

Science Group of the Anthroposophical Society in Great Britain

Newsletter – March 2009

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News

Materials for Lili Kolisko's biographer?

Soili Turunen is working on a biography of Lili Kolisko and asks if anyone has relevant materials please could they contact her or send her the materials. Useful things would be letters, notes, where she held lectures and on what theme, capillary dynamolysis pictures, personal memories about her, photos or some of the handicrafts she made and sold to cover her research or anything else in connection with her work and life. Soili has been working with Capillary Dynamolysis and Copper chloride Crystallisation methods since 1983 (initially in Järna, Sweden) and now lives in Norway.

Contact Soili Turunen: Kristoffertunet, Stuttvegen 3, 7053 Ranheim, Norway. Email: soili.turunen (at) overweg.org.

Science Group conference fund

Members are reminded that the Group holds a reserve fund which can be used as a float and/or to underwrite losses made by conferences organised by members. Usually a conference will be budgeted to pay for itself, but organisers may appreciate the security that this fund represents. Under the current circumstances, the reserve can be set at £1000. To draw from this fund, the conference budget has to be approved by the Treasurer in advance and an evidenced account of income and expenditure submitted after the conference has met its liabilities.

Archetype

The autumn 2008 issue of *Archetype* did not appear because of the editor's illness. The issue is in preparation and the intention is to publish it in March 2009. It will contain an article by Werner Schneider on meadows as an image of their surroundings and one by Johannes Wirz on the idea of the organism in genetics and epigenetics; plus correspondence generated by an earlier paper by Ernst-Michael Kranich. From now on, *Archetype* is published in November each year.

Corrigenda

September 2008 Newsletter

The number of the issue of *Elemente der Naturwissenschaft* for which 'current contents' were given should have read **88** not **87**.

Ron Jarman writes that in his article *Away with this 'points at infinity' nonsense!* the phrase at the bottom of page 1 which reads 'lines AH and GH do not meet each other' should read 'lines AH and CG do not meet each other'.

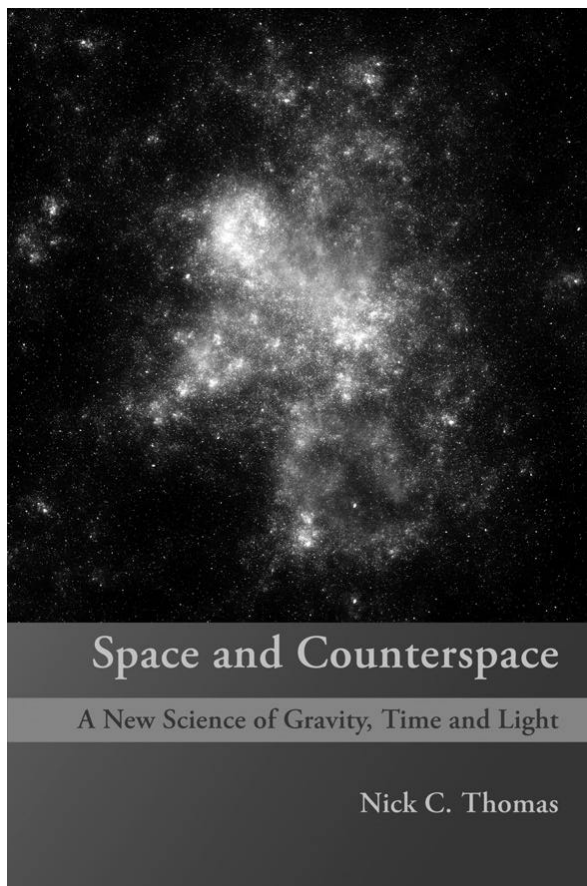
Review

Space and Counterspace. A New Science of Gravity, Time and Light. Nick C. Thomas. 2008. Floris Books, Edinburgh. ISBN: 978-086315-670-0. £14.99

There is a kinship between the principles inherent in natural phenomena and the ideas of our inner world. This is shown very well, nowhere better perhaps, in the use of projective geometry in science. This book is an excellent example of that.

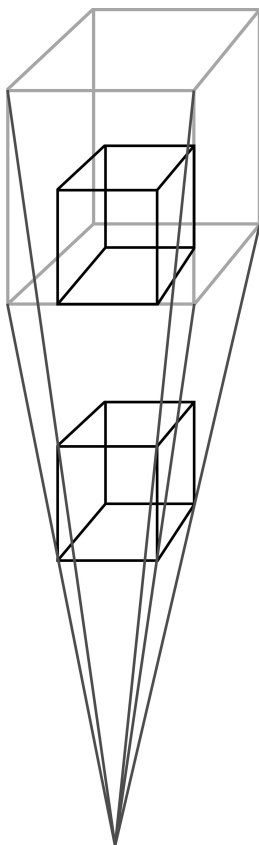
Nick Thomas describes one of the motives of this book to be an attempt to make sense of certain natural scientific discoveries, particularly in physics, made through clairvoyance by Rudolf Steiner. One being that light is not, as is commonly held, 'electrified' and that it acts instantaneously rather than having a finite, if very large, velocity; another that the Sun is a region of negative space. In the first half of the 20th century, following suggestions of Steiner's, George Adams had worked with the idea of negative space (also called counterspace) and its relation to positive space, the space of our ordinary consciousness proper to the physical world. This radical and fundamentally new idea of space provided Thomas with the starting point and the context for a new approach to physics.

Newtonian physics was based on Euclidean geometry, which proved inadequate for Einstein who had recourse to the non-Euclidean geometries developed in the 19th century for his relativity theories. Similarly a spiritual development in physics finds a suitable geometrical language in the polarity between space and counterspace. It turns out that the interaction between the two polar opposite spaces can explain or at least provide an approach to the phenomena not just of gravity, light, and the states of matter, but also of the four ethers and time.



Space as one normally experiences it extends far away in all directions from oneself as point out to the plane at infinity, to the inaccessible periphery of one's everyday world. To get a feeling for counterspace we have to imagine the opposite of what we normally experience. One thinks of oneself as located in a peripheral plane. Outwards becomes inwards, inwards outwards, and counterspace reaches from this plane inwards (counterspatially outwards) to a point, the inaccessible point at infinity, also called the absolute centre, of counterspace. Translations and rotations are examples of transformations undergone by objects in, and proper to, space, transformations which do not change the objects size and shape. In counterspace there are transformations (polar opposite to the translations and rotations) which are proper to counterspace. If an object transforms in a way which is faithful to space then it will tend to violate the transformation laws of counterspace, and vice versa. The resulting strain (in Thomas' terminology) will be in counterspace or in space respectively and the stress answering to this strain can explain – and this is backed up by rigorous mathematical explanations – the physical and etheric phenomena mentioned.

In everything – and this is most noticeably true in living things – the 'principle', the whole, is immanent in each part and this is perhaps reflected in Thomas' postulating fractal lineages in which the primal counterspace infinity (CSI) is imaged in each linked point. These 'essences', these CSIs all obviously 'see' any other particular point of the object in different directions. It is the answering stress that relieves this particular kind of strain in counterspace that is shown to be gravity. A sort of will to reconcile the different views, as I see it. The strain in this case is calculated as the difference in direction of points from just two CSIs in the centres of Earth and Sun respectively, suggesting that for a solid there is a pooling of CSIs at its geometric centre. The transition from strain to



'When moving a cube in counterspace, it expands.' (p. 38)

stress – from geometry to physics in other words – is achieved by scaling between space and counterspace, which in this case is the density of the Earth alone, the important and remarkable point being that the stress does not depend on the Sun being a massive body. Equally importantly the analysis also explains gravitation in the case of two massive bodies. (To be more precise the strain mentioned is a difference of 'shift' of points seen from the Earth and Sun CSIs, and the stress is related via scaling to gradient of shift. 'Shift' measures separation of points in counterspace just as angle can measure separation of planes in space. Similarly, the polar opposite of distance between points in space is something called 'turn' between planes in counterspace.)

Gases are seen not as freely moving molecules but aggregates of CSIs fractally linking space and counterspace. In the case of gases the geometry appropriate for their physics is affine geometry: unlike Euclidean geometry it allows expansions, an obvious necessity. But the freedom this geometry confers means that the CSIs' positions are not determined. As in the case of gravity the strain lies in a directional incompatibility and by a similar analysis Boyle's law is deduced. Here the strain involves the directions in which two CSIs, momentarily fixed due to their interaction with the walls of the container of the gas, 'see' a freely-moving CSI. For liquids, the geometry used is a special kind of affine geometry whose transformations do not change volume, reflecting the extreme reluctance of liquids to change theirs. In the analysis of gases triangles of three CSIs were used; for liquids four CSIs are considered at a time and using these tetrahedra a whole array of properties of liquids is deduced, including Brownian motion.

When it came to the four ethers it was found fruitful to assume that counterspace predominates and the strain occurs in space. This is opposite to the case of the three states of matter where space predominates and the strain is in counterspace. Polar to the geometries associated with gases, liquids and solids, namely affine, special affine and metric respectively, there are three counterspace geometries which turned out to be suitable for the light, chemical and life ethers. Here the geometrical imagination required, as the geometry itself, becomes intensified! But the explanations of phenomena such as diffraction, reflection and refraction turn out to be simpler than the conventional ones.

There are further very interesting chapters on time, astronomy and cosmology, and the application of counterspace to various phenomena.

This book requires a certain effort on the part of the reader – effort that he or she will surely find worthwhile. Thomas' approach will I feel certain turn out to be ground-breaking in the future; whether near or distant will depend on its reception. Indeed the effort demanded is hardly surprising: one would hardly expect a serious attempt to go beyond relativity, quantum mechanics and string theory to need anything less. And it is an approach that seeks to explain natural phenomena rather than simply find models for them, useful though the models may be.

For those interested, many of the mathematical details are fully fleshed out in Thomas' earlier book *Science Between Space and Counterspace*, New Science, London 1999.

Paul Courtney

Meetings/Conferences

Research Group

Saturday 21 at 2 p.m. until Sun 22 at 12.30 p.m. March 2009

Trebullom in Cornwall is unavailable due to flooding, but through the kind assistance of Gordon Woolard we have the use of: The Christian Community, 23 Chapel Street, Buckfastleigh, Devon, TQ11 0AQ.

Programme: Malin Starrett D. Phil – Einsingen experiment. The peach blossom colour. *Alex Murrell* – Skin effect (conduction in electricity). *Mark Moodie* – 1. Potentization; 2. Hugo Erbe. *Discussion: Space & counterspace; a review of Nick Thomas' new book by Paul Courtney. Henry Goulden* – Significance of Ehrenfried Pfeiffer today. A.O.B.

Gordon Woolard has offered to provide us with a meal on Saturday night. Please bring Sunday breakfast.

For use of Christian Community building we need to pay £40 collectively; additionally accommodation is available (in the form of a mattress and duvet) at a cost of £5 per person if needed. Bedding and towels provided.

Location maps available. The nearest Railway station is Totnes which is a 35-40 minute (7 mile) bus ride from Buckfastleigh. Newton Abbot has more trains but is further away. Please phone Gordon on 01364 644241 for further information on trains.

RSVP stating if you need accommodation to: PaulRC (at) btinternet.com; or to Paul Courtney, Ground floor flat, 1 Surrenden Road, Brighton, East Sussex, UK BN1 6PA; tel +44 (0)1273 557080.

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.

Our next meeting is on 28 March 2009, 10 a.m. to 4.30 p.m. at Elmfield School, Stourbridge, West Midlands.

If you are interested in attending, but do not normally receive notification of Section meetings, please contact Simon Charter, Juniper Cottage, Ludlow Green, Ruscombe, GL6 6DQ. Tel: 01453 755614.

Email: simon (at) ebandflow.fslife.co.uk.

Group for the study of karma in connection with prominent scientific figures

It is very instructive to study the history of science in connection with the general evolution of humanity (which shows itself as a demand of our times). Any glance along shelves in bookshops will reveal a deep need, among the educated public, to experience famous scientific figures as total human personalities, rather than as mere spokesmen of ideas. But without the openness towards existence before birth and after death, and of reincarnation, this interest remains in a way unfulfilled. An individual biography, for example that of Einstein, Watson, Crick, Oppenheimer, Newton or Curie, becomes, without these insights, in a way mummified in time, unable to develop further and so, in a way, incompletely experienced.

The natural outcome of the concept of evolutionary metamorphosis implied in reincarnation, transcends this element and shows us ideas and personalities in constant development, transcending death positively rather than being caught in a time warp as if in a kind of 'golden mummy'.

There can be no doubt that the rise of the physical sciences marked a colossal step in the evolution of mankind. It produced, in effect from two sides, a confrontation with death.

Objectively, 'Nature' and 'Heaven' ceased to be experienced as garments or outer signifiers of 'Goddesses' and shrank into

dead inert substances and evaporated into empty spaces of the sky.

What followed is that slowly the sky became occupied by copies of the earth; objects of weight revolving in immeasurable emptiness and coldness, and nature became merely a mechanical interaction of substances differentiated mainly by their weight.

The subjective corollary was the death of thought as inner experience, and its surrender to an external sense world, where it is reduced to a mere organiser of impressions; rather like a queen reduced to the level of a clerk in an office of filing cabinets.

The fact that the visible heaven could be experienced this way only goes to show that the heavens of old cannot be seen with an earthly eye at all and that what is seen outwardly is only still an Earth-space.

In a similar way the hard compact 'earths', with their atomic weights, began to disintegrate and reveal themselves to be largely empty space! Void!

Therefore human thought passed in the middle of the 19th century, through a death process; and at the start of the 20th a kind of resurrection began, showing the non-existence of death conceived as the finality of solid matter.

As Steiner says, "Our usual view of death is an illusory representation of the 'Father'".

Anthroposophy itself stands contemporaneously in its birth with the resurrection of science. At the time when science was penetrating into the nothingness of matter and the fullness of space and evolutionary rhythms of time, anthroposophy was teaching the metamorphosis of the personality in reincarnation and karma.

It is clear that the general receptivity for these ideas is implicit in all scientific thought which is honestly undertaken and not harnessed to extraneous ends (as we can see from the figure of Strader).

But in actual anthroposophical meditation, it is possible to draw closer to actual concrete instances; and this activity, like all scientific work is greatly strengthened by community endeavour.

A small beginning has been made in science section meetings in this country to consider 'scientist karma' as it were beginning with the fascinating figure of David Bohm.

I would like to extend this activity to any interested person; namely to take a biography of a scientific figure and to study this along the lines of the lectures on karma.

This need not necessarily involve regular meeting, but would involve regular correspondence* and agreed study. It is important however that those working have a sense of each other as people and not only as thinkers.

Would those interested in this please contact me at: smoorebridger (at) yahoo.co.uk or on 01384 898728

Stephen Moore-Bridger

* by agreed means

Publications

Archetype

Issue 14, November 2008

Networks, not building blocks – the idea of the organism in genetics and epigenetics, *Johannes Wirz*. Meadows as a picture of their environment, *Werner Schneider*. Goetheanism – false contrasts, *Peer Schilperoord*.

ca. 48 pp. A5 format. Price: £4.00 per copy including UK postage (overseas postage: Europe add £0.50, elsewhere add £1.00). Orders to: David Heaf, Hafan, Cae Llwyd, Llanystumdwy,

Gwynedd, LL52 0SG, UK. Tel/Fax: +44 (0)1766 523181 Email: david (at) dheaf.plus.com

Four payment options: 1) by cheque drawn on a UK bank; 2) by UK banknotes/coinage (sent at the buyer's risk); 3) by cheque in non-UK currency (including €); 4) by UK or Non-UK banknotes (sent at the buyer's risk). If sending non-UK banknotes, please add the equivalent of £3.00 to cover our bank's exchange commission. Cheques should be made payable to 'Science Group – AS in GB'.

Please refer to published currency exchange rates applicable at time of order. All back issues are still available – for contents/prices of back issues please see: <http://www.science.anth.org.uk/archetyp.htm> or enquire at the above address for details.

In Context, The Newsletter of the Nature Institute

No. 20, Fall 2008: Ants, acacias and herbivores, *Craig Holdrege*. Digital evolution, *Steve Talbott*. Save the phenomena, *Martin Wagen-schein*.

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. 89, 2008: Das Rätsel der farbigen Schatten, *Dirk Wegner*. Landschaftsgestaltung, *Andreas Wolfart*. Anschauende Urteilskraft, *Peer Schilperoord*. Ringversuch mit Weizensorten Luxor, MAA 48 und Capo, *Ingrid Pleier, Claudia Scherr, Stephan Baumgartner*.

Editorial board: Johannes Wirz (editor-in-chief), Birgit Althaler (editorial assistant), Ruth Richter, Johannes Kühl, Barbara Schmocker.

Subscription enquiries to: Wochenschrift 'Das Goetheanum', Abo-Service, Postfach, CH-4143 Dornach 1, Switzerland. Email: abo (at) goetheanum.ch. Fax: +41 61 706 4465.

Editorial enquiries to: Naturwissenschaftliche Sektion am Goetheanum, Elemente der Naturwissenschaft, Postfach, CH-4143 Dornach 1, Switzerland. Tel. +41 61 706 4210. Fax +41 61 706 4215. E-mail: science (at) goetheanum.ch.

Cost: Annual subscription (2 issues, including postage): €20.- / CHF 32.-. Single issues: €12.- / CHF 18.- 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. 234, Autumn 2008: Massenausgleich des Hexagon, *René Barthowiak & Christoph Woernle*. Höherdimensionale Metamorphose von Superstrings zu Astralräumen als Träger geistiger Aktivität, *Hans Thiel*. Selected topics in three-dimensional synthetic projective geometry, Chapter 12: Collineations in three-dimensional projective space: tetrahedral quadratic complexes, *Renatus Ziegler*.

No. 235, Winter 2008/9: Windungssinn von Liniengebilden, *Dieter Kötter & Hanns-Jörg Stoß*. Counterspatial thermodynamics, *Paul C. Marx*. Selected topics in three-dimensional synthetic projective geometry, Chapter 13, Part I: Non-Euclidean, Affine and Euclidean properties of linear families of lines in three-dimensional projective space, *Renatus Ziegler*.

Subscriptions are SFr 50/€30 per year.

Edited by Prof. Dr. Peter Gschwind, Mathematisch-Physicalisches Institut, Benedikt Hugiweg 18, CH-4143 Dornach, Switzerland. Tel: +41 61 701 5968. Email: p.p.gschwind (at) intergga.ch.

Wasserzeichen

Nr. 29 (2008): Tropfbildversuch – mit ganz einfachen Mitteln, *Andreas Wilkens*. Kann auch Weizen strömen?, *Christine Picariello*. Wasser für die Arzneimittelbereitung, *Michael Jacobi*. Formen des Lebendigen II – Aus den aktuellen Ergebnissen, *Manfred Schleyer*.

In addition to the articles in this well illustrated in-house magazine, its 60 pages have many shorter contributions including items on the Flow Research Institute's work, conferences, publications and funding.

Price €3.00 per issue. Free to sponsors.

Editors, Georg Nitsche & Martha Schmalzried, Institut für Strömungswissenschaften, Stutzhofweg 11, D-79737 Herrisried, Germany, Tel: +49 (0)77 64 9333 0, Fax +49 (0)77 64 9333 22. Email: sekretariat (at) stroemungsinstitut.de. Internet: www.stroemungsinstitut.de.

Jupiter – Astronomy, Mathematics and Anthroposophy

Volume 3(1), May 2008: Einblicke in die Konstellationsforschung mit strömendem Wasser, *Christine Picariello*. Entstehung des Mondes, *Cornelis Bockemühl*. Austritt des Mondes in Natur- und Geisteswissenschaft, *Oliver Conradt*. Die «Schwester» der Eulerschen Geraden, *Uwe Hansen*. Mathematische Denkübnungen zum Symmetriebegriff, *Renatus Ziegler*. Zur technischen Anwendung von Umstülpungsprozessen, *Klaus Ernhofer*. Peter Gmeindl, *Walter Kraul*. Arnold Bernhard in Kursen und als Autor, *Klaus Labudde*.

Volume 3(2), December 2008: Sternenwirken im Kolophonium, *Renate M. Schmidt*. Der tetraedrische Komplex, *Jan Steenbruggen*. Development of mathematical imagination of 3-dimensional polyhedra throughout history and inversion phenomena, *Alexander Heinz*. Das Liebenzeller Metall-Kolophonium, *Biografische Notiz von Renate M. Schmidt*. Koordinator der Mathematisch-Astronomischen Sektion in Holland, *Interview mit Gerard Hermans*. Reinhardt Johannes Schlie, *Walter Kraul*. Elisabeth Vreede. Ein Bild ihres Erdendaseins, *Gerhard Kowol*.

Editor-in-Chief: Oliver Conradt, Section for Mathematics and Astronomy, Goetheanum, Postfach. CH-4143 Dornach/Switzerland. Tel: +41 (0)61 7064220, Fax: +41 (0)61 7064223, Email: mas (at) goetheanum.org.

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Treasurer's Report

Science Group accounts summary for 2008: Income £431.95 (Subscriptions, £335.00; *Archetype*, £31.42; Donation, £50.00; Other, £15.53). Expenditure £90.45. Balance at 31.12.08: £2,600.02.

Membership

The Group has 58 subscribers. The membership subscription is £5 (UK), £6 (Europe) or £7 (elsewhere).

We welcome the following new members to the Group: Paul Hawkins (Birmingham); Judyth Sassoon (Bristol).

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 20th August 2009.

Dr David J. Heaf, Hafan, Cae Llwyd, Llanystumdwy, Cricieth, Gwynedd, LL52 0SG, UK. Tel/Fax: +44 (0)1766 523181. Email: david (at) dheaf.plus.com

Science Group web site: <http://www.science.anth.org.uk/>

Please note new e-address!