

Counterspace Research

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Rudolf Steiner produced about 50 written works and gave nearly 6,000 lectures. It is important to work with them as research reports rather than 'bibles'. Indeed he urged us (Ref. 1) not to treat him as an authority because in the spiritual realm that approach to a spiritual teacher is today not just inappropriate but damaging. Research in the physical realm is relatively easy as we are free there, and a wrong thought remains abstract and soon shows itself to be false. But in the spiritual realm that is not the case, two sources of illusion being important. First a wish can colour what we experience, misleading us, or worse a wrong concept can drastically alter what is perceived and obstruct the truth (Ref. 2). This perhaps indicates the importance of the research mood, which treats the reported findings of a researcher impartially, seeking to understand them first and then to check them. Wishes are controlled and concepts are carefully checked before being accepted.

Rudolf Steiner spoke about the threshold of the spiritual world, a most important feature of the modern path of spiritual training and development. Research is only truly spiritual when it is related to what lies on the other side of that threshold. For the threshold separates our ordinary consciousness from the kind of consciousness needed to live in the spiritual world. Here we live a partly illusory existence in the sense that we only experience a part of the full reality of the cosmos, which is calculated to give us freedom by making it possible to think as we will without incurring the two types of illusion referred to above. Fortunately our thoughts do not drastically change the physical world in a direct manner e.g. thinking that a chair is a table does not immediately change the chair, and equally our wishes for the weather, for example, to conform to our convenience have no effect. The threshold separates that state of affairs from the one where every unguarded wish or thought has immediate consequences. That is why our consciousness on this side of the threshold is objective and non-participatory, while on the other side it is fully participatory. Indeed to cross the threshold requires a kind of inversion of consciousness, for our everyday objective consciousness is not serviceable on the other side – worse, it is destructive. The research of the author concerns that inversion of consciousness in relation counterspace (see below) for application to science and the possibility of finding a non-materialistic paradigm for it.

How can we aspire to do spiritual research, given these strictures? Clearly the threshold must be involved in some way. To acquire modern clairvoyance accompanied by suitably enhanced thinking would be the ideal, but that is not readily achievable by all of us. Merely to combine other peoples' spiritual findings in new ways certainly leads to new insights but it is perhaps at the bottom of the scale. I have used three methods to approach this research on counterspace: working with the dead, the transformation of study of conventional work, and using Emerson's idea that "every wall is a door". Clearly a cooperation with the dead involves the threshold, but some explanation of how to do that is required, and also of the other two methods. Using Emerson's idea, one looks for "walls" in one's work. Now a "wall" here means an aspect of the work that one cannot see through, or a problem in the work. A wall is a door in the sense that it shows just where development is needed which leads to something new when accomplished. Have you ever asked yourself why you find a new concept difficult to grasp? In the last analysis it is because something in you will not change, for you have to change to grasp a concept. When you have grasped a new concept you are to some degree a new person. Inability to grasp a concept points to a "wall" inside you, but which is also a door in the above sense. A concept is best grasped when several diverse examples are given involving it, for then thinking weaves between them to grasp it. Thus the concept "triangle" is best grasped if many different kinds of triangle are seen rather than only one.

One very fruitful approach to such walls is to carry them into sleep. I was working on scientific questions with friends who have since died. Working now on those questions and carrying the results of the effort - the "walls" - into sleep can enable something to come back across the threshold from them. Indeed it is clear to me that the progress originally made in a short time was hardly within my own capacity alone!

Some self-knowledge is needed here, and some modesty, as it is easy to think that every idea is one's own. That is, however, the hallmark of what it is like to receive an answer from the dead, for it appears as if we are speaking the answer to them (Ref. 3), and it is easy then to think that we have thought of it.

The third method is to take some conventional work, study it really hard, and offer it to the Archangel Michael who may then return it in a spiritualised form (Ref. 4). I have tried this by studying relevant mathematical and scientific subjects that were well beyond my engineering training and natural ability. One must not be presumptuous here, but it was noticeable that after such work ideas flowed more freely in relation to the research.

What is it like inside the Sun? Rudolf Steiner discovered that it is not "burning gas" (we would say a nuclear fusion reactor today) but rather there is less than nothing there, that space itself is negative (e.g. Ref. 5 lecture 15). Furthermore he indicated that it is in such a space that the ether is to be found (Ref. 5 lecture 4). In Ref 6 he describes the inversion of consciousness when we cross the threshold. George Adams followed this up and did seminal work on the nature of what is now often called counterspace, and Louis Locher Ernst independently worked on the subject too. I have attempted to stand on their shoulders and take the work further, with three objectives. First to see how to develop a paradigm for science that is Michaelic in the sense that it is as accurate as conventional science, but is not based on materialism. Secondly to re-think the Sun, as it is our common spiritual heart on the other side of the threshold. What effect must it have on the social life to think of that in materialistic terms as a nuclear fusion reactor? This is then also a social aim of the work. Thirdly to see if a way can be found to treat nuclear waste. Progress has been made on the first two, but much work remains to approach the third.

The best way to understand counterspace is, of course, to cross the threshold and experience it directly! However that is not yet readily available to all. The other way is to use projective geometry, which Rudolf Steiner recommended as a very good start. Much more is in fact needed. That also may be felt not to be readily available to all, but it is within the compass of serious study and work. The reason it is valuable is that it involves a qualitative dimension of mathematics, and most importantly contains the notion of *polarity* which enables the inversion that is involved on the other side of the threshold to be described. Imagine three points in space forming a triangle. The triangle lies in a plane i.e. in a completely flat surface extending indefinitely outwards in all directions. In fact any three points determine a plane provided they do not all lie on one straight line. Now imagine three planes that do not contain a common line i.e. they must not be like three pages of a book. They meet in one point. For example two walls and the floor of a room meet (ideally) in a point at one corner of the room. These two pictures are *polar* to one another, as three points determine a plane, or three planes a point. Interchange the words 'point' and 'plane' and you pass from the one to the other. Now this idea applies quite generally in geometry, for every statement about points and planes can be replaced by an equally valid one where points and planes are interchanged. Our current science has concentrated exclusively on the role of points e.g. in thinking of minute particles making up atoms and matter generally. But in the last decades it has become increasingly clear that holistic aspects cannot be ignored, indeed the very particles themselves have become 'fuzzy'. The polar aspect needs to be recognised, which has not happened.

We will now use this idea of polarity to approach counterspace. Imagine you are standing outside on a starry night. The widths of the cosmos are apparent, and it is as if you occupy one point in space and look out towards infinity in all directions (at least above the horizon). Infinity is physically unreachable, and because an infinitely large sphere becomes flat there is an infinitely distant plane outwards. The polar imagination is to suppose your consciousness is located in a plane in the periphery and you are looking inwards toward an unreachable point. For this experience there is an infinite inwardness rather than an infinite outwardness. You see how we have interchanged point and plane to arrive at this picture. The kind of space it represents is what is called counterspace. It is inextricably bound up with a change of consciousness as clearly our ordinary consciousness does not normally extend over a whole infinite plane. In Ref. 6 Rudolf Steiner describes how, when we cross the threshold, we look down upon our body as our

outer world, and the planetary system is felt to be inside us. In other words we look inwards from that perspective towards that 'point' we started from.

My research started with the question: what if something is in both spaces at once? It would have to obey simultaneously the laws of two worlds at once. The sort of laws involved concern how objects behave in space when they move. Certain important properties remain unchanged. Thus a moving car does not, fortunately, become shorter or wider. If I move a box around its volume remains the same, the areas of its faces do not change, the lengths of its edges are unaltered and the angles between them is invariant. Now in counterspace there are quantities analogous to volume, area, length and angle. An object that is moved in that space retains its *polar-volume* and other polar dimensions the same. For example the polar-volume of a sphere is made up of all the planes in space which do not intersect it i.e. it is what in ordinary space is the outside of the sphere. If the object exists in both spaces at once then there are eight types of quantity that should remain the same. But that is only possible in special cases, such as rotation about an axis through the infinitely inward point. Otherwise it cannot 'obey both masters'. Now in physics we call a forced change of shape *strain*. Extend an elastic band to twice its natural length and we say that it suffers a 100% strain. So if we have a box in both space and counterspace and then move it, the quantities in one or other space will be forced to change, leading to strain. Furthermore, the elastic band exerts a force on our fingers trying to restore it to its natural length, which is the result of what is called *stress* in physics. It is reasonable to suppose that the strain suffered by the box will also result in stress. Notice that stress, unlike strain, is not a geometrical concept. We make the important transition from geometry to physics when we pass from strain to stress, an aspect which Rudolf Steiner also emphasised in his lectures on light (Ref. 7).

If space 'wins' and ordinary volume etc. are conserved then strain and stress will arise in counterspace. Because the box is *linked* to both spaces that stress may be expected to react back on it physically, just as if I keep one hand still and extend the elastic band with the other, I nevertheless experience a force on the hand that does not move. Thus forces in space could arise from stresses in counterspace. For the engineer this is interesting because etheric forces could nevertheless result in physically measurable effects, leading to the possibility of a form of etheric technology. This idea was first used to try to understand a very mysterious force: gravity. The result was successful, and the correct formula for gravity was deduced, implying that gravity can be understood as a special kind of stress between space and counterspace. It is important that we not only imagine the thing in principle but also obtain a result in agreement with scientifically verified results. The idea was then refined and applied to the behaviour of gases and liquids, also successfully.

But it is also possible that the strain and stress occur in space instead of counterspace. Application of that idea led to a comprehensive new understanding of light which correctly describes the phenomena of reflection, refraction, diffraction and scatter. The stresses and strains involved are more subtle than for the four elements, and a new approach to time was needed. It is also possible to understand Steiner's finding that light does not have a velocity as is supposed in physics, but crucially also why we think it does. The light has been 'demonised' by our modern approach to it (Ref. 8 lecture 10), and it is important to overcome that. More recent work has shown that the supposed electrical aspects are not intrinsic to the light itself but only arise when it is absorbed or emitted by matter. All experiments with light in physics necessarily study its interaction with matter, which has led to the 'demonised' view of light. The chemical and life ethers were then approached, and the reason for Rudolf Steiner's different names for the chemical ether became apparent i.e. the number ether and tone ether as well as the chemical ether. This also makes contact with quantum physics. In the case of the life ether the action of membranes appeared as a significant interface between the physical and etheric realms. A living body is full them, from the plasma membranes round the cells outwards to the skin itself.

Stress and strain may also be involved in both spaces, which applies more to the warmth ether which acts as an important interface between the physical and etheric. This aspect still needs much more work, as in fact does all of the enterprise! The first phase of the work has been to see if these ideas agree with what is already known in science and to keep in touch with phenomena, which has been a long job, and seems to be

the case. The next phase will be to find practical applications. It is too incomplete as yet to be taken seriously by mainstream science, and for example *The New Scientist* declined to review the book about it (Ref. 9). The latter is now out of print but still in demand. A pictorial approach is contained on my web site (Ref. 10), which has been taken seriously all over the world.

Finally, a further word about the spiritual aspects. This level of the work concerns the nature of force. We only know of force through our direct experience, in lifting a heavy object for example. When we see a tree swaying in the wind, say, we assume that the air is exerting a force on the leaves and boughs. But we do not observe that, we only observe motion. Of course it is reasonable to suppose force is being exerted, but nevertheless it is not observed other than by direct intervention e.g. I could oppose the swaying of a bough. Force is experienced by opposing motion (also that of the earlier elastic band to its natural length). We know of force, in other words, through the exertion of our will. The stress postulated between space and counterspace is envisaged as arising from the will of the spiritual beings giving rise to the world of appearance. Our ordinary space is Ahrimanic in character, being the space of separation and discreteness. Counterspace is Luciferic, being a space in which there is neither separation nor discreteness. The Christ aspect suffers on the cross of these two where the stress arises, and Steiner even spoke of the activity of Christ penetrating into physics (Ref. 5 lecture 16). Goethe spoke of the “deeds and sufferings of light”, and St. Paul wrote that “the whole creation groaneth and travaileth” (Ref. 11). Thus Goethe's words may be extended to the whole of physics

References

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