



**WORLD
KNOWLEDGE
DIALOGUE**

«Towards a Modern Humanism».

**A HISTORY OF THE « WORLD KNOWLEDGE
DIALOGUE » FOUNDATION'S BEGINNINGS**

2003-2009

Francis A. Waldvogel

Foreword

While fate may be a good provider, there is nothing wrong with lending it a helping hand, or at least trying to.

Two distant memories spring to mind:

Jacques Monod and Claude Lévi-Strauss are in discussion before the cameras of French Television. It is a debate of the highest level, between two experts, the first representing the natural sciences and the second, the social sciences. Both men comment on the rarity of the occasion to meet, pointing out that it is the occurrence of the televised event that has provoked their encounter.

And then there is the memory of a ballad by Bertolt Brecht, the « Kinderkreuzzug » : during the « children's crusade », a group of war orphans find flour and wood in an abandoned village. One knows how to make dough, another knows how to make a fire, but no one manages to bring the different efforts together to produce the bread they are all in such need of. The group, still with empty stomachs succumbs to squabbling and starvation....

To facilitate fruitful encounters, help those with knowledge in different fields to get together and allow society to advance as a whole, or, to use the Brecht analogy, to « make bread »; these aptly evoke the ambitions of the « World Knowledge Dialogue » initiative, henceforth known under its acronym WKD.

The following pages trace the broad-brush strokes of the WKD's story from its conception, through the early years until the initiative's joint adoption in 2009 by five university establishments of Suisse Romande. They describe its methods, its creation, its first efforts crowned with success. One feature stands out right through the process : the critical role Francis Waldvogel has played. The colleague to whom Geneva University's Rectorat conferred the mandate of project chief, and who accepted to take the job in hand, truly became the soul of the enterprise. He assembled and inspired a remarkable team for his mission and under his leadership they created an international network at the highest level.

Should our country, as suggested by an American WKD participant, create an institute along the same lines as that of the Santa Fe Institute? The WKD does indeed have the support of all the universities of Switzerland, including its two Federal Polytechnic Institutions. But one might raise the objections that, on one hand, our confederated system is not suited to such an approach, and on the other, that the perenisation of the WKD initiative in form of an institute

risks having its vigour give way to routine. Better perhaps is for the WKD to navigate within a moving flux of questions than to try and achieve a solidly anchored structure. Nonetheless, as Plato said, it is necessary to strive towards a vision of utopia despite the paradoxical impossibility of achieving it. Our utopic ideals serve as the compass by which we measure whether choices will lead in the good direction or not.

In all of this, as you must by now be aware, the utopian vision is easily discernible. It is moreover entirely implicit in the title « World Knowledge Dialogue». And, as you are about to discover, the door to the future has been pushed wide open.

Prof. hon. André HURST

An idea...

In 2003, whilst Professor of ancient Greek literature and language at the University of Geneva, André Hurst (AH) and Francis Waldvogel (FW), Professor of Internal Medicine at Geneva University Hospital (HUG) held a discussion in the former's office. The purpose of FW's visit was ostensibly to present the projects of the Fondation Dr Henri Dubois-Ferrière Dinu-Lipatti, and as its President, to recruit AH's rich cultural background to its cause by inviting him to join the foundation's overseeing council. In the course of the wide-ranging discussion that afternoon, AH mentioned for the first time his dream of creating dialogue between the exact sciences and the social sciences, under the auspices of a project provisionally entitled «Knowledge Forum», for which he sought FW's collaboration. Entirely convinced by the idea, FW accepted forthwith to participate in its achievement. During that year, André Hurst was elected to the Rectorship of Geneva University. Empowered by this new charge, he placed the « Knowledge Forum» on the Rectorate's 2003-2007 political agenda. At that time, the project's precise organisational form had yet to be determined, however it's overarching aim was clearly to facilitate exchange of ideas between leading representatives from across the disciplines, each of whom had already marked their field with ground-breaking contributions that challenged received paradigms, by hosting periodic encounters for dialogue.



Prof. André HURST (left) and Prof. Francis WALDVOGEL (right)

A project...

The precise organisational format of the project required in depth planning as few attempts at dialogue between the so called « hard » and « soft » sciences had been made to date. One of these, the Collegium Helveticum of the ETHZ and the University of Zürich, created in the 1990s, rapidly

became isolated as a venture, devoting itself to esoteric intellectual issues of purely academic interest.

The idea that most appealed was to identify a number of themes that seemed particularly suited to exploration through a transdisciplinary approach - as opposed to a multidisciplinary one, and by participants whose credentials had already secured them global recognition, while also factoring in an opportunity for dialogue with the general audience.

It was 2004 before the project got off to an encouraging start. First, through a meeting organised by FW at the La Réserve restaurant in Geneva, which brought on board two influential protagonists; Madam Ruth Dreifuss, an ex-Federal Councillor at the Federal Department of Home Affairs and a former President of Switzerland, and Madam Heidi Diggelmann, Professor of Microbiology and President of the Research Council of the Swiss National Science Foundation. Throughout their respective careers these two personalities from the spheres of Suisse science and politics have shown a remarkable appreciation and understanding of complex transdisciplinary issues, and in particular of their social and societal ramifications. In an agreeable and calm atmosphere, the project was sketched out to them: FW then responded to the best of his ability to the perceptive comments and questions posed by his two eminent guests, at which point both declared themselves enthusiastic supporters of the project and eager to enlist their efforts towards its realisation.

This meeting was followed on the 12th of July 2004, by a larger séance in Bern attended by Werner Arber, Nobel laureate at the University of Basel's Biozentrum, Heidi Diggelmann, Ruth Dreifuss, Ralph Eichler, President of the EPFZ, R. Gibson, Professor of Economics at the University of Zurich, Charles Kleiber, Secretary of State for Education and Research, as well as the initiators of the meeting, AH and FW. The objective of this gathering was to explore and define more precisely the mandate and terms of operation of this project whose originality and scale of ambition are undisputed.

Following these two important encounters and at the suggestion of Ruth Dreifuss, the "Forum des Savoirs" was renamed "Dialogue des Savoirs" and in its English translation baptised "World Knowledge Dialogue" (WKD).

The WKD is born!

Ruth Dreifuss, defined the WKD's approach to dialogue with three slogans that capture its essence: Let us ask ourselves the following :*What do I know ? What don't I know ? and Who can help ?*

In fact these three questions encapsulate the difference between « multidisciplinary » and « transdisciplinarity ». In the first, each one aims to contribute his knowledge; the boundaries of his wisdom in the second, each one – while still contributing his part of knowledge – acknowledges and aims at enriching it with the help of others' wisdom.



Ruth Dreifuss and Gilles Crettenand

With this point clarified, the WKD's goal was now defined and precise. It was to facilitate a high quality dialogue at international level between the natural and physical sciences on the one side of the spectrum and between the human and social sciences on the other, and to be done within the framework of excellence and hospitality of the contemporary Swiss science landscape.

Such an aim would be achievable only by offering all concerned the promise of profound dialogue: an opportunity to compare, contrast and confront the methodologies and the ideas of the authors of great scientific discoveries and principles with those of the generators and proponents of radical thinking and concepts in the domain of the humanities and the social sciences. Numerous personalities from the intellectual world, such as Edgar Morin, E.O. Wilson, Hubert Reeves, Helga Nowotny, had already openly advocated for such a dialogue. The most audacious step remained; successfully motivate them to actively participate in the adventure, put their already-earned reputations aside and expose the potential vulnerabilities of their own fields to the critical analysis and complementation of others.

Creating the reality ...

In March 2005, FW put the first budget of planned operating costs for the WKD to AH, in the light of a scheduled first symposium to take place from 14 to 16 September 2006 in Crans-Montana, and for which the target was an attendance of 300 participants.

Why Crans-Montana ? Situated in the heart of the Swiss alps, easily accessible, hosting an appropriately-sized conference centre, the commune was already distinguished by its organisation of a previous symposium with an essentially economic character but also concerned with interdisciplinary themes.

The global expenditure for the first WKD event was evaluated at 1 million CHF, from which 590'000 CHF could be covered by expected income. It was estimated that the



remaining deficit of 410'000 CHF could be recovered with the help of diverse sponsors, among whom certain had already been identified. This perspective had no truck with utopia, but was rather one of healthy realism, as future events were to demonstrate.

In 2005, the WKD received influential support from two national institutions : on May 27th the "Conférence des Recteurs des Universités suisses" (CRUS) agreed to play the role of "mentor", thus signalling its official support for the WKD initiative. Though precious for its influential role, this support carried no financial implication, the budget sought by AH - the contributions of CHF 50'000.— per university - being voted down. Shortly thereafter, the Secretary of State for Education and Research, Mr Charles Kleiber, approved the project and agreed to disseminate news of the WKD's creation to other European State Secretariats. Once again, this most welcome help was above all of a virtual nature, no financial participation being involved.

Strengthened by these two considerable manifestations of support, the moment had arrived to equip the WKD with the operational framework necessary for it to function. AH and FW's broad network of contacts played a particularly important role at this stage, vastly facilitating the

selection of personalities who would most generously contribute both ideas and time to the cause.



Richard Ernst, Mauro Dell’Ambrogio, Claude Roch and Ruth Dreifuss

Whilst the creation of the WKD initiative was indisputably recognised as a “worthy” cause, it had yet to acquire the institutional capacities to realise its ambitions : it was deemed imperative to radiate an impressive international dimension from the WKD’s inception, through the constitution of an international scientific committee and an honorary board of equally high renown : the participation of the Swiss-German universities was ensured thanks to the collaboration of the Rector of the University of Zurich, Professor Hans Weder, who promoted and supported the WKD within the German-speaking regions of the country. Professor Weder subsequently became a member of the WKD Foundation Council upon its creation on June 26th 2006.

The Honorary Board (HB) was created in 2005, and composed of internationally renowned intellectual leaders and respected personalities from a broad variety of domains, including politics, the sciences, learned societies etc.

The board-members’ names and functions are as follows:

- ✚ Pascal Couchepin, Federal Councillor, Federal Department of Internal Affairs, Bern
- ✚ Phillip L. Clay, Provost, Massachusetts Institute of Technology (MIT), Cambridge, USA
- ✚ Heidi Diggelmann, Past-President, Swiss National Science Foundation Research Council
- ✚ Don Gibbons, Assoc. Dean of Public Affairs at Harvard Medical School, Boston, USA
- ✚ Peter Gruss, President of the Max-Planck Gesellschaft, München, Germany
- ✚ Charles Kleiber, State Secretary for Education and Research, Bern, Switzerland

- ✚ Kishore Mahbubani, Dean of the Lee Kuan Yew School of Public Policy, Singapore
- ✚ Ryoji Nyori, President of the Riken Institute and Nobel Laureate, Japan
- ✚ Koji Omi, Director of the STS Forum, Tokyo, Japan
- ✚ Albert H. Teich, Director of the AAAS Directorate for Science and Policy Programs, Washington, USA
- ✚ Volker Ter Meulen, President of the Leopoldina National Academy of Sciences, Halle, Germany
- ✚ Edward O. Wilson, Professor of Entomology, Harvard University, Boston, USA

Each of these renowned personalities, having been personally contacted by FW, agreed to join the WKD's honorary board, with their role being essentially to help promote and disseminate knowledge of the WKD within their respective domains as well as to encourage representative participation of colleagues and peers at the 2006 symposium.

In parallel with the creation of the honorary board, an **International Scientific Board** (ISB) was created, with the mandate of selecting the themes of the 2006 symposium, as well as the most appropriate speakers to present them. This difficult and delicate task involved making choices that would not merely showcase a particular domain, but would in contrast rather make use of both its strengths and weaknesses to promote the notion of transdisciplinary synergism. This challenging mission was deemed of the highest importance in the conception of the initiative, being absolutely central to the symposium's success. The following eminent personalities agreed to join the ISB :

- ✚ Bertil Andersson, Chief Executive of the European Science Foundation, Strasbourg
- ✚ Werner Arber, Biocenter, Nobel Laureate, University of Basel
- ✚ Ruth Dreifuss Past-Federal Councillor at the Federal Department of Home Affairs, Bern
- ✚ Peter Fulde, Director of the Max-Planck Institute for the Physics of Complex Systems, Dresden
- ✚ Georges Haddad, Director of the Division of Higher Education, UNESCO, Paris
- ✚ Dame Julia Higgins, Vice-President of the Royal Society, London
- ✚ Dieter Imboden, President of the Swiss National Science Foundation, Bern
- ✚ Hiroshi Komiyama, President of the University of Tokyo
- ✚ André Langaney, Director of the Department of Anthropology and Ecology, University of Geneva
- ✚ Jean Starobinski, Professor Emeritus of the University of Geneva, member of the Institut de France and writer

✚ Frank Wilczek, Nobel Laureate, Professor of Physics at MIT

At Bertil Andersson's invitation, the ISB held its first session on October 4th and 5th 2005. The entire board gathered in Basel then travelled together to the Strasbourg headquarters of the European Science Foundation, for an assembly at which the intense and congenial discussions were to pose the intellectual foundations of the project. Over several communal meals in Strasbourg's old town, the board-members forged a sense of team spirit and community. The specific tasks on the agenda were to choose themes for the 2006 symposium, to identify potential orators and to come up with a shortlist of candidates of suitable stature to adopt the mantle of « Author in Residence ». The role of this key figure, as the moderator of dialogue, would be crucial to the symposium's success. By the close of the Strasbourg session, it had been provisionally decided that the inaugural symposium would elaborate only two of the eleven themes initially considered. The board members were asked in addition to furnish propositions for potential orators deemed to be top experts in the chosen areas. Why fix the number of themes at two? First and foremost it was considered essential to avoid the risk of spreading effort too widely in view of the plethora of interdisciplinary problems identified. It was just as important however to avoid that any single theme itself became the primary objective of the symposium as opposed to serving as a pretext for the practice of interdisciplinary dialogue.

In order to harmonise the flow of dialogue, to set the tone of the symposium and to encourage and guide the direction of the exchanges, as mentioned above, we sought to appoint a moderator : the author in residence. The person appointed to this pivotal role, would ultimately be responsible for ensuring the success of the dialogue; by developing and gently guiding the debates and where possible allowing some questions from the audience; providing perceptive overviews and summaries of the presentations; assessing the coherence or eventual contradictions arising between different approaches; evaluating the symposium; expressing personal opinions on how and in which ways issues were clarified (or not) by the exchanges.

Interdisciplinary dialogue must by definition nourish the exchange of knowledge and encourage its wider dissemination. On FW's initiative, the incorporation of a *young scientists* programme became an integral part of the symposium. An international group of bursary awardees were offered the chance to participate in the debates, in return serving as « amplifiers » and as an interface between the participating leading thinkers and civil society at large. The call for applicants elicited a strong response with the outcome that 41 *young scientists* contributed abstracts to the 2006 symposium. The group of young people in question demonstrated a genuine interest in the event, expressing a desire to play a more active role in subsequent

reflections and actions. The almost integral financing of their participation at WKD 2006 contributed decidedly to the success of the *young scientist* programme.



Some of the « Young Scientists »

After the meeting in Strasbourg, the organising group had thus an impression of having taken a decisive step towards setting the wheels of the first symposium in motion.

The organisation...

With a framework for the project by now well defined and under the guidance and supervision of a body of eminent international experts, it still remained to put in place an efficient operational structure to bring the project to term. In 2005, an **executive committee** was designated. This structure was constituted of FW as executive director, Gilles Crettenand (GC) as project manager, and Jérôme Billotte (JB) as scientific secretary. The choice of GC was influenced by his important role in the administration of the Institut universitaire Kurt Boesch (IUKB) at Bramois, a future partner in the WKD adventure; the choice of JB was the outcome of a candidate search conducted through the Swiss Romande press : FW was already familiar with the particular merits and abilities of these two colleagues in their respective domains. They were to prove defining for the project's success, the one through his rigorous management skills, the other through his intellectual input and broad-minded approach. Joining this decision-making trio to complete the executive committee were an administrative assistant and the executive director's personal secretary. These five people formed a small team that was efficient and highly complementary at every level.

With these structures in place, it was time to focus all attention on setting up an innovative international symposium of the highest quality. To achieve this ambitious goal, it rapidly became clear that additional external help was required. This help consisted of, among others, the **Institut universitaire Kurt Boesch**: at the suggestion of Claude Roch, State Councillor and President of the Department of Education, Culture and Sport of the canton of Valais. The IUKB lent its functional infrastructure, office and archive space for WKD, as well as technical and computing help, notably through its resident computer specialist, Laurent Zufferey. This help was particularly welcome and efficient in view of the IUKB's proximity to Crans-Montana, its transdisciplinary vocation, as well as the connections linking FW and Claude Roch in the context of the reorganisation process undergone by the IUKB.

Pleon C-Matrix was mandated to manage the task of communication and press relations with the Swiss and European media, (press conferences, interview requests, maintenance of the newly created WKD internet portal etc).

Rezonance, a company specialised in network building, created and managed by Isabelle Morand, was mandated to regularly update and keep track of symposium registrations ; to produce a Newsletter, the content of which would be provided by the ISB and the executive committee; to develop a database containing addresses and coordinates of potential participants and to follow up on mailings up to and including the definitive symposium registrations.

ICVolunteers, a Geneva-based non-governmental organisation, was engaged to take charge of the symposium's logistic aspects: participant reception, local organisation, registration, document and badge distribution, help desk, etc.



Members of the ICV team (in white shirts)

The European Centre for Nuclear Research (CERN) joined with WKD, through a collaborative accord, to have one of its technical teams render « livestreaming » videos of the symposium

conferences available on the world-wide web. The perfect achievement of this painstaking and technically demanding task contributed enormously to the WKD's diffusion via internet.

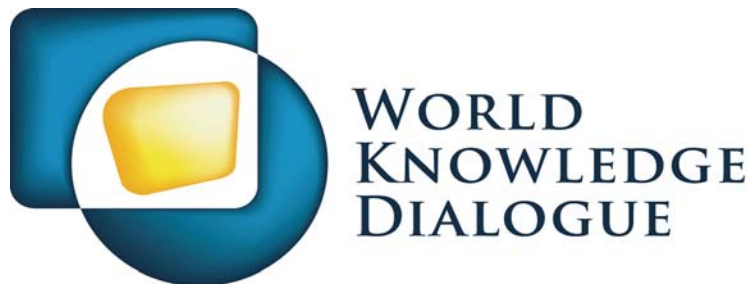
Lastly, in the interests of bringing a humanitarian dimension to the project, WKS concluded an accord with **Qualilearning SA**, whose President, Bernard Comby, had previously been responsible for education during his time as a State Councillor for the Canton of Valais. The focus of this accord was to recruit high-profile personalities from the African and Latin American academic and political spheres, with the WKD providing a substantial sum of money to finance their participation. Eleven symposium participants were eventually recruited through this scheme.

All these elements of the WKD puzzle having been amassed, it remained to define clear roles and responsibilities for each. This took a considerable effort, through which each new element of the construction was assessed, refined and tweaked such that the overall scheme was optimally tailored to the initial goals set out. Through its fortnightly reunions, the executive committee soon became familiar with the make-do conference room of the station buffet at Lausanne.

In parallel with these administrative and organisational aspects, the main goal was to put in place an attractive, enticing programme with well-chosen, captivating world-renowned speakers. To this end, the ISB and the executive committee conjointly activated their professional networks and combined their efforts, skills and experience. But before describing the programme itself, I must relate yet another key stage in the project, that of the creation of the WKD's Foundation Council (FC) and of its legal recognition at cantonal and federal level as a charitable foundation. The document bringing the Foundation into legal existence was signed at the Carouge-based chambers of Public Notary, Me. Pierre Mottu, on June 27th 2006. The FC comprised 8 members representing the political and academic spheres, with an additional 3 members of the executive committee having an advisory capacity. AH was elected to the presidency of the FC, a role he assumed with devoted competence until stepping down in the autumn of 2009.

With the Foundation at last created, it had to acquire a visual identity. The Geneva-based design and communication company Meta GE, came up with a logo based on the *Project manager's* suggestion to develop the notion of the legendary alchemical philosopher's stone: from the overlap of two different forms intended to symbolise realms of wisdom of the exact sciences and the social sciences, emerge a third shape in gold, representing the transdisciplinary outcome of

dialogue between different fields of knowledge. The accompanying slogan is self-explanatory: *towards a modern humanism.*



«Towards a Modern Humanism».

The 2006 symposium

The programme of the 2006 symposium was designed to focus on the following two main themes selected by the ISC :

**« *Novel Discoveries Defining Complexity* » and
« *Origins and Migrations of Modern Humans* ».**

The first subject was covered by three prestigious orators, in juxtaposing presentations whose titles are enumerated here : Geoffrey West, President of the Santa Fe Institute, a globally renowned physicist who has studied the complexity of diverse biological systems : « Complexity and biological systems » ; John Schellnhuber, Director and founder of the Potsdam Institute for Climate Impact Research, world famous in the sphere of climatology : « Complexity in climatology » ; Ian Hacking from the Department of philosophy of Toronto University, a member of the Collège de France, philosopher and epistemologist, observer of science and linguistics: « Complexity : an approach from epistemology and philosophy ».

These orators approached the first theme of the symposium, by illustrating some of the obstacles that must be surmounted to grasp the complexity of problems in their domain, and by sketching out some possible approaches to tackling those issues : $\frac{3}{4}$ power universal scaling laws to understand and extrapolate information from numerous and, at first appearance, unrelated concepts such as metabolic rates, organismal lifespan, the behaviour of communication systems at city scale for G. West ; evidence of planetary-wide interactions between almost 20 geographical zones for J. Schellnhuber, « why physics is easy and people are hard to understand » for Ian Hacking.

The second theme « Origin and migrations of modern humans » saw presentations by Ofer Bar-Yosef, Professor of anthropology at Harvard and specialist in paleolithic archeology:

« Paleontology » ; Bernard Victorri, Director of Research at the CNRS et international authority in linguistics : « Linguistics » ; finally, Svante Pääbo, Director of the Departement of Genetics at the Max Planck Institute in Leipzig, recipient of numerous academic prizes including the Louis Jeantet Prize for Medicine en 2005 : « Genetics ». These three orators attempted to show how totally different and independent approaches have converged to give us a reliable and coherent overview of the trajectory of *homo sapiens* from its African origins to its conquest of the entire planet over the course of the last 100'000 years.

All of these presentations, each one followed by debate to which the attentive audience contributed, ardently demonstrated just how much there is to gain from dialogue between specialists from different disciplines but equally, underlined just how difficult it is to sustain.

Two other main sessions completed the programme. The first of these plenary conferences was given by Gerald Edelman, Nobel laureate, Professor of Neurobiology at the Scripps Research Institute, in a talk entitled « From Brain Dynamics to Consciousness ». Two days later, a talk by Jean-Pierre Changeux, Professor of the Collège de France and the Department of Neurosciences of the Pasteur Institute in Paris, entitled « The Physiology of Truth and the Human Diversity », allowed this exceptional researcher and thinker to guide the audience through myriad links between culture, ethics and brain function.

The final day of the symposium was devoted to several workshops covering the following areas :
1) transdisciplinarity in political decisions ; 2) science and technology ; 3) economy, science et society : the point of dialogue.



Pascal Couchepin 2nd from the right

Pascal Couchepin, Federal Councillor and head of Federal Department of Internal Affairs, and Jan Figel, European Commissioner for Education, Training, Culture and Youth gave opening introductions to the symposium with their remarks lending an international perspective to the proceedings.

Their visit to Crans-Montana was not without its strategic problems: To digress briefly, we experienced a certain degree of genuine worry during the arrival of these two important personalities since each since each was being separately transported to the symposium by Swiss army helicopters, and the landing ground – the football pitch at Chermignon – was somewhat small to permit both helicopters to land at the same time.

To avoid all risk of collision, while respecting the hierarchical positions of their occupants, required the ingenuity of the military pilots to escape catastrophe. Both passengers later confessed to experiencing a nervous moment in spite of the carefully executed and planned landing manoeuvres.



Jan Figel (right) and Prof. R. Ernst (left)

At that point we had yet to discover that rare personality, of preference an academic, who would be able to rise to the occasion and smoothly orchestrate such a symposium by playing the role of its conductor.: he or she must be a person with experience, able to connect with the young, yet having a vast scientific network and regularly frequenting international meetings. Our unanimous choice for this role of « Author in residence » fell rapidly upon Professor Dame Julia Higgins, from Imperial College, London. The crucial task of recruiting her to our cause was not without its strategic difficulties. It involved arranging a visit to London for an introduction to this « star » of Imperial College through the intermediary of its President and friend of FW, Richard Sykes. FW left Imperial College that afternoon with a sigh of relief, having convinced Dame Julia to take on a role that she had never attempted before. Her incarnation of the role of *Author in Residence* was indeed remarkable and she directed the symposium with a perfect blend of authority, competence, good sense and pertinence.

The first symposium took place at the Regent Conference Centre in Crans-Montana between 14 to 16 September 2006. It assembled 270 participants from 34 countries, of which 41 were « Young scientists ». In addition to the high quality of the presentations and discussions, one should pay homage to the exceptional atmosphere that reigned throughout the symposium and was a source of exchanges both within and outwith the established programme. The *young scientists* 'contribution was recorded in their production of a summary document analysing the themes covered by the symposium.

A strong Japanese delegation offered us an Asiatic perspective on the chosen themes. At a gala dinner held on the last evening of the meeting, the entirety of the participants enjoyed the warm and conducive atmosphere created by the evening's superb opening concert by the duo Jael, whose artistic sensitivity touched the hearts of all present.



Dame Julia Higgins and Sir John Sulston

Lessons from the 1st symposium

This summary of participants' feedback incorporates reflexions on both the programme and its outcome as well as on more organisational and logistical aspects of the event.

Among the most-reiterated compliments were:

- Impressively high quality scientific content
- Quality and choice of presenters excellent, scientific presenters outstanding
- The « Young scientists » participation is highly successful, an excellent initiative deserving to be pursued further

- Plenary conferences remarkable and superbly presented

In spite of all the efforts undertaken, I felt that the goal was nonetheless only partially achieved : sadly, the extent of dialogue between the so-called exact sciences and the humanities and social sciences was generally deemed disappointing, insufficiently profound, and could have been pushed further to the limits, used more telling imagery and had more time made available for discussion, A greater exchange of viewpoints might be facilitated through a less intensive timetable and a more equal representation of representatives from the humanities and social sciences with respect to participants from the quantitative, exact and natural sciences.

Furthermore, media coverage, notably in the Geneva area, was not as high as we had set out to attract.

The collected criticisms and comments were all reviewed and considered at a « debriefing » of the executive committee along with other actors such as Rezonance, on October 3rd 2006. One might add that the level of international participation, notably at the European scale, was lower than we would have liked and that the approach for organising an eventual 2nd conference in 2008 was clearly in need of some revision. Overall however, the criticisms underscored just how great the need and the wish for some cross-disciplinary forum of dialogue was, across the generations and across the spectrum of the intellectual domains : The future path was laid out.

The first symposium's innovative approach was recounted and its essence captured through the publication of a collection of written contributions entitled « *A vision of transdisciplinarity : laying foundations for a world knowledge dialogue* », edited by Frédéric Darbellay, Moira Cockell, Jérôme Billotte and Francis Waldvogel, EPFL Press, 2008 (221 pages).

New structures...

Nourished by the collection of criticisms and compliments that the 2006 symposium had elicited, the executive committee took a certain number of decisions. First, it was decided to organise a second symposium, to be situated once again in Crans-Montana, and scheduled for September 2008. The symposium must be carefully thought out and prepared, taking account of all of those critiques levelled at the 2006 experiment. To this end the WKD's organs were reinforced with a number of new and enthusiastic members, amongst them some of the highest profile, and willing to invest themselves personally. Heidi Diggelmann resigned from the **HB**, which was then joined by Bertil Andersson, Provost of Nanyang Technical University à Singapore, ex-member of the ISB.

The **ISB** was reorganised to include the following people :

- Professor Edward Wilson, ex-member of the HB.
- Geoffrey West, President and Professor of the Santa Fe Institute, USA
- Helga Nowotny, fellow at the Wissenschaftszentrum in Vienna (Austria) and Vice-President of the European Research Council
- Gerd Folkers, Professor of Pharmaceutical Chemistry at ETH Zürich and Chairman of the Collegium Helveticum, Zürich
- Richard Ernst, Nobel laureate and emeritus Professor of ETH Zürich
- Paul Boghossian, Silver Professor of Philosophy, New York University
- Iris Bohnet, Professor of Public Policy, Kennedy School of Government, Harvard University, Boston
- Jean-Pierre Changeux, Professor at the Collège de France, Chairman of the Department of Neurosciences, Pasteur Institute, Paris
- Gerald Edelman, Nobel Laureate and Chairman and Professor of the Department of Neurobiology, Scripps Research Institute, San Diego

Resignations from the ISB were accepted from Professors Peter Fulde, Dieter Imboden, André Langaney and Jean Starobinski.

The **EC** was also substantially reorganised. Its composition for the 2006 symposium had been dwarfed by the monumental size of its task, justifying the acquisition of supplementary and complementary help for the preparation of the 2008 symposium. It was thus joined by :



Jérôme Billotte and Francis Waldvogel

- Frédéric Darbellay, Institut Universitaire Kurt Boesch (IUKB), engaged as a scientific assistant
- Ariane Vlérick, independant, engaged for the tasks of media and scientific communications
- Laurent Zufferey, informatics expert at IUKB, engaged as the WKD's webmaster.
- Moira Cockell, biologist, scientific editor and translator, engaged as a scientific assistant, having already collaborated with WKD since June 2006 for all its aspects requiring translations to English.



Executive committee session with two representatives from ICV (2nd and 3rd from right)

The executive director's secretary and the administrative assistant, respectively Françoise Michaud and Karima Amiguet, continued in the roles appointed to them in 2005.

The methodology applied to the structuration of the 2006 symposium had been the target of substantial criticism. In order to address this, a general overhaul was taken on with the help of three specialists in the domain :

- **Anne-Claude Berthoud** : Professor at the University of Lausanne, Department of linguistics and language sciences. Among her specialisations, an expert in the analysis of discourse and in the enunciative approach to understanding the structure and meaning of language as well as how it is acquired and used in the production and transmission of knowledge.
- **Frédéric Darbellay** : Associate professor at the IUKB and head of its Inter- and Transdisciplinary Unit. Researcher in the area of discourse and communication studies

and specialist in epistemology and interdisciplinary methodology.

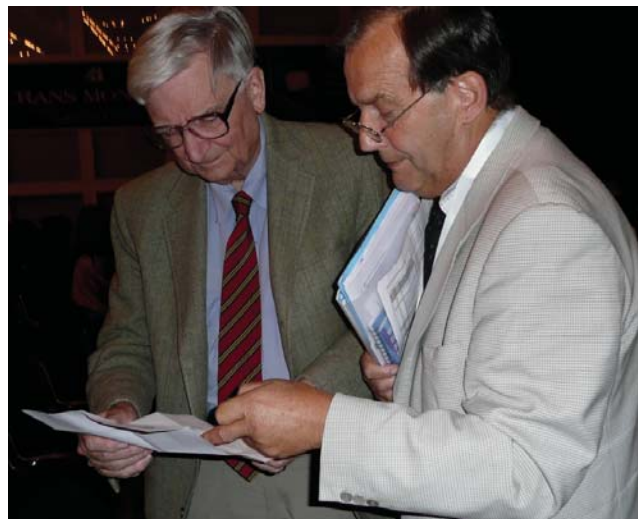
Pierre Dominicé : Emeritus professor of educational science at the University of Geneva, with specialist expertise in the domain of adult learning and further education.

The period between the 2006 and 2008 symposiums required a substantial and sustained intellectual engagement from all concerned in order to attain the projected goal and ensure that the 2nd symposium would be a marked advance on the first, better structured, more didactic and more attractive. The numerous meetings and planning discussions throughout this period enabled us to get a firm grasp of the risks, the challenges and the objectives.

The 2008 symposium (from 10 - 13 September)

Its overarching aim being to stretch the boundaries of experimental dialogue between the knowledge domains, the themes chosen to this end for the new symposium were inspired by the lessons learned during the 2006 event. The titles chosen were :

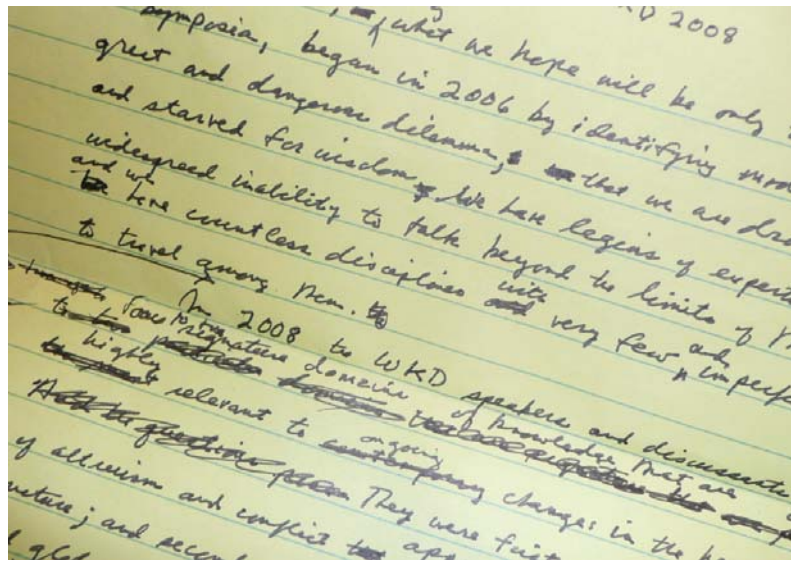
1. Collaborative behaviour, altruism and conflict : from animal behaviour to economics and prevention of violence.
2. Collective network knowledge and human individual intelligence : convergences and divergences.



Edward O. Wilson and Francis Waldvogel

This time around, the role of « Scientist in Residence » was filled by the globally renowned sociobiologist and Humanist, Professor E.O. Wilson from Harvard University. His personality and scientific qualities infused the entire proceedings to an exceptional dimension. He was assisted throughout by the 2008 symposium's group of « young scientists », who were assigned to

support him in a range of tasks such as collating summaries of the dialogues and preparing a roundup of general conclusions and points emerging from the symposium proceedings.



Closing remarks written by E.O. Wilson

Of 60 submissions by the « young scientists », 40 abstracts were retained and accepted by the ad hoc committee, for presentation in poster form. The selected abstracts fulfilled either the general criteria of interdisciplinary studies or were contributions to one of the two principal themes selected for the dialogue. Two poster sessions were held during the session breaks for lunch, and these seeded informal discussions based on the innovative transdisciplinary projects presented therein.

The honour of opening the symposium proceedings was confided to André Hurst, who was then followed by Mauro Dell’Ambrogio, Secretary of State for Education and Research.



André Hurst

The opening session, on the theme « Knowledge, dialogue and responsibility », saw the contributions of Dame Julia Higgins, Koji Omi, organiser of the « Science- Technology-Society » symposia in Kyoto, FW and E.O. Wilson. A round-table discussion then assembled Richard R. Ernst. ETH Zürich, Paul Boghossian, New York University, Veronica Boix-Mansilla, Harvard Graduate School of Education et Karuvannur Mohanan, National University of Singapore.

At the end of the afternoon, Nobel laureate, Sir John Sulston from the University of Manchester UK, wound up the day's sessions with a wide-ranging presentation entitled « Knowledge and Responsibility ».

Treatment of the symposium's first theme continued on the following day, with introductions by Ruth Dreifuss and André Langaney of Geneva University, followed by presentations from Raghavendra Gadagkar of the Indian Institute of Sciences in Bangalore India; Frans de Waal, Emory University USA; Karen S. Cook, Stanford University USA and Jean-Pierre Hocké, former UN High Commissioner for Refugees. The « keynote lecture II », entitled « Scientific enterprise and responsibility », was given by the Nobel laureate Christiane Nüsslein-Volhard of the Max Planck Institute for developmental biology in Tübingen, Germany. The day ended with the « keynote lecture III » entitled « Civilisation du numérique et intelligence connective », given in French by Joël de Rosnay of the science museum Cité des Sciences et de l'Industrie in Paris. This conference was open to the public.



André Hurst, Francis Waldvogel and Joël de Rosnay

The 3rd day was given over to the symposium's 2nd theme, and was introduced by Hiroyuki Yoshikawa, President of the Japanese National Institute of Advanced Industrial Science and

Technology. The other speakers were Wendy Hall of Southampton University UK, Florence Devouard of the Wikimedia Foundation and Pierre Levy from the University of Ottawa.

The « keynote lectures » were given by Edward O. Wilson, whose title was « Consilience and the future of biology », and by Hubert Reeves whose presentation in French was entitled « Astronomie et Ecologie ». Both of these conferences were open to the public and that of Hubert Reeves in particular received an exceptionally high level of attendance. The day ended with a remarkable and much appreciated concert of percussion instruments given by students from the Geneva Music Conservatory.

The Saturday morning was given over entirely to conference summaries and conclusions in a session chaired by Kiyoshi Kurokawa. A round table and a general discussion assembled together E.O. Wilson, (moderator), Richard Ernst, Paul Boghossian, Noreen Golfman and Julia Higgins. At the close of the morning, the stage was successively handed to the « Young scientists » « Feedback from the Students » and to E.O. Wilson for his « concluding remarks ».

Here to conclude the picture, a few further biographical details for some of the symposium presenters and participants :

Paul Boghossian of New York University, Professor of philosophy, specialist in epistemology and the philosophy of language.

Veronica Boix-Mansilla of Harvard Graduate School of Education, whose research work explores cognitive, epistemological and interdisciplinary dimensions.

Jean-Pierre Changeux, Professor at the Collège de France and at the Neurosciences Department of the Pasteur Institute in Paris. He is widely considered by his peers as a founder of the science of modern neurobiology.

Karen S. Cook of Stanford University USA. Director of the Department of Sociology

Richard Ernst Emeritus Professor of the Eidgenössische Technische Hochschule (ETHZ) Zurich, the 1991 Nobel Laureate in Chemistry for his contributions to the development of nuclear magnetic resonance.

Wendy Hall of the University of Southampton UK. Vice-president of the Royal Academy of Engineering, founder of the Web Science Research Initiative (2006).

Jean-Pierre Hocké former High Commissioner for refugees at the United Nations Organisation. He directed the International Committee of the Red Cross during 12 years.

Kiyoshi Kurikawa, « Chair of the Health Policy Institute of Japan ». Dean of Tokai University until 2002. Member of the Association of American Physicians and the Institute of Medicine

André Langaney Emeritus Professor of the Department of Anthropology and Ecology at the University of Geneva and Director of the Laboratory of anthropology of the “Museum of Man” in Paris.

Hubert Reeves, Director of Research at the National Centre for Scientific Research in Paris, astrophysicist and Associate Professor at the University of Montreal.

Frans de Waal, Professor at Emory University, Atlanta USA, and Director of Yerkes National Primate Research Centre.

Geoffrey West, President and Professor of the Santa Fe Institute, USA.



André Langaney and Hubert Reeves

It should be emphasized that the conference achieved a high degree of cultural mixing, with the Asian countries strongly represented, and their participants contributing to animating the debates and interacting comfortably with conference staff and participants.



Kiyoshi Kurikawa and Hiroyuki Yoshikawa

It is not easy to summarise in a few lines, the essence of this 2nd symposium, spread over four days, with five keynote speakers, seven main presentations, numerous workshops and more than forty individual contributions to the two themes chosen. Of note in the understanding of

the first theme, was how rapidly the concept of empathy emerged in the evolution of emotional sentience on the animal kingdom's tree of life and how much its human benefits manifest in acts and gestures of reconciliation, comfort and materialize in the notions of fair commerce and group solidarity. The underlying key condition needed for such a development is the establishment of reciprocal trust between interacting parties, this being the cultural, political and economic foundation for a democratic human society.

The second theme was approached using historical, philosophical, technological and digital methodologies : Since the origins of humanity 300'000 years ago, a variety of levels of systems of symbols and of signalling tools have enabled the development of multiple layers of intercommunication, the latest- cyberspace - combining an apparently limitless technological potential with a novel semantic system. This novel system of describing and conveying meaning that can be shared across application, enterprise and community boundaries, is developing through a global collaboration of interneters. It is intended to be freely available and for the benefit of one and all, without economic, cultural, or political constraint. The deconstruction of hierarchical order by the Semantic Web, gives each and every person the possibility of expression within the context of a new form of collective intelligence. Values, belief systems and their practices are being redefined in this information revolution. Who are we, where are we heading, are the fundamental questions of humanity, deserving our focus on a new global challenge equivalent to that which took us to the moon.

A restructured WKD organisation

If the 2006 symposium shone primarily for the quality of its presenters, that of 2008, due to an intense epistemological effort, allowed it in addition to introduce and set in motion several new methods of communication between the disciplines. Sometimes, these new channels of interdisciplinarity are merely interfaces of disciplinary proximity, such as between ethology and sociobiology, or anthropology and genetics : such interfaces can occur naturally, but nevertheless require the development of a common meta-language. Other transdisciplinary efforts link domains that appear further apart on the disciplinary spectrum, but prize common values such as solidarity, reciprocal trust, individual responsibility or civic spirit. Universal themes such as feeding the world's population, global access to basic resources such as water, a world economy and financial system that respects human rights and environmental sustainability belong to this category. Finally, at a third level, the complexity and non-linearity of nature, life, human endeavour, lead to shared new approaches for manipulating, analysing and interpreting such data, giving rise in the process to novel intellectual constructions such as

Morin's "complex thinking", network theory, systems theory and a plethora of others that promise to advance human knowledge in the widest sense of the term.

Having learned these lessons, it was decided in 2008 to revisit how they might best be incorporated into the future WKD and its quest to invigorate transdisciplinarity. It was deemed the right moment to strengthen the WKD's links to those institutions that are the guardians of the intellectual heritage belonging to such a quest, the universities.



Francis Waldvogel and Jean-Dominique Vassalli

On the initiative of the Executive Director, a reunion of the Rectors of the universities of Geneva (Jean-Dominique Vassalli), Lausanne (Dominique Arlettaz), Neuchatel (Martine Rahier) and the President of the Ecole Polytechnique Federale of Lausanne (Patrick Aebischer), was organised at Begnins in the district of Nyon.

At this meeting and in view of its important impact, it was decided that the four universities would forthwith pursue the WKD experiment as a joint project, funded by a financial contribution from each university and under the responsibility of two vice-rectors Philippe Moreillon and Guillemette Bolens. While continuing to focus on the original goal, the effort from now on should concentrate on the discovery of new, less reductionist ways to broaden the nature of human inquiry, to surpass ideological boundaries, to reflect on, assimilate, challenge and communicate the complex issues and problems of our lived existence. These works should be presented at annual reunions, the alpine resort of Villars taking over from Crans-Montana at the host location.

A few comments as a conclusion : the search for meta-idea(s), meta-language(s), meta-theory(s) that will allow us to approach and grasp the relationships between diverse elements in numerous domains of knowledge is one of the great intellectual challenges of our time. To establish alternatives to the traditional assumptions and methods of inquiry that lead us to reduce and separate our knowledge to order it within binary frameworks, is the role of the WKD. The concept of emergence, an awareness of the relationship between order and disorder, are signatures of the understanding of complex systems. Far from being a threat to the more traditional methods of organising our understanding and thinking, these should be welcomed as complements to the reductionist approach that has held sway over the intellectual cosmos for the last three centuries – a truly magnificent new mission for the echelons of higher education.

The Knowledge Dialogue since 2010: a new stage, a new horizon.
Jean-Dominique Vassalli, Rector of the University of Geneva

The WKD was created by the meeting of visionaries from many fields covering the gamut of human knowledge. Its first two symposia and accompanying publications provided an irrefutable demonstration of the urgent need for, and benefits of, collaboration across disciplines traditionally distinguished as lying within distinct categories; the humanities, social sciences, mathematical, physical and life sciences. To maximise the benefits that can be derived from this novel intellectual partnership, the delicate, nascent seedlings of this cooperative concept now need to take root within an intellectually robust matrix that has the capacity to explore and to develop new methodologies.

The logic of the WKD's transversal approach, having already been adhered to by certain enlightened institutions, has been pursued by uniting the efforts of the Universities of Geneva, Lausanne, Neuchatel, the Federal Polytechnic of Lausanne (EPFL), and the Kurt Bosch Institute at Bramois (IUKB), in a common project under the aegis of the "Triangle Azur", a consortium of the former WKD foundation and these universities. The guiding principal is one of "practical interdisciplinarity", through a program to develop new methodologies in fields spanning the spectrum of human knowledge, from the arts, humanities, law, ethics, economics, to the biomedical sciences and emerging technologies. Furthermore, the participants are chosen to ensure that every stage of a knowledge-seeker's career is represented; graduate students, postdoctoral fellows, young group leaders and established intellectual figures. All have an

opportunity to participate in defined, concrete projects, and are encouraged to exchange ideas and discuss the important issues that confront us all.



Professor Philippe Moreillon

These programmes of collaboration have been pursued actively with contributions from professors and students alike, culminating in the organisation of four symposia organised by Philippe Moreillon and Guillemette Bolens at Villars-sur-Ollon. Each three-day meeting has hosted 60-80 participants, with strong representation of both genders, and with invited experts in transdisciplinarity acting as moderators. The subjects discussed to date include global inequalities in the treatment of HIV and the limits of democracy in a globalised world (2010); how the economy can prosper while respecting the environment and the individual (2011); how digital humanities can help to forge interdisciplinary links between literature and medicine (2013); Bodies in context – an interdisciplinary perspective on social interactions (2013). The diversity of the themes chosen underlines what truly enormous potential there is for such exchange to be fruitful and enriching for each domain of knowledge.

Looking beyond the individual discussion topics, some important general conclusions can be drawn from these meetings. First, the amazing enthusiasm of the younger generation for these ideas serves to underline how important it is to bring together different viewpoints (be they

artistic, spiritual or intellectual) in a spirit of open dialogue and mutual respect, while still maintaining the highest standards of intellectual rigour. Second, the choice of topics that touch upon the major issues facing us today, maintain the spirit and philosophy of the founders of the WKD.



Professor Guillemette Bolens

As is by definition the case for all university-led research projects, this one is a work in progress, with many successes, and occasional faltering steps, from which valuable lessons are also to be learnt. Looking to the future, the initiative has acquired momentum, funding, and the way forward is clear. The goal is not to replace the paradigm of scientific reductionism that has served us so well over centuries, and will continue to do so; rather, it is to offer an alternative, transversal, holistic and complementary in its outlook, which will take more account of the complexity of our world.