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Research Paper



Déjà vu — Moments Relived

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ABSTRACT

Déjà vu, an eerie phenomenon, emanating from memory portions of the brain manifests for only a few fleeting moments making you feel that the moments are being re-lived and leaving you with a pleasant shudder. You strongly feel that you are living the past in the present and you equally believe that it cannot be!! Being a Parapsychologist, I am attracted to phenomena which are out of the ordinary; Déjà vu reminded me of Retrocognition and I wanted to explore the difference between the two phenomena. During the exploration, this remained a small fraction of the research as many other exciting revelations came to the fore. The paper explores the meaning of Déjà vu, how it happens, who is more prone to have this sensation, being a mind phenomenon how it compares with other psychic phenomena like retrocognition and dream precognition, whether it could be harmful, does it have a positive side, and how does the brain get activated while experiencing it?

Keywords: Déjà Vu, Re-Living Past Moments, Retrocognition, Re-Living Past Life, Memory Recall, Dysfunctional Brain, Dream Precognition, Psychic Phenomenon, Brain Aberrations

he rain had just stopped in the morning and while standing on my balcony when I looked outside, I felt strongly that I was reliving the moment. I had experienced, the same fragrance of moist soil, the chirping of birds, moist walls, the moist road, a dog fluttering his body to remove water sprinkles from his body and a loud praying voice from the nearby mosque. I looked at clouds in the sky and when I saw the same pattern in the cloud of a bear mocking at me; I knew it was $D\acute{e}j\grave{a}vu$!!

Just imagine a situation—You are in the midst of a conversation or an activity when, all of a sudden, you're overwhelmed by the sensation that you've done this same thing before — but you know that's not possible. It is $D\acute{e}j\grave{a}vu$!!

In another situation, you decide to go on vacation to a city that you have never gone to before and when you reach there, you are overwhelmed that the things that you see are not new; you had seen them before but you do not recall when? It is $D\acute{e}j\grave{a}vu$!!

I remember words from David Copper field which aptly describe Déjà vu (Moments Relived): We have all some experience of a feeling, that comes over us occasionally, of what we are saying and doing having been said and done before, in a remote time of our having been surrounded, dim ages ago, by the same faces, objects, and circumstances- of our

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knowing perfectly what will be said next, as if we suddenly remembered it! (https://www.wisesayings.com/deja-vu-quotes/)

We all have felt Déjà vu in our lives and have exclaimed, 'I have lived this very moment before!' You do not believe it but the eerie feeling gives a pleasant shudder. It will not be wrong to say that "A déjà vu is your future self -doing a past life regression-- David Mellen-Thomas"

Essentially when you have déjà vu, you feel like you're experiencing something you almost certainly couldn't. In your inner heart, you believe that it is impossible but still observe it as happening and remind yourself that you had experienced it. You feel that the situation you are in at the moment had occurred earlier also in your life but how hard you try you cannot retrieve it from your memory but the feeling persists. Maybe the happened event had gone into subconscious memory and its glimpses have just surfaced or could it be that you lived the moment in your last life and it is haunting you now? Whatever the case, you have the feeling that it happened previously (in the present life or the last one!) but in your inner heart you believe it is not possible. But it is a pleasant surprise!!

This topic fascinated me as the other ones which are equally bizarre viz Telepathy, Clairvoyance, Remote Viewing, Precognition, Synchronicity and life after death. I have been researching these and have published papers and books covering these topics. I chose to explore $D\acute{e}j\grave{a}$ vu as it intrigued me and when I researched it, it surprised me and I am sharing the surprises with you.

The paper explores the meaning of $D\acute{e}j\grave{a}vu$, how it happens, who is more prone to have this sensation, being a mind phenomenon how it compares with other psychic phenomena like retrocognition, whether it could be harmful, does it have a positive side, and how does the brain gets activated while experiencing it? Questions are many; let us begin with understanding its meaning:

Meaning of Déjà vu

It is a French word for 'already seen'. Émile Boirac was the French philosopher, parapsychologist and psychic who coined the word and since then a lot of tossing and turning around has happened around this word.

In the above narrations, we have been thinking that $D\acute{e}j\grave{a}vu$ is a moment relieved but this is only half the meaning. A paper in Cleaveland Clinic Health Essentials¹ brings out a complete meaning:

"Déjà vu is a false sense of familiarity," Dr Khoury says. "Your brain creates a sensation as if you have lived a certain situation before, but you're unable to retrieve it from your memory and cannot identify the actual situation."

In 1983, Dr Vernon Neppe defined déjà vu as a "subjectively inappropriate impression of familiarity of a present experience with an undefined past." In simple terms, that means that when you have déjà vu, you feel like you're experiencing something you almost certainly couldn't.

"There's usually an incongruence between the sense of familiarity and the fact that the situation should not feel familiar," Dr Khoury explains.

It's not like taking the same bus route each day and recognizing the scenery — that's familiarity. Déjà vu, on the other hand, is when you feel like you've had this same conversation or experienced this very specific scenario in the past, all while also knowing that it cannot have ever happened before."

Thus, $D\acute{e}j\grave{a}$ vu is past re-lived while realizing that it cannot have ever happened before. Theodora Blanchfield² has the following to say about Déjà vu:

"Déjà vu is a sense of having already seen something you're currently seeing or experiencing—coupled with knowing you haven't actually seen it, which is why it catches many people so off guard. It is thought to be the equivalent of a small brain "glitch," with two streams of thought colliding. The phrase literally translated from French to mean "already seen."

St. Augustine, an ancient philosopher, first referred to the concept of déjà vu in 400 AD as "false memoriae," but French philosopher Emile Boirac was the first to use the term déjà vu in 1890. The first use of the phrase in the scientific world was from F.L. Arnaud, a neurologist who proposed to use it at a meeting of the Societe Medico-Psychologique³.

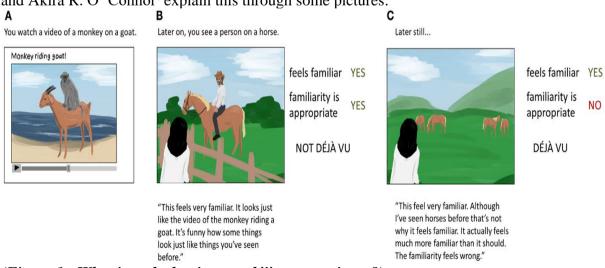
Early research showed promise for déjà vu to be a sign that helped doctors Déjà vu diagnose epilepsy⁴, but more recent research has shown it may be a matter of perception or memory."

Déjà vu is, indeed, a matter of perception and memory. Both are integral parts. How else, does this manifest? Memory, be it subconscious or discarnate memory, when stirred consequent to the current scenario, leads to the perception of Déjà vu while at the back of your mind, there lingers a realization that this could never have happened before. Sounds paradoxical and true it is!!

According to experts like Dr Akira O'Connor, a senior psychology lecturer at the University of St Andrews, déjà vu – the French for 'already seen' – is not only a feeling of familiarity but also the metacognitive recognition that these feelings are misplaced. "Déjà vu is basically a conflict between the sensation of familiarity and the awareness that familiarity is incorrect. And it's the awareness that you're being tricked that makes déjà vu so unique compared to other memory events," (Thomas Ling in Science focus⁵)

The weird thing about déjà vu is the paradox that you have a real sensation and simultaneously your inner self knows that it is not possible.

There are occasions when we are fooled that it is déjà vu when actually it is not. Julia C Teale and Akira R. O' Connor⁶ explain this through some pictures:



(Figure 1 - What is and what is not a déjà vu experience?)

Picture A----We all go through our lives seeing and experiencing things that we may remember later on. Our memories typically work very well and we can usually trust the feelings of memory we experience. In this picture, you are watching a video of a monkey riding a goat for the first time so it feels like a funny, new thing.

Picture B-----. Sometimes we see and experience things that we recognize or that look like other things we have already seen. When this happens and our memories are working well, we may feel a sense of familiarity. This feeling is entirely appropriate and is not déjà vu. In this picture, you can see a man riding a horse who looks a bit like the monkey riding the goat that you just watched online. Although it is a coincidence that you have seen two such similar things, the feeling of familiarity is appropriate so the sensation you feel is not déjà vu.

Picture C---When something feels *too* familiar, whether it is a thing you recognize or not, and the familiarity feels wrong, you are probably having a déjà vu experience. You often notice this kind of over-familiarity because the feeling happens very quickly and then also quickly fades to a normal level of familiarity. In this picture, you see horses and they suddenly feel *too* familiar. You know that although you have seen horses before they should not make you feel as strongly familiar with them as these horses do. Then, the feeling fades away and you wonder what just happened. That is a déjà vu experience!

The special thing about the phenomenon is that a strong feeling lingers that what you are experiencing is not true. You have the feeling that this experience was lived earlier but a strong feeling lingers that it is not true. To put it more correctly, Déjà vu is basically a conflict between the sensation of familiarity and the awareness that familiarity is incorrect.

Amy Reichelt⁷ goes on to say, "Despite coverage in popular culture, experiences of déjà vu are poorly understood in scientific terms. Déjà vu occurs briefly, without warning and has no physical manifestations other than the announcement: "I just had déjà vu!" Many researchers propose that the phenomenon is a memory-based experience and assume the memory centres of the brain are responsible for it."

Having understood what Déjà vu mean, let us now explore how this phenomenon is caused:

How Déjà vu gets caused

There are many theories and all relate the phenomenon to the working of the human brain. The most prevalent thought for the cause of the phenomenon is that whatever we experience gets stored in our brain which has infinite storage capacity. Some of these memories remain in the conscious mind and are easily retrievable due to triggers which happen regularly in our day-to-day life. There are many memories which in the absence of triggers go and get stored in the subconscious area of the brain. These remain latent in the brain.

When we experience new events, the perception through the sensory organs compels the brain to look for patterns which nearly match the perception. We can then relate the experience to some past event but it is not Déjà vu because you are certain that it happened in past as it got reflected from conscious memory. But when for some events, the brain does not find a nearly matching pattern in conscious memory, it transcends to subconscious memory and finds a nearly matching pattern and when found, it sends signals that the moment was lived in past and since the memory is buried deep, a sensation prevails that this may have not happened in reality and we exclaim to have Déjà vu. The event is Déjà vu because even though the event was lived in past, the conscious mind does not recognize it as it is not in conscious memory and hence it

creates confusion by sending strong signals that the event did not happen in past and the conflict arises and this conflict manifests Déjà vu.

Some thinkers extend it to retrieval from discarnate memory. The Survival Theory believes that life continues even after death and all our knowledge and memory remain intact in some form in the discarnate memory. Even though you may not have lived the moment in your current life, it may have happened in the past life and the memory form discarnate memory surfaces up by a trigger and we get a feeling that the event is being re-lived. It becomes Déjà vu because the conscious mind, again, sends a strong signal that the event did not happen and this conflict ensues and this conflict makes Déjà vu manifest.

This is a logical theory but not yet scientifically proven.

Some believe that Déjà vu is a manifestation of a dream i.e., you have a dream and a few days later the same dream or similar one actually happens in waking hours and it gives a feeling that the moment was lived before. Your conscious mind says that it is not true and hence Déjà vu happens.

Another theory is put forth by Amy Reichelt⁷ which makes use of observations on epilepsy patients. Most of such patients experience $D\acute{e}j\grave{a}vu$ prior to an epileptic seizure. This has given researchers a more experimentally controlled way of studying déjà vu.

Brain activities during Déjà vu

Epileptic seizures are evoked by alterations in electrical activity in neurons within focal regions of the brain. This dysfunctional neuronal activity can spread across the whole brain like the shock waves generated by an earthquake.

The brain regions in which this electrical activation can occur include the medial temporal lobes. Electrical disturbance of this neural system generates an aura (a warning of sorts) of déjà vu prior to the epileptic event. By measuring neuronal discharges in the brains of these patients, scientists have been able to identify the regions of the brain where déjà vu signals begin. It has been found that déjà vu is more readily induced in epilepsy patients through electrical stimulation of the rhinal cortices as opposed to the hippocampus. The activation of the rhinal neural system, involved in the detection of familiarity, occurs without activation of the recollection system within the hippocampus. This leads to the feeling of recognition without specific details.

These observations led to the speculation that déjà vu is caused by a dysfunctional electrical discharge in the brain.

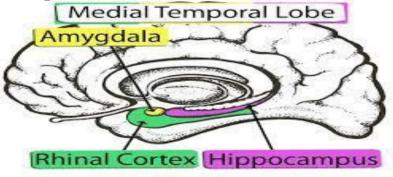


Figure 2: Brain areas relevant to epilepsy and De Ja Vu (source: https://www.child-encyclopedia.com/sites/default/files/docs/glossaire/Glossary_Brain_MTL.pdf)

These neuronal discharges can occur in a non-pathological manner in people without epilepsy. It has been proposed that déjà vu could be triggered by a similar neurological discharge, resulting in a strange sense of familiarity.

There is a view that the phenomenon is not real but is a hallucination caused by brain aberration. "Déjà vu is caused by dysfunctional connections between the parts of your brain that play a role in memory recollection and familiarity," Dr Khoury explains. You have two temporal lobes, one on each side of your head — right above your temples. They play an important role in helping you to:

- Recall words.
- Remember places you've been.
- Recognize people.
- Understand language.
- Interpret other people's emotions.

In each temporal lobe is a hippocampus, which contributes to many of these functions and is responsible for storing your short-term memories. Occasionally, like during certain types of seizures, your hippocampus and surrounding brain tissue can be activated, causing you to have memorable experiences like déjà vu."This causes a disruption of recognition memory systems, which gives you that false sense of familiarity," Dr Khoury says.

(source: https://health.clevelandclinic.org/deja-vu-what-it-is-and-when-it-may-be-cause-for-concern/)

Neurologist Professor Sam Berkovic says you can think of deja vu as a "glitch" - but in our own brains. Our little grey cells aren't perfect, after all. We might occasionally see a flash of something that's not there, as our visual cortex misfires, or hear a phantom sound thanks to a mistake by our auditory cortex, Berkovic says. "And I think when we get deja vu, it's our memory cortex just [briefly] malfunctioning. Really, it's surprising that our brains don't misfire more often."That might explain why people are more likely to get deja vu while tired or stressed, Moulin says when the brain can start to "get all kinds of weird disturbances which are not unlike the disturbances you get with pathology, but you're not ill. It's only temporary. At least two-thirds of people are estimated to get deja vu at some point. And patients with epilepsy often report especially powerful bursts of deja vu before or during seizures (as do some people before a migraine hits). It turns out the phenomenon hits deep in the temporal lobe, under your temple, there lies the hippocampus, the key to laying down experiences into memories, and other crucial parts of the brain's memory hardware. Perhaps neurons firing out of sync causes the deja vu glitch. In 1963, neurological researcher Robert Efron concluded that the left hemisphere of the temporal lobe sorts incoming information, but it receives it twice: once directly, and once again after it takes a quick detour, milliseconds long, through the right hemisphere of the brain. If that delay is stretched out a little longer than usual, and the two signals are thrown out of sync, then the same information might get two timestamps. If the first has already been processed, the second could seem like a reliving of it. Others theorise something similar could happen if our mind momentarily wanders as we take in a scene. When our attention shifts back to finish processing what's before us, it feels like it's already been seen.

(Source: https://www.smh.com.au/lifestyle/health-and-wellness/i-ve-been-on-this-plane-before-and-it-s-about-to-nosedive-what-s-deja-vu-20221122-p5c0ez.html)

Dysfunctions in the brain are responsible for the manifestation of 'déjà Vu. This is proven by research by scientists Fabrice Bartolomei, Emmanuel J Barbeau, Trung Nguyen, Aileen McGonigal, Jean Régis, Patrick Chauvel, Fabrice Wendling¹⁰

The phenomenon of 'déjà Vu is caused by acute disturbance of mnemonic systems of the medial temporal lobe (MTL). In epileptic patients investigated with intracerebral electrodes, déjà vu can be more readily induced by stimulation of the rhinal cortices (RCs) than the hippocampus (H). Whether déjà vu results from acute dysfunction of the familiarity system alone (sustained by RC) or from more extensive involvement of the MTL region (including H) is debatable.

Another school of thought relates the phenomenon to the level of Dopamine in the brain. Theodora Blanchfield⁸ posits that the hypothesis is that excess amounts of dopamine may be implicated in experiences of déjà vu. In studies of temporal lobe epilepsy, the research shows that elevated levels of dopamine were detected in rodent models of temporal lobe epilepsy.

One strange cause of déjà vu is the use of the flu medications amantadine and Proin (phenylpropanolamine). A case study writes about a man who took this combination of medications to treat an infection of the flu and began experiencing several episodes of déjà vu per hour—which stopped upon him stopping these medications.

The above may point to the fact that dopamine increases the human capability of retrieving memory and creating déjà vu.

Is Déjà vu an illusion / hallucination

There is a school of thought which believes that there is no memory recall and they feel that the phenomenon is not real but is an illusion created due to aberrations in the brain.

Saumya⁹ posits that the phenomenon is an illusion, we are not re-living the past but the brain is creating the illusion in stressful situations—

Many people believe that they experience déjà vu because they have lived through the exact moment in their past lives, whereas many others believe it to be a paranormal experience or a premonition of sorts.

Fortunately, that is not the case.

There is no single agreed reason behind déjà vu. Different studies have proven different things. But they all agree on one thing, déjà vu is a memory phenomenon.

Traditionally, our brain is divided into four lobes:

- 1. Frontal
- 2. Parietal
- 3. Temporal

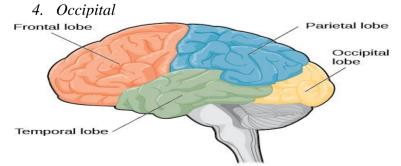


Figure 3: The four lobes of the brain

(source; https://courses.lumenlearning.com/waymaker-psychology/chapter/reading-parts-of-the-brain/)

The medial temporal lobe in our brains is responsible for retaining visual memories, language comprehension, and emotional understanding. When the temporal lobe is affected by factors such as epileptic seizures, fatigue, stress, burnout, etc, it causes a discrepancy in our memories. The aforementioned factors are the primary reasons behind the occurrence of déjà vu.

So, medically speaking, you do not experience déjà vu because you remember something from the past. Déjà vu occurs when you are reeling from stress, anxiety, burnout, or seizures.

All the above research work on Déjà vu appears to zero down to its cause which is dysfunction in the brain. The causes could be many. It may be due to stress, anxiety or seizures which create an illusion of re-living the past.

While this may be true but on the other hand we can't rule out the possibility that all the above factors create neuronal disturbances but these may not be creating illusions but may be creating a situation whereby the memory matching the current experiences surface out from subconscious memory and create Déjà vu, i.e., the brain activities in epileptic or other stress conditions may not be creating illusion but are responsible for bringing out hidden memories matching current experience come to fore. Thus, it is wrong to conclude that the phenomenon is nothing but an illusion, it could be a real happening. Whatever the case, the brain malfunction does cause Déjà vu.

Further research is needed to find out the real truth behind the phenomenon. In this context laboratory research on Déjà vu assumes importance.

Let us explore the laboratory experiments which were done to find causes for Déjà vu *Laboratory experiments concerning Déjà vu*

The phenomenon is strongly related to memory and in the past memory has been the subject of research in various laboratories. A paper by Alan S. Brown, Elizabeth J. Marsh¹¹ summarizes the findings from several laboratories. The details are given hereunder:

The findings point to three possible mechanisms that could trigger déjà vu.

Perceptual Explanation

Usually referred to as perceptual gap or split perception, a déjà vu may occur when a person processes the present sensory input twice, in rapid succession. The first input experience is brief, degraded, occluded, and/or distracted. The second perception, immediately following, then seems strangely familiar because it connects to the immediately prior input (unbeknownst to us). As with each category of explanation, many variations exist that can be traced back over a century.

Implicit Memory Explanation

There are a number of different versions of the implicit memory interpretation of déjà vu. All are grounded in the assumption that a déjà vu occurs because some aspect of the current situation has actually been experienced before. When the present stimuli hook into previously stored memories which are lacking temporal or contextual tags to assist in the conscious identification of the source of "oldness," a sense of familiarity that is aroused cannot be explicitly identified. Several lines of research tie into this general explanation.

Wikipedia¹² adds more to the Implicit Memory explanation:

Research has associated déjà vu experiences with good memory functions, particularly long-term implicit memory. Two approaches are used by researchers to study feelings of previous experience, with the process of recollection and familiarity. Recollection-based recognition refers to an ostensible realization that the current situation has occurred before. Familiarity-based recognition refers to the feeling of familiarity with the current situation without being able to identify any specific memory or previous event that could be associated with the sensation.

Physiological Explanation

Turning to the third class of explanations, one of the earliest interpretations of déjà vu is that it reflects an alteration in the normal brain functions that utilize multiple pathways of information transmission. Osborn (1884) speculated that the sensory signals transmitted from the eyes to the occipital area separate and follow different tracks to the right and left hemispheres. This information then merges together at the occipital lobe to produce one unified perceptual impression. This information then merges together at the occipital lobe to produce one unified perceptual impression. On occasion, the messages become slightly asynchronous, producing a sensation of Dejavu. The slight temporal delay in one track results in two visual impressions rather than one as they arrive successively (rather than together) at their destination. The trailing sensation seems to be a duplication of the first. These transmissions become slightly dysphasic due to a neurological event, such as a slight synaptic deficiency at some point in one of the two pathways. The brain misinterprets this slight separation as reflecting temporally distinct experiences, and the logical interpretation is that the present experience duplicates one from an earlier time and place.

Elaborate and finer experimental details of all three explanations can be viewed in the paper by Alan S. Brown *and* Elizabeth J. Marsh¹³

The above narration into the different experiments brings forth both views about Deja vu: The first view is that it is an aberration in brain functioning creating an illusion as the phenomenon as brought out in *Perceptual Explanation* and *Physiological Explanation*. And the second view is that really we have re-lived the moments as brought out in *Implicit Memory Explanation*. Maybe both explanations are true—Sometimes the phenomenon may be real and we really re-live the moments and sometimes this phenomenon appears to manifest as a mere illusion or hallucination caused by the dysfunctioning of the brain. However, it is extremely difficult to ascertain in a situation whether the manifested phenomenon is real or an illusion.

There is an interesting paper by Anne Cleary¹⁴ that talks about testing déjà vu at the Psychological lab. She was prompted to take déjà vu to a psychological lab after getting inspiration from a scientist called Alan Brown who had consolidated the research on this topic to date and gone beyond to find out amongst other things a fact that the phenomenon had a place in medical segment because as there appeared hints that déjà vu had some association with some type of seizure activity in the brain. His research and reviews brought this topic into the realm of science. His work catalyzed scientists to design experiments to investigate the phenomenon.

Inspired by Brown's research Anne Cleary's team started conducting experiments aimed at testing hypotheses about possible mechanisms of *Déjà vu*. They investigated the century-old Hypothesis that the phenomenon can happen when there is a spatial resemblance between the

current scene and the unrecalled scene in your memory. Psychologists called it Gestalt Familiarity Hypothesis. According to this hypothesis if a previous situation with a similar layout as the current one doesn't come to mind, you might be left only with a strong familiarity with the current one.

To investigate this idea in the laboratory, her team used virtual reality to place people with scenes. That way they could manipulate environments people found themselves in—some scenes shared the same spatial layout while others were distinct. As predicted, déjà vu was more likely to happen when people were in a scene that contained the same spatial arrangement of elements as an earlier scene they viewed but did not recall.

This research suggests that one contributing factor to Déjà vu could be a spatial resemblance of a new scene to one in memory that fails to be consciously called to mind at the moment. However, it does not mean that spatial resemblance is the only cause of déjà vu. Very likely many other factors can contribute to what makes a scene or a situation feel familiar. Further research is needed to explore this aspect.

This research treats the phenomenon as a real phenomenon and experiments validate this point. Memories are central to this phenomenon.

A similar view is put forth by Everyday Einstein Sabrina Stierwalt¹⁵:

Scientists have tried to effectively recreate déjà vu in the lab. In a 2006 study by Leeds Memory Group, researchers would first create a memory for patients under hypnosis. That memory was usually something simple like playing a game or looking at a printed word in a certain color. Then patients in the different groups were suggested to either forget or remember the memory, which could later trigger the sense of déjà vu when they encountered the game or word.

Other scientists have attempted to bring on déjà vu using virtual reality. One study found that participants reported experiencing déjà vu when moving through the virtual reality Sims video game when one scene was purposefully created to spatially map to another. (For example, all of the bushes in a virtual garden were replaced with piles of trash to create a junkyard with the same layout.) These experiments have led scientists to suspect that déjà vu is a memory phenomenon. We encounter a situation that is similar to an actual memory but we can't fully recall that memory. So, our brain recognizes the similarities between our current experience and one in the past. We're left with a feeling of familiarity that we can't quite place.

So far, we have seen the causes behind the manifestation of déjà vu, how it occurs, what happens in the brain during the phenomenon and what advances have been made in its laboratory research. Now we shall examine whether there are classes of people who experience déjà vu more often when compared to other people.

Who is more prone to have the sensation of déjà vu

In the above discussion, different sources have repeatedly pointed out that this sensation occurs frequently just before epileptic seizures. Hence patients with epilepsy are more prone to have the feeling of this phenomenon. Invariably these patients experience déjà vu just before the epileptic seizures. Epilepsy is the most common neurological condition to be associated with déjà vu, as it affects the temporal lobe of your brain, where vision is interpreted. There are several types of seizures, but it is simple partial seizures, also known as focal onset aware seizures, that are most often associated with deja vu experiences.

Besides epileptic patients, the phenomenon happens in healthy people also. Theodora Blanchfield² claims that according to research those who experience it multiple times share the following characteristics:

- Frequent travellers
- High income
- Well educated
- Those who remember their dreams
- Those who are politically liberal
- Ages 15-25

There is a paper published in Penn Medicine¹⁶ which posits that the sensation is more likely to happen to people who travel often and have college or advanced degrees. And it can peak in young adulthood, but gradually go away with age. Also, people who are exhausted or stressed are connected with what likely causes most cases of déjà vu memory.

As per the above narration, stress is another factor which does accelerate the chances of having déjà vu. The chance of manifestation of déjà vu depends on how tired and stressed you are. When your brain is fatigued, your internal neuronal systems haven't had the chance to kind of recuperate and really regulate themselves. And so, your neuronal firing is more likely to be a bit off and result in déjà vu.

A negative correlation of dejà vu to age is pointed out in a survey of 444 students in Switzerland (Arthur Funkhouser1, & Michael Schredl¹⁷). In the above paragraph, it is pointed out that people in the age group 15-25 are more prone to Déjà vu which is in line with the survey even though it appears strange that older people have larger memory stored in their brains are less prone to Déjà vu.

Another point that people with more anxiety are more prone to Déjà vu is confirmed by another survey done by Christine E Wells, Akira R O'Connor, Chris J A Moulin ¹⁸. Their findings are as under:

"We used an online questionnaire to collect data from individuals self-reporting a clinical diagnosis of anxiety, as well as from age-matched controls. The Anxiety Group reported a significantly higher frequency of déjà vu episodes over the previous month than controls. They also reported experiencing déjà vu more frequently and with higher intensity during periods of high anxiety. In addition, the Anxiety Group reported finding déjà vu episodes significantly more distressing than the Control Group. The findings indicate that there are differences in déjà vu experienced by people reporting high levels of anxiety compared to healthy controls without an anxiety diagnosis."

Summarizing the findings in the above paragraphs we can say that people in the age group 15-25 or those who are stressed out or have high mental anxiety or who are epileptic are more prone to Déjà vu. It is also found that the experiencers of Déjà vu are often frequent travellers and most of them are well-educated.

Do psychics have Déjà vu more often?

The phenomenon is related to memories which are stored in the brain and hence it is not wrong to say that the phenomenon is mental. Mental phenomena are mostly involved in psychic people. There is a far-fetched thought that could being psychic make a person experience De ja Vu more often. Psychics have the ability of precognition and also retrocognition. They also

are capable of having precognitive dreams. Retrocognition is re-living the past as it enables remote past memories to come to the fore. Also, precognitive dreams when manifesting in reality, leave a feeling of Déjà vu. Hence it is logical to think that psychics may form a class of people who frequently have De ja Vu.

As retrocognition and Déjà vu, both phenomena recall memory, both are probably correlated in some way. In the next section, we examine this aspect.

Déjà vu and Retrocognition

As mentioned earlier Retrocognition involves visualizing events from the remote past. Stephen Wagner¹⁹ while explaining Retrocognition posits that De Ja Vu could be a part of Retrocognition:

"Also known as "post-cognition," retrocognition literally translated from its Latin roots means "backwards knowing." In the context of the paranormal, it is the ability to psychically pick up information about a place's or person's past.

Retrocognition might work in the way that residual ghost phenomena work: the event is imprinted on the environment in some holographically psychic way that we do not yet understand. Everything, after all, is made up of energy, and the energy of the traumatic or oft-repeated events remains recorded in the environment in which they originally occurred. The psychic can "tune in" to the specific frequency of this residual energy and "see" it or experience it. Let me stress that this is just a possibility or theory for which we have no concrete proof.

Paranormal experts believe that all people have some power of retrocognition, though some are more in tune with their abilities than others.

The experience of deja vu may be a small form of retrocognition. If you have ever walked into a room or met someone, and felt like you have done that same action before, you may have experienced retrocognition.

We know that re-living the past is déjà vu where we feel that we are re-living the past but we believe otherwise. But in Retrocognition, we feel that we are re-living the past as well as we believe in it. Retrocognition is totally going into the past whereas De Ja Vu is partially going into the past. Thus, it may not be wrong to say that déjà vu must be a part of retrocognition – it is a only feel of past memory but belief in the feel is missed out.

Comparison of déjà vu with retrocognition is legitimate as both concern memory recalling. We close this discussion here.

By far we have explored various aspects of the phenomenon and the readers must have enhanced their awareness about how our mind manipulates our memories, be it immediate past memories, or remote past memories and some even extend the phenomenon to discarnate memories. We now come to the end of this paper and shall conclude after exploring whether déjà vu is a harmless phenomenon or if can it harm us in any way.

Could déjà vu be harmful

Prima facie the experiencers of the phenomenon will deny that it is harmful. It is a fleeting phenomenon, it comes, baffles and whithers away. It does not leave a lasting impression on us. Maria Masters²⁰ agrees to it but says that there are situations when this could be harmful:

Having occasional—once or twice a year—déjà vu is a typical experience, even if scientists don't yet know exactly why it happens. However, sometimes it may be an indication that you have an underlying health issue. If it's accompanied by headaches, weakness, shaking, loss of awareness, seizure or confusion you should talk to your doctor.

According to the Cleveland Clinic, déjà vu episodes are a cause for concern if:

- You're experiencing déjà vu several times a month
- It's accompanied by weird dream-like memories
- You lose consciousness afterwards
- Experience symptoms like a racing heart, fumbling around, or unconscious chewing

These could be signs of epilepsy or another neurological disorder, so consult a healthcare provider for an evaluation.

As long as you don't have these symptoms accompanying your déjà vu moments, your déjà vu is probably just your brain's way of processing memories.

WebMD Editorial Contributors²¹ also caution that in rare situations the phenomenon can cause neural disorders. Let us understand what they have to say:

Most people experience déjà vu with no adverse health effects. In rare cases, déjà vu can be a sign of a neurological disorder. Individuals with epilepsy often have focal seizures that occur in one area of the brain, sometimes in the temporal lobe where we store memories. These are called temporal lobe seizures.

Seizures involve bursts of uncontrolled electrical activity that cause nerve cells in your brain to misfire. The shortness of focal seizures and the fact that people typically remain awake when they happen make it hard to recognize what's happening. People may mistake a person having a focal seizure as daydreaming or staring off into the distance.

Temporal lobe seizures can produce feelings of déjà vu. Signs that you may be having a temporal lobe seizure versus a regular déjà vu experience include:

- Sudden, unexplained feelings, like joy or anger
- Problems controlling your muscles
- Twitching in your muscles
- Having sensations that involve vision, taste, smell, hearing, and touch
- Feeling as though you are about to have a seizure

Temporal lobe seizures impact your ability to interact with other people. Most of them last anywhere from 30 seconds to minutes. You may lose awareness of your surroundings or realize that you've been sitting and staring off into the distance. Others may observe you smacking your lips or constantly chewing and swallowing during the seizure.

Once the temporal lobe seizure ends, you may find yourself feeling confused. It may be difficult for you to speak or remember what happened while having the seizure. A temporal lobe seizure can become a more serious tonic-clonic (or grand mal) seizure that causes convulsions and makes you lose consciousness.

Should You See a Doctor About Déjà Vu?

You should get an evaluation from a doctor if you suspect that temporal seizures or other neurological issues may be causing your feelings of déjà vu. Get help immediately if you:

- Have seizures lasting longer than 5 minutes
- Have trouble gaining control of your breathing after a seizure
- Remain unconscious after having a seizure
- Have a second seizure after the first
- Have other medical issues like diabetes
- Are currently pregnant
- Hurt yourself during a seizure

Seek advice from a doctor if this is your first time having a seizure. Ongoing temporal seizures can shrink the hippocampus, the part of the brain that helps you learn and control your memory. You can also lose brain cells, leading to other memory issues.

The above narration talks about rare cases where the phenomenon may cause harm but normally déjà vu is a positive phenomenon which brings a refreshing feeling with a fleeting sensation that you lived the moment before. A positive way of looking at it is that there are angels who are helping you by bringing to you this sensation from past memories may be from this life or the lives lived earlier just to freshen you up.

So next time you experience this fleeing pleasant feeling, send a prayer up to both your spirit guides and your ancestors, thanking them for subtly reminding you that you are, far more than just living this life in this physical body; you're a compilation of all of many many past lives and déjà vu came to you just to remind this.

I conclude this paper on this happy note.

When I started this paper, I had a nagging feeling that nothing much can be said about a fleeting moment as déjà vu but as I went on researching, I could dig out several amusing facts and now I leave it to readers whether I did justice to the topic!!

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Conflict of Interest

The author(s) declared no conflict of interest.

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