

DuVersity Newsletter No. 18

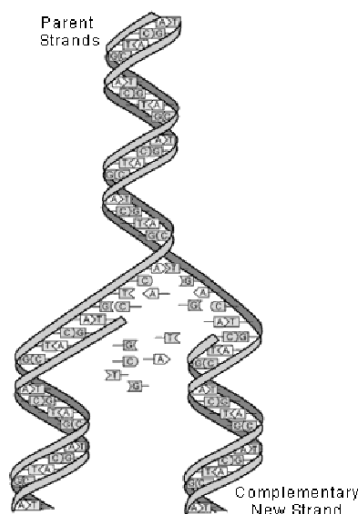
Genes, Memes and Gods: The Three Replicators of Evolution

Richard Heath

In this brief and stimulating essay, Richard Heath takes the extension of the idea of genes into memes a step further, by introducing a third and cosmic 'replicator'. Memes are the replicating 'units' of mind or culture, and Richard regards them as barriers to progress unless they are brought under the influence of cosmic replication, the patterns of the greater present moment. His argument draws on Gurdjieff's definition of the 'law of three' or triamazikamno: "The higher blends with the lower to actualise the middle, this being higher than the preceding lower and lower than the succeeding higher."

The more science looks at the human body, especially from the point of view of molecular science, the more it is seen to be an enormously complex set of information, relationships and systems, largely working below the level of consciousness. We are aware of an end product of all this evolutionary development: the subjective experience made possible by it. We can hold the complex picture of Science in our heads, but these heads are themselves merely part of an overall construction.

So, do we need to understand what we are, or is it our function just to get on with what is made possible through it? The answer appears to be both, for the very reason that self-awareness, informed action and understanding are all parts of the apparent destiny of our selves. However, we cannot avail ourselves of the implicit sophistication of our bodies without realising their function. In one sense, our ordinary conscious state is the "lower" and our potential to manifest is "higher". Working to realise our potentials then creates a new "middle". Here, we follow Gurdjieff, who said of the 'law of three': "The higher blends with the lower to actualise the middle."



The genes appear to hold a store of human potential, full of variety based upon the survival successes of all of human experience. Since these genes are expressed in individuals, the genetic can be equated with the basic, ground state of our lives. These lives would be entirely instinctive if it were not for the development of imitative learning through a developing brain system, whose capabilities gave evolutionary advantage.

These imitative structures, now called *memes*, became another replicating structure; since all that has been learned by imitation can then be passed on, either through re-enactment or, most efficiently, through the development of language centres in the brain. This neatly defines the arising of the human world with its societies, rules, beliefs and norms. In simple terms, the ordinary life of man was created as another "middle" from the "lower", animal form of existence. The higher in this case seems hypothetical but must be the total environment of the Earth, the conditions of local environments over time (causing selection) and any influences from the planetary world.

The dynamism and synchronicity of climate, volcanism, water movement, gas exchange, is ultimately a cosmic factor. But the determinism of our thinking has given us the concept that these forces are arbitrary, unintelligent and wasteful, partly because we feel personally threatened by changes beyond our control. However, it is largely the size of our present moment that leads us to these feelings as it is entirely

possible that what we see as hazardous is in fact held together by a larger present moment in which factors are being kept in balance.

Such a cosmic present moment would need its own replicating mechanism, which could transmit influences from one moment to a later one, without loss of information. This differs from an existential gene or meme, where the whole pattern is replicated within a new host, because the cosmic is *hypernomic*. This term was used by Bennett to designate the realm beyond life, literally 'beyond rules'; life being the *autonomic* or self-ruling and material existence *hyponomic* or determined by the rules (see *The Dramatic Universe Vol. 1*). In the hypernomic realm, patterns within the whole scheme are being transmitted between one time and space and another. Thus it is possible for patterns to disappear and reappear in environments that are the lower relative to the higher of the cosmically replicating mechanism.

In myth, the replicating structures are the *Fates* and by implication, the lives of the Gods. In astronomy, the equivalent is the lossless, repeating, but ever varying system of the planets. It is a numerically stable system, whose variations can cause a conjunction of factors to reappear in a similar form over days, months, years, decades, centuries, millennia and epochs.

The Memetic Society

Modern society is largely ruled by the secondary replicator, the memes. As Susan Blackmore points out, a purely memetic society is highly unstable and may not last for very long. This is because the genes can easily be wiped out when the memes develop fantastic ideas about the world, which do not relate to the real world and even directly select against genetic survival. From a Gurdjieffian point of view, this has echoes of the organ kundabuffer and the "buffers" that prevent man from seeing the world as it is.

Kundabuffer was connected to the survival of the Moon, whose creation necessitated the arising of life to maintain it. This means the arising of genes are directly linked to the Moon. But then we know that the conceptual and linguistic brain is evolved by the genes, gaining better control and hence survivability within the animal to produce the modern human experience. We should therefore link the higher brain functions with the organ kundabuffer or at least its after effects, the buffers that prevent man from seeing reality as it is.

The brain deals with imitation, using specialised brain functions evolved over time through selection events organised by the environmental challenges of the past. The need to survive finds the genes and the memes in a partnership, generating a human world of social relationship. But these human, social worlds are not descriptions of cosmic reality and in their essence they become fed with their own dream landscapes.

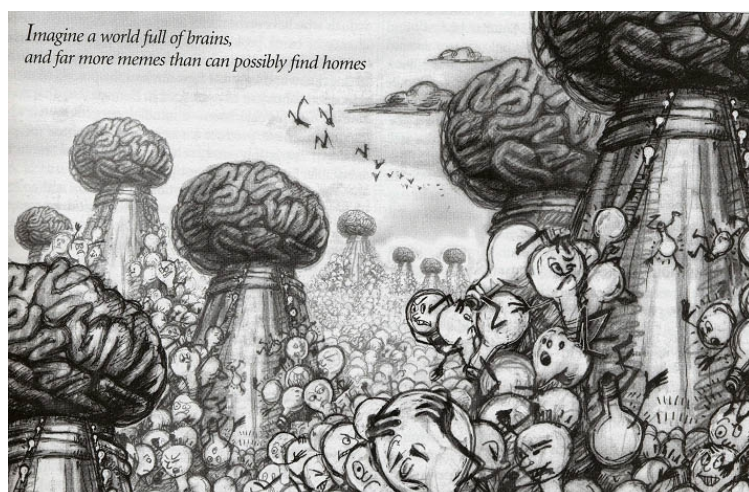


Image of memes by Pat Linse, used by Susan Blackmore

Gurdjieff's prime question was "What is the sense and purpose of life on Earth?" The replicators cannot answer such a question because their purpose is to replicate

their patterns! This is true of genes, memes *and* gods. As a pattern of will, replication is not of the present moment but forms a linkage between two present moments. An act of will, on the other hand, relates to a single present moment, and goes beyond such patterns in Eternity. It speaks of the ability to be, *now*, combining Bennett's determining conditions of time and eternity with hyparxis. In Bennett's scheme, *hyparxis* is ableness-to-be and is associated with *will*, as eternity is with *being* and time with *function*. Hyparxis determines the 'strength' of the present moment.

The Idea of Work

A prime motivation in the Work is to have all three centres working together, for only then "I Am". The moving/instinctive centre has genetic, animal origins, whilst the hormonal feeling centre underlies the social life of humans. The intellectual centre of the memes is generally tied to the emotions through opinions, egoism and self-definition. The objective knowledge that Gurdjieff says can be developed in man is the relationship to reality that modern culture has little practical contact with, being itself obsessed with security, wealth, celebrity, entertainment, and so on.

The survival of objective systems of cosmic knowledge is heavily selected against in the world of memes. They cannot find "markets", they are hard to transmit without turning into something useless, and they are perceived as a hobby, and avoidance of reality, and so on. It is necessary for new ideas to be combined with traditional esotericism for Work to take place, and for it to be relevant.

We propose that the genes, the memes and the gods are the three centres of real human evolution. Whilst forming in the "formatory apparatus" of our brains as a new meme, which is the "middle", the "lower" is revealed as the memetic culture within this we live, a culture that possibly has not long to run. New ideas are a potential created by the three replicators that must be grasped now, in an original way. A "higher" will always be there in potential but the grasping of it must be a uniquely timely act, the "purpose of life" in this moment.

Whilst man is the "evolving tip" of life on Earth, the realising of the momentary potentials within the biosphere itself belongs to an "evolving tip" of humanity itself. It has to produce a necessary change of paradigm relative to which the existing order is a buffer maintaining our present views. Existing ideas are merely a buffer working against new ideas, a denying force for the cosmic affirmation of the emergent worldview.

The predilection against what were traditional forms of cosmic knowledge within our present society, is a natural development compatible with the needs of the lower two replicators. These needs are denying factors determining most of human behaviour and they would be perfect unto themselves were it not for the progressive nature of cosmic evolution.

Any system of ideas degenerates as it becomes a memetic system that can be imitated for the purpose of transmission. This is the progress of ideas or "influences" from a source beyond the vortex of ordinary life, namely cosmic reality. Their emergent quality means that they arise through life processes, and they are cosmic only in that they can be related back to a pattern that 'guides' them.

Working with the Replicators

Modern science has produced a simplifying concept called memes, integrated with the well developed scheme of the genes. However, it is only being developed and the scientific progress of such an idea will take further decades. However, the worldview of Gurdjieff and predicament of our memetic civilisation allows the memes to be integrated to psychological reality and systems of traditional knowledge to form a

balanced view of life on Earth and see the necessary forms of action emerging from the present circumstances.

Ideas, it seems, are buffers except in their relationships to other ideas. It is a reasonable fact considering that all beings partake of denial in order to affirm their specific natures. Whilst tool use gave rise to survival of those with the brains to (a) make them and (b) learn from others how to use them, we have lost sight of ideas as tools, made of a certain substance, having a definite identity, and denying all that they are not.

The inability to see the “down side” or denying factor of systems of ideas has led to fixation upon them as complete in themselves. This is of course “identification” which is one of the most powerful ways of presenting ideas, “I think that...” links idea with the false self who can then be imitated by another false sense of self.

The more it is considered, the more the memetic world appears to be the subject of Gurdjieff's system. Through this we can discern the same primary cause of modern man's incapacity to see reality as it really is.

The complexity of the human system is dealing with a relatively un-complex environment and therefore is another “higher” relative to it. Perhaps it is bored? Maybe it is turning in on itself, exactly because it is not able to manifest the role for which it is suited. The social world generates complexity but no cosmic role, and in a sense is a training facility yet also a prison.



The three Fates were thought of as weavers; they were called:

Clotho (Spinner of thread of life)

Lachesis (Determiner of length)

Atropos (Cutter of thread)

The key technology, it would seem, is non-identified working with ideas in order to facilitate an ever invisible thread of emergence linked to the cosmic world. Thus it is that the *tekkia* (places of spiritual learning) must always be dismantled, as in the Sufi teaching stories, and all things have the limited relevance of their immediate use.

Whilst patterns go in and out of existence, effectively disappearing into the invisible world of determining conditions, the exact same effect is found in the human mentation, as ideas come and go and as the brain is capable of re-evoking any of a vast range of stored impressions under the right conditions. Thus, the inner and outer life of man correspond as processes, not surprisingly since the human is a response to both the cosmic and environmental.

The emerging theme here is intimacy hidden by fixity. Contrary to expectations, of course, it is the Objective that is intimate and the Subjective that so easily becomes a fixed obstruction to direct, human experience.

THE FOUR-FOLD SYNTHESIS: EAST - WEST - RELIGION - SCIENCE

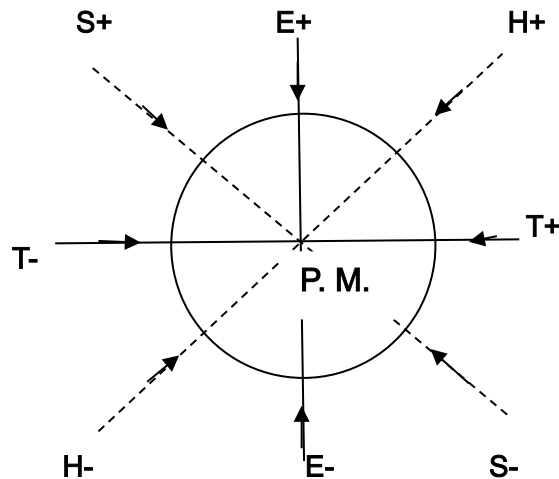
Lecture 4. SCIENCE AND RELIGION

Summer School 1965

J. G. Bennett

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I can start from the diagram of the present moment that we used in the last session.



The present moment is represented, not by a point in the line of time TT as people usually do; but, by a circle to remind us that it is a *region of experience* within which it is possible to act. This region expands and contracts according to the *state of being* of the person or group of people by whom the moment is defined. We speak of a 'strong will' and of a 'weak will' and this can be taken to mean the power of holding together a larger or smaller present moment. The *size* of the circle, therefore, indicates the strength of the will: but it does not tell us what is happening. This comes from each of the eight directions. I will set them down to help you to remember, I have marked each of the lines with plus and minus signs to indicate whether the contribution to the present moment is active or passive,

- T - passive time or the 'past'
- T + active time or the 'future'
- S - passive space or separation
- S + active space or configuration
- E - passive eternity or form
- E + active eternity or pattern
- H - passive hyperaxis or decision
- H + active hyperaxis or destiny

All our experience flows into the present moment from one of these eight sources. In the present seminar, we are primarily concerned with the distinction between the positive and negative directions. The positive direction is that which is directly given to us in sensations, thoughts and feelings. It makes what we call the 'visible world'. The negative direction is experienced as imagination, expectation, sense of obligation, wonder and awe; all that belongs to the 'invisible world'. It would not be

right to equate the distinction with that between science and religion, because science is concerned with expectation and requires imagination, and religion is concerned with decision and form.

Nevertheless, on the whole, we can say that science seeks to bring order into our experience of the visible world, whereas religion seeks to bring us into more intimate relationship with the invisible world. Science deals with what we know or can know. Religion deals with what we believe or can believe.

These formulae are deceptively simple. There can be no science without faith and there can be no religion without knowledge. Though science deals with *facts* that we can know only as traces of the past; it also looks towards the future to predict and to perform. Religion looks beyond the present towards life beyond death, but it recognizes that without decision and commitment there is no escape from the pre-determinate future. We cannot take the diagram and say that the field of science is the positive half and that of religion the negative half. The distinction is one of emphasis rather than of substance. The *Truth* is One and Indivisible/ but our perception of It is multiple and imperfect. The emphasis is constantly changing. At times, science has acknowledged the importance of the invisible, at other times it has denied it. At times, religion has sought for God in Nature and, at others; it has repudiated Nature as the enemy of God. Spirit and matter at one moment appear the same; and at another, contradictory.

We are now passing out of a phase of history in which science and religion have stood poles apart and entering a new phase in which the simple dualism of spirit and matter is seen to be insufficient, I hope to show you in this summer school how we can get beyond it, Before we come to that, we must see what science and religion look like when they are taken as opposite or contradictory.

In its extreme expression, science studies only what we discover in the present moment as traces of the past and expectations of the future. In other words, science studies only that which is given positive direction of predetermination. This is called 'positivism' and as I said last night, this view reached its extreme expression in the notion of the absolute world of Minkowski, though it already existed in the eighteenth century, with the celestial mechanics of Laplace, Laplace supposed that everything that happens in the world and everything that enters into the present moment, on every scale, depends upon antecedent causes that are capable, at least in principle, of being calculated and that the consequences are also in principle to be calculated. It was thought, at that time, that the laws which govern changes are wholly knowable and were of the same kind as the mechanics of Newton that was developed through the eighteenth century and reached its culmination in Hamilton's principle of stationary action in about the thirties of the last [19th] century, That principle in effect really says that everything that we can observe remains on the line of determination; that means, its action does not change.

So we can say that from the time of Newton until the time of Einstein - two and a half centuries - we had a certain conception of the world which was based upon recognizing only these two directions. It must be understood that the notion of forms includes not only such a notion as circles, but a notion of laws - such as the laws of motion - and the conception of action, or the conception of energy, which came into current use in the beginning of the early part of the last [19th] century. All these belong to the content which we may call subliminal, or below the present moment.

One can say that science concerns itself only with the traces that we find of the past, with our expectations of the future with the forms in which we think, and with the laws which govern changes. This notion comes to its final and complete expression when the principle of restricted relativity is interpreted to mean that time and space are uniquely related to one another through the velocity of light, and that all possible

observations can be interpreted as a pattern of momentary events, linked together by simple and knowable laws,

I said that this is the extreme pole of the scientific view, which is sometimes also called positive, or deterministic, or mechanistic. But, although in principle science claims to be concerned only with traces and expectations and laws, and forms of thought, every scientific action requires decision. The significance of this is overlooked, or disregarded. Because we are so accustomed to selecting one action and not another, it does not seem to be relevant to the understanding of science that in fact scientists are all the time selecting the field of their enquiry, and if they did not select, there would be no observations, no science, and nothing would have got anywhere.

The common observation about the progress of science is that its dependence upon close selection results in the situation that scientists come to know less and less in general and more and more in particular. Science, for its success does depend upon selection and selection, by its very nature, is something other than this determined world which science appears to be presenting to us. It means, in effect, that science has to take into account that there must be something which escapes from the complete determination of line T+ -, and that the scientist has, in this present moment - let us say when he decides he will make this experiment or that one - in fact got an objective choice in the region between T - and H - ; i.e. between the temporal future and the hyparchic future. So that the scientific activity itself is incompatible with the extreme scientific views. Another way of putting it is that if determination were the only law which fixes the content of our present experience, then that present experience would have no science in it.'

This is not, by any means, the whole story. As I said, a hundred and fifty years ago, and even much more recently than that, there was a view that the best and ultimate explanations were mechanical; that if we could observe the existence of apparently non-mechanical phenomena, this would be due to the incompleteness of our knowledge. People were confident, and indeed still are, that the progress of human knowledge would always be the elimination of the uncertain, the contingent, and its replacement by knowledge of the certain and determined mechanism. This view is held to this day in many parts of the world, perhaps mostly in the United States and in Russia. Scientific thinking still claims to be based on an overall confidence that progress is towards understanding mechanisms. But side by side with this there has been a realization that one cannot explain everything in terms of one single kind of mechanism.

Because we find a range of structures, we have to conclude that not everything can be reduced to simple motions of simple particles, such as the ancient Greek atomists believed in. Modern physics is no longer able to describe its results in these kinds of terms. The whole tendency of modern physics, especially in these last few years has been to see that without thinking of structures, one cannot think of anything at all. And of course this is even more true when we pass, let us say, to the study of material objects, because such sciences as crystallography and the theories of matter, are all studies of structures and not of atoms in motion. At about the same time as Minkowski's Absolute World came out, William and Laurence Bragg established, with their X-ray methods, the intimate dependence of all solid matter upon a planned structure; that means, upon something which was not reducible to matter and motion. Since then, we have made much progress towards the discovery of the structures that underlie living processes, and we also have come to see that it is very necessary to think in terms of *different orders of structures*. In other words, it is no longer possible for us to think of mechanisms without thinking that these mechanisms have some structure, and that that structure is altogether relevant and can never be eliminated from the scientific picture.

This is a very important step. The tendency now throughout scientific research is to transfer the emphasis from the study of *mechanisms* to the study of the *structures* that make processes possible. This amounts to the recognition that it is necessary to take into consideration what I call form and pattern. i.e., E + and E - on the diagram. Scientists are beginning to understand that there is a dynamic pattern in everything which leads it on to become what it is. One can say that the progress of science itself is leading to the realization that something must fill the region between determination and destiny. The notion that the whole of this present moment of life on the earth can be understood as a predestined pattern, is still far away,

I happened to be reading yesterday a paper published in Nature, by a Professor Blum who is engaged in cancer research, in New York. He brings out the amount of order - the amount of patterning - because order is patterning - involved in this world, with man and perhaps a million different species of living creatures on the earth, each of which has presumably come into existence through a process of what is called mutations or deep-seated changes. The interesting conclusion he reaches is that the odds against this world coming into existence by chance are ten to the minus eighteenth - a million times a million times a million. From this he draws the conclusion - which does not seem quite to the point to me - that as this is probably the same number as the possible total of inhabitable planets in the entire universe, it is not at all probable, as many scientists think, that there is life anywhere except on this earth, A life including intelligent and cultured beings is against all probability. This is assuming, of course, that the pattern of life on the earth has arisen simply by chance combinations and nothing but chance combinations; that is, entirely by random processes that are possible in the line of determination, coupled with universal laws, particularly of course the second law of thermodynamics, which is the one on which he bases the whole calculation.

But of course it is possible to interpret this same conclusion much more plausibly the other way round, It is, at the very least, a million million, million times less probable that the pattern of human life as it is, plus the rest of life that is present together with us on the earth should have come into existence by chance than that it should have come into existence according to a pattern. If it is so improbable that a pattern of this kind came into existence by chance then it probably came into existence by design; that is, it came into existence in response to an intentional programme of action directed by intelligence.

Now let us come to it from the side of religion. We can also look at religion in terms of an absolute. As we have this absolute notion of determination with science, so we can have the notion of absolute unity in the whole structure of the entire universe; that it is created as it is and that within it there is no other will except the Will of the Creator, and that the whole structure of the universe is simply the expression of an absolute scheme of values, which eventually therefore comes back to one single value. This can be said to be the extreme motion, and it has been held, and is held, that all truth, all value, all power, resides in One and this One is called God or the Absolute, But in order to avoid any suggestion that this is similar to the determination of science, it is personified. It is not merely the very source of freedom, it is also supposed to produce everything that happens in the world, and produces it according to a scheme of values which are imposed upon the world in the form of commandments, requirements, that the world itself is unable to satisfy because only the Source can satisfy them.

This one can call the extreme, uncompromising religious interpretation of reality. This interpretation in effect denies that there is any interest in knowing about it all or any purpose in studying anything because all is wholly decided along the line that joins E - which is the Divine Form, with E + which is the Divine Decree. Just as absolute science says there is nothing but line T T so absolute religion in effect says

that there is no reality except in line E E. All forms, all patterns, all laws, are existing once and for all, and accompany the universe throughout its existence. That is to say, that they are eternal and always present, and also that all values, all purposes, are equally absolute and unchanging. You will notice that this would make the notion of the present moment empty and meaningless.

Such absolute religion is no less repugnant to us than absolute science, and the reason for this is that our very nature is to live in the intermediate region of the present moment, It is on this account, and through the experiences of people, that these absolute notions begin to give way to the notion of there being a certain participation of the created universe in the realization of its own destiny. That is what is implied by departure from the absolute line which says that nothing can be other than it is.

If one begins to depart from this line of absolute decree to a notion that the universe, or existence - which of course includes us men also, because this is what most intimately concerns us – [missing object?] one has to accept that it has some responsibility; that we in some way participate or co-operate. This means that there is something intermediate between the absolute values and the region of freedom. And on the whole there has been a tendency, especially in more recent times, for the extreme interpretations of the religious standpoint also to give way somewhat like science is giving way. It, however, remains true to say that any relative notions in religion never, or very seldom, go so far as to give an independent objective significance to created beings such as ourselves. That is to say that however broad religious views may be they always tend to hold back at a certain point and feel that something is not right in the notion that man's freedom of action may be as legitimate, as substantial a part of the whole picture as is the power of God, or the working of natural laws.

The general effect of all this is that those who try to make some sense of man's intuition of objective values are searching in the negative region, just as those who are trying to make some sense of the extraordinary enrichment of our knowledge of the world through the progress of science are working in the positive region. There is very little awareness that both are moving towards a, common point, I think the reason for this is that theological or religious thinking tends to be closed to the notion that limited beings can be a necessary part of the whole scheme of things, and not merely permitted as it were, to pretend to play a role. The notion, for example, that we, in the fulfilment or the failure to fulfil our destiny are an essential part of the scheme of things is not entertained by religious people, who think it is inconsistent with Divine Omnipotence,

My belief is that we have a legitimate place in the universe, not merely by being scientific objects, nor by being the puppets of an omnipotent Creator; but because we, in our present moment, have, not only the power of choice but even creative possibilities of bringing something into existence which could not exist without us. That is really the essential meaning of the *present moment*. If the present moment is a region in which the will is free to act, it follows that a limited being, capable of having a present moment large enough to be able to entertain purposes and to distinguish between values, has also to be a creator, And as I said, not merely a creator by permission, as it were, but a full-fledged real creator - making something which, without him, would not be there at all.

This view, it is easy enough to see, is really no more admissible from a scientific than from a religious standpoint. It is quite incompatible with the supposition that all reality is in the lower half of this diagram or with the belief that all reality is in the upper part of it. It requires that we should accept a different kind of reality; that is, a reality which is not a reality of values and forms, and a reality which is not that of

traces and expectations, but a reality that is the reality of the will. To accept this, we should be prepared to think that will is something which is not just a kind of value or a kind of mechanism; it is quite, quite different from either. Will is a freedom here and now, in this present moment. It certainly is not a right to destroy what belongs to the line of determination, nor a freedom which is to cast out of the present moment the forms and the values that accompany it; neither of those things is possible. But to work, to fashion with traces, expectations, values, forms; that is, to bring into existence forms that do not accompany the present moment anyway, to realize values that are not abstractions from experience, to make something which is not just a rearrangement of the traces of the past, but something different from any of these.

This notion of a third reality, other than the reality of matter and spirit, may seem very strange and unexpected. This third reality is really the secret of the reconciliation of science and religion. You may ask "What evidence is there of this third reality?" There is just as much evidence of this as there is of either of the other two. Although very limited and very small in what it produces, it is always there. That is to say that we people, with the kind of present moment we have got, are sometimes in a state in which we are free to choose, free to accept or reject, and sometimes even free to make, to do, to work.

Unless we are able to strengthen our will, to be able to embrace a greater present moment, our possibilities of creative action must remain very small. This does not mean that creative action is the same as constructive action. There are various degrees of constructive and intelligent action possible, the most intelligent one of all being to know and to fulfil one's destiny. But there is beyond the realm of destiny, that other region that lies between hyperaxis and eternity. Here intelligence is no longer enough; there is a spontaneous uncaused element. We have to be responsive to that also. We have to be capable of recognizing its entry into the present moment. It probably enters all the time, but it is wasted because it is unnoticed. The waste consists in this power being turned into a kind of self-indulgence, whereas it could be the means by which man does more than fulfil his destiny; that is, he becomes a creator in his own right.

We should look at the whole of existence as being a task, a challenge, what I call a *Drama*. In such a situation, there is something to be done, and the kind of world in which there is *something to be done*, is neither of the two absolute worlds.

Once the supposition that there is an absolute dominant power that determines everything is sacrificed, then the whole of existence begins to acquire a real meaning. We then accept that *everything* has to be done, that nothing whatever is guaranteed, that everything is being created and nothing would be there unless it is created.

There have undoubtedly to be great changes in the *way* men speak about religion, but there will not have to be great changes in religion itself, because the religious experience of man really derives from the inescapable conviction that we owe an obligation to something that is beyond ourselves. That sense of obligation really means that there is some part of man which belongs to the upper region.

The idea that all that can in principle be known is an axiom of science rather like the axiom of religion I have just been speaking about. And it is this belief - that in principle man can know everything - that science will have to sacrifice.

It is a strange thing that the very increase in knowledge, the explosion of knowledge that is taking place at the present time, is just the very factor that is leading people to ask themselves whether, after all, it may, even in principle, be impossible to know everything. The effect of knowing more and more, and seeing the truly incredible complexity of the world, will raise the question; is the world, after all, something that is beyond man?

Just as religious people refuse to face the question of the possibility of a real drama in the world because of the omnipotence of God; strangely enough, scientists also refuse to believe in the possibility of a real drama in the world because of the omnipotence of matter. They still tend to think that the world is not dramatic, not exciting, but by its very nature knowable and, like everything else that is knowable, it ceases to be very interesting. The progress of science is undermining that attitude. Once the idea that the progress of science is leading towards complete knowledge is sacrificed, then, with that sacrifice, comes the realization that there remains something mysterious in this world that is mysterious by its very nature, not because we do not yet know it. This attitude produces the same sort of challenge that we found before; in this uncertain and mysterious world, there is something we are obliged to do, something which we have to serve, that is greater than ourselves.

The knowledge and understanding of structure is bound to bring with it some knowledge of man's nature. At present; the world mostly disregards the notion of man's nature as being capable of transformation and capable of seeing and understanding things that are beyond his sensory perceptions and his mental operations. When this change of attitude comes about, then those who are trying to understand the problems and the future of the human race will find themselves drawn closer and closer to the hyparchic line $H +$. The realisation that there is something that does not work in the religious life of man so long as man's part in the world is played down, or ignored, will also operate in the same direction, When this change comes - and it will be difficult and hard for it to come - then there will be a meeting-point and an agreement between science and religion.

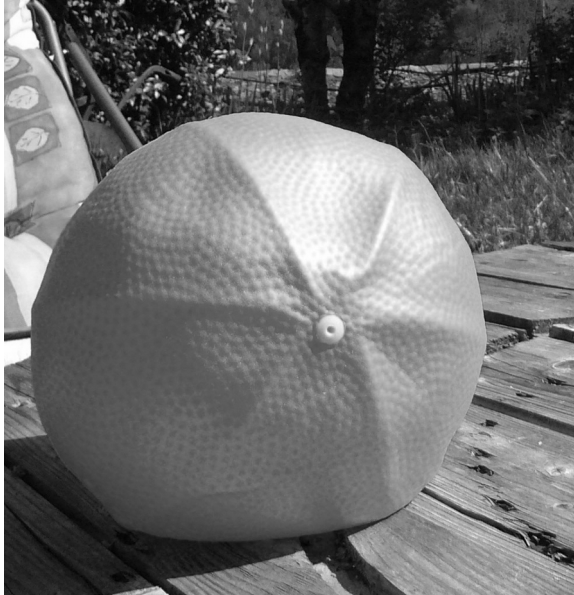
If we ask ourselves, what can make our lives worth living, surely we must say that our lives are only worth living if we can serve some purpose. And that in serving that purpose we are doing something which needs to be done, and which needs to be done in a total sense, not just for our own benefit or even for the benefit of the whole human society. The world is put together in such a way that there is something that everyone has to do to allow it to fulfil its purpose. When we can really come to that conviction, there will be renewal of satisfaction in life for humanity, a satisfaction that at the present time is terribly shattered, more shattered than anything else. This particular conviction has gone because in the past things were presented as important, and behind the scenes they were regarded as not important. We do not accept that sort of hypocrisy any more,

It is very strange how our language and our thoughts continue to be conditioned by absolutes which have been fashionable in the past. How difficult it is to come round to a real relativism. And to understand this kind of relativism is not a weakening, or a compromise, it is coming to grips with another reality, a far richer reality. This is the reality of the *Work*.

THE THIRD FORCE

Anthony Blake

Here is a picture of a third force. Perhaps, by the end of this essay, we will understand why it is such; or you will have some sympathy with me giving this partially inflated or 'saggy' ball such a title.



The 'third force' was the name given to the *third* beyond the clash of affirmation and negation. It was by this force, Gurdjieff declared, that anything happened; but we are mostly 'third force blind' and do not see this, nor understand it. Like any enigmatic principle, it assumed many names such as 'neutralising', 'reconciling', or 'synthesis'; in Samkhya it is *sattvas*, sometimes translated as 'consciousness', and in Christianity it appears as the Holy Ghost. 'The Third' remains the best name of all, I say, because it modestly suggests we just look further than active and passive and all those other similar pairs of elements that are liable to clash

against each other.

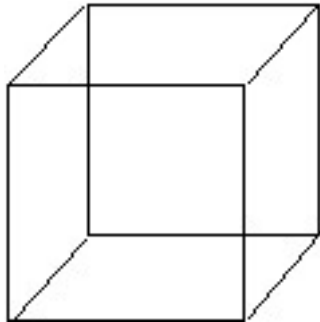
To help you see what I might mean by the Third and why I feel it important, or at least have some chance of doing so if it pleases you, I'll have to tell some kind of story. This is what we must do with words and sentences. I've shown you the picture of a third force and will probably draw a few pictures or diagrams but they won't serve to help you along a path of discovery or through a conversation. 'The Third' says it all but doesn't explain *why* it does. A story might help because it can talk about perils and pitfalls, and double back on itself to change its mind as it goes, or show many points of view. It might also distract if you don't play *your* part of a constant meditation on 'The Third'.

Besides the enigmatic figure of The Third, we will encounter the archetypal figures of The Two and The Three (The Third being a part of The Three) and discover why it is we can never find or insert The Third into The Two to turn it into The Three. People tend to be scared of The Two. It is where all things begin before they even start, but where nothing can happen. It speaks of the original sense and meaning of *chaos*, not as confusion but as absence. It eludes casual thought, and when we discover one it will not let us go. Many people fondly imagine that they can put something between The Twain (the two parts of The Two) that makes everything alright; that fills in the gap between, so that it doesn't hurt so much, and call this 'reconciliation'. This should remind us of the seductions and deceptions of sex.

The Two turned up big time in the field of quantum mechanics and was made much of by Niels Bohr, though long recognized from ancient times as in the Vedic saying: "Two birds yoked on the self-same tree. One sees and acts not; the other acts but does not see". If you have one of the Twain you can't have the other; but only both are true. Bohr named such thinking *complementarity* and claimed it an essential and irreducible feature of reality.

By this time, readers familiar with *systematics* will have registered that we are talking about the *Dyad* or two-term system, and that the Twain are the two 'poles' or *terms* of the two term *system*. The challenging idea we now need is that the nature

of the Twain is not identical with the nature of The Two and we have to appreciate terms and systems differently from each other. The Twain *exclude* each other, while the Two *includes* both of them. A familiar form of the dyad is to be found in optical effects such as the cube shown here, which can be seen as *either* going into the page *or* coming out of it, but not both at the same time.



To add to our troubles, I'm going to talk about the *hyparxis* of such things as terms and systems. Hyparxis was John Bennett's most special word, he claimed to have acquired from Aristotle, and meant *ableness-to-be*. The hyparxis of the Twain exclude each other while the hyparxis of the Two includes both of the Twain at once. One of the Twain, or terms of the dyad, is able to be itself only by the exclusion of the other, and vice versa; while The Two is able to be itself only by the inclusion of both.

It's important to get the sense of the weight and significance of the words used above in one of the sentences: 'at once', meaning *in the same time*. Hyparxis is a kind of time defined by simultaneity.

In quantum mechanics, there are two complementary parameters for things, such as position and momentum. They are utterly bound up with each other (and called 'conjugates'); but, increasing the accuracy of one decreases that of the other; they are exclusive. Positive and negative electrical charges do not make a Twain, nor the north and south poles of a magnet (monopoles exist). This affects our understanding of both religion and technology. God and man make a Twain in Christ as Two (Two natures in One Person): the truth of God's nature as omniscient, omnipotent and so on excludes that of man, as finite in all respects. It is impossible to be truly both at the same time. The hyparxis of man excludes that of God and vice versa, while the hyparxis of Christ (as the Two) includes both. *There is nothing that can be put between the Twain.*

In the realm of technological innovation, the Russian system TRIZ tells us to look for the 'core contradiction' through which we might come to the limits of physics in our inventions. A commonly cited example is that of power v. weight for a machine: to increase its power, it seems necessary to increase its weight. The hyparxis of power leads to increase of size and mass of the machine. But can there be a hyparxis in which there is *both increase of power and decrease of mass*?

I mentioned the seductions of sex. Can there be anything between male and female? In the language I am using, the answer is No: the male and female are yoked together in the hyparxis of sex, but in their own hyparxis cannot possibly understand each other. There is *nothing* between them because there is no betweenness at all. Fornication, homosexuality, procreation do not belong in The Two. Incidentally, a slip of my fingers wrote that the Twain were *joked* together, which is another clue for us.

In ancient cosmologies chaos as the 'yawning gap' precedes the gods, that is, the creation, which is not possible without nothingness. Finding a true Dyad is a tremendous thing, because it stands at the primordial edge of a new creation. The gap is never filled. It is not an actual gap, as between stars, but a gap in principle, of exclusive hyparxis; such as in the ideas of Fact and Value. To introduce anything 'between' the Twain would be to destroy their meaning. There cannot be something like $\frac{1}{2}$ fact + $\frac{1}{2}$ value. All that can be real is a Two in which both are true simultaneously and exactly for the Self or God that we may intimately feel but *never* know.

The abstract and metaphysical are not far away. If one wants something tangible, pick up a coin and toss it: heads or tails! Of course there is a coin with two

sides, but there is still *nothing between* head and tail, no halfway position. The tossing of coin reminds of choice; the Magus in John Fowles' novel of that name points out, 'God does not have to choose. You do!' We say, 'In some other world the other choice was made; it is really the same as this one but not for me in this life.' What is not chosen is as powerful as what is.

Choice itself can be made a choice. Free will and inexorable mechanism exclude each other but the choice of mechanism is the proof of freedom. There is a 'modest exercise' proposed by Joseph Needleman in his terrific little book *Time and the Soul*, part of which is to see that what you are about to do has already happened (and there is nothing you can do about it). By playing the role of one lacking any power of choice, a new kind of freedom is revealed. The *play* of choice is the core of drama and meaning, the word 'play' having to be emphasized because choice is never what it seems. To live the Two of the Twain is not to reconcile the Twain but to enjoy them to the utmost and has inexhaustible shades of paradox and meaning. A man finds himself in the core contradiction of himself and each of us must act out a version of our equal mortality and immortality.

The Twain are not any old pair of quarrelsome items such as Continuous-Discrete, Symmetry-Asymmetry, pairs trotted out amongst dozens of others in a recent book boasting the title *The Complementary Nature* (J A Scott Kelso and David A Engstrom are the joint culprits) which are really old buddies or barely disguised versions of each other. Such pairs easily yield gradations between them and have none of that biting hyparchic strength of exclusion that true twains must have – to make them worth bothering with.

A different reality comes forth when the *between* becomes something rather than nothing; the Twain disappear and the 'Trinites' appear, a 'trinite' being our just coined word for a player in the game of threes, which is not all that bad and serves the purpose of having a word for terms of a triad as I adopted 'twain' for the terms of the dyad, words that say nothing about what these terms are supposed to be like.

It's good to start with an example easily evoked by a picture of something between, such as the oil lubricating the movement of a piston in a cylinder. Such an example is tangible and the Trinites clear: Moving Piston – Static Cylinder – Lubricating Oil. It also indicates that the two elements which the Third is between can engage with each other without the Third playing any part; but we know that when this happens, heat is generated, the metals expand and the movement can 'seize up' and come to a stop. I now jump to the example of an argument in which the two people get nowhere because there is nothing they can relate to together, to support the view that there is something universal here, to do with whether the Third is in play or not, and also helping to define the kind of things Trinites One and Two might be. It seems as if the One and Two are such that, in naked interaction with each other, they generate heat and other similar 'entropic' results; with the Third between they can continue to function, and serve a purpose.

Just to make sure that the categorical distinction between The Two and The Three is clear: in The Two, the Twain *never meet*, while in The Three, Trinites One and Two can and do. When Trinites One and Two meet, they generate an in-between Third by default, but of defective character. It is 'defective' because it is not truly autonomous or independently sourced. It is a *mockery*.

I slipped in the idea of 'purpose' earlier. It is this that makes it possible to speak of authentic and counterfeit or simply better or worse. We know that argument without means of agreement is futile, a waste of energy; as a piston without lubrication expands to stop the working of machinery. Trinites One and Two come together for a purpose but without the Third they will thwart it rather than realize it. Another way of talking this through is to say that The Three comes together in the

hyparxis of the purpose, as in the piston designed to deliver mechanical energy to a crankshaft. The authenticity of this work is in the energy delivered by the system rather than used up or wasted (as in the piston getting hot, etc.).

Gurdjieff talks about this in exotic ways in *Beelzebub's Tales*, as in experiments done on Saturn by bird-beings: they show that when just two of what I call the Trinities come together they produce heat and light, as in our use of electricity, but three coming together do not. With two of the Trinites only, the energy is lost but, with Three, it 'goes inside' aligned with purpose. Whatever the imagery and metaphors, the essential meaning is that a genuine Three is *intelligent*, while the crude clash of Trinites One and Two without the Third is not, a mere waste of energy.

Trinites One and Two tend to 'argue' as I've said and are not complementary to each other; they squabble over the same thing, such as contested territory, or they are as Yes and No in relation to each other. Without the Third, only friction results; heat, light, noise, waste; pollution one might call it. The Third can accommodate both of the others without compromising itself; it has a quality quite served by the word 'translucent' in that the other trinites are visible and in play without any mutual interference. The piston strives to move, the cylinder to stay still; while the oil laminates into layers that slide over each other in a curve of motions from fast to zero. Heat generated is minimized and efficiency of energy transmission maximized. The oil has sooner or later to be replaced, but we feel it is of some essence that does not change with the work of the system.

And so to the concept of *catalysis*: the property whereby some reaction or process is enabled or accelerated by the sheer 'presence' of something that is not itself changed. It may not even be possible to speak in terms of the one trinite influencing the other 'through' the Third; it becomes mystical in the definition of the *Tao* as 'that which does nothing, but by which all things are done'. There are many kinds of catalysis, including autocatalysis (where the Third regenerates itself out of the other two) and examples from physics include the influence of a nuclear mass on the making of particles from photons.

Simple physical examples such as the piston and oil can be pictured as involving a Third that *contains a gradation* from Trinite One to Trinite Two, making it easy to understand how it might work; but other kinds of cases will not be so easy. In general, some concept of the Third taking on and giving up qualities from the other two is needed, as in the electrons shared between atoms to form molecules, where 'extra' ones from one atom are enabled to 'fill in' spaces in another. But paying attention to as many different kinds of examples as can be found leads to some feeling for the 'same' quality in every Third, a wisdom of experience, a sense for the intelligent. Intelligence is the achievement of results without force.

This intelligence is not just some generalized concept or abstract principle; it is manifest in such things as *tools*. I want to shape a piece of wood but my hand cannot do it: it is too blunt and needs protection against the wood. I take a knife as my Third. In the handle, it is held by my hand, and transmits the force of my arm. The handle connects to the blade, which takes the force from the handle and transmits it down to the edge, the thinnest part, producing high pressure on the wood along the line of the blade. Arm, hand, handle, blade, edge, to fibres in the wood form a continuum, the handle-blade-edge replicating the Three in itself as the Third, a replication that replicates in a myriad of ways right down to the entry and direction of the cut in the wood. Here, the word 'continuum' that I have used is to remind of the *hyparxis* of the Three, to emphasise that the three hyparxis of the terms or trinites are in agreement, so that the system serves the purpose for which it came into being.

The practical example of the knife may conjure up experiences in which, for example, the knife 'disappears' either into your hand or into the wood. What is called

'skill' means an agreement of hand and wood, enacted in the knife. The knife is an autonomous element in its own right yet even something more in its movements. It acquires or manifests intelligence in the hand that guides it. You learn to trust the knife *if you have treated it well*.

Now is the time to take another turn in my story and look at the nature of the Trinites. The physical example of shaping wood is a good place to start since most people have had some experience of it. The hand is going for the change of shape, but the wood itself is after keeping itself just as it is; the knife truly reconciles them both, though one is aimed at innovation while the other is aimed at preservation. Most people have read at least of how the skill is to work with the grain of the wood, with the intrinsic structure of the fibres, to minimize tearing and sheer, in achieving a design. In the *Chuang Tzu*, Prince Wen Hui's cook says:

What your servant loves is Tao, which is more advanced than art. When I first began to cut up bullocks, what I saw was simply whole bullocks. After three year's practice, I saw no more bullocks as wholes. At present, I work with my mind, but not with my eyes. The functions of the senses stop; my spirit dominates. Following the natural veins, my chopper slips through the great cavities, slides through the great openings, taking advantage of what is already there.

I'll lay out words for the Trinites like this:

TRINITE ONE	STABILITY	PRESERVATION
TRINITE TWO	CHANGE	INNOVATION
TRINITE THREE	REGULATION	HARMONISATION

The Third transmits or has the character of intelligence and it does not actually 'do' anything; which description obviously evokes the idea of *awareness*, for example, and takes us out of the realm of function (one thing acting on another).

Awareness comes into our story for a number of reasons, amongst which the already stated point is that awareness does not 'do' anything, while making a real difference. It is not a thing; which means that it can be in a gradation of states all at the same time (the range of states Bennett gave the name 'apokritical interval') a veritable 'translator' by reason of this between trinites one and two. Bennett placed awareness between two other factors that he related to Will and Function. There is a state of awareness nearest to will and one nearest to function – I am thinking in this way because of the previous encounter with the Third in the guise of a knife as replicating the Three (the whole system) in itself. It may seem an impossible step to go from knife to awareness, but entertain the possibility; as also to jump (in *exactly* the same spirit) from the hand that holds the knife to will, and the wood beneath the knife to function. This is all according to the hyparxis of the Three, which I can here explain as a kind of *ratio of meaning*. Obviously, a knife is not aware; but the relationships I have briefly explored can be the same, no matter what they consist of (the lesser hyparxis).

The Three including awareness can lead us into an understanding of a trinite in terms of the others. This is especially of interest in approaching the meaning of *will*, which we can do through a movement out of function through awareness. It would be quite possible to stop there and say that, 'Will is the trinite that stands in the other role to awareness than function'; it would then assume the character of something like the 'unmoved prime mover', or what is more than movement that is totally without movement. In traditional scholastic philosophy, these concepts remind us of the idea of *act*. The change or innovation does not engage with the world of function or mechanism (I am taking preservation to correlate with mechanism in this context) 'directly' at all (which, after all, would be the impossible condition of freedom acting somehow on mechanism) but only 'through' or 'with' awareness. Awareness

then appears as sort-of functional as well as sort-of willing, which Bennett considered was reasonably addressed by the term *energy*. It's tantamount to taking examples like running car as our guide: the driver directs the car only in so far as the engine has (the right kind of) fuel. Ouspensky described how different functions require different gradations of awareness, for which he used the metaphor of light.

Awareness leads us into all sorts of directions; and so it should. Another avenue to briefly explore is the correlation of it with *air* and we can return to our saggy ball to help us understand that what is at stake is not only the yielding quality of air but also the *kind of togetherness* involved that the ball illustrates. Awareness is not like a gas dispersing into space; it is a connecting power. In Hinduism, air is associated with the words *vayu* or 'void' and *prana* or 'vivifyingness'. We need to add a third word, such as 'communicating' (remember that the Third reflects in itself the Three). The ball in the illustration is more than air because it holds itself together in a way that enables the other two trinites to do the same. A movement here leads to one over there; a pressure at one point transmits to several all at once over the surface; a firming up in one region is related to a softening in another. By allowing the ball to lose its *elasticity*, it becomes *plastic* in nature. Though the idea might be hard for you to swallow, this means that the ball is *more intelligent* than if it were fully blown up and elastic.

A hand resting on the ball can now be subtly worked on by another hand, in a way impossible if the hands directly, or *only* directly, interact. Any sense of 'aggression' by the one hand towards the other is ameliorated and even transmuted and the recipient hand plays an equal part with the active one.



The recipient's hand on the ball



Agent and recipient connected through the ball



Multiple action



Direct and indirect together

The seeming mysteries of metaphysical words such as 'being' and 'will' are not so far away from the ball and its work. Gurdjieff invented the word *triamazikamno*, which people have translated as 'I put three together and do' and presents the 'three

together' in the middle as the reconciliation that enables something to be done. The trick is, just as in the case of the saggy ball, to 'do' as little as possible. In every realm, the short-circuiting implied in such expressions as 'I think' is a mistake and evidence of lack of intelligence. The reality is more as if 'I give myself into the making of the togetherness from which a function emerges'. Will cannot 'touch' function and 'make' it do something; it is more that will is in need of a function that it calls forth, a calling that is only heard through the togetherness, the being, of the Third. As John Berger says in one of his essays, 'Reality is always in need'. And he speaks of the role of poetry:

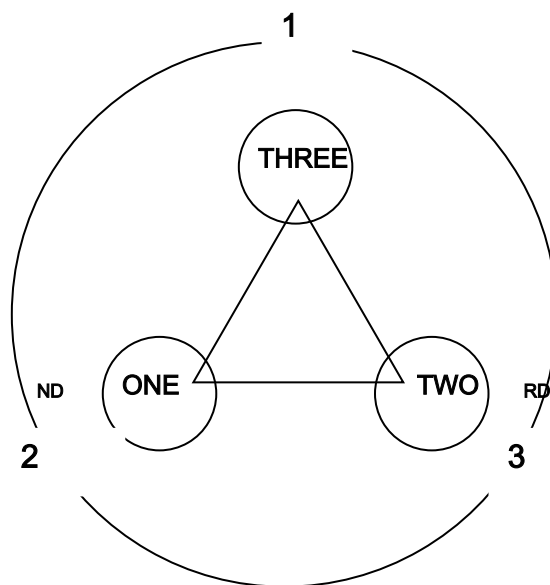
Poetry can repair no loss, but it defies that space which separates. And it does this by its continual labour of reassembling what has been scattered. . . to discover those correspondences of which the sum total would be proof of the indivisible totality of existence.

Mention of poetry leads me on to speak of the 'poetics' of systems. I start with the ancient tradition of such texts as *sutras*, those pithy statements perhaps close to the nature of equations, which are preserved together with *commentaries* on them, that strive to explicate what the sutras have in the implicate. In the *I Ching*, there is abstract symbol, image and commentary but the principle is much the same. I want to point out that a *system* is much the same as a *sutra* and, equally, might leave us blank or asking, 'But, how does it work?' In the case of sutras, such as those of Patanjali on Yoga, the commentaries take up the meaning of each critical word – akin, I would like to say, to *terms* of a system – delving into them, their grammar, this history, their development, their relation to other words, including those occurring together with them in the *sutra*. The task of the commentator is to show how the several critical words come together to make the meaning of the *sutra*.

Using the word 'hyparxis' I have used before, I say that the commentator operates on the level of the hyparxis of the words (terms) to explicate the hyparxis of the *sutra* (system). Bennett attempted to spell out the method in his treatment of the triad (The Three) by constructing a combinatorial grammar of the three terms, inspired somewhat by the Samkhya system of three *gunas*, with one term in first place, another in second and so on. This is a picture of how it works: each term can be made the starting point or 1st and there are two directions for each, hence there are six in all. I suppose that 1st place means that that term is taking the role of *will*, the 2nd place that the term has the role of *being* and the term in the last place has the

role of *function*. I relate such an approach to poetics in that *poesis* means making or production; but also because Bennett's calculus is also a poetics, a formal procedure that might help us create some meaningful stanzas.

Making the hyparxis of the Three is a wonderful thing but not mystical or ethereal at all. A simple equation such as $P.V = k.T$, which expresses the coherence of behaviour of an ideal gas, is an hyparchic Three. Three people who are connected together can make a Three through coming together *in the hyparxis of the same moment*. This



is happening all the time but rarely noticed. What does this *making* of the Three mean?

The Three is Redemption, Healing, Love, and Intelligence. Its hyparxis cannot be replaced by any one of its three elements, because it is only in their mutual co-operation that the purpose is served. It is in the Third that we intimate the whole, but if it is taken out by itself it is just like the saggy ball, of no particular consequence. That which neither strives nor resists is the magical ingredient that enables salvation. In thinking, it is the Thought that neither asserts nor denies and, in particular, has no authority other than itself; and, obviously, for the most part, liable to be disregarded as unimportant. When it is given space, the particular moment of the 'all' flows and comes together according to its hyparxis.

I've tried to take you from the Dyad into the Triad. Perhaps this is the meaning of the Fall in Paradise, when Adam and Eve are driven forth and not allowed back, thrown into a world of travail and procreation; but which is also a world where salvation is possible, where Christ may come to earth and walk among humans as one of us. But you must be asking about what comes before and after in this story of mine.

Between the Three there is nothing. But if, then, this nothing becomes something, it is the *Fourth*. As the Third was given the name 'reconciling', the Fourth can assume the name 'creativity' and takes its place in the *Four*. I propose this in the spirit of the idea expressed in the words *creatio ex nihilo* (creation out of nothing) but also to signify a meaningful linkage with the fundamental ideas of the philosopher A. N. Whitehead on 'creative novelty'. It is also a testament to the alchemical *recalcitrant fourth* and the 'missing guest' in Plato's *Timaeus*. As you might guess, the story will continue further because there is the *quintessence* to come. If you are still wondering about what might be the Two of the Dyad, consider that of the Twain, the one is everything except itself while the other is nothing but itself, and you make your own choice!

The Third can be thought of as very Holy but in *a very necessary way* it has to be most ordinary. If we are all the time looking for some holy force coming down from heaven to help us out of our misery we are idiots. We miss the magic in the world around us and in each other; while, just maybe, some useless and discarded object will make all the difference. I finish with this story, recorded by Italo Calvino:

Once there was a farmer who was devout, but who prayed only to St Joseph. When he died, St Peter refused to let him into heaven. 'No question,' said St Peter, 'you forgot about Christ, God the Father and the Virgin'. 'Since I'm here,' replied the man, 'could I have a word with Joseph?' Joseph appeared, recognized the farmer, and said: 'Come in, make yourself at home.' 'I can't,' complained the man, 'Peter here has forbidden me to enter heaven.' Joseph turned to Peter and angrily remonstrated: 'You let him in here, or I'll take my wife and son and we'll go somewhere else to build paradise!'

Note: Special thanks are due to Ilana Nevill who worked with the saggy ball and me during some wonderful days in the Pyrenees. Ilana is an advanced practitioner of the Feldenkrais method and has written an article for our newsletter on her work (see xxxc) . Feldenkrais often met with Bennett and was a great admirer of Gurdjieff.

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