

# Non Local Effects in The Process of Dying: Can Quantum Mechanics Help?

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## **Abstract**

Studies in hospices and nursing homes have shown that a number of different phenomena are associated with the mental states of the dying. In the days or weeks before death, the dying person may have premonitions, often unrecognised, of their impending death, or visions of dead relatives who they say have visited them. Relatives who may be spatially distant from but emotionally close to the dying person may experience an inexplicable awareness of them at the time of their death. Other phenomena reported at the time of death are clocks stopping, mechanical malfunctions, strange animal behaviour and shapes seen leaving the body or light seen surrounding it. Although these phenomena are well recognised by both carers and relatives, they are seldom discussed because they are difficult to explain in terms of any recognised medical model. A possible alternative hypothesis involves non-local effects, which would require a quantum mechanical explanation. This is supported by parapsychological findings, which are not always accepted by mainstream science. The hypothesis suggests that as death approaches consciousness becomes loosened from the brain-mind structure and this is the prime mover for the non-local effects that are noticed at this time.

**Key Words:** death bed visions, deathbed coincidences, non-local effects, numinous reality, telepathy

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## **Introduction**

Death in our society has become both a medical failure and a social taboo. Freud's paradox - that when we discuss death, we always discuss somebody else's, never our own - is almost as true now as when he first formulated it. This negation of death within our Western culture has almost reached the point where most of us prefer to ignore the fact that we will die and secretly hope that medical science will advance to the point where we may no longer have to face the ultimate degradation and suffering leading

to the intensive care unit. This article gives us more hope that dying may not be the terrible process that we think it is, and even that there are phenomena just before and at the time of dying, which indicate that although dying is the switching off of the body, it may not be the final switching off of consciousness (Fenwick and Fenwick, 2008). I must stress that this is a hypothesis, although data driven. Please regard it as such and let us build a new model of dying.

## **Non locality**

This new view of dying is associated with the concept of non-locality, those physical events, which seem to occur independently of time or space, or both time and space. In the 1980s and 1990s Bob Jahn at Princeton

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University carried out a number of experiments with Brenda Dunne, showing that random number generators could be altered by the mental intention of an operator who had set out to change the distribution of their random noise source. (Jahn and Dunne, 1986). This could be achieved for electronic noise with the shifting of the population mean. It could also be done using psychokinesis (PK) to move the distribution of a set of balls, which fall through a series of pins randomly deflecting the path of each ball into different bins. (Jahn *et al.*, 2007). There has been considerable criticism of these experiments and the scientific community divides into a sceptical reductionist group, and a rather more open-minded group who feel the data is more persuasive.

If these experiments were valid, it would suggest that consciousness is a field rather than being generated just by the brain. Dean Radin has shown that changed consciousness can alter the randomness of electronic noise sources. He has published a number of papers suggesting that large-scale events such as the Oscars ceremony, watched by many Americans, can so focus consciousness that this can lead to the deviation of random noise generator distributions in machines placed at various sites throughout America (Radin, 1997; Nelson *et al.*, 1996). These findings have again been challenged scientifically, but the data does seem to point in this direction.

Further evidence to support non-locality comes from telepathy experiments, both in the Ganzfeld and telephone telepathy. In the Ganzfeld situation, a video is shown to a sender who tries to 'beam' information about it to a recipient who is in partial sensory isolation in a remote location. The recipient ('later' deleted) is then asked to look at four videos and choose the one, which was beamed,(delete commas) to him in the experiment. The results of Ganzfeld experiments are highly significant, suggesting that one mind can influence another at a distance. Again, there is scientific dissent.

Telephone telepathy makes use of the principle that two people in an emotional relationship are somehow linked through a non-local field. When one intends to

telephone the other, that person may become aware of the intention and know when they hear the telephone (delete that substitute who) is ringing. The telephone telepathy experiment involves five friends. When one telephones another, the chance of this friend guessing which of the other four is the caller at a chance level is 25%. Actual results run up to 40%, showing a very strong effect. (Sheldrake and Smart, 2003). Here it is clear that the characteristics of the non local field are intention and emotional linking. These authors have also carried out a similar study of email telepathy (Sheldrake and Smart, 2005). Not all scientists accept these findings, but (delete now) the data has since been replicated by another group.

Precognition is reported in a number of experiments, which suggest that knowledge of future events can be obtained. The most studied of these is pre-sentience. A subject is given either a frightening or neutral visual stimulus and his emotional response is measured. The brain then seems able to forecast whether the next stimulus will be pleasant or unpleasant. The measurement uses the *galvanic skin response* (GSR - finger sweating), the slide sequence is truly random, and the slide is chosen at time zero when the trial begins, so there is no way of knowing before this point what the slide is likely to be as it has not even been chosen. This data is well replicated and suggests that non-local information about the future can be received. This has not been accepted into the scientific mainstream – yet! (Radin, 2006).

The next important influence on the non-local field is transition, by which I mean a pathological change in the linkage of consciousness so that non-local effects may occur. The clearest examples of a change in consciousness leading to a transition experience are those situations where the individual is brought close to the borders of death, the near death experience. The tunnel, the perception of light, the Being of Light, the life review, meetings with dead relatives, are all part of the Western near death experience. These experiences have a clear cultural component, but also a number of features, which are trans-cultural. In the West, when the individual meets a border, which they know is a point of no return, it is

usually a door in a garden wall, a small stream, going further down a path, etc. In Japan, the psychological barrier is usually a river, often with a dark and foreboding character (Osiris and Haraldsson, 1977).

The near death experience can be triggered by any overwhelming physical illness such as meningitis, childbirth with haemorrhage or cardiac arrest. The gateway to the experience does not matter, as the experience is the same whatever the circumstances. The important point is that this numinous reality is experienced in response to a transition in consciousness which may be very severe, even going as far as the deep coma which occurs in cardiac arrest. However, in cardiac arrest brain, function of sufficient complexity to support consciousness is absent, so some other explanation for the occurrence of and the memory for these experiences are needed. One theoretical possibility is that these experiences are non-local and thus occur in a domain (if we can use a spatial metaphor) which is beyond space and time. (Fenwick and Fenwick, 1997)

### Summary

These assumptions depend on the involvement of some non-local effect. Non-local effects seem to require at least one of a number of factors. (Fenwick *et al.*, 2007). One is intention, next emotional linking, thirdly a transition in consciousness and finally, an entrance into a numinous reality. Quantum mechanical non-local effects are a possible mechanism, perhaps in association with multi dimensional string theory. It is worth repeating that not everyone agrees. Here is a comment from Professor Clark who was working mainly on Einstein's theory of gravitation at the universities of Cambridge, York and Southampton, where he was professor of Applied Mathematics, "...I think you are being over optimistic on the quantum side, Peter, to say that *"There are certainly a set of non-local phenomena which suggest that mind is extended, but none of this goes beyond what would be explicable by quantum mechanics."* It is really quite difficult to explain standard psi experiments quantum mechanically while keeping to minimal assumptions needed to get QM (*quantum mechanics*) complete..."

Chris goes on to say, "Chalmers has indicated that consciousness needs to be supposed as an irreducible aspect of some physical systems. This places a selection criterion on the observable universe: only those universes which contain conscious systems are observable. This then defines a completion of quantum theory which produces large-scale quantum effects." Therefore, ideas in this area are still evolving. (Schwartz *et al* 2005).

With the concept of non-local factors in mind, let us now consider the dying process. The hypothesis suggests that the major factor leading to a change of consciousness is the progressive loosening of consciousness, which the dying undergo, a concept that comes from the Tibetan book of the dead.

I have mentioned that this hypothesis is data driven. We have carried out studies in hospices and nursing homes in England and Holland (Brayne *et al.*, 2007; Fenwick *et al.*, 2009) looking at the mental states of the dying. This has been a carer study. We have asked carers of the dying, both retrospectively and prospectively, to answer a questionnaire which lists a number of mental states and phenomena which are not uncommonly seen before and at the time of death. An indication of the frequency with which carers found these phenomena in the prospective study of one year is given below. (Osiris and Haraldsson, 1977)

### The dying process – stage premonitions

Our study did not include a question about premonitions, so we have no data about the frequency of this phenomenon.

The Dalai Lama suggests that about two years before death the individual may have a premonition that death will occur in the not too distant future. He suggests that changes in breathing and behaviour are the harbingers of death, which, if the individual is sufficiently sensitive and has been taught about dying, he will be able to pick up. We have a number of accounts of premonitions, but in our culture, as opposed to that of the Dalai Lama, these usually occur days or weeks before death and are seldom recognised as such at the time. The following accounts show the major features.

*“My sister ..... told me that our mother and father had visited her again. They had stood at the bottom of her bed and smiled at her.... She was talking to them but they were not answering her just smiling. My mother had died in 1953 and my father in 1998. I was quite upset at the time because I wondered why they had not come to see me!.... About a month later, she died. Now, if I'm not feeling too well and wake up in the middle of the night, I always check whether anybody is at the bottom of my bed.”*

This information about a future event, even if it is not recognised as such at the time, is thus non-local and raises the possibility that a shift in consciousness possibly by a loosening of the mind/body linkage, has started to occur. If that hypothesis is correct, then the leaking of non-local events into ordinary awareness would be one of the predictions.

### **Stage deathbed visions**

***54% of carers reported visions of dead relatives or religious figures who appear to come and sit on the dying person's bed and have the express purpose of taking them away.***

Interviews we have carried out in hospices and nursing homes suggest that in the weeks before death the dying are 'visited' by dead relatives. These visions are highly structured and appear to the dying in three-dimensional space. The dying will look to a particular corner of the room and address their comments to the 'visitor.' Rarely the visitors are seen by carers or relatives, most usually by children.

*“One lady was fading at the age of 97, just slipping away. She was talking to someone, we could see her doing it but no one was there. We asked her later who it was and she said it was her sister Betty who had died 6 months previous. She said Alice Betty would come for her the next day at 2.30pm. I started work the next day at 2pm and asked 'is she still here'? I was told she was dying and as I was new to the job, someone would stay with me and see me*

*through the death experience. Just before 2.30pm, she opened her eyes briefly, whispered Alice Betty, held out her hand and passed away peacefully. I saw nothing, felt nothing cold, but to be on the safe side said, 'Hello Betty.’”*

The data from the two studies we have carried out suggests the most common visions – 25% of 118 visions - were of parents. 17% were of persons unknown often spiritual, 14% were greeted with joy but the dying were to ill to speak and identify them, 14% were spouses, 9% siblings, 3% grandparents and 14% other relatives. These visions evoke very positive feelings in the dying, who smile, seem pleased to see them and communicate with them in a positive way. The visitors often indicate that they have come to be with the dying and look after them as they transit in the death process. Sometimes they will set a precise date – for example saying they will be back on Tuesday - and occasionally even give a time. The dying are sometimes reluctant to accept this deadline, often because someone they very much want to say goodbye to has not yet arrived and sometimes they are allowed this short extension of life. We also have one or two accounts of a dying person refusing to go, though unfortunately this makes little difference to the visitors who take them anyway.

*“My sister heard Dad talking very crossly to someone in his room. Fearing that one of her children had gone in and upset him she went in to see what was going on. Only Dad was there in his bed. My sister asked him who he was talking to. He replied “I was telling the angels that I was not ready to go yet!” He knew I was coming and was determined to stay alive until I had seen him.”*

The hospice staff recognises that when a patient reports such visits they are near to death. Interestingly, after such a visit the language of the dying changes to 'journeying language,' they will say for example, "my uncle is coming and I will be going with him".

*“She told us that she wouldn't be there the next day as "these people" would*

*"pick her up when she fell and take her on a journey"*

*"My mother told me shortly before she died that she saw my late father arrive on a white horse with the intention of 'collecting her', but she tripped up the horse and refused to get on the back of the horse with my father."*

Do the images of these dead visitors arise in memory or are they indeed true non-local phenomena? In favour of them being non-local are the few accounts we have had of people who have had visions of relatives they thought were still alive though they had in fact died. The surprise with which these visitors are greeted suggests that expectation and the need for comfort cannot easily explain such cases. Hospice nurses Maggie Callanan and Patricia Kelley describe the case of a Chinese woman, a Buddhist, whose husband had died some years before.

*"... 'I will join him soon', she said, but one day she seemed very puzzled. 'Why is my sister with my husband?' she asked. 'They are both calling me to come.' 'Is your sister dead?' I asked. 'No, she still lives in China', she said. 'I have not seen her for many years'. When I related this conversation to the daughter she was astonished and tearful. 'My aunt died two days ago in China', Lily said. 'We decided not to tell mother....'" (Callanan and Kelley, 1998).*

If we accept the mechanism that I have proposed, as we are now coming closer to death, consciousness is now beginning to loosen in a significant way, and this shifting consciousness will make non-local phenomena much stronger. It is interesting to compare these apparitions with the visions of relatives seen in the near death experience and their appearance in the alternative new reality (see below) which the dying often describes. It suggests that these phenomena are all part of one continuous process of dying.

**Stage – moving to an alternate reality  
48% of carers said they had patients' reports of a sense of going to and back from a different reality as part of their dying process.**

This stage usually occurs fairly close to death, usually in the week before. The dying report that they are becoming aware of a transcendental reality, and there are common features in many of the experiences they describe. Their descriptions are very similar to those of people who have a near death experience. The area to which they go is full of light, love and compassion; sometimes there is a focus from which the light appears to be emanating; it is described as brilliant but does not hurt the eyes. Some people describe the area as being a 'waiting area' where there are spiritual beings and dead relatives who are there to help the dying through the dying process and take them on in their journey to elsewhere. The dress of the spiritual beings and often of the relatives is very similar to that described in the NDE. The spiritual beings are usually wearing long flowing white gowns and radiate light. The relatives are recognised and welcome the dying person.

*"My father was at his (my grandfather's) bedside, deeply distressed, but my grandfather quietly said to my father, 'Don't worry, Leslie, I am all right, I can see and hear the most beautiful things and you must not worry.' Then he quietly died, lucid to the end."*

As death draws near, the dying often, spend longer in this alternative reality. We have had comments, which suggest that in some people, the alternative reality takes over from that of this world and they express surprise when they recognise that they are still 'here.'

One argument put forward to explain this transition is that it is a reflection of religious belief. This does not fit the data. Many people who see it say they did not expect what they saw, and we have accounts from family members saying that the experience is not concordant with their actual beliefs.

*"I was nursing my friend who had definite views that there was no after life. In her last couple of hours she became very peaceful and arose from her unconsciousness periodically saying clearly and happily such phrases as 'I will know soon', 'come on, get on with it then, I am ready to go*

*now', and 'it is so beautiful'. She would immediately lapse back into unconsciousness after uttering these phrases. She was very obviously content, happy and at peace. It was a wonderful experience for her partner and me."*

This movement to an alternate reality occurs close to death when the loosening of consciousness has increased. The fact that it is so similar to the alternate reality seen in the NDE again suggests that the two are part of the same process. Clearly to ask where this reality is makes little sense as it is a non-local domain and beyond space and time.

### **Final stage – phenomena surrounding the moment of death**

At the moment of death, when breathing stops and consciousness goes through its final loosening processes, the strongest non-local effects might be expected to occur. This does seem to be the case as a variety of phenomena – deathbed coincidences, light surrounding the body, shapes seen leaving the body, mechanical malfunction such as clocks stopping, bells ringing or TVs malfunctioning, strange animal behaviour – have all been reported at this time.

### **Deathbed coincidences**

***48% of carers note coincidences, usually reported by friends or family of the person who is dying, who say the dying person has visited them at the time of death.***

Deathbed coincidences, from our data, are one of the most frequently reported ends of life phenomena. In such a coincidence, someone emotionally close to a dying person has an awareness of him or her at their moment of death, even though they may not know they are ill and be far distant from them. The form that this takes depends on the mental state of the receiver. If they are awake then they may very occasionally hear the person's voice, or feel some slight physical contact, like a hand or a gentle push, but more usually it is simply a strong emotional feeling, which may be specifically related to the dying person – perhaps that something has happened to them – or a more general feeling of intense unease, which has to be acted upon. We have reports

of people rushing to the telephone to find out if everything is ok at home.

*"Sadly my brother was killed in a car crash some 20 years ago now. I had been at work intending to work till 5 o'clock. At 4.20pm I was so uneasy and began getting cross with myself I just packed up and went home despite really needing to stay at work for one reason or another. I found out at 2.30 am the next morning that my brother had been killed instantly by a drunk driver at 4.20pm."*

If the receiver is asleep then the contact comes in a dream. The dream experience is usually narrative, much more specific, often with an image of the person who has died and usually with a message. The message is one in which they say they are 'all right' the dreamer has no need to worry about them, and then the dream fades. These dreams are recognised as being extremely important and very real. The next morning the dreamer either will try to contact the person in the dream, or will receive a telephone call telling them the person has died, usually at the time they had their dream.

*"I had a vivid dream. Mum walked into my dining room wearing shorts, walking shoes and a fleece jacket; she was perfectly well and looked younger than she had done for many years! ... I ran across and shouted "What are you doing here? You're better!" . Mum looked at me and said "I am ready to leave now." I immediately knew that she meant that she was about to die and 'let go'. I looked at her and I said "But we haven't said goodbye" and I tried to kiss her, but my face passed through her face as if she wasn't really there. We both looked up and said quietly "Please God, just this once!" I was then able to kiss her properly and she disappeared from the dream.*

*I awoke with a start and looked at the clock in the bedroom – I knew that what I had dreamt was significant. It was 2.15am. The next morning I got up at 5am, anxious for news. The phone rang at 7.00am – it was the Cottage Hospital ringing to let us know that mum had died at 2.50am , just half an hour or so after my*

*dream... Of course, you could say I wanted mum to come and say goodbye and I needed that closure. Whatever the reason for the dream, it will always be a special moment in my life."*

In our survey, these deathbed coincidences usually occurred within ten minutes or so of the time of death. They seem to be driven by the dying person as we had accounts where the dying person had retained strong emotional feelings for an ex-partner. Although these were no longer reciprocated, the partner still seems to have remained on their visiting list. Relatives who had had a dream in which the person has told them they are all right say they have derived much comfort from these visits.

### **Light**

***35% (55% in the Dutch study) of carers reported a radiant light that envelopes the dying person, may spread throughout the room and involve the carer.***

Light seen either surrounding the body at the time of death, or shining strongly from it, is reported by carers of the dying. We have accounts of relatives who have noticed the light and sat in it, who report that it is associated with love and compassion and is very similar to the light described people who have had NDEs. Others describe the light as being spiritual in nature and sometimes when it is seen radiating from the face, they describe the dying person as being 'transformed.' Not everybody sitting in the room will see the light, suggesting that there may be an individual sensitivity to the phenomena, which are occurring. Some people see little pinpoints of light flitting about over and around the body rather like sparks. These are always described as spiritual forms:

*"...towards the end of his life, Mike ...would often drift off to sleep and come back to us and say that he had seen a strong light, but that it was not time to go yet"*

*"I could see tiny lights like little slits which kept coming and going, then, starting at the back of my head and slowly working to the front, I felt happiness and there was a bright*

*light, getting brighter and brighter until it got so bright I could not see. .... Margaret had passed away in those moments."*

### **Something leaving the body**

***Question not included in the study questionnaire, but many examples reported to us and are in our database***

The Dalai Lama's tradition is that the dying will experience various phenomena as they approach their time of death. First, they will see a mirage, then smoke, then fireflies or sparks, like the bottom of a wok over a naked flame, then the flickering flame of a butter lamp. At this point breathing stops. Then they see orange, like an orange sky, then a white sky, then a living blackness, followed by a period of unconsciousness which ends when the dying come into the clear light, a level at which it is said that they can then get a Buddha's light body. Although these are said to be the subjective experiences of the dying, it is interesting that the accounts we have been given of 'shapes' seen leaving the body to some extent echo the first phases of this process, as do the sparks of light described above. Most of the people who give these accounts describing the mirage or the smoke, say it is not really like smoke or a mirage, but these are the best words that can be found to describe the experience. It is difficult to know how common these are, they are not often reported and when they are seen it is usually only by one or two people present.

*"I saw....odd tiny sparks of bright light emanating from around my brother's body. Not many, just 2 or 3 very brief instances. I did not mention this to anyone else present. However, my brother's wife noticed the same thing and mentioned it, so I told her that I too had seen this."*

*"As he died something which is very hard to describe because it was so unexpected and because I had seen nothing like it left up through his body and out of his head. It resembled distinct delicate waves/lines of smoke (smoke is not the right word but I have not got a comparison) and then*

*disappeared. I was the only one to see it. It left me with such a sense of peace and comfort. I don't think that we were particularly close as my sister and I had been sent off to boarding school at an early age. I do not believe in God. But as to an afterlife I now really do not know what to think."*

**Feelings of presence**  
**Question not included in the study questionnaire, but many examples reported to us and are in our database**

Often reported by carers and relatives after a death is a feeling of the 'presence' of the dead person in the room, as if they remain. After a variable time this feeling disappears and the body now appears to be 'empty' and quite dead, as if the person has finally left.

**Spiritual Feelings**

It seems that dying can be a very special time, particularly for the family. Around the time of death there are reports of very strong feelings of love and compassion in the room of the dying, which help families to reconcile, and are very comforting to both the dying and their carers. The feeling is strongest in hospices or units, which are specifically dedicated to the spiritual care of the dying. In these units, dying is seen as a very special process and within an environment of spiritual care these feelings of love manifest. Can this be seen as the leaking back into this reality of features of the other?

**Mechanical malfunction**  
**33% of carers reported synchronistic events such as clocks stopping at the time of death.**

High on the list of odd phenomena at the time of death are reports of clocks that stop at the time of death. These clocks always have some personal link with the dying. There are numerous anecdotal accounts of this, perhaps the best-known being the old song about 'My Grandfather's Clock', which was based on two brothers in the 18th Century who possessed a long case clock which, unusually for that era, kept excellent time. When the first brother died, the clock started to run slow, and could not be re-timed, and when the second brother also

died, the clock stopped altogether. We were interested to know if it was only mechanical clocks, which stopped, or whether modern digital ones responded in the same way. From the many clock stories we received it is apparent that clocks of all kinds, including electric clocks, have been seen to behave in this way, and stop so reflecting the time of death.

Other reports are of TVs malfunctioning in the rooms of the dying, and alarms sounding or bells ringing for no apparent reason.

**Odd animal behaviour**  
**35% of carers noticed the symbolic appearance of an animal, bird or insect, near or at the time of death.**

Birds making an unexpected appearance on the windowsill of the dying have been reported. Often there are cultural associations with these phenomena, such as the traditional appearance of black butterflies in the Phillipines at the time of a death, which was reported by Phillipino carers (Brayne *et al.*, 2008).

No question was asked about animal behaviour in our study, but we have numerous accounts in our database that suggest some non-local phenomena may occur when animals have a special relationship with their human owners. Domestic animals are often reported to behave strangely at the time of their owner's death, for example dogs howling and cats in nursing homes that seem to be aware of approaching death and choose to sit on the bed of anyone who is about to die (Dosa, 2007). A recent account of the funeral of a Zimbabwean farmer who had had a special interest in and relationship with the wildlife around his home described the unexpected appearance at his funeral of two bull elephants that wandered through the crowd to the coffin and sniffed it long and intently (*The Times*, p.93, May 8th 2010)

**Conclusion**

The theory predicts that non-local effects will manifest themselves particularly strongly at the moment of death, as consciousness finally separates and the veil between non-local reality and the reality of our world is transiently lifted. It is reported that at the



moment of Jung's death, his favourite oak tree was struck by lightning, which would certainly be a strong non-local effect! Strong non-local effects such as this, however, are seldom are not reported on a daily basis. Is it possible that advanced spiritual development in such a great mind, as Jung's would create a particularly noticeable disturbance?

The difficulty in this theory is to provide a scientific basis for consciousness loosening and the triggering of non-local phenomena. Chris Clarke has suggested that if consciousness is included in a model of the universe, then quantum mechanics is completed and macro quantum events are possible. However, whether this would be sufficient to form a scientific basis for the interchange of effects at the time of death between our world and a non-local domain is a matter for the quantum mechanists. Do we need to invoke the multi-dimensional fields of string theory?

For humans, the dying process seems to be very special. Intention, emotional linkage, a transition in consciousness and an

entrance into a numinous reality, the requirements for non-local events, all occur at the time of death. Dying seems to be a state in which non-local features can manifest, but more research is needed to gain a better understanding of it. One avenue to explore and perhaps verify the non-local nature of the dying process would be to place random number generators in the rooms of the dying to see if these deviate from randomness during the approach to and at the time of death when the major non-local effects we have described here might be expected to occur.

I would be very happy to be contacted by any physicist who felt that this theory could be taken further or indeed, who felt there was no future in it!

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