these activities they have had a series of negotiated agreements with OISE, but these negotiations and agreements have been marked by misunderstandings, contradictions, and lack of Secoya access to information or to independent advisors.



Secoya and advisors at the site of a proposed oil well

This history culminated a year ago in OISE's discovery and denunciation of a secret agreement between OEPC and residents of one Secoya village allowing exploratory drilling in Secoya territory. The rejection of this agreement by the majority of the Secoya, and the renunciation of the agreement by the minority who had signed, under pressure and without access to advisors or information, led to annulment of the agreement. Since then, OISE has worked, with support from the Institute for Science and Interdisciplinary Studies, the Center for Economic and Social Rights, and other allies, to establish a set of rules to govern their dialogue with OEPC.

OEPC's initial reaction was to argue that a code of conduct was un-

necessary but OISE's position that without a code their could be no dialogue—no discussion of any proposed oil activities in Secoya territory—forced them to modify this stance. After four months of difficult negotiations over the wording of the code, it was finally signed—

in Spanish and Pai Coca, the language of the Secoya nation—at a ceremony in Quito attended by 90 Secoya, several Ecuadorian Government Ministers and sub-secretaries, international observers, and most of OEPC's Quito based employees.

The Secoya fought for, and signed, the Code of Conduct with OEPC in order to ensure:

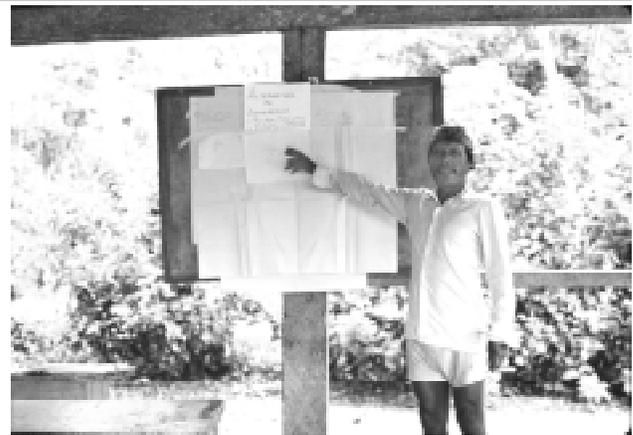
1) an honest and transparent dialogue.
2) recognition and ap-

plication of the Secoya Nation's right to information, participation, consultation, and self-determination regarding activities in their territory.

3) recognition of the Secoya Indigenous Organization of Ecuador—the democratically elected governing organization of the Secoya Nation—as the only Secoya representative in the dialogue with OEPC.

4) access to information about the possible environmental, social, and cultural impacts of oil activities proposed for Secoya territory.

5) their right to choose,



Roque Piaguaje shares his vision for the future at an ISIS workshop on oil impacts

freely and without restrictions, the consultants and advisors that they need to understand and respond to the proposals of OEPC.

6) their right to make decisions according to Secoya norms and traditions, without pressures of time or any other sort.

7) the principle that OEPC is responsible to provide all necessary financing for full, informed OISE participation in the dialogue, yet there can be no implied or intended influence on or commitment by OISE as a result of this financing.

The winning of the code has been a long and difficult process and it represents only the beginning of a new phase in the dialogue between OISE and OEPC. The oil company remains adamant that they are obliged by their contract with the Ecuadorian government to drill three explor-



The Occidental side of the negotiating table

atory wells in Secoya territory by the end of the year 2000. They hope to negotiate an agreement permitting this work with OISE by March 31, 2000, at the latest. Given this pressure, it will be at least as difficult for OISE to defend the rights defined in the code as it was to win their recognition. We hope that public knowledge, in the US and Ecuador, of the Code, along with interest in the continuing dialogue

process, will help ensure the protection of Secoya rights as they consider decisions that could permanently change their lives, their land, and their culture.

Full copies of the Code in English translation as well as Spanish and Pai Coca are available from ISIS. Please email Jim Oldham at joldham@hampshire.edu or write us at ISIS—Prescott House, 893 West Street, Amherst, MA 01002.

ISIS thanks those who have given generously since this summer (donors over \$100 are in bold):

- Barbara Baffa*
- Lisa Bertoldi
- Linda Bresky*
- Annie Chappell*
- Dean Cycon**
- Edward Dees**
- John Dell
- Michael Fischer
- Sidney Fulop
- Danny Greenspun**
- David Gruber**
- Jock Herron**
- David Hopkins*
- A.R. LaPalme
- Lucy McFadden**
- Michael Sands & Betsy Dietel**
- Ruth Skoglund
- Joseph Turner**
- Anne Ullman*
- Sharon Wachslar*
- Peggy Wolff*

* Gave to Envir. Health Coalition of Western Mass

Goodbye & Hello

After a busy year at ISIS, Sonia Lindop, our Secoya Survival Project Coordinator has resigned to return to work in video documentaries. We wish her well and thank her for her hard work and dedication to the Secoya struggle. We are fortunate to have already found a new Project Coordinator, Ecuadorian Biologist Felipe Campos, who will work as a consultant to the Project. Felipe brings many years of experience working in the Oriente and is knowledgeable about both the environment and the cultures of the rainforest. As a full time in-country consultant he will increase our ability to work closely with OISE in the coming months. We are glad to have him.

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