

# Science Group of the Anthroposophical Society in Great Britain

## Newsletter – September 2011

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### News

#### Goetheanum Research Institute

The 2010 Annual Report of the Research Institute (Glashaus) at the Goetheanum is now available in English for download at: <http://science.goetheanum.org/fileadmin/nws/text-downloads/annualReport2010web.pdf>

#### Michael Kirn

Graham Rickett has announced that Michael Kirn's book *The Computer and Philosophy's Picture of the Human Being; with Special Reference to Leibniz and Hegel* will soon be available in English translation in manuscript form for private circulation. A review copy could be made available for anyone wishing to review it for this newsletter. The book is a concentrated study, particularly on the spiritual background of the binary system of calculation and its implications for mankind's future.

Instead, there is of course the option of reviewing the German edition: *Der Computer und das Menschenbild der Philosophie : Leibniz' Monadologie und Hegels philosophisches System auf dem Prüfstand* (Verlag Urachhaus, 1985). If anyone would like to review the book, please contact me using the contact details at the end of this newsletter. *D.H.*

### Meetings

#### Projective Geometry

A small group meets weekly in Brighton, currently on Mondays, to explore the laws of the space underlying physical and living forces.

Themes for the Autumn term are: Harmony, Polar Systems and Imaginary Elements.

Please contact Paul Courtney on 01273 557080 or 07903 961390 or at PaulRC (at) btinternet.com for further details.

#### UK Group of the Science Section

The Science Section for members of the School of Spiritual Science who are taking responsibility for the scientific work has been meeting twice a year in autumn and spring.

The next meeting will be at Elmfield School, Stourbridge, Worcestershire on Saturday 12<sup>th</sup> November 2011.

As well as the contribution from Judyth Sassoon on convergent evolution, Sandra Moore has reminded us of the suggestion from the previous meeting to look at the uncertainty principle and non-locality experiments relating to nuclear physics. If you are interested in attending, but do not normally receive notification of Section meetings, please contact Alex Murrell, 26 Arundel Drive, Rodborough, Stroud, GL5 3SH. Tel: 01453 766484 Email: alexandermurrell (at) hotmail.com.

### Research Group

Saturday 1 October 2011, 9.30 am to 4.30 pm at The Christian Community, 23 Chapel Street, Buckfastleigh, Devon TQ11 0AQ.

Programme: *Nick Thomas* – Electromagnetism in the light of counterspace. *Pat Toms* – Ancient stone sings experienced as path curves. *Tobias Goulden* – Land trusts. Any other contributions and business.

Almut Woolard has kindly offered to provide us with an organic lunch, available for £6. Those arriving on Friday please bring Saturday breakfast (basics provided).

Hire of meeting rooms and facilities is funded by the Science Group. Accommodation on Friday night (at) £12 to £15 for a guest room, £10 for a camp bed in the hall (limited availability; please book in advance). Bedding and towels provided.

RSVP stating if you need accommodation to: Paul Courtney, PaulRC (at) btinternet.com, 1 Surrenden Road, Brighton, East Sussex, BN1 6PA. Home: 01273 557080 Mobile: 07903 961390.

Location maps sent on request. The nearest Railway station is Totnes. Newton Abbot has more trains but is further away.

Allow 40 min. for journey by bus to/from Buckfastleigh. For further information on buses please contact Gordon Woolard, home: 01364 644241, e-mail: [gordon.geometry@gmail.com](mailto:gordon.geometry@gmail.com).

#### First International Conference on Agrohomeopathy

From 7th to 9th October 2011 at Oaklands Park, Newnham, Gloucestershire, UK.

The first international conference for this discipline will take place in the UK. Delegates from all parts of the world will report on their research and the issues surrounding their work. Presentations and reports will be interspersed with discussions and time to meet each other and share our stories.

The Saturday will be of particular interest to those who wish to catch up on the research, whilst the Sunday, though open to all, will be for delegates to discuss the common challenges and a way forward for the discipline - with the hope of facilitating collaboration and community.

I have borrowed a saying: "we go faster alone and further together." On Saturday we will see some of those things various presenters have achieved so far, and on Sunday we will discuss whether we can support each other through the challenges that lie ahead.

Cost: £80.00; booking by 23 September.

Contact: Mark Moodie (organiser) info (at) agrohomeopathy.org. Skype: 'markmoodie'. Phone: +44 (0)20 7193 4697, leave message. Post: Oaklands Park, Newnham, Glos, GL14 1EF, UK. Web: [www.agrohomeopathy.org](http://www.agrohomeopathy.org).

#### Workshop on the geometry of form in nature

February 13th-15th 2012. Hawkwood College, Stroud UK. There is a simple construction which creates forms called "path curve surfaces". It is generated by a tetrahedron of 4 points, and the quality of form is governed by mathematical relationships in the way points move along the curves which run between these four points.

The best known forms are those of the egg and bud which have, for instance, spiralling curves running between the points at each end. Lawrence Edwards studied this extensively and was able to show how shape-changes in buds over

time relate to planetary movements (vortexoflife.org.uk). Graham Calderwood has continued Lawrence's work (budworkshop.co.uk) and has come to an explanation of the mysterious phase shift between the bud movements and the planetary movements.

The egg is generated by one arrangement of the points of the tetrahedron – other arrangements generate different forms: recent work by John Blackwood indicates that this leads us to the forming principles in all the kingdoms of nature; mineral, plant, early animal and (possibly) Man.

The workshop will involve some geometry and presentations from John and Graham.

For more information and costs please contact:- Simon Charter, 01453 755614, simon.charter (at) live.co.uk.

### **New Perspectives in Science Conference**

17th–19th February 2012 at Glasshouse College, Stourbridge. The third conference in the series for scientific work inspired by Anthroposophy will again be held at Glasshouse College in Stourbridge.

Speakers include Judyth Sassoon, Pat Toms, Nick Thomas, John Blackwood, Nicky Gregory, Sandra Moore, Adriaan Luijk. The conference is open to all who are interested. Details can be found at <http://www.naturalscience.org.uk>. To speak to a human ring Mark Moodie on 020 7193 4697.

## **Course**

### **In-service training in Goetheanism**

Pishwanton Wood – North European Centre for the study, demonstration and practice of Goetheanism in all aspects of life

The Life Science Trust is trying to build up a team of competent co-workers to carry Pishwanton Community Wood into a lively and secure future. To this end the Trust is offering the unique opportunity of an enhanced training in Goethean Science applicable to many areas of professional life. A guided process of disciplined empowerment will lead, after a period of between three and five years training to the carrying of the management and development of one or more areas of this unique land-based project in South East Scotland.

The aim of this in-service training is to develop a core carrying multi-skilled team of people schooled in Goetheanism to take the Pishwanton Project into its future. It might be viewed as an apprenticeship in Goethean Science as a training course for people wishing to eventually take over an area of management of the project. These areas are people, land, organisational, household management. Such a group of individuals will all be working in a team out of consensus planning based on Goetheanism. This is a novel way of working and has to be learned in the place based context of Pishwanton. It is vital that every member of the team understand each other's work and areas of responsibility as well as the ethos of the Life Science Trust and its 15 year old project in Pishwanton Wood. In order to ensure this common view all successful applicants will first complete two years of the Goethean Scientific training. The first year will be a Foundation Year entitled "Beholding the Heart of Nature". Those wishing to commit further will deepen their own professional discipline through the Goethean Scientific methodology in the second year.

This opportunity is open to people already familiar with skills or interests in the areas of conservation and care of the land, biodynamic gardening, farming or forestry, building, architecture and environmental enhancement. The principles of Goetheanism can be applied to most fields of human activ-

ity including people, their relationships, support and supervision. The opportunity would therefore also be available to people with an interest or experience in taking on supervision, support and training of co-workers, students, volunteers and people with special needs working in Pishwanton. Therefore, we are seeking people to join the team who have an interest in people management, education, biodynamic land management, curative education or office skills. Prior training and experience in any of these areas would be valuable.

The Life Science Trust is a member of the Camphill Association. This means we are embedded in a world-wide network of community building endeavour based on similar principles of concern and care for people and their landscapes. The Trust was founded in order to develop a way of looking at the natural environment using a methodology based on Goethean Science together with the consensus creative design and doing process which grows out of such an intimate "getting to know" Nature. All the buildings, landscape features, farming, gardening and forestry at Pishwanton have grown out of this process over the last fourteen years, it is much akin to the "college meeting" used to look at children with special needs in Camphill and based on the seven life processes as described by Rudolf Steiner in his lectures on *The Riddle of Man* (Mercury Press). (Further reading on the Trust's work in this field can be found in *Consensus Design* by Christopher Day (Elsevier) and *Healing the land, healing ourselves* by Margaret Colquhoun, Caduceus Journal, issue 72).

The infrastructure of a wonderful place has been sketched out in Pishwanton through fifteen years of careful study, designing and doing. This needs to be maintained, developed, enhanced and taken into the future. Hence this initiative to offer people a path of personal and organisational development as a course. It is a very experimental process with a strong research emphasis in which the Goethean Scientific method will be used not only to explore the spirit of place and the needs of the landscape, but also people's biographies, the relationships between them and the group or organisation as a whole. The first two years of the Goethean Training will consist of a detailed study of the landscape "rooms" of Pishwanton's 60 acres and, out of this study the creation of a twenty five year management plan, together with implementation programmes for specific areas, with accompanying educational, therapeutic and artistic programmes and, identifying the necessary buildings to house them.

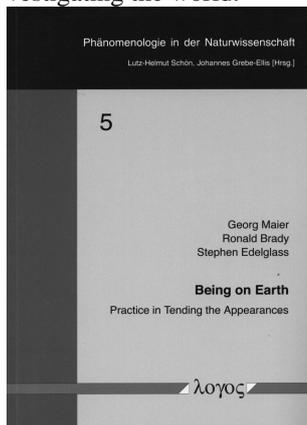
If you would like to take part in this pioneer process, want to enhance your skills base through a programme of Goethean Science and Consensus Design and are prepared to consider a commitment to a long term carrying of responsibility, please get in touch with Margaret Colquhoun at the address below: The Life Science Trust, Old Bank Building, 1B High St., Gifford, EH41 4QU. Tel. 01620 810259. admin (at) pishwanton.com

## **Reviews**

**Being on Earth – Practice in Tending Appearances** by Georg Maier, Ronald Brady & Stephen Edelglass. No. 5 in the series *Phänomenologie in der Naturwissenschaft*, Lutz-Helmut Schön & Johannes Grebe-Ellis (eds.) Logos Verlag, Berlin, 2008. ISBN 978-3-8325-1887-5. ISSN 1861-4035. 196 pp. € 45.00

The title says it all. This book is about the essence of being human as personally experienced and investigated by these three important beings or people. From the opening chapter, the reader is encouraged to enter into a real investigation of the biographical and experiential elements that helped to influence

and lead the authors into a more open yet precise way of investigating the world.



The book was begun in the mid 1990s and written collaboratively by the authors for almost a decade. The three authors, in addition to being human beings, were also highly recognized and respected in their particular areas of specialized education. As their professional and personal lives unfolded, all three begin to stretch beyond the confines of the traditional views held in their respective fields: Maier,

originally a nuclear physicist and later a researcher into phenomenological based methods of science, Brady a professor of philosophy and Edelglass a professor of physics who later develops phenomena based methods of science for high school students. The early chapters introduce the reader into the biographical details that led each of the authors to the realization that something was wrong in the split that was happening between their professional lives in comparison with their common everyday experiences in their personal lives. It was as if they were asked to see the world through one lens professionally and then go home and live, assuming a different worldview. Individually, they each reached the conclusion that much of our cultures contemporary knowledge and understanding of the subject/object world view was a worldview that was not an accurate expression of everyday experience. What makes the book unusual is rather than speculating on some new theory as often occurs in the field of physics and occasionally in philosophy, the authors individually take the path of investigating their experiences and then collaboratively compare their findings. The results are something that will resonate with any human being that is actively willing to investigate their own experiences of their inner and outer life.

While the early chapters deal with biographical elements that mark the moments where a new way of *being on earth* was experienced by each of the authors, the middle chapters give the reader an opportunity to live into the authors experiences and begin to compare them with our own. Brady's chapter on *Intentionality*, Edelglass's description of *Reflections Upon a Pond* and a number of Maier's chapters, all point to the incredibly dynamic happening that results in us forming the concepts of 'out there' and 'in here'. As the book unfolds, the concepts 'out there' and 'in here' begin to harmonize in ways few people ever understand.

Maier points out the importance of paying attention to the biographical details of an individual human being and we begin to see them as important as paying attention to the particular constellation of conditions that make up a visual scene. The inner and outer becomes more integrated the more one pays attention to the finest details. Throughout the book, the reader is introduced to some very important work that is not so commonly encountered such as: the role of intentionality in what we see, the aesthetic science of Baumgarten and the influences that human beings have on each other over the course of a life.

The book ends with Maier's final chapter, *Company*, a chapter that clearly discusses this effect of human beings on each other. The authors began the book with an investigation of the relationship between our inner and outer world and the book ends with a look into how our inner world is in many ways a reflection of the inner worlds of all the others we have

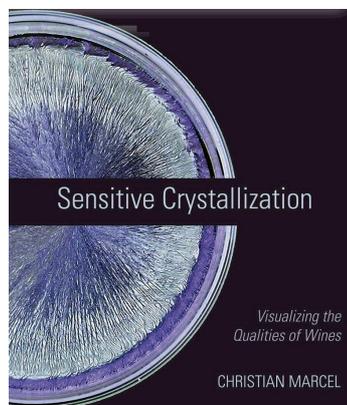
encountered in our lives. Who would have guessed that two physicists and a philosopher would make the journey from the clarity of science and philosophy to a grounded understanding of interpersonal human interactions? The journey is an interesting one and one that is worth reading many times and discussing with others.

As a final note, during the course of the writing of this book, first Stephen Edelglass and then Ron Brady both died and left behind the chapters each had worked through. The book was ultimately finished by Georg Maier who wove the threads of these three men's lives work together. The beauty, simplicity and eloquence of the final chapter takes on a whole new meaning when it is read with this understanding. The authors have captured an essential element of what it means to be *being on earth*. This book will give you a lot to work with for years. I believe this was the authors' intentions.

Michael D'Aleo

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**Sensitive Crystallization: Visualizing the Qualities of Wine**, by Christian Marcel, transl. C. J. Moore. Floris Books, 112 pp, p/b. 978-086315-082-5, £14.99



"Formative forces! How can I trace formative forces?" that was the question Ehrenfried Pfeiffer had, and "study crystallization processes" was the answer Rudolf Steiner gave to him. Thereafter Pfeiffer developed the so called sensitive crystallization method. He allowed a solution of copper chloride mixed with an additive to crystallize on a glass

plate. As the additive influences the formation of the crystals in a specific way, the crystallization picture tells us something about the nature of the additive, for example a plant extract. The challenge is that the crystallization process is very sensitive to the surrounding conditions such as temperature, humidity, air turbulences, as well as the concentration ratios of the copper chloride salt and the additive. It is a chaotic process and can only be guided by the technical conditions, but it cannot be forced or even predicted. Hence each crystallization picture looks different. We select the pictures according to their structural resemblance, as we do to classify plants or animals. What do we learn about sensitive crystallization with the book of Christian Marcel; how does he cope with the technical difficulties; how does he deal with the quality variations of wine?

Christian Marcel leads us carefully step by step from thoughts about formative forces to the methodology of sensitive crystallization, the structure elements of the pictures and continues with the application of the method as a tool to visualizing the qualities of wine. He ends the book with applications of the method in the field of vegetables and cooking. I would like to discuss three aspects: first the scientific approach with a link to the crystallization technique; second the interpretation of crystallization pictures and thirdly the value of the method.

First, to be scientific means to study the literature other than Marcel mentions. Sensitive crystallization has a scientific relevance. The method of sensitive crystallization has been presented at scientific congresses such as the conference on organic food quality and health research in Prague 2011 or the

Wissenschaftstagung ökologischer Landbau at the ETH in Zurich 2009. It has been validated at the University of Kassel 2006. We find studies dealing with the physics of crystallization processes or the evaluation procedures. A number of articles have been published in *Elemente der Naturwissenschaft*, Dornach. Reading this, we learn that to meet a scientific standard a crystallization chamber is needed where temperature and humidity can be regulated and which is symmetrically built to minimize uneven air fluctuations caused by the heating system and the evaporation process. To achieve a sufficient reproducibility it is necessary to use plain glass discs with applied rings which form an exact 90° angle. Petridishes don't fulfill these demands. To find optimal conditions in preliminary experiments we need to vary the concentrations of both the additive and the salt. Marcel works with rather simple equipment which doesn't meet today's standards. As far as I can see several of his pictures show signs of unfavourable technical conditions.

I come to the second point, the interpretation of the pictures. I agree expressly with Marcel when he writes that the method "requires a long apprenticeship" and that "it is necessary to carry out thousands of experiments and comparative studies". Thousands of experiments are the basics of modern analytical methods too, but sensitive crystallization differs in that the observers themselves are the measuring instrument for reading the crystal structures. That means that everyone has to acquire experience of the method personally. Marcel presents a row of photos of crystal forms and the explanations in terms of structure and texture which give us a good orientation to learn about picture language. Moving forward to interpretation, Marcel writes: "The characteristics and variations in a crystalline mesh do not have absolute value in themselves, but must always be correlated with the nature of the test substance". We can underline this sentence three times and follow Marcel into the interpretation of the picture he introduces to us, visualizing the qualities of wines. He begins with the soil, limestone, sand, soil management. Who would have thought of this to start with? But of course, the wine is as well a manifestation of the ground! Wines of different colours and noses, grape varieties, diseases, techniques of winemaking follow ... an interesting world of crystallization pictures opens before us and a stunning world of wine. Here we are at what the cover is promising. The tailpiece dealing with vegetables seems to be a bit lost, the context of it being too short.

Finally, what is the value of the method? To answer this question I have to take in mind the context in which the method is applied and the intention I need it for. I would say to begin with the method is a tool to settle oneself into the world of formative forces. Marcel compares all he knows about wine quality with the crystallization pictures. As the form and the organisation of the crystals are a result of the capacity of the wine to shape minerals (copper chloride) by and by with increasing experience it's possible, as Marcel does, to deduce from crystallization pictures to the qualities of wines. Until this point the book gives a valuable impulse to everyone who is convinced to start using sensitive crystallization in his own field of interest. But if one intends to go further and apply the method in public, the crystallization technique should be upgraded to get optimally structured crystallization pictures. That means that the danger of interpreting crystal structures induced by the technique as influences due to the additive is minimized. It is necessary to work with the richest picture language possible and therefore the most detailed information. Research with sensitive crystallization in the context of a university requires the supreme technical and evaluation standard of today.

To any beginner: we are not pioneers any more in sensitive crystallization. Look for partners to communicate with and who can help you on your way. There is a small community of those who work with picture-forming methods. We need to correct our errors mutually, to learn from each other, to get new insights, to step forward, together! Sensitive crystallization should acquire a sustainable future. It is a method where we have to bring forth not only intellectual skills but also an emotional-aesthetic understanding of form.

*Beatrix Waldburger*

## Publications

### In Context, The Newsletter of the Nature Institute

**No. 25, Spring 2011:** Main articles: Biological engineering for fun and profit, *Steve Talbott*. Paul Weiss, scientist of distinction, *Steve Talbott*. Mirror images, *Georg Maier*

Editor: Steve Talbott. Single copies of *In Context* are available free of charge while the supply lasts. Contact details: The Nature Institute, 20 May Hill Road, Ghent, NY 12075. Tel: +1 518 672-0116. Fax: +1 518 672 4270. Email: info (at) natureinstitute.org. Web: <http://natureinstitute.org>. The Nature Institute's online *NetFuture* newsletter is available at <http://netfuture.org>.

### Elemente der Naturwissenschaft

**No. 94, 2011:** Die Hainbuche – Baum der Abgrenzung, *Jan Albert Rispens*. Form und Bewegung und die Entstehung von Neuerungen in der Evolution *Susanna Kürnmell*. Crystallisation of a film of copper chloride in the presence of additives – Preliminary study on the experimental conditions and criteria of quality, *Jean-Georges Barth, Jean Roussaux, Klaus Suppan, Silvani Rosa dos Santos*. Zur Weiterentwicklung des Experiments von Einsingen, *Reinhard Koehler*. Star-rhythm in mistletoe shape, *Nicholas Kollerstrom*.

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Cost: Annual subscription (2 issues, including postage): €30.- / CHF 40.-. Single issues: €8.- / CHF 25.- ISSN 0422-9630.

A list of the contents of back issues is available at <http://www.science.anth.org.uk/elemindx.htm>.

### Mathematisch-Physikalisch Korrespondenz

**No. 244, Spring 2011:** Der ätherische Charakter des Photonen-Welle II, Ausbreitung der photonen, *Karl-Heinz Niklowitz*. Die Strophoide, taken from *Hermann Schmidt* Ausgewählte höhere Kurven (Wiesbaden, 1949). Book review: On the fundamentals of geometry by L. A. D. de Boer, reviewed by Matthias Lerchmüller.

**No. 245/246 Summer/Autumn 2011:** Die bekannten Interpretationen, *Ingrid Hartmann & Peter Gschwind*. Zur Weiterentwicklung des Experiments von Einsingen, *Reinhard Koehler*. Von der Regenbogenmeditation zum Experiment, *Ingrid Hartmann*. Ich-Prozesse und höhere Farbmetrik, *Peter Gschwind*.

Subscriptions are SFr 50/€30 per year.

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## Next Issue

This newsletter is issued to members in March and September each year. Copy for the next issue should reach the editor at the address below by 20<sup>th</sup> February 2012.

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