Towards a New Paradigm of Science

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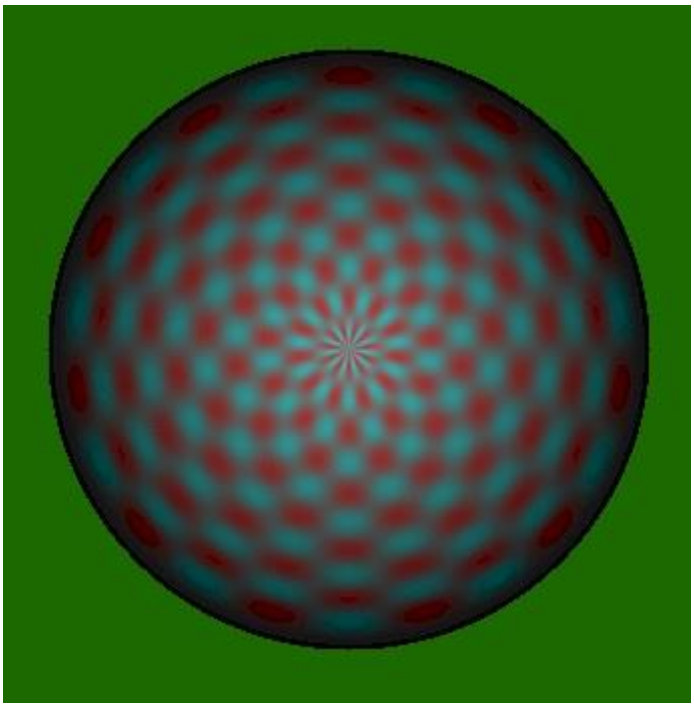
Nick Thomas

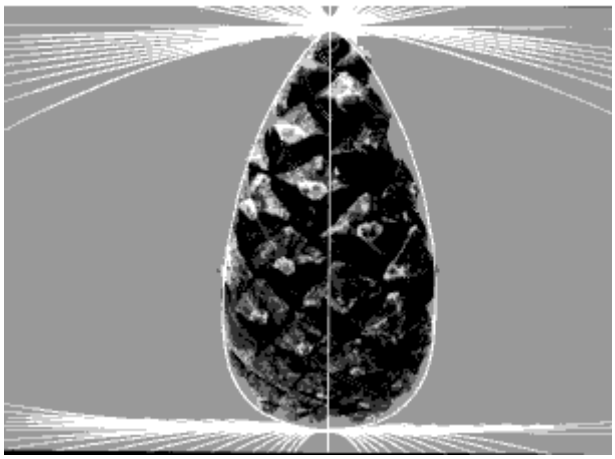


Projective geometry provides a genuine holistic approach to understanding the world. This is because it works with complete entities from the outset. In some approaches to geometry points are regarded as basic entities and lines, planes, surfaces and solids are supposed to be made of points. This is not the case in projective geometry and a straight line is regarded as a primitive entity in its own right, not an assemblage of points. Points may lie on lines of course. The same applies to flat planes: points and lines may lie on planes but planes are not "made" of points. In academic books points, lines and planes are said to be undefined entities that obey certain rules. In fact we are free to choose other entities in place of the well known ones, for example it is possible to have a geometry where the basic entities are points and conic sections, the conic sections being its "lines". This demonstrates the power of this approach, and together with the principle of polarity provides the means to approach holism on a sound basis.

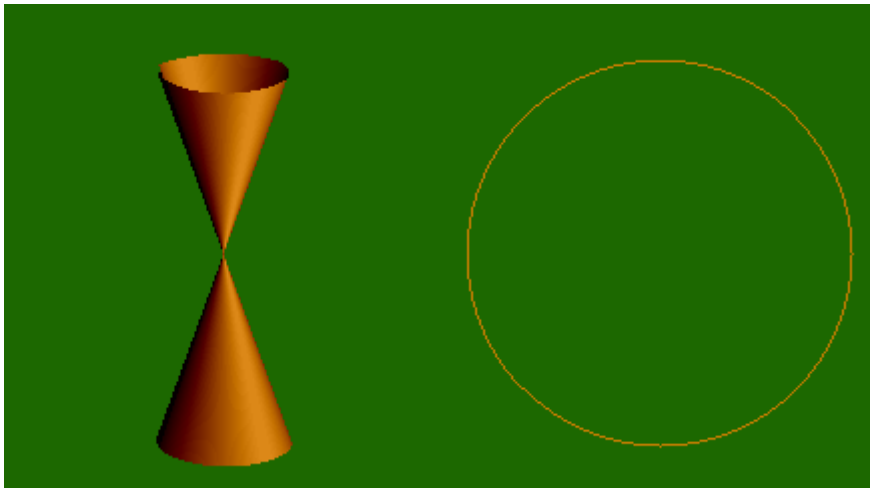
In the last 100 years a holistic aspect has increasingly become indispensible in physics, and an approach based on projective geometry is under development. George Adams and others pioneered this based on Rudolf Steiner's recognition of the value of projective geometry for achieving it. However we must note at the outset that Steiner said projective geometry is a very

good start, not that it is the only tool to be used. In practice other advanced forms of mathematics such as tensor and spinor analysis are useful in conjunction with projective geometry.

Lawrence Edwards followed up the work of Adams for many years in showing the value of applying projective geometry to the description of living forms in Nature, and discovered in the process a quantifiably demonstrable relation between rhythmic processes (Reference 7) in plants and cosmic rhythms.



Path curves are an important part of this work, which were discovered by Felix Klein. Adams saw how special forms of them may describe the spiralling egg forms seen for example in pine cones and plant buds, and this was what Edwards particularly investigated. They have also been found to occur in artistic creations such as Greek amphorae and Flowforms. In the latter case it is also possible to include them explicitly, but even so freely designed forms often exhibit them.



Behind these applications of projective geometry there lies the concept of counterspace. Steiner discovered that besides our ordinary space there is another polar opposite kind of space which is also part of our world. The above investigation of path curves in Nature is not a mere “form fitting” exercise, but both an application and a test of this idea. The development of a new paradigm for science based on counterspace is under active development. By this means gravity, gases, liquids, crystals, light, chemistry and biology may be thought of afresh in holistic terms, and some important standard laws of physics may accurately be derived from it.