Up to this point, we have talked about generalities; now it is time to get specific, or more to the point the action of the brain in paranormal events. For those of you who might be tiring of my constant references to James and the ASPR experiments a century ago, the following will give you a better taste for the level of conceptual thinking that was going on back then and how it has expanded recently. This is not an endorsement of sciences embracing of what we call transliminality, nor are we surrendering to those who might suggest our work is explained wholesale by such theories. The good news is that someone is actually giving study time to the expansion of James' work and that of later colleagues.

The concept of transliminality had its origin as the adjective "transliminal" and in related terms in the late 19th and early 20th centuries with the work of William James, F. W. H. Myers, and F. Usher, and E Burt. It later received elaboration at the hands of Harold Rugg and Donald MacKinnon.

Transliminality, by definition is the tendency for psychological material to cross thresholds into or out of consciousness from the subliminal, the supraliminal, and the outside world. Many correlates of this variable have been discovered, especially belief in and experience of the paranormal and the anomalous, as well as psi itself. Transliminality also correlates with psychopathology, and it is hypothesized that high transliminality can lead to psychosis, although "happy high transliminals" do seem to exist. The purpose of this article is to describe the concept of transliminality, its origins and antecedents, the evolving ideas about its nature and constituents, and the uses to which it has been (and can be) put, as well as the handful of criticisms to which it has thus far been subjected.

These findings validate the suggestions by James that some mental phenomena share a common underlying dimension with selected sensory experiences (such being overwhelmed by smells, bright lights, sights, and sounds). Low scores on transliminality remain correlated with "tough mindedness", as well as "self-control" and "rule consciousness," whereas high scores are associated with "abstractedness" and an "openness to change" on that test. An independent validation study confirmed the predictions implied by this definition of transliminality, but does not include field studies of a paranormal nature, nor offers a method to study it in such environments.

Enter Michael Thalbourne who suggests that we occasionally have insights or feelings which seem beyond commonsense. Is it coincidence, something paranormal, or something else? Dr Michael Thalbourne is a fellow from the University of Adelaide. He suggests it's 'transliminality' or a leak from the subconscious. So how can we make controlled use of such abilities?

According to Thalbourne in the New Science magazine, sometimes, something pops through because it's stimulated by something in the environment. "I mean for example if I light a candle a kilometre from here and ask you to see it, you're not going to have very much luck. But the closer I bring it the more is the activation in your brain and at a certain point which we call a threshold you will start seeing the candle flame.

Likewise for material in the unconscious it's got to reach a certain level of activation before it crosses its threshold and appears as a conscious experience in what we sometimes call the super-a-liminal," he explains.

Thalbourne says that in one experiment at Goldsmith College in London people were given subliminal level stimulation of pictures of cards, in particular ESP cards. Based on that test of transliminality, which is a questionnaire that has 29 questions and can be convert into a score; above 30 is a high transliminal person, below 20 is a low transliminal person and in between is people who are in the middle who are not really here or there. And what they found was that high transliminals tended to pick up on this subliminal stimulation whereas low transliminals, it literally went over their heads. They did not perceive it.

"Now in studies we've done at Adelaide we have found that people high in transliminality do better at ESP tests. Goldsmith college found that their people scored at chance and there's oodles of ways of explaining that. One way is to say parapsychological experiments don't work very often so this was just one case where it didn't work. And it's an extraordinarily difficult thing to elicit ESP in the laboratory. Every day people talk about coincidences, dreams come true, possibly even seeing an apparition or something and all these are very interesting anecdotes but for the mainline scientist what they want is in particular the repeatable experiment where you can give a particular paradigm and be fairly sure of getting results from it. "Parapsychology has never managed to produce something like that which has lasted. I say lasted because there are often new technologies, new techniques of testing that come along and they work for a while in the beginning but the more you go on with them the less successful they become. And that's called the decline affect and that happens even within a particular person like a particular person may be very good in the beginning but as time goes on their scores decline also. So the Goldsmith outcome could have been just one of the very typical sorts of outcomes you get in parapsychological experiments. Even though we don't get results very often we think that it's very worthwhile, very interesting even given our scientific assumptions about the world, surprising if we do get significant and genuinely significant results," he explained in the article.

Thalbourne explains in the article about his own testing in parapsychology as a possible sensitive using Kundalini. "Kundalini literally means the coiled one and refers specifically to a snake as it's about to jump up and bite you. Kundalini is supposedly an energy at the base of the spine which under certain circumstances can be activated and shoot up your spine to your head and give you an experience of either the paranormal or the mystical. But that's just a very basic definition because my kundalini starts from my throat area and goes down to my toes and then up to my head and sometimes flowers and fountains out around that. So kundalini can actually begin at any part of the body. But because my colleague Bronwyn Fox who is a well known person in the panic disorder area and takes a great interest in kundalini because she thinks that panic attacks are kundalini gone wrong. Like if you had this

energy and it just explodes in you and it makes your limbs go this way and that and you get this frightening kind of sensation, burning," he explains.

Continuing with his explanation of self testing, Thalbourne says, "The experiment I did was using a random number generator. This is basically a source of statistical noise, it produces ones and zeros in a random fashion and I actually tested about 75 people on it and I did get some people who got significant results. It consists of a circle of lights and at any one time there is a decision to be made. Proceed to the next light or stay where you are. And in this way it sort of makes a jumping staccato movement around the circle of lights and the idea is to try and influence the machine to go further around the circle than it would by chance. And that distance is quantified into a score and we test these scores very, very extensively, like having 10,000 trials to see whether there's any bias in the machine whatsoever.

"What happened was that I get kundalini through wonderful music. (Other researchers have utilized everything from strong pleasant smells to sexual stimulation.) I like Monteverdi's operas and I get kundalini up and down my body through listening to his fantastic music. And a friend actually suggested the hypothesis he said maybe the R and G will produce more when you're in the kundalini state. So the first experiment I did was a bit rough and ready. I was the only person involved, I sat in front of the random number generator with the lights going round and I had a score sheet. Also I introspected and whenever I had kundalini happening, I put a little k next to the box where that score would be. And out of a thousand runs only 46 of them were accompanied by kundalini, it's frustrating me that I can't elicit it more regularly in the laboratory. I think there's something about the laboratory context, which makes it scary.

"Of course, test conditions may be anxiety arousing and even when there's my experiment and I can proceed as I want, what we found the results were some people like to call them marginally significant, some people say the results approach significant. They were almost high enough to say that something was going on in the kundalini condition but nothing was going on in the control condition. And so I sent it to the Journal of Parapsychology and they said intriguing, this sort of experiment has never been done before. Parapsychologists have not paid much attention to kundalini but it's an eastern concept and you know these things take a while to get established in the west. They said very, very interesting so why don't you do it again. And I started doing it and I had to stop for various reasons, basically illness and whether I'll continue it I don't know. But what I did in the second experiment was to get a man I called a monitor so he looked at the random number generator, marked down the scores and I reclined in a chair and I told him when I was experiencing kundalini and he wrote that down in the appropriate box. And we've only done two sessions and actually the scores look to be negative and this is a typical annoying parapsychological phenomenon, that when you get positive scores in one experiment you'll get significantly negative scores in the next experiment. And in fact if you added it altogether you get chance."

Thalbourne notes that he does a lot of research in parapsychology, but he also does other research. "I'm doing a study of manic depression at the moment. I've invented a questionnaire, 20 items long and it is quite clear from as few as 14 manic depressives and 30 non-manic depressives that the manic depressants score hugely high on this scale. If you score 12 or 13 you are into the danger zone, the results are that striking. And I'm also hoping to give the so-called transliminality scale to some trainee psychiatrists at the end of the months because people who have mental illness tend to have high transliminality. I wondered what psychiatrists score at, are they at the average and we know exactly what the average should be or is it the case that they score differently.

"Now there are two schools of thought; one says psychiatrists have the highest suicide rate of any profession so given that kind of depressive symptomatology you might expect they score high on transliminality because it is a measure of dysfunction. On the other hand it could be that they're low transliminals and low transliminals have a certain immunity to mental illness but at the same time they don't have interesting things of high transliminality such as experience of ESP, experiences of life after death, mystical experience which I guess you understand is enlightenment and illumination. The high people have awful problems with their minds, they have sleep problems, they take illicit drugs to try and get a better state of consciousness and they're bombarded with unpleasant memories and all sorts of things.

"So they want to get rid of their transliminality so they do it by drinking or with marijuana or whatever it might be. But the trouble with low transliminality is you don't have any mental problems but you don't have any creativity either. Creativity goes with high transliminality and it's the one saving grave of that state of consciousness." While the scientific community accepts the concepts and claim to understand transliminality, when it comes to the paranormal we seem to hit an impasse, a case in point Uri Geller.

Thalbourne notes, "There is an answer to that and the answer is that he (Geller) decided to make money out of his ability. So he did jobs with salvage firms, like where is this ship sunk, and he became a millionaire. And he never really got on well with scientists, it's possible that he felt that he'd already demonstrated his ability enough and yet some sceptic is going to come along and say oh that experiment was invalid in some way or another and therefore we can't conclude that Uri Geller has any powers. Another problem is that when he's stage performing he does have a bag of tricks which he resorts to when the rather unreliable psychic phenomenon doesn't occur. Cause you can't fill the Entertainment Centre and say oh well I'm sorry folks my powers are just not working today, you just \$25 to come in but you're not going to see anything. So he'll do these things and he'll reach into his bag of tricks. He's what we call a mixed medium."

Returning to the issue at hand, Transliminality is now thought by some to be the single determining factor in paranormal experiences, creative personalities, mystical experiences, depression and fantasy, to name a few. The problem, at least from my

perspective is that there are also parameters outside the subliminal and supraliminal pathways that suggest this is not true. Nevertheless, poltergeist phenomenon seems to be linked to transliminality, as might "encounter" with angels, UFO inhabitants or woodfolk, none of which are within my personal preview, so I can't elaborate there.

All of that notwithstanding, transliminality is of interest to paranormal investigators because it has been linked to paranormal interaction by mainstream science. If there is a link between unexplained phenomenon and temporal limbic structures and sensory association cortices as Thalbourne suggests, then much of what we study is now being attributed to temporal lobe activity in the brain by the skeptics in the scientific community. This certainly is the case in lab induced apparitions under testing, but seems to fall short when we attempt to match the in-field experiences.

So, we return to the same problems we have wrestled with for generations, back in fact to James and the ASPR over a hundred years ago. There is truly a limited amount of data in regards to transliminality and even less in the specific area of ghosts and haunting. Further data will be gathered but the problem once again, is that lab experiments are not the same as field work, a debate that Rogo and I hammered each other over at Duke. To say that you can now produce the "ghost" or "haunting effect" in the lab with proper stimulation begs the question if that has anything whatever to do with the thousands of case histories with varying factors outside those being played with in the limited studies now touting the transliminality thesis. What really is at question is whether we can adequately test the transliminality theory in the real time environment, not just with random number generators or card tests. As it was proven back then when Rogo and I debated the issue, there seems little hope for proving one as it is associated with the other. To date, no one has attempted to induce the ghost effect while monitoring EMF, for example, which is a good indication of the lack of understanding about we do in the field. Simply put, you can grab a rabbit out of a hat on stage, but can you do the same in a field of clover?

I solicit your comments and theories on this topic or any other. Please, if you have questions I beg that you tell me; there has been way to much shifting of "blame" when it comes to the enlightenment of our personnel and the only way to overcome it is to ask. If you do not get a satisfactory answer, go to the next person on the chain of command, or ask me personally. I certainly do not have all the answers, but I have over the years learned where to look for them. Only your personal involvement will solve the questions with which we wrestle.