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20. Januar 2018, Verkehrshaus der Schweiz, Luzern
20 January 2018, Swiss Museum of Transport, Lucerne

DAS RÄTSEL DES MENSCHLICHEN BEWUSSTSEINS THE ENIGMA OF HUMAN CONSCIOUSNESS

Veranstalter – Organizer: Neue Galerie Luzern – Swiss Academic Association (NGL – SAA)
Konzept – Concept: René Stettler

A B S T R A C T S

(ENGLISH/DEUTSCH)

Inaugural Keynote

09.15 – 09.45 **MARTIN REES** (via Skype from Cambridge, UK)

CARTE BLANCHE

Martin Rees is a cosmologist and space scientist. He has made fundamental contributions to our understanding of galaxies, black holes, and cosmology, and has a deep interest in more speculative issues such as extraterrestrial life, and the «multiverse». He is based in Cambridge, where he has been Director of the Institute of Astronomy, a Research Professor, and Master of Trinity College. He was President of the Royal Society during 2005 – 2010. He is a member of the UK's House of Lords, and has the title of *Astronomer Royal*. He has received many international awards, and holds honorary degrees from numerous universities, including Cambridge, Oxford, Harvard, and Yale. He is a former trustee of the British Museum, the Science Museum, and the Gates Cambridge Trust, and is on the Board of the Princeton Institute for Advanced Study. He lectures, writes, and broadcasts extensively to wide audiences. His general books include *Before the Beginning*, *Our Final Century?*, *Just Six Numbers*, *Our Cosmic Habitat*, *Gravity's Fatal Attraction* and *From Here to Infinity*, an expanded version of his BBC Reith Lectures. In recent years he has been much involved with issues of public policy, especially with the mitigation of global threats stemming from humanity's collective footprint on the planet, and from misapplication of advanced technologies.

09.45 – 09.55 **Diskussion – Discussion**

Leitung – Chair MARCELO GLEISER

Keynote

09.55 – 10.25 **DONALD HOFFMAN**

THE CASE AGAINST A PHYSICAL ORIGIN OF CONSCIOUSNESS – ARGUMENTE GEGEN EINE PHYSIKALISCHE ENTSTEHUNG DES BEWUSSTSEINS

If I have a visual experience that I describe as a red tomato a meter away, then I am inclined to believe that there is, in fact, a red tomato a meter away, even if I close my eyes. I believe that my perceptions are, in the normal case, veridical—that they accurately depict aspects of the real world. But is my belief supported by our best science? In particular: Does evolution by natural selection favor veridical perceptions? Many scientists and philosophers claim that it does. But this claim,

though plausible, has not been properly tested. In this talk I present a new theorem: Veridical perceptual systems are never more fit than non-veridical perceptual systems of equal complexity that are simply tuned to the relevant fitness functions. This entails that perception is not a window on reality; it is more like a windows interface on your laptop. Spacetime is your desktop, and physical objects, like apples and neurons, are simply icons on this desktop. I discuss this interface theory of perception and its implications for one of the most puzzling unsolved problems in science: the relationship between brain activity and conscious experiences.

Wenn ich eine visuelle Erfahrung mache, die ich als eine rote Tomate in einer Entfernung von einem Meter beschreibe, dann bin ich geneigt zu glauben, dass es tatsächlich eine rote Tomate in einer Entfernung von einem Meter gibt, auch wenn ich die Augen schliesse. Ich glaube, dass meine Wahrnehmungen im Normalfall wahrheitsgetreu sind und sie Aspekte der realen Welt genau abbilden. Aber wird mein Glaube durch die beste Wissenschaft gestützt? Nämlich: Bevorzugt die Evolution veridische Wahrnehmungen aufgrund natürlicher Selektion? Viele Wissenschaftler und Philosophen behaupten, dass sie das tut. Diese durchaus plausible Annahme ist nicht genau überprüft worden. In diesem Vortrag stelle ich ein neues Theorem vor: Veridische Wahrnehmungssysteme sind nie fitter als nicht-veridische Wahrnehmungssysteme von gleicher Komplexität, die bloss auf die relevanten Fitnessfunktionen gestimmt sind. Daraus folgt, dass die Wahrnehmung kein Fenster zur Realität ist; sie ähnelt mehr der Windowsoberfläche Ihres Laptops. Die Raumzeit ist Ihre Benutzeroberfläche und physische Objekte – wie Äpfel und Neuronen – sind einfach ikonische Zeichen auf dieser Benutzeroberfläche. Ich erörtere diese Schnittstellentheorie der Wahrnehmung und ihre Konsequenzen für eines der rätselhaftesten ungelösten Probleme der Wissenschaft: die Beziehung zwischen Hirnaktivität und bewusster Erfahrung.

Donald Hoffman is a cognitive scientist and author of more than 100 scientific papers and three books, including *Visual Intelligence: How We Create What We See* (W.W. Norton, 2000). He received his BA from the University of California, Los Angeles, in Quantitative Psychology and his Ph.D. from MIT in Computational Psychology. He joined the faculty of the University of California, Irvine, in 1983, where he is now a full professor in the department of cognitive sciences. He received a *Distinguished Scientific Award* of the American Psychological Association for early career research into visual perception, the *Rustum Roy Award* of the Chopra Foundation, and the *Troland Research Award* of the US National Academy of Sciences. He has a TED Talk entitled «Do we see reality as it is?».

10.25 – 10.35 **Diskussion – Discussion**

Leitung – Chair STEVE PAULSON

Steve Paulson is the Executive Producer and an interviewer with *To the Best of Our Knowledge*, a Peabody Award-winning radio program produced at Wisconsin Public Radio and syndicated by PRX. His radio reports have also been broadcast on NPR's *Morning Edition* and *All Things Considered*. In 2006 he was a Templeton-Cambridge Journalism Fellow in Science & Religion. He has co-organised and moderated six series of panel discussions at the New York Academy of Sciences, including *The Emerging Science of Consciousness*, *Rethinking Mortality*, *Beyond the Big Bang* and *From Knowledge to Wisdom*. He has written for various publications, including Salon, Slate, Huffington Post, The Chronicle of Higher Education, The Atlantic Online, Nautilus, and The Los Angeles Review of Books. His book *Atoms and Eden: Conversations on Religion and Science* was published in 2010 by Oxford University Press.

11.00 – 11.10 **Musical Interlude 1**

ISABELLE VAN KEULEN (Violin), **DIEMUT POPPEN** (Viola), **PATRICK DEMENGA** (Violoncello)

Johann Sebastian Bach (1685 – 1750), ausgewählte Variationen aus den «Goldberg-Variationen», BWV 988. Die berühmten Goldberg-Variationen von J. S. Bach stellen einen Höhepunkt barocker Variationskunst dar. Das Werk zeichnet sich durch einen planvollen Gesamtaufbau mit in den Oberstimmen streng kanonischen Sätzen aus. Den inneren Zusammenhang der Variationen liefert das gemeinsame Bassthema. Jeder Einzelsatz besitzt einen eigenen Charakter. Die Haupttonart ist die «Friedenstonart» G-Dur. Die in Luzern gespielte Fassung für Streichtrio von Dmitri Sitko-

vetsky bringt den Dialog sowie die Einheit der drei verschiedenen Stimmen besonders schön zur Geltung. Sie stellt an die Interpreten höchste geistige und technische Anforderungen.

Johann Sebastian Bach (1685 – 1750), selected variations from the «Goldberg Variations», BWV 988. Bach's famous Goldberg Variations mark the height of Baroque variation art. The work is characterised by a systematic overall structure with strict canonical movements in the upper voices. The inner relationship between the variations is provided by the mutual bass theme. Each individual canon has its own character. The main key is the «peace key» G major. The string trio version by Dmitri Sitkovetsky performed in Lucerne brings the dialogue as well as the unity of the three different voices particularly nicely to the fore, and demands utmost mental and technical skills of the interpreters.

Intervention

11.10 – 11.50 **MARCELO GLEISER**

BEING HUMAN IN AN EXPANDING UNIVERSE: SCIENCE AND OUR SEARCH FOR MEANING – MENSCHSEIN IN EINEM SICH AUSDEHNENDEN UNIVERSUM: WISSENSCHAFT UND UNSERE SINNSUCHE

What can we know about the world? Is there such a thing as ultimate knowledge, or are we blind to certain aspects of reality? Although this is a question that is essential for science, it is also one that transcends the scientific discourses as it is linked to human knowability and unknowability. In this talk, I will discuss examples from cutting-edge cosmology, quantum physics, and cognitive science in order to illustrate the far-reaching but also crucial limitations of a purely scientific view of reality. In doing so, I will explore the notion of science as an incomplete narrative revealing, in fundamental ways, our very human ways of knowing.

Was können wir über die Welt wissen? Gibt es so etwas wie letztes Wissen oder sind wir blind für bestimmte Aspekte der Realität? Obschon dies eine unentbehrliche Frage für die Wissenschaft ist, ist es auch eine, welche über die wissenschaftlichen Diskurse hinausweist, da sie mit dem was wir wissen und nicht wissen können zu tun hat. In diesem Vortrag werde ich Beispiele der Spitzenforschung in der Kosmologie, Quantenphysik und Kognitionswissenschaft diskutieren, um die weitreichenden, aber auch kritischen Grenzen eines rein wissenschaftlichen Verständnisses der Realität zu veranschaulichen. Dabei werde ich die Vorstellung der Wissenschaft als eine unvollständige Erzählung untersuchen, welche – auf grundlegende Weise – unsere sehr menschlichen Zugangsweisen zum Wissen offenbart.

Marcelo Gleiser is the Appleton Professor of Natural Philosophy and a professor of physics and astronomy at Dartmouth College, Hanover / NH – USA. He obtained his Ph.D. from King's College London and received the 1994 *Presidential Faculty Fellows Award* from the White House. He is a Fellow of the American Physical Society. His books have been published in 15 languages and include *The Island of Knowledge: The Limits of Science and The Search for Meaning*, *A Tear at the Edge of Creation*, and *The Simple Beauty of the Unexpected*. He has published hundreds of peer-reviewed articles, essays, and op-eds, and frequently participates in TV documentaries and radio shows in the US and abroad. He is the co-founder of the NPR blog on science and culture, 13.7.

Leitung – Chair ALAN WALLACE

11.50 – 12.30 **JOHN HORGAN / BERNARDO KASTRUP**

CAN CONSCIOUSNESS BE EXPLAINED? – SCIENCE AT THE EDGE

What is consciousness? Is it a property just of humans and other organisms possessing brains, or could it be a more pervasive, even universal phenomenon, that imbues all matter? Can science explain consciousness? Measure it? Replicate it in machines? What can we learn from altered sta-

tes such as those produced by psychedelics or meditation? Has philosophy contributed anything to our understanding of consciousness? Join two veteran explorers of consciousness, philosopher Bernardo Kastrup and journalist John Horgan, as they address these questions in a wide-ranging conversation. Kastrup and Horgan will critique the latest theories of consciousness, including ones based on quantum mechanics and information theory, and even the startling notion that consciousness does not really exist as well as presenting their own ideas about the deepest of all mysteries.

Was ist das Bewusstsein? Ist es eine Eigenschaft von Menschen und anderen, Gehirne besitzenden, Organismen oder handelt es sich um ein umfassenderes, gar universelles Phänomen, das alle Materie durchdringt? Kann die Wissenschaft das Bewusstsein erklären? Kann sie es messen? Kann sie es in Maschinen replizieren? Was können wir von veränderten Bewusstseinszuständen lernen wie etwa jenen, die durch Psychedelika oder Meditation erzeugt werden? Hat die Philosophie etwas zum Verständnis des Bewusstseins beigetragen? Folgen Sie den Gedanken von zwei erfahrenen Exploratoren des Bewusstseins – dem Philosophen Bernardo Kastrup und dem Journalisten John Horgan –, welche diese Fragen in einem breit gefächerten Gespräch diskutieren. Kastrup und Horgan werden die neuesten Theorien des Bewusstseins der Kritik unterziehen, einschliesslich jenen, die auf der Quantenmechanik und der Informationstheorie beruhen und auch die erstaunliche Auffassung, dass das Bewusstsein nicht wirklich existiert – und sie werden eigene Ideen über das tiefste aller Mysterien vorstellen.

John Horgan is a science journalist who directs the *Center for Science Writings* at *Stevens Institute of Technology*, Hoboken, NJ. A former senior writer at *Scientific American* (1986 – 1997), he has also written for *The New York Times*, *National Geographic*, *The London Times* and other publications worldwide. His books include the bestseller *The End of Science* (1996), *The Undiscovered Mind* (1999), *Rational Mysticism* (2003) and *The End of War* (2012). Since 2010 he has written the «Cross-check» blog for *Scientific American*. His awards include the *Science Journalism Award of the American Association for the Advancement of Science* and the *National Association of Science Writers Science-in-Society Award*. Horgan graduated from the *Columbia University School of Journalism* in 1983.

Bernardo Kastrup has a Ph.D. in Computer Engineering with specializations in artificial intelligence and reconfigurable computing. He has worked as a scientist in some of the world's foremost research laboratories, including the European Organization for Nuclear Research (CERN), and the Philips Research Laboratories (where the «Casimir Effect» of Quantum Field Theory was discovered). Bernardo has authored many academic papers and books on philosophy and science. His three latest books are: *More Than Allegory*, *Brief Peeks Beyond*, and *Why Materialism is Baloney*. He has also been an entrepreneur and founder of a successful high-tech start-up. Next to a corporate life developing technology strategy in the high-tech industry, Bernardo maintains a philosophy blog, a video interview series, and continues to develop his ideas about the nature of reality. He has lived and worked in four different countries across continents and currently lives in the Netherlands.

12.30 – 13.45 **Mittagspause – Lunch Break**

13.45 – 13.55 **Musical Interlude 2**

ISABELLE VAN KEULEN (Violin), **DIEMUT POPPEN** (Viola), **PATRICK DEMENGA** (Violoncello)

Johann Sebastian Bach (1685 – 1750), ausgewählte Variationen aus den «Goldberg-Variationen» BWV 988, Fassung für Streichtrio.

Johann Sebastian Bach (1685 – 1750), selected variations from the «Goldberg Variations», BWV 988. Version for string trio.

A CONTEMPLATIVE SCIENCE OF CONSCIOUSNESS – EINE KONTEMPLATIVE WISSENSCHAFT DES BEWUSSTSEINS

Over its 400-year history, modern science has witnessed two revolutions in the physical sciences and one in the life sciences, but it has yet to bring about its first revolution in the mind sciences. A principal reason for this may be that, while physicists and biologists have developed rigorous means for directly observing the phenomena under examination, cognitive scientists have failed to devise methods for directly observing mental phenomena, as opposed to their behavioral and neural correlates. While the contemplative traditions of the world have no brain science and no quantitative means of investigating human behavior, they have developed sophisticated means for observing the states of consciousness directly, enabling them to explore the origins, nature, and potentials of the mind. In this lecture, methods for refining attention and applying it to the rigorous, introspective study of consciousness will be discussed, together with means of achieving optimal mental health through the contemplative cultivation of mental balance.

In ihrer 400-jährigen Geschichte hat die moderne Wissenschaft zwei Revolutionen in den Naturwissenschaften und eine in den Lebenswissenschaften hervorgebracht, aber sie hat ihre erste Revolution in den Wissenschaften des Geistes noch zustande zu bringen. Ein Hauptgrund dafür mag sein, dass, während Physiker und Biologen exakte Hilfsmittel zur direkten Beobachtung der untersuchten Phänomene entwickelt haben, es Kognitionswissenschaftler versäumten, Methoden zur direkten Beobachtung mentaler Phänomene zu entwickeln, im Gegensatz zu ihren verhaltensbezogenen und neuronalen Korrelaten. Während die kontemplativen Traditionen der Welt über keine Wissenschaft des Gehirns und keine quantitativen Hilfsmittel verfügen, um menschliches Verhalten zu untersuchen, entwickelten sie ausgeklügelte Mittel der direkten Beobachtung von Bewusstseinszuständen, die sie befähigten die Ursprünge, Natur und Potentiale des Geistes zu erforschen. In diesem Vortrag werden Methoden zur Verfeinerung der Aufmerksamkeit und ihre Anwendung zur gründlichen, introspektiven Erforschung des Bewusstseins erörtert, zusammen mit Mitteln zur Erzielung einer optimalen geistigen Gesundheit durch die kontemplative Kultivierung des mentalen Gleichgewichts.

B. Alan Wallace began his studies of Tibetan Buddhism, language, and culture in 1970 at the University of Göttingen and then continued his studies over the next fourteen years in India, Switzerland, and the United States. During most of that time he trained as a Tibetan Buddhist monk, ordained by H.H. the Dalai Lama, for whom he has often served as interpreter. After graduating summa cum laude from Amherst College in 1987, where he studied physics and the philosophy of science, he went on to earn his Ph.D. in religious studies at Stanford University in 1995. He then taught for four years in the Department of Religious Studies at the University of California at Santa Barbara, and is the founder and president of the Santa Barbara Institute for Consciousness Studies <http://sb institute.com>. He has edited, translated, authored, and contributed to more than forty books on Tibetan Buddhism, medicine, language, and culture, and the interface between science and Buddhism, including *Meditations of a Buddhist Skeptic: A Manifesto for the Mind Sciences and Contemplative Practice*, *Mind in the Balance: Meditation in Science, Buddhism, and Christianity*, and *Hidden Dimensions: The Unification of Physics and Consciousness*.

Leitung – Chair DIEGO HANGARTNER

Diego Hangartner has dedicated over thirty years to external scientific research and internal meditative exploration of the mind and consciousness. He started as a pharmacologist specialising in psychopharmacology and addiction, always interested in what constitutes a healthy mind and how to cultivate it. He spent many years at the Institute of Buddhist Dialectics in India where he studied, translated and published several Tibetan works, and organised a number of large events with His Holiness the Dalai Lama in Europe. Diego was COO of *the Mind and Life Institute* in the US, and Co-Founder and Director of *Mind and Life Institute* in Europe until 2015. *Mind and Life* is an organization that brings together scientists and contemplatives in order to discuss, investigate, and fund research into how to tackle some of the toughest challenges facing mankind. Today, Diego continues

his research and the teachings at the Max Planck Institute, the Swiss Federal Institute of Technology, and Zurich University. To share his teaching more broadly, Diego founded the *Institute of Mental Balance* and *Universal Ethics* (IMBUE), an interdisciplinary initiative, which develops and provides tools as well as programs that foster mental balance. He created and teaches «The Wheel of Mental Balance», a methodology, which helps to cultivate a healthy and resilient mind.

14.35 – 14.45 **Meditation: DIEGO HANGARTNER**

Keynote

14.45 – 15.15 **JOANNA COOK**

**IF MINDFULNESS IS THE ANSWER: WHAT IS THE QUESTION?
WENN ACHTSAMKEIT DIE ANTWORT IST: WAS IST DIE FRAGE?**

In the UK, mindfulness is a political concern. An awareness practice originating in Buddhism, mindfulness is being interpreted as a positive intervention for societal problems as wide ranging as depressive relapse, criminal recidivism, children's academic performance and worker burn out. Given the diversity of these challenges, it is striking that their solution is presented as unitary. In this lecture, I consider changing understandings of mental health and human flourishing. Taking political interest in mindfulness as my ethnographic focus I examine the broader cultural value of «metacognition». I argue that cultivating a relationship with one's own mind, learning to think about thinking in a peculiarly committed way, is increasingly being incorporated into understandings of the good life, mental health and governance.

Achtsamkeit ist in Grossbritannien ein politisches Anliegen. Obschon eine Bewusstseinspraxis, die im Buddhismus gründet, wird Achtsamkeit als eine nutzbringende Intervention für so weitreichende gesellschaftliche Probleme interpretiert wie depressive Rückfälle, Rückfallkriminalität, die akademische Leistung von Kindern und das Burn-out von Arbeitern. Angesichts dieser unterschiedlichen Herausforderungen fällt auf, dass ihre Lösung als einheitlich präsentiert wird. In diesem Vortrag stelle ich das sich ändernde Verständnis von psychischer Gesundheit und menschlichem Gedeihen zur Diskussion. Ich untersuche im weitestens Sinne den kulturellen Nutzen von «Metakognition», indem ich das politische Interesse an der Achtsamkeit zu meinem ethnographischen Fokus mache. Mein Argument ist, dass die Kultivierung einer Beziehung mit dem eigenen Geist, das Erlernen eines besonders engagierten Denkens über das Denken zunehmend in das Verständnis des guten Lebens, geistiger Gesundheit und Staatsführung münden.

Joanna Cook is a Reader in Anthropology at University College London. She is the author of *Meditation in Modern Buddhism: Renunciation and change in Thai monastic life* (Cambridge University Press, 2010) and the co-editor of *The State We're In: Reflecting on Democracy's Troubles* (Berghan Books, 2016), *Detachment: Essays on the limits of relational thinking* (Manchester University Press, 2015) and *Southeast Asian Perspectives on Power* (Routledge, 2012). Her current research focuses on mindfulness-based initiatives in civil society in the UK. Through long-term anthropological research with patients, therapists, and political advocates, this work examines the ways in which practitioners learn to relate to their minds and the relationship that this has to broader political framings of health and human flourishing.

15.15 – 15.25 **Diskussion – Discussion**

Leitung – Chair TANYA LUHRMANN (via Skype from Stanford, USA)

Tanya Marie Luhrmann is the Watkins University Professor in the Stanford Anthropology Department. Her work focuses on the edge of experience: on voices, visions, the world of the supernatural and the world of psychosis. She has done ethnography on the streets of Chicago with homeless and psychotic women, and worked with people who hear voices in Chennai, Accra, and the South Bay. She has also done fieldwork with evangelical Christians who seek to hear God speak back, with Zoroastrians who set out to create a more mystical faith, and with people who practice magic. She uses a combination of ethnographic and experimental methods to understand the phenomenology of unusual sensory experiences, the way they are shaped by ideas about minds and persons,

and what we can learn from this social shaping that can help us to help those whose voices are distressing. She was elected to the American Academy of Arts and Sciences in 2003 and received a John Guggenheim Fellowship award in 2007. *When God Talks Back* was named a NYT Notable Book of the Year and a Kirkus Reviews Best Book of the Year. She has published over thirty OpEds in The New York Times, and her work has been featured in *The New Yorker*, *The New York Review of Books*, The Times Literary Supplement, Science News, and many other publications. Her new book, *Our Most Troubling Madness: Schizophrenia and Culture*, was published by the University of California Press in October 2016.

Keynote

15.50 – 16.20 **SUSANA BUSTOS**

SONG, CONSCIOUSNESS, AND HEALING IN PERUVIAN AMAZONIAN SHAMANISM – GESANG, BEWUSSTSEIN UND HEILUNG IM PERUANISCHEN AMAZONISCHEN SCHAMANIS- MUS

Developing relationships with seen and unseen natural forces to gain knowledge, to create survival strategies, and to influence the environment and social milieu is a prominent feature of Amerindian cosmologies and lies at the core of indigenous and mestizo shamanistic traditions in Peruvian Amazonia. These forces are considered sentient with their own agency in a delicate web of interconnectedness, a web whose balance influences the overall state of health of a community and of individuals. For the healer, the establishment of these relationships entails the incorporation of the sentience into his/her physical and energetic bodies through ingestion. In this process, singing becomes the main means of communication.

*My presentation will focus on the nature and functions of embodied singing in Peruvian Vegetalismo shamanistic practices, which involves the ritual use of mind altering plants, particularly the brew ayahuasca (*Banisteropsis caapi* and *Psychotria viridis*) from emic and etic perspectives. In addition, I will include my studies on the phenomenology of the effect of the healer's singing on patients and on the healers themselves in order to build a hypothesis on the mechanisms by which this singing supports the emergence of new forms and patterns of information to consciousness that may allow healthier states of being.*

Die Entwicklung von Beziehungen zu sichtbaren und unsichtbaren Naturkräften um Wissen zu erlangen, Überlebensstrategien zu kreieren und die Umwelt und das soziale Milieu zu beeinflussen, ist ein besonderes Merkmal indianischer Kosmologien. Sie bildet den Kern indigener und mestizisch-schamanistischer Traditionen im peruanischen Amazonasgebiet. Die Naturkräfte werden als empfindungsfähig bezüglich der ihnen zugeschriebenen Wirkung innerhalb eines fein vernetzten Wahrnehmungsgeflechts betrachtet – einem Netzwerk, dessen Gleichgewicht auf den Gesamtgesundheitszustand einer Gemeinschaft und den von einzelnen Menschen Einfluss hat. Für den Heiler bzw. die Heilerin bedeutet die Schaffung eines Zugangs zu diesen Wahrnehmungen, sie als Empfindungen physisch und energetisch zu inkorporieren. In diesem Prozess sind Gesänge das primäre Kommunikationsmittel.

Der Fokus meines Vortrags liegt in der Natur und den Funktionen des verkörperten Gesangs im Rahmen schamanistischer Praktiken des peruanischen Vegetalismus, die den rituellen Gebrauch von bewusstseinsverändernden Pflanzen, im Besonderen des Gebräus Ayahuasca (*Banisteropsis caapi* und *Psychotria viridis*) involvieren. Emische und etische Sichtweisen werden diskutiert. Zusätzlich werde ich meine Studien zur Phänomenologie der Wirkung des Gesangs des Heilers auf Patienten und auf die Heiler selber präsentieren und eine Hypothese über die Mechanismen vorstellen, wie durch diese Gesänge neue Informationsformen und -muster im Bewusstsein entstehen, die gesündere Seinszustände ermöglichen.

Susana Bustos holds degrees in Clinical Psychology and in Music Therapy from Chilean universities as well as a Ph.D. in East-West Psychology from the *California Institute of Integral Studies (CIIS)* where she is currently teaching. She is an expert in Gestalt Therapy, Holotropic Breathwork, and Expressive Art. Her work in Chile included the creation and assessment of local and national psycho-educational programs, teaching, research, and psychotherapy. Susana's long term passion for indigenous cultures and their relationship to the natural world—together with her interest in the therapeutic potentials of non-ordinary states of consciousness—brought her in 1999 to the Peruvian Amazon. Since then she has been studying Vegetalismo and other indigenous shamanic

practices in the Americas. She has also repeatedly worked as a researcher, therapist, and clinical supervisor at *Takiwasi, Center for the Rehabilitation of Drug Addicts*, Tarapoto, Peru (www.takiwasi.com), which brings together indigenous practices and Western medicine. Her research interests include the therapeutic potentials of shamanic songs (particularly the *icaros*), and plant diet processes as well as the integration of entheogenic experiences into ordinary life. Susana Bustos gives workshops and talks on an international level, and she also co-leads groups that visit the Amazon rainforest.

16.20 – 16.30 **Diskussion – Discussion**

Leitung – Chair TANIA RE

Tania Re is a psychologist, medical anthropologist, and expert in naturopathic medicine. She is a member of the Board of the Unesco Chair *Health Anthropology, Biosphere and Healing systems* at the University of Genoa, and currently a researcher at the *Integrative Medicine Centre*, Careggi Hospital, Florence, Italy. She teaches Ethnomedicine and Medical Anthropology in the context of the Integrative Medicine Master at the University of Florence. Her research interests are focused on the processes in traditional healing understood as systems that connect mind, body as well as the spiritual dimensions of human existence in different cultures. She works in interdisciplinary workgroups with physicists, medical doctors, and anthropologists. The topic of her research is the intergration of different types of knowledge in health systems. In the past, she has been repeatedly engaged and is still involved today in field research taking place in the Amazon rainforest.

16.55 – 18.00 **Podiumsdiskussion – Panel Discussion**

CONSCIOUSNESS, SCIENCE, AND THE NATURE OF REALITY

Susana Bustos, Joanna Cook, Marcelo Gleiser, Donald Hoffman, John Horgan, Bernardo Kastrup, Martin Rees (via Skype from Cambridge, UK), Alan Wallace

Leitung – Chair STEVE PAULSON

18.00 Ausblick und Verabschiedung – Outlook and Farewell René Stettler

René Stettler is the founder of the Neue Galerie Luzern (1987), the *Swiss Biennial on Science, Technics + Aesthetics* (1994), and the NGL – SAA Neue Galerie Luzern – Swiss Academic Association (2013). In 2011, he received his Ph.D. from the University of Plymouth, UK, for the thesis *The Politics of Post-Industrial Cultural Knowledge Work* under the guidance of Roy Ascott (UK) and David Turnbull (AU). His areas of interest are the sociology of knowledge, the socio-epistemological-political responsibility of cultural work, and educational challenges in the face of industrial society's logic of accumulation, market rationality, and instrumentalism. In his book titled *The Politics of Knowledge Work in the Post-Industrial Culture* (Birkhäuser-Verlag, Ambra-Verlag, Basel / Vienna, 2014), Stettler reconceptualises cultural and scientific learning in the face of incalculable global threats, risks, and contingencies.

The *Swiss Biennial on Science, Technics + Aesthetics* has been a forum for discussion of major topics such as «Brain–Mind–Culture» (1995), «Liquid Visions» (1997), «Frontier Communication: Human Beings, Apes, Whales, Electronic Networks» (1999), «Consciousness and Teleportation» (2005), «Consciousness and Quantum Computers» (2007), «The Large, the Small and the Human Mind» (Part 1 in 2010, and Part 2 in 2012), «Be the change we want to see in the world» (2014), and «The Enigma of Human Consciousness» (2001, 2016 and 2018) by internationally acclaimed speakers such as the British mathematician Sir Roger Penrose, the French sociologist Bruno Latour, the Austrian-American ecologist Fritjof Capra, the founder of the *Right Livelihood Award* and Initiator of the *World Future Council*, Jakob von Uexküll. More information via www.rene-stettler.ch

Übersetzung – Translation: René Stettler

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