

**Shamanism  
in the Interdisciplinary  
Context**

**Papers from the 6<sup>th</sup>  
Conference of the  
International Society for Shamanistic Research  
Viljandi, Estonia  
August 2001**

*Art Leete and R. Paul Firnhaber  
Editors*

*Shamanism in the Interdisciplinary Context*

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## INTRODUCTION

The 6<sup>th</sup> Conference of the International Society for Shamanistic Research was held in Viljandi Cultural College, Estonia, from 11<sup>th</sup> to 17<sup>th</sup> of August, 2001. Thirty scholars who represented 15 countries from all over the world participated in the Conference. The Conference Patron was the President of Estonian Republic, Lennart Meri. The Honoured Guest of the Conference was Estonian-born scholar, Dr. Ulla Johansen from Köln.

During the conference an excursion to Tartu, an old University town, was organised. The participants participated in book presentations, enjoyed folk music concerts and an exhibition of graphics on folk-belief motifs by Estonian artist, Evi Tihemets. Banquets were organised for the participants of the Conference by the Major of Viljandi Town and by the Rector of Viljandi Cultural College, Dr. Anzori Barkalaja.

The work of the conference was held in two sections: “New Viewpoints on the Northern Shamanism” and “Shamanism in the Interdisciplinary Context.” As it happened, most of the speakers presented their papers in the second section, consequently it was decided to also use this section title as the title of this volume of Conference papers. This theme is also characteristic of the present situation in the shamanic studies; researchers globally are struggling to find new ways to interpret the shamanistic phenomena by using methodology and achievements of extremely different disciplines (beginning with literary theory and ending with neurochemistry.)

**Jeremy Narby**'s (Switzerland) paper, “*Shamanism and Science*” is based on his key-note presentation delivered at the conference. Dr. Narby develops the revolutionary hypotheses about the common ground of shamanic and scientific knowledge. According to Dr. Narby's idea, shamans associate the essences or spirits with a form that historians of religion call the *axis mundi*, the axis of the world, shaped like a twisted ladder or two vines wrapped around each other or a spiral staircase. Scientists use these exact words to describe the shape of DNA and this shape explains its function. It is because the DNA molecule is shaped like a twisted ladder that it can be unwound; it is like two strands of a complementary text wrapped

around each other that can be unwound and then copied. This shape allows DNA to be an information storage and duplication device.

**Anzori Barkalaja** (Estonia) develops his new and problematic ideas about the character of shamanism in his paper “*Shamanism as Information Design.*” Dr. Barkalaja gives an overview of different problems, connected to general theory of shamanism. He himself applies a general information design theory to shamanism, connecting, with his hypotheses, achievements of different scientific disciplines.

**Philip T. Nicholson** (USA) and **R. Paul Firnhaber** (USA) develop, in their joint paper, “*Autohypnotic Induction of Sleep Rhythms Generates Visions of Light with Form-constant Patterns,*” extraordinarily interesting ideas about shamanic visions. Their neurophysiological theory of prehistoric rock art proposes that some markings incorporate phosphene form-constants that are common with shamans’ mental images observed during altered states of consciousness (ASCs.) They draw on recent developments in the neuroscience of sleep, vision, and epilepsy to identify neural mechanisms that can be intentionally manipulated to induce phosphene images with form-constant patterns without using hallucinogens.

Innovative ideas about shamanic experiences are discussed also in **R. Paul Firnhaber’s** (USA) paper, “*Mapping the ASC: a Cultural-Physiological Construct.*” The study of the ancient shamanism complex and its functionary counterpart, the ASC, today occurs within a number of research disciplines, typically those of the history, philosophy, and comparative studies in religion and mythology, the disciplines of anthropology and ethnology, and, to the extent that shamanic artifacts are often re-discovered, archaeology. Psychologists, psychiatrists, therapists and other mental health specialists, including practitioners of holistic and ancient healing arts are becoming involved in the study of shamanism and shamanic states of consciousness, exploiting them for healing. Recognizing that neurophysiological change is intimately involved in ASC, research is beginning to include the pure science of the neurochemical dimensions of the ASC, consequently neurologists, neurobiologists, chemists, and medical researchers are now contributing to the scenario. This work proposes a model within which the cultural/physiological dimensions

of the shamanic complex can be ordered and better understood, particularly from an interdisciplinary perspective.

**Diana Riboli** (Greece) challenges the ideas of Philip Nicholson and Paul Firnhaber in her paper, “*Extrasensory Trances and Trances of Movement. Reflections on the Different Types of Shamanic Trances,*” and gives different interpretation to the phenomenon of ASC. According to Dr. Riboli, ASC could not be extrapolated from the cultural context in which it appears as this would entail seriously undermining the cultural and religious complex to which it belongs. So Dr. Riboli argued that all possible medico-physical implications of ASC must be left to one side and concentrate on the study of different types of categories linked to the cultural and religious context in which the ASC function.

**Merete Demant Jakobsen** (UK/Denmark) writes in her article, “*Modern Man in Search of a Shamanic Experience,*” that the search in other cultures for a spirituality that modern man had lost has taken many forms, core-shamanism being one of them. The syncretistic combination of Old Hebraic, North American Indian and Inuit wisdom, which is Jonas’ spiritual background, was characteristic of much of the New Age literature that was to develop in the end of the twentieth century. This article proves one more time that shamanic studies has become really interdisciplinary and can give us ideas about shamanistic substratum in different fields of modern culture.

**Barbara Wilhelmi** (Germany) interprets, in her paper, “*Differentiations: A Shamanic Reading of the Gospels. An Evaluation of Shamanic Practices in the Texts of the Gospels of the Bible and the Consequences for the Current Interreligious and Intercultural Dialogue,*” another extraordinary development of modern cultural phenomenon related to shamanism. For centuries, shamanic acts were regarded as being totally contrary to the practice of the Christian religion. The reason why this term was avoided is probably related to the history of the expansion of Christianity. A closer look reveals that shamanic practices are in no way uniformly rejected in the texts of the New Testament, but, are, in fact, eminently visible.

**Tamara Ingels** (Belgium) analyses, in her paper, “*Jóska Soós. A Shaman as Artist,*” the shamanic background of the works of the Hungarian artist Jóska Soós (since WW II living in Belgium.)

The origins of his ideas are to be found in Hungary and have links with shamanistic cultures worldwide, yet, at the same time, we can enter the field of contemporary art. Jóska Soós' ideas were collected in interviews to make his personal visions and ideas on shamanism and his own works more clear to the reader. In this way the artist himself had the chance to explain his very original view on shamanism and its place in the world.

**Jean-Loup Rousselot** (Germany), in his paper, "*Alutiiq Masked Ceremonies*," analyses the shamanistic folk art of the original inhabitants of the coast of southern Alaska, the Alutiiq, or southern Yup'ik, who were earlier called Pacific Eskimos. The masks he describes were discontinued in the middle of the 19th century as a consequence of the christianization of the Alutiiq society. In spite of the omnipresence of the Orthodox Church in the archipelago with the arrival of the first missionaries in 1784, Alphonse Louis Pinart collected more than eighty masks almost a hundred years later, which was the largest single collection of masks known from the area. Jean-Loup Rousselot interprets the masks in the context of the traditional Alutiiq mid-winter festival.

In the paper, "*Cosmic Symbolism in Siberian Shamanhood*," **Mihály Hoppál** (Hungary) gives an overview of important issues concerning the Siberian shamans' roles in their communities and shaman's equipment (garments, head-dress, crown, belt, footwear). Hoppál analyses symbolic meanings of all described items. Additionally, Dr. Hoppál concerns the question of the image of shamanic tree that is one of the central organizing principles of the worldview of Siberian shamans. Dr. Hoppál's text is based on his key-note presentation.

**Zinaida Ivanova-Unarova** (Russia) explains, in her paper, "*Shamanism and Contemporary Art of the Sakha*," principles of the Sakha sacred folk art. According to Zinaida Ivanova-Unarova's ideas, music, performing art, poetry, and fine arts have been of great importance in the shamanistic ritual of Siberian peoples, in particular among the Sakha (Yakuts.) Shamanism is not only an ancient religion, but is to a greater extent a part of traditional culture, going back to ancient times and reflecting the cosmological views of the people on the surrounding world and life. Its ancient origin is confirmed by

rock engravings of the Paleolithic period and Neolithic Age, which, in the opinion of many contemporary researchers, are of a shamanistic character. Within Sakha culture and arts, the subject of shamanism and its spiritual influence permeates. During the last 20 years the concept of shamanism among the present Sakha educated people has changed radically.

**Marjorie Mandelstam Balzer's** (USA) paper, "*Social Medicine?: Shamanic Movements in Siberia*," is dedicated primarily to contemporary religious phenomena in the Sakha Republic (Yakutia.) Shamanic revitalization in the Sakha Republic has taken place at many levels, from annual nationally sponsored fertility ceremonies, to police use of "seers," to emergency curing seances. The diversity of shamanic activities is matched by a variety of shamanic styles, and some publicized disillusion with failed faith-healers. This essay explores the links between individual and community healing in multicultural, multicontentious social contexts. Sensitivity to gender issues is explicit. Hopes of indigenous peoples for spiritual revitalization at personal, community and national levels are taken seriously. Two nascent Sakha shamanic movements are featured, that of a young, rural philosopher-visionary Kyta Baaly and that of the healer and ecology activist Ed'ii (Elder Sister) Dora. Data are based on frequent fieldwork in the Sakha Republic (Yakutia) since 1986.

**Tatyana Bulgakova's** (Russia) paper, "*Tale as a Road, Where a Shaman Must Win*," is dedicated to an analyses of one not-well-known aspect of the Nanai shamanism. According to Dr. Bulgakova, the Nanay shamans perceive tale as a road. The Nanay expression "to tell the tales" one can translate "to walk along the tale road." When they say that someone knows the tales, they say, "he knows where the tale walks along." The idea of a "tale road" is a shamanic one. In his ceremonies and in night dreams a shaman walks along the same invisible roads. The information about shamanic unseen roads and territories belongs to the hidden esoteric knowledge, prohibited from divulging. But in her article, Dr. Bulgakova shares a bit of her knowledge about this extremely interesting phenomenon.

**Eva Jane N. Friedman's** (USA) paper "*Amidst Steppe and Taiga: Women Shamans in Hövsgöl Province, Mongolia*," presents

case studies of four female shamans, all older women. Article is based on fieldwork conducted in Mongolia in 1999 and 2000. Dr. Friedman analyses the Mongolian shamans' tradition in the context of accessibility from the main centres of political power and other aspects influencing cultural change processes.

**Atsushi Hatakeyama** (Japan) and **Takefusa Sasamori** (Japan) introduce, in their joint paper, "*Okinawan Folk Religion Kamusu: the Ritual of Visiting Gods in Irabu Islands, Okinawa, Japan,*" three types of Okinawan religious roles: priestess (Noro and Yukiama) and shaman (Yuta). Then, an actual example of the Kamusu ritual from the Irabu islands, Miyako Archipelago, Okinawa is examined. Further, the function of the folk religion and the way of priestess and shaman work is discussed. Then the nature of the group and participants who support the Kamusu ritual, and the process of the Kamusu ceremony are explained. Music and dance, and their creation mythologies are also analysed. Through those examinations, the significance of the Kamusu ritual is revealed.

**Huang Zhongxiang** (China) analyses, in his paper, "*On the Shamanic Traces in Kazak Epic,*" the possibilities of studying Kazak shamanism in historical perspective. According to Dr. Huang, some epics of Kazak people lost their original content and some new textual parts are added. This makes it problematic to study the historical traces of shamanism in the epic. But as the Kazak people don't have enough written documents about their history, the epic texts remain their importance for historical research.

**Bai Gengsheng** (China) describes, in his paper, "*The Ending of Naxi Shaman,*" the religious change in Naxi society. Dr. Bai analyses how one part of previous Naxi shamans, Sani, became later wizards of Dongba religion, influenced by Tibet Ben religion. Another part of Naxi people continued to believe in original Sani shamans. Today, both the Dongba religion and shamanistic beliefs of Naxi people have almost disappeared and the Sanis can not be found any more.

**Peter Knecht** (Japan) gives us an overview about shamans whom Dr. Knecht met during his fieldwork in northeastern China. In his paper, "*Fieldwork among Shamans in China,*" Dr. Knecht describes the immediate circumstances of his research where the

persons met are arranged into groups based on a preliminary typology. The paper discusses these shamans' activities, arranging them into three categories.

**Jojo M. Fung** (Malaysia) deals, in his paper, "*The 'Subversive Memory' of Shamanism*" with some specific functions of shamanism in contemporary Malaysia. His explanation is context/locality-specific, particular to a people, known as the *Muruts* ('hill people') of Southwestern Sabah, Malaysia, and, their memory and culture. Dr. Fung's explanation of the "subversive memory" of shamanism will be based on two sources: first, his ethnographic research and second, his own shamanic experiences.

**Art Leete** (Estonia) deals, in his paper, "*On the Religious Aspects of West-Siberian Peoples' Resistance Movements against the Soviets During the 1930s,*" with the most dramatic event in the recent history of Ob-Ugrian and Nenets people. In 1930s the native peoples of Western Siberia organized an uprising against the Soviets that is called by indigenous people "Kazym War" (by the tributary of Ob River, Kazym.) During this uprising several religious problems were treated. The article demonstrates the desperate attempts of the West-Siberian natives to maintain their worldview and religious rituals untouched. So the article is dedicated to revitalistic aspects of the natives' resistance.

**Carla Corradi Musi** (Italy) considers, in her paper, "*Finno-Ugric Shamanism in the Interdisciplinary Context,*" that an interdisciplinary approach to Finno-Ugric shamanism is now increasingly necessary, since it is particularly profitable for the development of research not only for the reconstruction of the history of that system of beliefs and for highlighting aspects of the present day situation, but also for the recovery of the unedited elements of the history and culture of ancient Eurasia. With the aid of sciences such as archaeology, ethnology and philology, recent studies have compared the traditions of the Finno-Ugric peoples with those of other areas, both Celtic, Balkan and Mediterranean from a comparative-contrastive point of view: a common sharing of myths and beliefs has emerged, making it possible to rediscover a surprising readiness for acceptance and mutual understanding among the inhabitants of ancient Eurasia, even before "modern" Europe existed.

**Carol Laderman** (USA) analyses, in her paper, “*Tradition and Change in Malay Shamanism*,” two case studies about Malay shamans. Laderman compares the failure of a long-established village shaman and success of a young shaman who uses unorthodox healing methods. The failure of the elderly rural shaman’s treatment of an urbanized Malay and the success of the young rural shaman’s practice, composed almost entirely of city Malays, were a result of changes in Malay society, the growth of a new middle class, and their efforts to reconstruct Malay identity through symbols of a traditional, village-based Malay culture.

The organising committee of the 6<sup>th</sup> Conference of the ISSR thanks the Presidium of the International Society for Shamanistic Research for giving an opportunity to organise this important international scientific forum. The editorial board wants also to thank participants of the conference for their contributions and the Estonian Cultural Endowment for support to the organisation of the conference. The organising committee and editorial board are grateful to everyone who assisted in the organisation of the conference and the publication of the present volume.

Compiled by Art Leete

*Greetings of the president of the Estonian Republic to the Sixth  
Conference of the International Society of Shamanistic Research  
on August 12, 2001 in Viljandi*

I send greetings to the participants of the Conference meeting in Viljandi and regret that I cannot be with you.

Culture is man's experience and contains many different forms. Shamanism is the oldest of them. It has transferred man's experience and world view in the pre-literary period and it has not been based on canonical texts. Everyday life has been the pressure that has kept shamanism alive in man himself. It has helped to perceive his eternal bond with all previous and coming generations. It has liberated man from time and space and given him the possibility of communicating with eternity.

I wish you a good time in lovely Viljandi.

Sincerely yours,

Lennart Meri

Riihiniemi  
12 August, 2001

# SHAMANISM AND SCIENCE

Jeremy Narby

Twenty years ago development experts said that to develop the Amazon you had to rid the forest of its indigenous inhabitants and cut it down to develop its resources. They said that Indians didn't know how to use the rain forest rationally and it was economically justified to confiscate it from them.

I found this situation unacceptable, so as a student in anthropology I decided to do the fieldwork that my training required in a place where one of these development projects was being carried out, so I strolled into the Peruvian Amazon in 1984, fresh from the suburbs and the library. I had no previous experience of the tropical forest or its indigenous inhabitants. I wanted to study how Ashaninca people used their resources, to demonstrate that they used them rationally and therefore deserved the right to own their lands. The point was to contradict the international development banks and try to bring about a change of policy.

The Ashaninca people that I lived with showed me what they knew about the forest. They gathered all kinds of foods in it, as well as building materials, medicinal plants, cosmetics and dyes. I soon saw that these people had an encyclopedic understanding of plant properties. They knew plants that could accelerate the healing of wounds, heal chronic backache, or cure diarrhea. Each time the occasion arose I would try these plant remedies on myself, only to find that they worked.

So I began asking my Ashaninca consultants how they knew what they knew about plants. Their answer was enigmatic. They said that knowledge about plants comes from the plants themselves, and that the *ayahuasqueros* or *tabaqueros* or shamans take *ayahuasca* or eat tobacco concentrate and speak in their visions with the animate essences or mothers or spirits common to all life forms, which are sources of information. They said that nature was intelligent and spoke with people in visions and in dreams.

Well, I didn't believe what these Indians were telling me. It couldn't be true. To consider that there is verifiable information in your hallucinations is the definition of psychosis. You have to be nuts to believe that; it was an epistemological impossibility. And besides, it contradicted the main argument underlying my research. I wanted to show that these people used their resources rationally!

But after four months, I found myself in a neighboring village one night talking with some men and drinking some manioc beer, and I asked them how they knew what they knew about plants. And one man said: "Brother Jeremy, if you want to know the answer to that question, you have to drink *ayahuasca*." Several weeks later I found myself on the platform of a quiet house with this *ayahuasquero* who administered the bitter brew and began singing slightly dissonant melodies and loops of ungraspable sounds.

Suddenly I found myself surrounded by enormous fluorescent serpents about 15 yards long, one yard high, terrifyingly real, talking to me in a kind of thought language through my forehead, and I could see that my ordinary materialist perception of reality had limits, starting with its presupposition that what my eyes were showing me didn't exist. I could see that my world view had bottomless arrogance. This caused it to collapse in front of me, and then I had to vomit.

I found myself vomiting colors and then seeing in the dark, and then I flew out of my body and found myself miles above the planet. "Anthropologist has an out-of-body experience." Stop the presses! Then the shaman shifted his melody and I found myself back in my body and then saw hundreds of thousands of images, like the veins of a human hand and the veins of a green leaf flashing back and forth: it was the same stuff. This went on for two or three hours.

The next day I tried to make sense of this experience. It confirmed to a certain extent what my Ashaninca friends had told me: one could take *ayahuasca* – with a trained practitioner, please note – and learn things. I had learned that I was puny, and somehow part of nature. I also learned that my Ashaninca informants' seemingly fanciful notions corresponded to something powerful that flew in the face of my own understanding of reality. But it was also too much. How could I begin talking about these things and hope to have my colleagues take me seriously? The shadow of Carlos Castaneda flew

over my budding career. And I chickened out. I turned my back on this mystery and completed an additional year of fieldwork on the Ashaninca's rational use of their resources and then returned to my university and spent another two years writing a dissertation and became a "doctor in anthropology". At your service.

"Doctor" means "the one who knows more", but I knew that I didn't really understand the essence of the Ashaninca's concepts. But one concept that they had passed on to me was that practice is the most advanced form of theory. If an idea is really good, you can use it. So I wanted to use the knowledge that I had acquired to see if I could help these people. As of 1989, I got a job working as an indigenous land rights promoter. This involved gathering funds in Europe and supervising land-titling projects in the Amazon. This work allowed me to return to the Amazon each year and to meet people from many different indigenous cultures, not just Ashaninca, but Matsigenka, Huitoto, Ocaina, and so on. I would ask them how they knew what they knew about plants, and they all gave roughly the same answer: knowledge about plants comes from the *ayahuasqueros* or *tabaqueros* who take their plant mixtures and in their visions speak with the essences that are common to all life forms.

Here were people living in the most biologically diverse place on earth; their knowledge is now widely recognized by science and industry. There are several times more Amazonian plants that bear an indigenous name than a Latin name given by science. When ethnobotanists go to the Amazon, they hire indigenous shamans and follow them around taking notes. (They also take samples and patent the active ingredients, but that's another story.) And these indigenous people say that their knowledge about plants comes from their hallucinations. What could this mean?

I decided this enigma was worthy of an independent anthropologist's investigation. After months of thinking and reading I began to see correspondences between what indigenous shamans say about the essences common to all life forms and DNA, the informational molecule at the heart of each cell of each living being.

For example, shamans associate the essences or spirits with a form that historians of religion call the *axis mundi*, the axis of the world, shaped like a twisted ladder or two vines wrapped around

each other or a spiral staircase. Scientists use these exact words to describe the shape of DNA and this shape explains its function. It's because the DNA molecule is shaped like a twisted ladder that it can be unwound; it's like two strands of a complementary text wrapped around each other that can be unwound and then copied. This shape allows DNA to be an information storage and duplication device.

Shamans say that the *axis mundi* is very long, so long that it connects the earth and heaven. Well, if you take the DNA molecules in a human cell, you will find that they are ten atoms wide and line up to be two yards long. That's a billion times longer than its own width. It's like a little finger that stretches from Los Angeles to London. If you could take every single DNA thread out of a human body and line them all up, they would stretch 120 billion miles. How's that for an *axis mundi*?

DNA is not just an assemblage of atoms, not just deoxyribonucleic acid. It's also a kind of text. DNA communicates its information to the rest of the cell through a coding system that is strikingly similar to human codes in that the individual "letters" have no meaning. The four chemical molecules which are the rungs of the DNA ladder, and to which scientists have assigned the letters A, G, C, and T, carry no meaning individually; they have to be combined in threes for meaning to emerge. The genetic code contains 64 three-letter words, all of which have meaning, including two punctuation marks, "start" and "stop". This kind of coding system was considered to be the proof of an intelligence up to the discovery of the genetic code in the 1960s; until then, it was thought that only humans used codes in which the individual signs were meaningless. But it turns out that every cell in the world uses such a code. There's a symbolic unity underlying all of nature.

And this unity isn't just limited to the genetic code; it touches every single one of our known physical chemical aspects. Biologists haven't found a gene in the human genome that doesn't have an equivalent in an animal or a plant. Molecular biology as a whole is a demonstration of the deep kinship that we have with all the other species. Shamans have been pointing to this kinship for thousands of years while contemporary biology is just starting to find its physical manifestation. So now biology waves the double helix as its flag, the

symbol of the new healers, but this motif is the oldest symbol of life and healing in the world. Shamans have been waving this flag on five continents for millennia. The entwined serpent twisted ladder, *axis mundi* flag.

I think this shows, after 500 years of genocide, violence and misunderstanding, that there are several ways of knowing on this planet. And what is in question is the diversity of humanity. As Jay Griffiths says, each time a language or culture dies, untold ways of thinking and varieties of thought are lost and so is biodiversity of the mind. Each time a culture dies, humanity loses another string in its bow.

Surprisingly little appears to have changed in shamanic practices in the last 500 years. Scholarly treatments of shamanism, however, have changed dramatically. The biggest shift in the observers' gaze came in the 1950s when anthropologists started to apply "participant observation" to shamanism.

Participant observation consists of participating with people in their activities while observing them from a distance. It is kind of a schizophrenic methodology, but after a while you can get good at it. When anthropologists started taking part in shamanic rituals and swallowing these bitter and hallucinogenic potions or mushrooms, they started to see that they themselves could see things in a similar way to shamans. They also understood that shamanic phenomena pertain to the faculties of the human mind – and not just to mythology and superstition.

There have been all kinds of serious and detailed observations of shamans over the last 50 years, and in the last 30 years more texts were written about shamans than in all previous recorded history. What was documented was a multifaceted phenomenon that covers five continents. Shamans emerge as people who are respected now by psychologists, epistemologists and ethnobotanists, among others. By paying attention to what shamans say and do, scientific observers have found that they could learn things.

I was lucky enough to ride this wave right into the third millennium, because in September 1999 I accompanied three molecular biologists to the Peruvian Amazon to work with an

indigenous *ayahuasquero* to see if they could find biomolecular information in their visions. The idea was to test the hypothesis that *ayahuasca* visions could reveal genuine, verifiable scientific information about DNA to trained scientists. One of these biologists runs a genome-sequencing lab for a California genomics company. Another was a professor of molecular biology at a Swiss University who runs a lab where she and her colleagues modify the genes of potato and tobacco plants. And the third was a professor of molecular biology at the Centre National de Recherche Scientifique, a big French think tank. Aged between 39 and 64, these senior scientists are serious people. They courageously availed themselves to this experience, including rigorous dieting and correct preparation.

They participated in three *ayahuasca* sessions, and they did see DNA molecules and chromosomes, and they did gain information about the research that they were conducting.

The person studying the human genome works as a gene detective. As the endless sequences of the AGCT letter information come in, her job is to look for the needle in the haystack, to find the genes. One of the techniques they use is to identify what they call “CpG islands,” DNA sequences rich in C and G. These structures are located just upstream from about 60% of all human genes. If you find a CpG islands, you know that a gene is probably not far. She wanted to know if all CpG islands have the same structure; she also wanted to know what their function is. In one of her *ayahuasca* sessions she visualized herself as a transcription protein flying above a DNA molecule, and she saw that the CpG islands all had the same fundamental structure and their function was to serve as landing pads for transcription proteins. She says that she had never thought of this before nor had she heard anybody else suggest it, and she told me last week that this remains a testable hypothesis that she is working on in her lab.

The French professor said that *ayahuasca* is not a shortcut to the Nobel Prize. He also said he thought shamanism was a harder path to knowledge than science, at least for him, because it involves a subjective and emotional experience that is very strong. If you are a professor of molecular biology and have spent your life running labs trying to come up with reproducible experiments, it is difficult

to consider learning through an experience that is subjective and non-reproducible. You can never have the same *ayahuasca* experience twice nor can someone else have exactly the same experience as you, so there are fundamental methodological differences between these two approaches.

Nevertheless, what he had been studying for a decade with his colleagues was “How do sperm cells become fertile?” When sperm cells come out of the testes, they aren’t capable of fertilizing an ovum. They have to travel through the sperm duct, or epididymis. Fifty different proteins are secreted by the cells in the sperm duct. They work on the sperm like workers in an automobile chain, and by the time the sperm gets to the end of the duct, it can fertilize an ovum. They were doing research on this because they were looking for a male contraceptive. One of the things he wanted to know was which protein was the key to this process. He asked about this in an *ayahuasca* session, and a voice gave him an answer: “It’s not one protein, it’s all 50 and how they work together.”

The third molecular biologist has been modifying the genes of potato and tobacco plants in Switzerland, where there has been a lot of opposition to genetic engineering. People like her have had their labs run over and plants torn out and she’s taken these criticisms to heart. She wanted to know about the ethics of genetic engineering. Because she’d been working with tobacco, trying to make it resistant to a virus for ten years, she’d heard that shamans speak with an entity they call “the mother of tobacco” so she wanted a one-on-one interview. She asked the *ayahuasquero* whether he could arrange this and he said: “No problem.” And during a session he invoked this entity with the melody that corresponds to her and the genetic engineer reports that she indeed spoke with an entity that identified herself as the mother of tobacco. She asked her about genetic engineering and the mother of tobacco said: “Tobacco is here to serve. Tobacco is pleased to be of use to any of the beings of this planet, be it a virus or a human being. Modifying my genome is not a problem, as long as it is done with the interests of all of the above in mind.”

# SHAMANISM AS INFORMATION DESIGN

## Anzori Barkalaja

Shamanism is most commonly understood as being a special technique of achieving ecstasy that is used to contact the spirits, to control some of these spirits and to make these spirits pursue the ends desired by the shaman. Usually those spirits are the helping spirits of a shaman. The shaman him/herself, while in a trance or state of ecstasy, also possesses a power to make spirit-journeys i.e. to travel to the upper or lower world or to travel through the middle world (Eliade 1974:4–6, 88; Siikala 1987:6–18, Hoppál 1992:1; Bulgakova 2001). According to the classical definition, terms like *trance*, *ecstasy* and *possession*<sup>1</sup> are characteristic features of shamanism and are brought together under the term *altered state of consciousness*. Experiences gained in such a state are closely connected with one's cultural background (Siikala 1987:16–17; 1998b:26–27). With the invasion of a foreign, or other culture, and its gradual assimilation, traditional patterns of vision can also change and elements of the new culture become adopted. For example, after a spirit-journey, one young Eastern-Khanty man described a genuine Soviet passport office between the border of the middle world (our world) and the realm of the dead (see Barkalaja 1997:64). Additional examples of contamination can be found in the 17<sup>th</sup> and 18<sup>th</sup> century Hungarian *táltos*-tradition (Pócs 1999:127–128), in the teaching practice of the Udmurt shamans (Lintrop 1999:43), in the world view of the Khanties that combines Russian orthodox saints and Khanty spirits (Barkalaja 1999:58–66), etc. In essence, the phenomena termed by Jung: *visionary rumours*, wherein people see Jerusalem, the Virgin Mother

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<sup>1</sup> See Hamayon (1995), concerning the difference between *trance*, *ecstasy* and *possession*; see Siikala (1987:25–26, 37–40; 1998b:26–27) for an overview of the phenomenologico-historical debate over the possession or ecstasy related essence of shamanism.

or UFOs, can be considered as belonging to the same category<sup>2</sup> (see Jung 1995).

Since Eliade the research scope of the field in question has been expanding, both geographically and phenomenologically. Much new information has been added that no longer fits under the old construction. The theoretical concept of shamanism as merely a technique for attaining ecstasy is losing its validity, and does not inspire scholars towards a more creative thinking. Thus, for example, in the recent dissertation of Tatyana Bulgakova (2001), the stress is laid upon the *emic*-approach so that the holistic rendering of the research material might be assured. Because of this Bulgakova makes a distinction<sup>3</sup> between *shamanstvo* and *shamanism*<sup>3</sup>, basing her research on the former, and thereby distancing herself from the traditional concept of shamanism.

Here, it seems that we deal with the contradiction between the *emic* and *etic* methods in regards to the research material. The tradition of the *etic* approach in Russian ethnography has thus far failed to yield an “objective” and comprehensive treatment of specific shamanic traditions as explicitly referred to by Bulgakova (2001). Art Leete has researched the evolution of *etic* descriptions of West Siberian people, and has subsequently revealed a clear systematisation of distorting the characterisation of these West Siberian people (Leete

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<sup>2</sup> The Khanties have also seen UFOs. At the upper section of the rivers Pim and Tromyugan the Khanties have told that “the unidentified flying objects” are an annual occurrence and that they are especially often seen in autumn, suggesting thereby that this might be “the experiments of Russian military industry.” At the lower course of the river Ob in the village of Korvozhevo, a Khanty informant described two types of *menkv* (‘spirit’ in Khanty). One was described as a “bigfoot,” the other displayed traits of an “alien.” The latter were described as being three metre tall robot-like creatures who had flashlights for eyes. The Khanties believe that people who meet such creatures will die soon (Barkalaja 2000:186–187).

<sup>3</sup> Here she is drawing upon the works of N.A. Alekseenko concerning the debate within the Russian school. L. P. Potapov and V. N. Basilov on the other hand argue that those terms are synonymous: *shamanstvo* is a Russian term, whereas *shamanism* is an English term (Bulgakova 2001:7). Researchers from the West have employed such notions as *shamanhood* and *Schamantentum*, which point to a necessity of such distinction (Hoppál 1999:7).

1999, 2000, 2001). Marilyn Walker draws attention to the danger of abuses and distortions that may be a consequence of a “this- would then material-world focus” being used to interpret a spiritually oriented culture (2001:38-42). In my student research I have also discovered that the earlier, mainly etic-based gathering methods and concurrent theoretical works, inhibit the degree of discovery and have a distorting effect upon the process of data recording, in which the author’s biases, derived from literary sources, are exacerbated by the research object’s attempt to supply the “right” answers, at all costs (Barkalaja 2001:151–155).

The problem for researchers then, boils down to the question of how to form a holistic picture of the described phenomena. At present it is a natural critical response that along the *emic-etic* axis, the character of collecting field information concerning West Siberian people should have leaned towards the *emic* method, provided that the aim is to depict the culture<sup>4</sup> under study as a holistic system.

At the same time the choice of methodology should be kept in balance. To be sure, during the material gathering phase, the researcher might be exposed to the danger of a distorting effect of the “hermeneutic temptation” while recording the “etic of mental life” (Bulgakova 2001). However, the *hermeneutike techne* is an inevitable trap while doing intercultural analyses or syntheses. It is still difficult to imagine the application of a predominantly emic analysis in light of Western “materialistic” paradigms while discussing cultures that

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<sup>4</sup> The topic of culture is a real Gordian knot, the untying of which is most often either impeded or accomplished through Alexander the Great’s method. Nor do I possess a “philosopher’s stone” to cut that open. Rather, as far as it concerns gathering and systematization of field information, I’d like to rely upon Marvin Harris’s approach, by which a culture comprises the level of “memes” as well as its interdependent behavioral level (1999:19–29). However, in the theoretical analysis and synthesis, this approach does not seem viable because the upper rung of support for Wittgenstein’s ladder is missing. In the treatment of the emic-etic distinction I have also drawn upon Harris’s qualification stating “the reformulation of the emic/etic distinction to include mental and behavioural qualifiers results in four contrasting modes of ethnographic descriptions: emics of mental life, emics of behaviour; etics of mental life and etics of behaviour” (1999:40).

are traditionally oriented towards the “spirit world.”<sup>5</sup> Inevitably, the intercultural boundaries, or the translation from one sign system into another, semiotics, must be dealt with at this level. Likewise, psychology still remains important since the bearers of the researched cultures are humans according to the tacit agreement of science (although the emic approach would not rule out other creatures). Hermeneutic research<sup>6</sup> constitutes one possibility towards avoiding interpretation from an ethnocentric perspective.

As was already stated, the source of methodological conflict seems to reside in a theory of shamanism that has become too narrow (see Hoppál 1999:7–8). However, some recent studies have shown

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<sup>5</sup> In theory, this is possible if the bearer of the researched culture has received a Western education and maintained material contacts with his/her culture, which presupposes a preservation of the traditional life style and mentality. From the Siberian cultures such researches include Tatyana and Timofei Moldanovs, Maina Lapina, Agrafena Pesikova, Tatyana Gogoleva, etc. An opposite way is also possible, a person coming from a Western country and having the necessary research education merges with and adopts the researched culture, being him/herself accepted as a member of the respective society. Here, I don't mean the kind of participating observation such as Malinowski's whose method still does not secure an escape from the “hermeneutic temptation.” Drawing upon her own field experience (most likely), Marilyn Walker advocates the radical participation-I, recommended by Michael Harner. This should ensure the access to first-hand knowledge in the studies of shamanism (Walker 2001:41).

In both cases we deal with the possession of double identity. Unfortunately, the options in the case of a total emic-study would be limited to the two cultures and the mainstream of the still prevalent materialistic paradigm of science, which does not consider an identity oriented towards the spirit world seriously enough to even initiate a dialogue.

<sup>6</sup> Since the debate over hermeneutics as methodology is still in progress as in the case of cultural phenomena, then I'd point out that here I draw upon postulate 9 of F. Schleiermacher's “Hermeneutics and criticism” in which interpretation is treated as an art (below I elucidate the reason why) and upon p. 10 in which the main functions of language talent and individual language talent in the art of interpretation are being postulated (1997:16–18). It is interesting to note that Scheiermacher's postulates 19, 20 and 20.2 establish one of the main criterions for the “emic of mental life.” Fully realizing that Scheiermacher speaks about the written texts, I rely upon Juri Lotman's expansion of the notion of text to include other forms of texts besides exclusively written language.

that achieving trance or ecstasy is not always needed necessarily. This is the case with the Japanese *miko*-tradition (Kanda 1993:67), and also substantiated in the data collected regarding Korean shamans which shows that they do not always achieve trance or a hypnotic state during their professional practice. This has led some of the researchers to doubt the importance of the technique of ecstasy in the case of shamanism (Howard 1993:5–6; Hoppál 1999:8). There are several examples that prove such approach in the case of Khanties. Among the Khanties of the Pim and Tromyugan rivers, I have heard from my informant about one occasion where an old shaman from the Tromyagan area gave him good advice concerning the problems connected with his son and the changing of spirit dolls (see also Barkalaja 1996). The informant was truly impressed by the fact that he had not yet told anything to the shaman or asked for his help. The shaman had not used any aids and never altered his ordinary state as far as one could tell<sup>7</sup>.

Among the Eastern Khanties shamanizing or communicating with the “invisible people” was until recent times allegedly so ordinary that there was no special “theatre” necessary in order to make contacts with this world of spirits<sup>8</sup>. Everyone dealt with shamanizing to a greater or lesser extent, otherwise “one would not live very long” as Yegor Kanterov from the Pim river area put it. When we asked why there is such a small number of those with shamanistic powers in these days, he answered that earlier people were strong, but now the medicine is strong.

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<sup>7</sup> To understand the informant’s reason for wonder, we must know the Surgut Khanties’ classification of shamans according to their strength. According to this tripartite division, strong shamans do not use any aids to obtain information, and when manipulating with the environment, they use random objects at hand. Semi-strong and weak shamans especially, use various aids and they also need help from their community while performing rituals. The informant was impressed by the existence of such a strong shaman in the area. As a result of the Soviet repressions in West Siberia, the shamans do not advertize their power or even existence and hence, the information concerning them is insufficient even among Khanties.

<sup>8</sup> This observation seems to be supported by the description of a Sakha shaman Gerasimov (see Balzer 1993:154).