

THE SUN

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The Sun provides us with light and warmth, and without it our physical life would not be possible. Not only that, the constancy and stability of the Sun's behaviour is essential for life on Earth, as slight changes could be disastrous. If we reflect on the fact that the change in angle of the Earth's surface with respect to the Sun during the year leads to the difference between summer and winter, and that this change is occurring at a distance of nearly 150 million kilometres from the Sun, we see how significant small changes are. Even a slight change in the shape of the Earth's orbit is thought to contribute to the onset of ice ages, although that is not the only factor. Our orbit is constantly changing shape slightly, mainly in the eccentricity of its elliptical shape, so that sometimes it is closer to being a circle than at others. If the magnitude of the Sun's radiation were not constant it would have much larger consequences. In olden times the sixth stage of initiation was called "Sun Hero" to indicate that such an initiate has the constancy and reliability of the Sun itself. Although the regularity of the rising and setting of the Sun was principally in mind, the metaphor is only strengthened by our modern knowledge.

But the Sun does not only provide physical sustenance, indeed that is but a small part of its gifts. When a person changes consciousness on crossing the Threshold into the spiritual world, that change entails an inversion so that the roles of "inside" and "outside" are reversed. What for us is the great cosmic periphery becomes our "centre" from which we gaze inwards from all directions towards an unreachable inwardness. This inner unreachable point seems infinitely far "away" inwards, and now the planets and Sun seem to belong to us in the way our physical organs like the heart and liver belong to us normally. The Sun is felt by such clairvoyant experience to be our spiritual heart (Reference 1). But, this spiritual heart is not an individual possession, it belongs to us all on yonder side of the Threshold. We experience it now as a sphere of action of spiritual hierarchies far in advance of us in their development, who support the spiritual side of our life with grace and abundance. It is their constancy of action and giving that is reflected in the physical stability of our star as well as in the spiritual supports we enjoy. Who can say, for example, where courage comes from? Or even what it is? No mere physiological description of bodily processes – no matter how complex – can explain courage, for it is a spiritual gift and resource. Physiological studies may indeed trace processes that are a consequence of spiritual resolve, but they are not its cause. An interesting result of such research has been to show that there is a significant time-delay between the onset of an action in the body and our becoming conscious of our resolve in thought, of the order of a fraction of a second. It is argued from this that the conscious resolve is not the effective cause of the action as it comes after the physiological processes initiating the action, so after all unconscious bodily processes dominate what we do and our consciousness is merely a spectator after the fact. This misses something vital, namely that will originates in the spirit, not in the body. Now Rudolf Steiner often pointed out that in the realm of will we are completely unconscious – we are asleep in the will. Our higher spiritual self acts for us in the will, and now we see that these physiological findings entirely support that fact, for the act of will originates in the spirit and its effects on the body – to induce movement – are apparent before our ordinary consciousness "catches up".

Such attributes as courage and love act in this way too, having a spiritual origin which we find associated with the spiritual Sun. It is thus understandable that the Sun acts as our spiritual heart, the seat of courage and much else. What, then, is the consequence of the scientific view that the Sun is a huge thermo-nuclear fusion reactor? Also that it is an unremarkable ordinary star among billions of others? Surely it must have consequences if we think about our common spiritual heart in these terms! Now the spiritual beings associated with the Sun are especially active in connection with our relationships to one another, and that depends to some degree upon how we think about them. Thus our social life may be expected to depend upon the way humanity as a whole relates to the Sun, and consequently the current materialistic view would

be anticipated to lead to social problems. Why do people find it so hard to form stable relationships? Why has marriage become difficult for many – even looked down on as “old fashioned”? The ideals of faithfulness, loyalty and steadfastness in relationships give way to “freedom” (actually license in many cases) and diversity. Freedom is far more subtle than that, and diversity is invaluable in the right place, but so are other qualities. It is just the “Sun Hero” like qualities that seem most fragile and even scorned in modern times, yet they are the spiritual counterpart to the outer stability of the Sun. If we view the Sun only in material terms, just those spiritual gifts it seeks to impart are blocked to the detriment of our social life.

For this and other reasons the author has sought a way of approaching the Sun that is both scientific and spiritual at the same time. Is it possible to think of it as a spiritual entity and yet also accurately, avoiding superstition and groundless conjecture? That requires a new approach to physics and to science generally, and the line followed started with the work of George Adams who showed how to handle the idea of negative space in clear geometric terms. Negative space, or counterspace (nothing to do with the kitchen!) has the qualities required for the kind of consciousness referred to earlier which experiences an infinite inwardness in contrast to the infinite outwardness we associate with the far reaches of ordinary space. It is the arena of action for subtle or etheric forces. But, we do not wish to imagine the world in dualistic terms, with a physical world on the one hand and an etheric on the other, with no actual interaction between them. Life itself denies that, for etheric forces are part and parcel of the wholeness of a living body. We need to avoid the “Zeus and his thunderbolt” approach which sees a physical world as science describes it but which is then “twiddled”, “nudged” or “modified” by etheric thunderbolts. Thus it becomes important to see how the two spaces interact in a monistic manner. That requires ordinary physical laws to be understood afresh in terms of this interaction, or they will remain the objects of mere “nudging”. This has been attempted in Reference 2, and a different way of thinking about gravity, gas, liquids, time and light has been started there. The first consequence in relation to the Sun is that it need not be a massive body as physics imagines in order to hold the planets in orbit, it just needs to be a sufficiently “strong” counterspace. This is rooted in the gravity theory and thus conforms with our “non-thunderbolt” requirement. Secondly the existence of gases in its surface is understood as arising from the “tearing of space” Steiner refers to (Reference 3) where the etheric and physical meet, again as an intrinsic process rather than a dualistic one, so that Steiner’s research is not in conflict with scientific observations.

Subsequent work has developed the approach to heat further, with interesting consequences in our present context. Processes have become apparent that involve subtle aspects of time, and in order to avoid physical processes going backwards in time¹ a heat cycle is entailed that converts warmth ether into physical heat. This was found in another context, but when we ask where such a process may be found in Nature, where else but the Sun itself? Thus instead of a thermo-nuclear fusion process we envisage a large-scale oscillation between the etheric and physical aspects of heat in the surface. Of course this needs testing, and research is underway to find how to make a miniature version of such a process in the laboratory, which requires further refinement of the ideas. The purpose of mentioning it here is to show that at least in principle it is possible to think about the Sun in different terms that embrace the spirit without sacrificing scientific rigour. Whether the current approach proves correct remains to be seen, but even if it needs revision it serves that purpose.

¹ A recent article in *New Scientist* mentioned a serious study of the possibility of regions of the universe going backwards in time, and physics has long entertained the idea that particles such as positrons go backwards in time. However it seems advisable to assume otherwise on the physical plane, unless unavoidable, as spiritual science recognises such processes as belonging to the etheric and astral realms. The fruitfulness of finding processes based precisely on its avoidance encourages this approach.

[**Author's note:** An optional final paragraph follows to be included if and only if the picture appears on the front cover].

As a last thought, the Sun is no longer supposed to be in a special position in the cosmos. While investigating the possible relation of these ideas to research on rhythms in bud forms (Reference 4) the author was led to examine the distribution of stars in the neighbourhood of the Sun (out to 38 light-years). To show this in two dimensions it was necessary to project them onto the plane of the equator. This can be done so as to show the distance-distribution without distortion. An unexpected "space" or "gap" round the Sun became apparent, as shown on the cover picture. Checking the situation for other stars in the same region revealed no such gap round them, so the Sun does seem to have a special relation at least to its near neighbours. A statistical test finally showed the situation to be genuine. An unpublished scientific article as submitted to the magazine *Nature* is available from the author giving the technical details.

References

- 1 "True and False Paths of Spiritual Investigation" (GA 243), Rudolf Steiner. Tr. A. Parker. Rudolf Steiner Press London 1986.
- 2 "Science Between Space and Counterspace", N.C. Thomas, New Science Books, London 1999.
- 3 "Heat Course", Rudolf Steiner, March 1920 Stuttgart (GA 321).
- 4 "The Vortex of Life", Lawrence Edwards, Floris Press, Edinburgh 1993.