## Article

## **Out-of-Body Experience: Review & a Case Study**

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#### ABSTRACT

Out-of-body experiences in people with pathological conditions such as epilepsy have been studied by a fair amount of researchers to date. However, there is a severe lack of studies aimed at researching out-of-body experiences occurring in the non-pathological population. In article, I provide a review of the relevant literature and present a case of anomalous perception, in the form of autoscopic phenomena, of a healthy individual who reports experiencing massive out-of-body experiences, spontaneously or at will, on a daily basis, since birth.

**Keywords**: out-of-body experience, altered consciousness, autoscopic phenomena, waking state, near death experience.

### Introduction

People report experiencing out-of-body experiences (OBEs) as part of near-death-experiences (NDEs), or induced by hypnosis/trance/meditation techniques/contemplation and praying, epilepsy, cardiac arrests, brain injuries, life threatening situations such as resuscitation or a sudden shock, activities such as extreme exercising, or elicited by out-of-body-like experiences such as body parts distortions created under a virtual reality setting (Moody, 1975; Blanke, Landis, Ortigue, & Seeck, 2002; Fenwick & Parnia, 2002; Braithwaite, 2008; Blanke, Heydrich, Lopez, & Seeck, 2011; Craffert, 2015). OBEs associated with cases of migraines, drug use, and anesthesia have been reported as well (Podoll & Robinson, 1999; Blanke & Bunning, 2005; Annoni, Forster, Habre, Iselin-Chaves, & Lopez, 2006).

The present case study aims to describe the out-of-body experiences of a white Caucasian male who reports experiencing out-of-body-accounts in the waking/active state, under full consciousness, occurring both spontaneously and at will. The participant, who for the purpose of this study the author calls Mister M, is a healthy individual whose anomalous perception is not linked to any pathological or neurological states such as epilepsy or other ictal states. Mr. M represents an unusual case, whose out-of-body states have been observed by the author for over 25 years. Mr. M claims to have been experiencing fully conscious, fully waking OBEs since birth, over 43 years ago, or at least since the onset of his memory. "I have had OBEs since I can remember. I remember leaving my body as a toddler. I remember being in my mother's uterus." Mr. M also claims he went through the so-called conscious birth. The author relies on her own observations of the experiencer, which she has been documenting in her working diary for the past 20 years, on an irregular basis. The study documents the phenomenology as well as the semiology of the OBE phenomenon which is considered by the author as an integral part of the broader aspect of anomalous perception.

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The available literature on out-of-body experiences uses many definitions to describe this phenomenon. Irwin described OBEs as a state of the experiencer during which "the centre of consciousness appears, to the experiencer, to temporarily occupy a position which is spatially remote from his/her body" (Irwin, 1985, p.5). Blackmore suggested OBEs are an experience in which the experiencer "seems to perceive the world from a location outside his physical body" (Blackmore, 1982, p.1). A study conducted by Messier and Smith (2014) described the out-of-body experience as an experience which is based on both visual as well as somaesthetic perception in which the physical body, seen from a third person description, is illusory. People experiencing OBEs report that the experience itself feels very real while it is happening (Blanke, Brugger, & Mohr, 2006). The literature reporting on the phenomenon of OBEs agrees on a number of features which usually accompany the phenomenon.

The main features include the following elements: a) sensory perception of floating (Monroe, 1971), b) a profound feeling of being outside of the body (Messier & Smith, 2014, p.2), and c) a subjective meaningfulness and enhanced reality (Anzellotti et al., 2011, p.5). As to the most probable cause behind OBE elicitation, the existing literature mainly implicates a disruption in the processing of multisensory integration (Blanke, Landis, Seeck, & Spinelli, 2004). Other studies describe OBEs as part of the so-called autoscopic phenomena. For example, Brugger and Regard (1997) proposed to classify autoscopic phenomena based on phenomenology. Their study suggested six different modes of autoscopic phenomena which include the sensed presence, heautoscopy proper, autoscopic hallucinations, the out-of-body experience, and two forms of autoscopic phenomena which the authors distinguished as inner and negative. Some researchers opined that in order to differentiate between different autoscopic phenomena it is important to investigate, during research, more specific questions pertaining to the autoscopic experiences such as the ability to see your own body, the differences in visuospatial perspective of seeing your own body, as well as the intensity of disembodiment, if any (Blanke & Mohr, 2005).

## A Case Study

In the present report the author presents: 1) anecdotal evidence of the out-of-body experiences of Mr. M as observed and entered into a diary by the author herself (the accounts were compiled by the author over the past 25 years); 2) first-person descriptions of out-of-body experiences delivered by the experiencer himself. Apart from presenting the results of the author's own exploration and investigation of the OBE accounts of the subject, the report presents the case for studying out-of-body experiences based on first-hand experience as delivered by Mr. M. Consequently, it mostly relies on observations which are subjective in their nature. For the purpose of the study, a clear distinction should be made between a natural OBE and what should be called the near OBE state or an out-of-body-like experience. According to Blackmore (1982), the onset of an OBE would be characterized by the following features: no sensory input from the physical body, while the individual experiencing the OBE would remain conscious.

Consequently, a question arises whether the definition of an OBE should only take into account cases where the experiencer remains fully conscious while experiencing the OBE, or whether the definition should be extended to cases during which the experiencers find themselves in a different state of consciousness (as opposed to the waking state), but still feel separated from the physical body. Those accounts would include OBEs under hypnosis, trance, the influence of

drugs, the border line between sleeping and waking states, and many more. In the course of this report only accounts of spontaneous or willfully induced OBEs, occurring fully naturally, under full consciousness, and in the waking/active state, are presented. An active out-of- body state is a state under which Mr. M could be standing, sitting, walking, working at a computer, driving a vehicle, etc., while experiencing a clear sense of separation from the body, feelings of enhanced reality, or sensation of his Self/consciousness travelling long distances away from his real physical body. It is important to note that the waking state OBEs of Mr. M are in direct opposition to OBEs occurring during sleep, the so-called lucid states, under hypnosis, during REM intrusions such as hypnagogia, hypnopompia, or false awakening, during the state of the so-called sensed presence, unconscious astral projection, autoscopic phenomena such as autoscopy, autoscopic hallucinations, heautoscopy (whether inner or negative), Doppelgänger effect, or OBEs induced by drugs, trance, or other types of near OBEs such as body parts distortions created under a virtual reality setting.

A study conducted by Epstein and Freeman (1981) pointed out the importance of differentiating between autoscopic instances including OBEs and a dream-like state as in the dreamy state one might be in while aware of the Self without seeing one's body or parts of the body as usually would be the case in an OBE. The etiology and phenomenology of the above described accounts of out-of-body-like experiences might be different from the accounts experienced by Mr. M.

Furthermore, the descriptions of the individual accounts of out-of-body experiences of Mr. M are subjective and the semiology of his OBEs, to a considerable degree, goes beyond the extent of the OBE case studies presented in other scientific research to date.

Taking into consideration the above mentioned differences, as well as for the purpose of this study, the author has opted to name the phenomenon of the out-of-body experience accounts of Mr. M "a state of accreted consciousness" (SAC). Again, it should be noted that the present study documents only the SACs experienced by Mr. M in a clear conscious, waking, or active state, as opposed to OBEs occurring in the clinical population, or out-of-body-like phenomena which might be associated with sleep related states, as mentioned earlier. To the author's knowledge, the only case of a comprehensive, as well as lengthy scientific study conducted on a healthy individual experiencing natural full blown out-of-body experiences in the waking state while fully conscious was the case study of Alex Tanous.

The researcher into paranormal experiences, Karlis Osis, attempted to study psychophysiological correlates of Tanous' massive out-of-body experience accounts (Alvarado, 1989). The American Society of Psychical Research documented the different paranormal abilities of Tanous. These included, among others, conscious (astral) projection, the ability to bilocate, psychometry, as well as ASP. Tanous was also reported to be able to demonstrate teleportation, faith-healing, communication with ghosts, solidifying light, and projecting his thoughts on a screen (Alex Tanous Foundation for Scientific Research, communication in writing, October 2016). There are striking similarities between the descriptions of the accounts of anomalous perception occurring in the case of Alex Tanous and those occurring in Mr. M's case. The similarities include instances of precognition as well as retrocognition, leaving the physical body at will and/or spontaneously, communication with discarnates, and remote viewing, to mention a few.

Unfortunately, only a limited amount of scientific studies examining out-of-body experiences in the healthy population was conducted to date. The majority of available OBE studies pertain to examining elicited out-of-body experiences in the clinical population. Some researchers claim there are fundamental differences between OBEs induced electrically in different parts of the brain versus OBEs happening naturally such as OBEs experienced as part of NDEs (Holden, Long, & MacLurg, 2006). Ehrsson (2007) claimed his study demonstrated the first ever experimental method of induction of an out-of-body experience in the healthy population. However, Ehrsson in his experiments did not succeed in inducing an out-of-body experience, in the experiencer, to the full extent. Apart from experiencing the visual perception of their own physical body, from a location different than from within their own body, the experience failed to experience other important features accompanied by the full blown out-of-body experience such as the enhanced sense of reality, subjective meaningfulness, and a clear perception of the Self existing apart from the physical body.

As reported by Mr. M, his out-of-body states are always accompanied by the Self clearly separated from the physical body, unusual sensations derived from all five basic human senses which seem to be intensified to a higher degree, and more vivid comparing to the normal state of consciousness. In addition, Mr. M reported the presence of "an unidentified source of extrasensory perception coming from deep within in the form of direct vibrational cognition." Messier and Smith (2014) claimed to have induced an out-of-body experience at will in the psychologically normal population for the first time. The case describes a 24-year-old healthy woman (student) who reported having the ability to leave her physical body at will. In line with Mr. M's reports, she too reported instances of watching herself move from above, while perceiving herself clearly out of the boundaries of her own physical body. Furthermore, the study suggested the OBEs of the student did not occur spontaneously.

Instead, they seemed to be induced by will as reported by the research subject. Mr. M, in comparison, reported both instances of leaving the physical body: induced by will as well as spontaneous occurrence. The other OBE element, as experienced by the research subject, common with elements reported by Mr. M's SAC was that the student did not feel any specific emotions linked to her state of mind when out-of-body. Mr. M also reported neutral emotions when experiencing the SAC except one single case when he feared "permanent separation of consciousness from the physical body" and "felt unable to return to the physical body." Brugger and Regard (1997), on the other hand, in their study posited that out-of-body experiences would typically have an emotional component to them. Moreover, Mulligan, Murphy, Persinger, and Saroka (2010) suggested some OBEs were associated with fear. Plus, Blanke and Heydrich (2013) in their study reported the implication of emotional processing in OBEs. Furthermore, it is important to note that OBEs (especially the negatives ones) might be a cause of depression and other behaviors associated with it. A study conducted by Anzellotti et al. (2011), described the OBEs of a 40-year-old patient whose autoscopic experiences including OBEs were so terrifying she considered suicide.

### The SAC: frequency of occurrence, time distortion, the Self

The individual accounts of SAC as experienced by Mr. M differ substantially from most OBE accounts presented in current literature regarding the phenomenon on the basis of at least three details: 1) the frequency of the SAC occurrence, 2) the amount of time spent in the SAC, and 3) the ability of the conscious Self, after it separates from the physical body, to inspect at distance different places, subjects, or objects independently of the physical body. The frequency of the SAC occurrence as experienced by Mr. M is very high compared to OBE cases reported both in the healthy population as well as in pathological cases, which usually only last for a short period of time. Mr. M reports experiencing SAC at least once a day for the duration of a couple of minutes to many hours of the standard physical time flow as experienced by a healthy physical body.

Based on this, it would seem that an out-of-body experience does not necessarily happen only once or twice in a lifetime, as opined by Blackmore (1982). Moreover, studies aimed at researching how often OBEs occur in both the healthy and the clinical population revealed interesting results. For instance, a study conducted by Blackmore (1982) suggested that 10% and above of incidences of OBEs occurring in the general population would probably be an overestimate. Interestingly, Blanke and Dieguez (2009) suggested the estimate to be even lower, around 5%. Next, Mr. M reported experiencing a severe distortion of time during his SAC.

This is consistent with Persinger's (1974) claim that paranormal experiences (the author posits that the SAC belongs to this phenomenon), among others, imply distortions in physical time. According to Mr. M, prior to the onset of one of his regular daily SACs back in 2013, he looked at the watch at 2 P.M., just before leaving his body. Upon returning to his ordinary state of consciousness, he again checked the time, only to find that it was six hours later. Mr. M says, "The 6 hours felt like 20 minutes to me. I really was under the impression that the time difference between the onset of the SAC and the time I returned to the regular state of consciousness was about 20 minutes, not 6 hours. At least this is how it felt to me. I was horrified." OBE instances pertaining to individuals spending a considerable amount of time out of their physical bodies, such as in the case of Mr. M, are very rare. According to some researchers such as Blackmore and Green (cited in Para, 2010; 1982), individual OBEs would be difficult to observe and study as they would not last long.

A couple of OBE/NDE researchers suggested that Mr. M's limbic as well as reticular activating system be investigated due to his lengthy SACs (Sellers, 2014). Instances of individuals that reported staying out of their physical body for a longer period of time are mostly connected to near-death-experiences. A recent study on NDE memories showed that individuals who experienced a NDE reported NDE memories as real events, with a high emotional content when compared to real or imagined memories (Brédart, Charland-Verville, Dehon, Ledoux, Thonnard et al., 2013). This is strikingly similar to Mr. M's reports which suggested that his SACs were "extremely real, with extremely vivid settings, highly intensified emotional perception, as well as intensified sensory input." However, near-death-experiences mostly occur in life threatening situations or when dying so the individuals experiencing NDEs would be expected to be in other than the waking/active state or fully conscious.

This is in direct opposition to the SAC occurring in Mr. M's case as they do happen spontaneously in the waking state and under full consciousness, with no life threatening situation preceding the onset of the SAC. OBEs as well as NDEs are often associated with each other as it is a general understanding that an OBE is a part of every NDE. In a study conducted in 2007, 76% of NDE experiencers suggested they also experienced an OBE as they reported they clearly existed outside their physical bodies after they left it (Mattingly, Nelson, & Schmitt, 2007). Furthermore, a study conducted by Greyson (2007) suggested the reliability of NDEs over a period of almost 20 years; the study also showed that some individuals who experienced NDEs also experienced OBEs.

However, these two phenomena should not be confused with each other. Although a majority of near-death-experiencers report the tunnel experience, such an experience could also be a part of an out-of-body experience, which in turn is not necessarily part of a NDE as reported by Mr. M. According to him, he regularly travels through tunnels as part of his SACs. Research on NDEs conducted by Ring (1980) suggested that out of 102 who reported being near to death, a quarter would experience the tunnel journey. Furthermore, an individual who experienced NDE often reported accounts of mystical perception as well as undergoing a profound spiritual transformative experience (STA). It is also interesting that individuals with temporal lobe epilepsy reported religious or spiritual experiences happening in between, during, or after seizures (Devinsky & Lai, 2008).

This seems to be consistent with Mr. M's reports of experiencing increased spirituality and mysticism in some of his SACs. Furthermore, other studies argue that paranormal and/or mystical perception including "a sense of presence" in the healthy population can be related to the disturbance of the temporal lobe (Persinger, 2001; Makarec & Persinger, 1986). More specifically, Persinger suggests that "both the occurrence of paranormal experiences and their rates of incidence are associated with specific types of neuronal activity within the temporal lobes" (Persinger, 2001, p.515).

Similar results were demonstrated by the Cardiff Anomalous Perception Scale study (CAPS) aimed at researching anomalous perception conducted by Bell et al. (2006). During the study, the Cardiff Anomalous Perception Scale (CAPS) was presented to close to 400 participants of the healthy population. The results found high scores of temporal lobe disturbances associated with anomalous perception. Disturbances in the temporal lobe revealed by the CAPS were mostly associated with the feeling of sensed presence, sensations of being uplifted, and distortions of time, as well as own body distortions. Pertaining to Mr. M's so-called "vast journeys of the Self", he reported that every time his Self separated from his physical body, it was able to inspect different remote places including settings which didn't seem to be of Earthly origin. Moreover, he was able to do so at the speed of thought and independently of distance involved between his physical body and the place his Self tried to reach. According to him: "in the SAC state, neither time nor space exists, information is instant telepathic thought, forward and backwards is equal when experienced from the point of view of my accreted state of consciousness. I see and perceive with all my senses, situations and scenarios from a very distant past as well as from the future.

Furthermore, my Self is able to talk to the deceased and entities of different natures as well as spirits. Plus, the Self is able to inspect and observe different places located at vast distances at

will." The above description of Mr. M's experiences is remarkably similar to the descriptions of five patients who experienced ictal autoscopic phenomena, published in a research paper written by Hoepner et al. (2013). Some of the patients who reported OBEs and other autoscopic phenomena would also report seeing past or future scenes, encountering mystical beings, seeing spirits and the deceased, and visiting worlds that had otherworldly settings (Hoepner et al., 2013). This seems to be in line with other out-of-body experiencers who reported encountering supernatural settings during their OBEs (Irwin, 1985).

With respect to Mr. M's "vast journeys of the Self", an Australian researcher and author Mary Rodwell in her book "The New Human: Awakening to our Cosmic Heritage" opined that Mr. M's anomalous perception and the volume of experience acquired while out-of-body "... is profound and deserves attention. It offers a unique perspective in terms of the nature of reality, other worlds, dimensions, and the nature of consciousness, which is fascinating." (Rodwell, 2016, p.329). Furthermore, Rodwell suggested Mr. M's anomalous perception offers "intriguing perspectives on the holographic nature of reality, which will offer unique insight and assist research in the nature of human consciousness and reality itself" (Rodwell, 2016, p.329). In addition, according to Rodwell it was interesting and compelling that some of Mr. M's "... OBEs were identical, and corroborated information in some of the earlier chapters...." of Rodwell's book. (Rodwell, 2016, p.330).

### **Temporal Lobe**

A study conducted in 1941 revealed a connection between anomalous perception such as out-ofbody experiences and disturbances in the temporal lobe (Penfield, 1941 as cited in Tong, 2003). The study showed that upon electrical stimulation of the right superior temporal gyrus in epileptic patients, the patient would perceive a strange sensation of floating. Another study suggested that the stimulation of the right superior temporal gyrus might have elicited an OBE in a patient suffering from tinnitus (De Ridder, Dupont, Menovsky, Van de Heyning, & Van Laere, 2007). Another study also suggested that temporal lobe instability played an important role in anomalous perception such as own body processing in participants in the healthy population who either reported having experienced an out-of-body experience before or with no prior OBE (Apperly, Braithwaite, Broglia, Hulleman, & Samson, 2011).

Apart from implicating the temporal lobe instability, the study also pointed out that distortion of processing pertaining to bodily sensations is a significant sign of out-of-body experiences in the healthy population. The study, which claimed to be the first to research predisposition to OBEs in the healthy population, relied mostly on measures devised by the Cardiff Anomalous Perception Scale proposed by Bell et al. (2006). Moreover, another study found disturbances similar to the ones associated with the temporal lobe as described above to be associated with an angular gyrus at the parietal temporal junction as reported by Blanke et al. (2002).

It is noteworthy that the majority of OBEs caused either by an artificial stimulation of parts of the brain or elicited by brain damage implicate the angular gyrus on the right side (Blanke, 2012). In addition, Arzy and Blanke (2005) in their study implicated failure of multisensory integration between the physical body and the TPJ as the possible etiology of the OBEs. Further, if failure to integrate information about the location of the physical body in space and challenges

to the integrity of multisensory information about one's self are implicated in OBEs, then the question of how one experiences the self-consciousness in the first place should be addressed as well in order to fully understand other phenomena such as body ownership illusions and their connection to minimal phenomenal selfhood (Blanke & Metzinger, 2009).

Is the sense of having a physical body a necessary condition for the self-consciousness to arise? The research conducted by Blanke (2002) reported the onset of vestibular challenges such as feelings of floating or sinking, including a full blown account of out-of-body experience by an epileptic patient after her angular gyrus in TPJ was electrically stimulated. The patient reported floating close to the ceiling. In general, vestibular challenges as demonstrated in the case of the patient above, are consistent with vestibular challenges faced by Mr. M when in SAC. Mr. M reported "having been constantly floating above his body near the ceiling" and oftentimes having difficulties getting back into his physical body when undergoing SAC.

While the floating sensation of the epileptic patient in Blanke's study did not last long and was apparently triggered by the electrical stimulation of the TPJ region on the right sight of the brain, what triggers Mr. M's floating above his body while experiencing SAC in the waking/active state, given the fact that he represents the healthy population and his sensations of being clearly separated from his physical body are not caused by drugs, alcohol, hypnosis, trance, or linked to any pathological condition, is unknown. According to the research conducted by Alvarado, Cardeña, and Zingrone (2010) OBEs happen mostly in states of rest or relaxation as opposed to active states. On the contrary, Mr. M would "leave the body" frequently and spontaneously when in an active state rather than a state of resting or being in a supine position. This also seems to be in contrast with Blanke and Bunning (2005) who suggested that OBEs were mostly experienced in a supine position.

A possible role of the TPJ in the body and self-processing in the healthy population is also presented in a study conducted by Fink and Vogeley (2003). Fang and Yan (2014), in the study on spontaneous out-of-body experiences in an epileptic 15-year-old child, also strongly suggested implication of the right TPJ region in out-of-body experiences. Furthermore, Arzy, Blanke, Ortigue, Seeck, and Spinelli (2006) suggested that electric stimulation of the left TPJ was implicated in the sense of presence phenomenon or perception of an illusory shadow person. However, it is interesting that a very recent study conducted by Braithwaite, Daltrozzo, Guelers, Karim, and Kotchoubey (2016) reveals no apparent role of the right TPJ in abnormal body perception. This study is in contrast with the research conducted by Blanke and Mohr (2005) which implicated the right TPJ in elicitation of OBEs. Moreover, the findings of Blanke do not correspond to another study aimed at investigating of the etiology of OBEs. This study, conducted by Bos, Schouten, Smits, Spoor, and Vincent (2016) indicates implication of the left TPJ in eliciting out-of-body experiences in a patient who underwent craniology while awake. The patient reported a floating sensation after stimulation of her left TPJ.

#### Phenomenology of the SAC

The vast majority of instances of Mr. M's SACs occur spontaneously or at will while Mr. M is fully conscious and active. Mr. M also experiences SACs while relaxed or resting. Mr. M reported his SACs occurred multiple times daily spontaneously or at will, while in a waking or active state such as standing, working at a computer, driving a car, etc., or when resting such as sitting or lying down. Mr. M reported he would be walking or performing regular daily activities at work, when suddenly he would spontaneously slip out-of-body and into the SAC. The SAC experiences would be extremely vivid, real, and a clear sense of separation between the Self and the physical body would accompany each SAC. The surroundings as described by Mr. M, when in SAC, would appear in brighter colors that are not visible when in the physical body." Moreover, with each SAC, Mr. M reported feelings of disembodiment experienced in varying intensities, and an enhanced perception of reality.

Research by Blanke, Dieguez, Grunwald, Heydrich, and Seeck (2010) suggested that bodily selfconsciousness might depend on the following three main elements: self-identification, selflocation, and first-person perspective. Furthermore, it was documented that robotic gadgets are able to elicit out-of-body hallucinations by manipulating the sense of self-location which is directly connected to the sense of self-consciousness (Chapuis, Fornari, Heydrich, Ionta, Lenggenhager, & Mouthon et al., 2011). Another study documented that virtual reality is able to produce out-of-body sensations similar to out-of-body experiences by breaking the existing unity between the physical body and the consciousness which it embodies, which resulted in making people believe a virtual body was their own (Blanke, Lenggenhager, Metzinger, & Tadi, 2007). It would be interesting to study differences in neural correlates between the SACs as experienced by Mr. M and out-of-body-like experiences elicited in the research subjects by the means of virtual reality or using robotic devices.

Furthermore, future research should address the etiology of OBEs elicited by virtual reality or robotic technology and whether they should be considered regular OBEs as classified under autoscopic phenomena. Based on the SAC accounts as described by Mr. M, it follows that sometimes he would see visual representations of himself, while at other times visual representations would not be present. However, every time he reported perception of the Self from an extrapersonal, as opposed to intrapersonal, position. In other words, he would perceive his Self consciousness as existing clearly out of the boundaries of his physical body. The question of how OBE phenomenon links with self-processing and what neural and functional mechanisms are involved with the processing has not been fully answered by researchers yet, and would have to be investigated in future research regarding the topic. Interestingly enough, the study of Blanke and Bunning (2005) suggested that OBEs might be connected to self-processing happening at a much higher level than that what is considered normal.

In addition, Mr. M reported that during the instances of seeing his physical body he would perceive it either from an elevated position (from an external point of view) or a normal position. To clarify the meaning of the normal position, Mr. M explained he would see himself right in front of him as if in a usual vertical position of the physical body. His real body, at the same time, would be seen from the same spatial level as his physical body, as opposed to seeing it from a different spatial level such as from an elevated position. Based on this description it seems that Mr. M also experiences heautoscopic phenomena, which some authors such as Burger classified as a part of autoscopic phenomena.

Menninger-Lerchenthal described heautoscopy for the first time back in 1935 as an ability to see one's Self (as cited in Anzellotti et al., 2011). According to Brugger and Regard (1997), who used phenomenological criteria for the definition of autoscopic phenomena and considered heautoscopy a part of autoscopic phenomena, phenomena associated with autoscopic perception presented challenges to body ownership, embodiment, and demonstrated distorted own body perceptions. This is partially in line with the SAC reports of Mr. M pertaining to own body perception and embodiment. As suggested above, the SACs experienced by Mr. M are not always accompanied by a vision of his own physical body whether from an elevated or any other position outside his own body.

This is in line with the research of some authors who also suggested that seeing a body representation in any form is not a prerequisite of an OBE experience (Fox & Murray, 2005). It is also consistent with another study which suggested that you don't necessarily have to see a representation of your physical body during an OBE (Bagshaw, Braithwaite, Broglia, & Wilkins, 2013). Furthermore, it is in line with the research conducted by Braithwaite et al. (2011) in which some experiencers reported seeing their physical body during OBEs, while others reported only a shift in perspective. The research was conducted on the spontaneous OBEs in the psychologically healthy population. It would be interesting to know to what extent the differences in body processing might be experienced in the SAC during which Mr. M is able to see a visual representation of himself as opposed to the SAC in which the visual representation of the physical body is missing. It is my understanding based on the SAC experiences reported by Mr. M that the predominant modality involved in his SACs would be somaesthetic rather than visual.

Furthermore, Mr. M reported that despite the fact that he would always localize the Self outside of his physical body (in an extrapersonal space), he would not localize the Self in an illusory body. Rather, the Self would just "flow in the space, independently of the physical body, as a point of consciousness" as opposed to taking the form of a subtle body, parasomatic body, or etheric counterpart, for example. Furthermore, the Self would always perceive the surrounding environment through all basic senses which seemingly connected to both "the physical body as well as the independent point of consciousness hanging around," as described by Mr. M. Another important element of the SAC as experienced by Mr. M is experiencing vivid reality. During his SACs, Mr. M would experience situations, scenarios, and settings which would feel "extremely real." The element of experiencing vivid reality during OBEs is also suggested by a majority of OBE researchers (Brugger, 2002). Mr. M reported some vestibular elements such as vertigo, dizziness, a spinning sensation, as well as challenges to balance occurring during his SACs. This implicates involvement of sensations of vestibular nature in OBE phenomenon. Such implication is in line with research conducted by Lopez which associated OBEs with vestibular sensations such as sensations of floating or perception from an elevated position (Blanke, Halje, & Lopez, 2008). The study by Blanke and Mohr (2005) also suggested vestibular challenges to be a frequent element of OBEs.

However, Mr. M also reported SACs during which vestibular symptoms were missing. This clearly corresponds to the case study conducted by Anzellotti et al. (2011) which suggested

vestibular symptoms were not a necessary condition for an OBE to occur. Moreover, Mr. M reported that, during his SACs, he often experienced the sensation of being at two different places at the same time. This too seems to be in line with the Anzellotti et al. (2011) study, which described a patient reporting the feeling of being at two different locations at the same time. In addition, Mr. M reported that while sometimes he would have his double present at the second location in the course of his SACs, most of the time this would not be the case. Oftentimes, Mr. M would have the impression of being present at the second location in the form of pure energy, consciousness, and/or a point, which would not show any signs of a physical double, such as contours or outlines of his physical body in any form. In addition, Mr. M reported highly unusual tactile perception when experiencing the SAC.

This would correspond to the results of the section of the CAPS (The Cardiff Anomalous Perceptions Scale) study mentioned earlier which described unusual or distorted sensory experience concerning the five basic human senses as experienced by participants from the healthy population (Bell et al., 2006). The unusual tactile sensations reported by Mr. M included extreme levels of skin sensitivity to the point that "I was able to touch objects at distance." Mr. M reported the following phenomenology pertaining to tactile sensations perceived regularly during his SACs: "I can't read through my physical eyes. Only through touch and feel. I am only able to read through the shape of air and thoughts. I get oriented through touching at distance as my whole consciousness is extended in space. I don't have to physically see the object to know what it is. I just feel it with my extended consciousness. When out-of-body you don't need eyes, because you can see by touch, smell, and taste, so to speak. You can feel the shape of objects at distance. Basically you sense at distance if something is round or square." Mr. M also experienced synesthesia, or linking of the senses, during his SACs. For instance, when listening to music, he would perceive the color of it "as each sound has its own color." He would also see different shapes and geometric patterns that the individual notes generated. Each note or sound would have its own vibration.

Mr. M would see forms for words; each syllable would have a distinct form too. Each letter would have a different vibration which corresponded to a certain meaning. Even colors would have their own sounds or notes as reported by Mr. M. Furthermore, he claimed he would be able to detect vibrations using all of his senses. He could hear, see, smell, taste, and feel vibrations. Vibrations of joy and love compared to vibrations of anger and hatred would have different scents and completely different tastes. According to Mr. M, the vibrations would also be detected by the skin in the form of different pressures which, when felt intense enough, would give him specific feelings, emotions, and/or thoughts in the form of information. Furthermore, during his SACs, Mr. M reported losing the ability to spell correctly, read correctly, or express himself in words.

Instead, Mr. M could use different symbols, geometrical forms, or pictures to express his thoughts. In his own words, he is only "able to interpret what he sees in symbols, pictures, and images for which no words exist." According to the study by Trebuchon-Da Fonseca et al. (2009), electrical stimulation of the left temporal lobe suggested a possible role of its anterior part in the production of words, orally, in epileptic patients, while in healthy patients the role seemed to shift into the posterior part of the same lobe. Furthermore, while in the SAC, Mr. M would write from right to left, speak in reverse (as in reverse speech), or read a book in an upside down position. According to Mr. M, when in the SAC, he perceives surroundings through 180

degree inversion. The 180 degree inversion in extrapersonal visual space was also reported by neurological patients in the study aimed at OBE and autoscopy conducted by Blanke et al. (2004).

In addition, it seems that some of the features experienced by Mr. M during his SACs would oftentimes resemble the neuropsychological semiology of people diagnosed with aphasia, dyslexia, dyspraxia, agnosia (spatial and visual), as well as alexia. This is intriguing as Blanke et al. (2004), in their investigation of OBEs and autoscopy phenomenon in six neurological patients (mentioned above), found that some of them would show semiology of aphasia, agnosia, apraxia, verbal fluency deficit, along with deficit in oral as well as written comprehension.

#### Accounts of remote viewing, precognition

Mr. M reported that during his SACs he oftentimes would be able to receive information that would not be possible to obtain by ordinary senses. This seems to be in line with Persinger's (2001) study which suggested that one of the features attributed to paranormal phenomena was knowledge of information which seemed to be obtained by something other than basic human senses. An example of a case where Mr. M was seemingly able to use information obtained by something other than the five basic human senses was the case of a former Washington D.C. intern, 24-year-old Chandra Levy, who disappeared in 2000. She was later found murdered in Rock Creek Park near Washington D.C. Shortly after, Ingmar Guandique, an immigrant from El Salvador was sentenced to 60 years in prison for killing Levy.

In 2001, the Chandra Levy case was the most watched event on national TV. When asked about the case, Mr. M reported he knew "they got the wrong guy from the very beginning." Back in 2001, he told his confidant how and by whom he believed the intern was murdered based on the information he was able to view remotely while experiencing SAC induced at will for the purpose of obtaining information about the case. Mr. M then described, to his confidant, the murder and other information on Chandra Levy as seen by him when out-of-body. The confidant documented the story in writing and had it notarized by a U.S. notary in July, 2001. The person Mr. M indicated on the notarized document as the perpetrator of the murder was not identical with the person who was sentenced to 60 years for murdering Chandra Levy. Many years later, the conviction of Ingmar Guandique in the murder case of Chandra Levy was indeed overturned. After having been released from prison, Mr. Guandique was deported to his native El Salvador in May, 2017 (Bacon, 2017).

## **Multiple Realities**

Mr. M reported that while in the SAC, he experienced multiple realities. As a matter of fact, his experience of an OBE including a perception of multiple realities was described in chapter XX of the new book, "The New Human: Awakening to our Cosmic Heritage", authored by Australian researcher Mary Rodwell. Mary Rodwell is a professional counselor and hypnotherapist who has lectured in the USA, Canada, Hawaii, the UK, and New Zealand. In her

697

book, Rodwell opined the following on the OBE/SAC abilities of Mr. M: "I believe the information in this chapter offers a broad and detailed understanding of the OBE, as it is experienced by ...... (Mr. M). The extraordinary detail of the OBEs; the feeling, sensing with the multidimensional perspective, I found very illuminating and extremely intriguing. ... I believe this information can be enormously helpful on many levels, both in the validation of personal OBE, and understanding. I believe the information will enable us to have a broader grasp of the nature of reality and how the awareness of the individual is expanded in the out-of-body state. It offers glimpses of what is possible for us to experience and learn in terms of the nature of personal reality and consciousness itself." (Rodwell, 2016, p.359).

The following is an excerpt from "The New Human", detailing Mr. M's abilities connected to abnormal perception: "..... (Mr. M) has had OBEs since birth, with a conscious birth recall of the prenatal stage in the uterus of his mother. It is important to say that ..... (Mr. M's) OBEs occur not just in a resting state (sleep state, lucid dreaming, hypnagogia, astral projection, REM micro sleep, etc.), but are experienced with full consciousness. I also believe it is extraordinary that he can be out-of-body for half a day or more. It appears that ..... (Mr. M) often finds it difficult to keep himself in his body or grounded, and sometimes it is hard for him to get back into his body afterward. ... When out-of-body, he moves like a robot and can lose his balance. Furthermore, when out-of-body he has a hard time writing, as his muscles are relaxed (to the point where it is hard for him to hold a pen). Plus, he has difficulty expressing himself. ... (Mr. M's) abilities were assessed in 1998, by a 'government' to help solve the murder of a former government minister." (Rodwell, 2016, p.330).

## **Congressional Hearing on Mars**

Chapter XX of Mary Rodwell's book discusses claims made by Mr. M pertaining to his abilities to remotely view scenes from ancient Mars during his SACs. With respect to Mr. M's observations of the Red Planet, he is of the opinion that a long time ago, quite large lakes used to exist on Mars. The book further quotes Mr. M as saying, "Whole seas and oceans used to exist on Mars." (Rodwell, 2016, p.352). What is intriguing about the above description of Mars as reported by Mr. M is that the exact same description was given by Ken Farley, the project scientist for NASA's Mars 2020 rover mission in his July 18, 2017 testimony during a hearing of the U.S. House of Representatives' Committee on Science, Space, and Technology's Space Subcommittee (U.S. House of Representatives, 2017). At the hearing Mr. Farley stated that Mars had lakes and rivers, and perhaps even a huge ocean in the Northern part (U.S. House of Representatives, 2017). This is in line with Mr. M's description of the Red Planet as it appeared in Rodwell's book. Moreover, it is important to state that the working diary of Mr. M's reports of SACs, which the author of this report has kept for the past 20 years, had an entry on Mars from 1998. The entry, which was later adopted by Rodwell's book, is remarkably similar if not identical with the words testified as many as 19 year later by Mr. Farley during the House of Representatives hearing in July 2017.

## CAPS

Mr. M was presented with the Cardiff Anomalous Perception Scale (CAPS) to assess the level and intensity of his anomalous perception. According to a study conducted by Bell et al. (2006), CAPS is a new form of measurement of anomalous perception available for the healthy population, which does not depend on former clinical scales with respect to the use of both language as well as presumptions. Bell suggested CAPS' use of language was neutral, showing a high degree of validity. 336 healthy individuals and 20 individuals with pathological cases participated in the initial study. A principal components analysis of the general population data revealed clinical psychosis, temporal lobe disturbance, and chemosensation to be the three main components within CAPS (Bell et al., 2006).

CAPS contained 32 items classified into nine selection categories pertaining to the following anomalous experiences: 1) changed intensity of sensory perception, 2) non-shared sensory experience, 3) distortions in sensory experience, 4) perception of an unexplained source in the form of sensory experience, 5) verbally based hallucinations, 6) form/size/shape/distortions, 7) perceiving thoughts out loud and hearing thoughts as an echo, 7) the so-called sensory flooding, and finally 9) temporal lobe challenges (Bell et al., 2006).

Furthermore, it is important to state that for the purpose of the CAPS study, items which did not occur in a clear waking conscious state were removed from the CAPS so a clear distinction could be made between the waking state as opposed to such states as the borderline between sleeping and waking. The linking of senses accounts of Mr. M described earlier in the report correspond to the sensory flooding category of the CAPS. When asked about sensory flooding, participants reported experiencing sensations happening all at once as well as an inability to tell one sensation from another (Bell et al., 2006). Accordingly, Mr. M reported, "I can smell, taste, touch, and hear objects at distance. I feel all senses linked and I am able to perceive them all at once." Mr. M also reported experiencing "chemosensation", a strange olfactory as well as gustatory sensation, "out of the blue." This too corresponds to the results drawn from CAPS, which revealed chemosensation to be one of the three main components analyzed by the CAPS in the participants of the healthy population.

For better orientation, the 32 CAPS questions presented to Mr. M and the corresponding replies were entered in Table 1 below. Mr. M was asked to reply to the 32 CAPS questions (see Table 1). He would not give a further elaboration on the subcategories of the items. Mr. M replied "yes" to all 32 CAPS queries. Based on this, a conclusion could be drawn that the states as described in all 32 items aimed at measuring abnormal perceptions were present to a considerable degree in Mr. M's SACs. It is important to state that Mr. M did not reply to the question of frequency of anomalous perception given the fact that he undergoes SAC every day since the onset of his memory, when he was about 3 years old. Based on this, Mr. M would have experienced more than 14000 instances of SAC to date. Mr. M also skipped the questions pertaining to the levels of distress and distraction, which were part of the 32 item original measure.

### **Table 1 CAPS Items**

Do you ever notice that sounds are much louder than they normally would be? Yes x No	Do you ever hear noises or sounds when there is nothing around to explain them? Yes x No	
Do you ever smell everyday odors and think that they are unusually strong?	Do you ever detect smells which don't see to come from your surroundings?	
Yes x No	Yes x No	
Do you ever find that your skin is more	Do you ever experience unexplained taste	
sensitive to touch? To heat or the cold?	in your mouth?	
Yes x No	Yes x No	
Do you ever think that food or drink tastes	Have you ever heard two or more	
much stronger than it normally would? Yes x No	unexplained voices talking with each other Yes x No	
Do you ever notice lights or colors seem	Do you ever have the sensation that your	
brighter or more intense than usual?	body, or a part of it, is changing or has	
Yes x No	changed shape?	
Do you ever experience smells or odors that	Yes x No	
people next to you seem unaware of?	Do you ever have the sensation that your	
Yes x No	limbs might not be your own or might not	
Do you ever see things that other people	properly connected to your body?	
cannot?	Yes x No	
Yes x No	Do you ever find the appearance of things	
Do you ever hear sounds or music that	people seems to change in a puzzling way	
people near you don't hear?	e.g., distorted shapes or sizes or color?	
Yes x No	Yes x No	
Do you ever experience unusual burning sensations or other strange feelings in or on	Do you ever look in the mirror and think t your face seems different from usual? Yes x No	
your body? Yes x No		
	Do you ever hear voices commenting on what you are thinking or doing?	
Do you ever find that sounds are distorted in strange or unusual ways?	Yes x No	
Yes x No	Do you ever hear voices saying words or	
Do you ever find that common smells	sentences when there is no one around that	
sometimes seem unusually different?	might account for it?	
Yes x No	Yes x No	
Do you ever think that everyday things look	Do you ever find that sensations happen a	
abnormal to you?	at once and flood you with information?	
Yes x No	Yes x No	
Do you ever notice that food or drink seems	Do you ever have difficulty distinguishing	
to have an unusual taste?	one sensation from another?	
Yes x No	Yes x No	
Do you ever see shapes, lights, or colors	Do you ever hear your own thoughts	
even though there is nothing really there?	repeated or echoed?	
Yes x No	Yes x No	

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Do you ever hear your own thoughts spoken aloud in your head, so that someone near might be able to hear them? Yes x No Do you ever sense the presence of another being, despite being unable to see any evidence? Yes x No Do you ever have the sensation that your limbs might not be your own or might not be properly connected to your body?	Yes x No Do you ever have the feeling of being uplifted, as if driving or rolling over a road while sitting quietly? Yes x No Do you ever find that your experience of time changes dramatically? Yes x No
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Table 2 below lists specific elements based on descriptions of first-hand accounts of SACs as experienced by Mr. M. The phenomenological correlates of individual accounts of SACs were divided into specific categories based on different types of anomalous perception as experienced by Mr. M.

Bodily, vestibular, and	region as well as energy	places at distance at the
proprioceptive	centers of the coccyx	speed of thought
perception	- traveling through a tunnel	- clear sense of ability of
- presence of a variety of	Note: the vast majority of	the experiencer to control
physical sensations such as	people who have	their body remotely
vibrations of various	experienced traveling	- strong feeling of being
intensities emanating	through a tunnel actually	taken into another
directly from the inside of	underwent NDE	space/time, dimension,
Mr. M's physical body	- watching own body from	remote past, distant future,
- dizziness, brief states of	an elevated position,	or an environment
vertigo	usually ceiling or side	substantially different from
- sensation of body shaking	walls in an enclosed space	terrestrial
from side to side (the	such as a room	- an instant transfer over
shaking seems to be	- seeing own physical body	long distances to different
provoked by buzzing	contours (the double,	places including what is
vibrations emanating from	parasomatic body, etheric	perceived by the
within the body)	counterpart) which mostly	experiencer as other
- sensation of falling into	look transparent, are	dimensions, the past, or the
an abyss	glowing, or have an intense	future (the transfer takes
- subtle sensations of	white color	place instantly at the speed
floating	- perceiving the Self	of thought)
- sharp burning	- consciousness leaving the	Note: in the above
pain/sensation in the sacral	body or moving away from	described case, the out-of-
	it in order to visit different	body transfer is immediate

#### Table 2 Common elements occurring during SACs as experienced by Mr. M

and based solely on the intensity of intentions (desire) of the experiencer to move elsewhere - a clear sense that the experiencer whose Self is projected outside the physical body has the ability to move in space/time, creating a distinct feeling of flying, hovering, jumping, and/or skipping over large distances in space - ability to cross or pass through tangible objects such as walls, doors, windows, pieces of furniture, ceilings, buildings, different objects, or even people - ability to leave the body under full consciousness while continuing to carry out simple activities such as talking to others, talking on the phone, driving a car, moving around in the physical body, drinking, eating, walking – however there is a clear sense of separation of the physical body and the Self - ability to touch other inanimate objects and the outside as well as inside of living bio-matter whether mineral, plant, animal, or human - ability to move inanimate objects, or affect them

otherwise at distance, such as breaking glass at distance without any physical contact between the experiencer and the object affected

#### **Visual perception**

- visions of bright glare despite the fact that the OBE takes place at night and in complete darkness Note: the experiencer often sees bright vibrant colors or plasma-like shimmering lights accompanied by sounds

blurry or double vision
distorted vision of the surrounding environment
wave-like distorted motion of surrounding objects

- changes of shapes of surrounding objects in unusual ways

- 180 degree inversion in perceiving the environment
- 360-degree vision (the so-called circular vision)

#### Auditory sensations

presence of different
sound effects such as:
sounds similar to buzzing
bees or flies

- a deep droning sound similar to the sound of singing the Indian Ohm mantra

- sounds similar to rattling, wheezing, ticking, or a powerful roar

the sound of bells or sounds of metal objects colliding with each other
inner sounds coming directly from within the body (the sounds are very intense; they seem to be coming directly through the experiencers' physical ears from outside, e.g. the experiencer is able to hear their own breath, heartbeat, fluid motion inside the body, movements of organs inside the body) - ability to hear people talking at considerable distance or at a location different from the location of the physical body - ability to hear through walls

#### **Sleep paralysis**

body paralysis or an inability to move from the place where the body is located at the time
numbness/paralysis of certain body parts, such as an inability to close and/or open the eyes
total inertia and inability to control one's own physical body

#### Anomalous perception in the form of extrasensory abilities

Extrasensory perception of information drawn from other human beings (including unborn or deceased), animals, trees, and plants at the level of exchange of instant thoughts (telepathy), feelings, and emotions. Note: Mr. M perceives thoughts/feelings/emotions of the above mentioned subjects as if they were his own

- ability to extract information from inanimate objects providing they are organic in nature such as rocks, minerals, crystals, wood, metal, water, plasma, lights, colors, different shapes of light and sound - ability to sense moods of others, examine their states of consciousness, energy flow, and patterning of objects placed in the surrounding area or at distance

- ability to withdraw meaningful information from other individuals based on tactile, auditory, gustatory, and olfactory sensory perception which the experiencer perceives as coming from an unidentified source - ability to smell different scents such as roses, lilies, cigarette smoke, incense, vanilla, menthol, and other odors even though the objects emitting the fragrance are not present in the area or anywhere near the experiencer

# Modes of exiting the physical body

leaving the body in the waking state, while fully conscious, but without intending to do so, unexpectedly
leaving the body in the waking state, while fully conscious, and at will

- leaving the body while standing, sitting, walking, talking, working at the computer, exercising, lying down, or while resting - awakening from a deep sleep, semi-sleep, lucid dreaming, hypnopompia, microsleep, or REM microsleep into a state of being outside the physical body at the level of pure consciousness, the Self, or a point disembodied from the physical body and existing independently from the physical body while floating and/or moving in the broader space/time Note: The Self is fully aware of its identity and perceives the surrounding environment from the firstperson perspective

# Modes of returning back to the physical body

by own volition
automatically being pulled back into the physical body by some unknown force
due to an unspecified feeling by the experiencer that he will not be able to re-enter his body
a slow return to the body while the experiencer is able to observe the specifics of the return to the body

#### Some of the elements demonstrated during Mr. M's SACs

- vestibular challenges / attempts to find the right balance between intrapersonal and extrapersonal space when active and walking during SAC - difficulty in articulating / challenges both to oral as well as written fluency in his mother tongue - onset of some of the common features found in aphasia, agnosia, alexia, apraxia, dyslexia - ability to read and distinguish individual letters through touch and feel - spatial orientation through touching at distance - ability to feel the shape of objects at distance - enhanced multisensory perception (including visual, auditory, tactile, olfactory, as well as gustatory) - perception of double reality taking place simultaneously (being at two places at the same time) - ability to perceive information seemingly not connected in one indivisible whole - ability to perceive unusual symbols, numbers, geometric images, as well as light patterns of different shapes - experiencing synesthesia (linking senses)

- severe time/space distortions - strong perception that time does not exist - with respect to time flow, going forwards or backwards feels the same to Mr. M - episodes of both precognition as well as retrocognition - ability to perceive and experience future life events before they happen to the physical body (the case of retrocausality) - ability to remote view

Different modes of occurrence (both in the case of Mr. M as well as in general)

- spontaneously, naturally, in the waking state, under full consciousness - induced at will - in an active state such as standing, walking, talking, working on the computer, etc. - in a resting state such as sitting or lying down - in a lucid state or during the so-called lucid dream (the experiencer is asleep, but aware of the fact that he is dreaming and can navigate the dream) - during the so-called false awakening - as part of NDEs - induced by hypnosis/trance/meditation /contemplation - during REM intrusion such as hypnagogia,

hypnopompia, during sleeping paralyses - during autoscopic phenomena such as autoscopy, autoscopic hallucinations, heautoscopy (whether inner or negative), and the Doppelgänger phenomenon - OBEs induced by drugs, epilepsy, migraines, cardiac arrests, brain injuries, life threatening situations, sudden shocks, extreme activities such as jogging or exercising - induced by out-of-bodylike experiences such as body parts distortions created under the virtual reality setting

### Conclusion

The majority of current OBE studies examine elicited out-of-body experiences in the clinical population rather than the healthy population, or OBEs which are induced artificially rather than at will or occurring spontaneously in the waking/active state. This study presented a case of anomalous perception of a 43 year old healthy individual who, for the purpose of the report, was called Mr. M.

Mr. M reported experiencing massive autoscopic phenomena such as out-of-body experiences (as well as other autoscopic phenomena, which are outside the scope of this report) spontaneously or at will, on a daily basis, since birth. The phenomena as experienced by Mr. M were for the purpose of this study called "states of accreted consciousness" (SACs). I posit that the SACs of Mr. M are special and deserve attention as well as further examination due to their rare nature. As already mentioned, a majority of them occur spontaneously or at will, in the waking state, under full consciousness, in an active state. Mr. M also experiences SACs while resting. All SACs are accompanied by a clear sense of separation from the body, while Mr. M's

physical body is in an active state such as standing, sitting, walking, talking, working on the computer, etc.

Moreover, the Self consciousness separated from Mr. M's body during his SACs is able to exist independently as a "quantum of standing waves energy" and perceive different realities taking place at once as if "I was here, but also at another place at the same time." In addition, this separated Self consciousness is able to visit and inspect different places "at the speed of thought" and independently of distance. The explanation for the above described accounts where no pathological dysfunction was established is not clear. Therefore, more research aimed at the explanation of the SAC phenomenon as experienced by Mr. M should be done in the future.

In general, the phenomenology as well as semiology of the SACs experienced by Mr. M suggests that there are multiple diverse factors contributing to anomalous cognition and perceptual experience. The mechanism based on neural network processing by which this kind of abnormal perception is experienced by Mr. M would still need to be defined. Despite the fact that the mechanism of abnormal perception as experienced by Mr. M in the reported SACs is not fully understood, my direct observation as well as analysis based on Mr. M's first hand reports indicates that visuo-vestibular processes might play an important role. Furthermore, I speculate that spontaneous out-of-body experiences with no sign of inducement (made willingly or unwillingly) occurring in a healthy individual might be caused by the emission of discontinuous pulses of specific vibratory/oscillation rates of frequency produced by the physical body. The specific frequencies are resonant based. Furthermore, they are feeling and emotion based.

Moreover, they have to be intense enough to spontaneously induce specific discharges causing an OBE. These discharges might be similar to paroxysmal discharges inducing out-of-body experiences in pathological cases. Since feelings such as joy, love, hatred, and fear are longitudinal compressed mechanical waves of high intensities with an existent electrical component, I posit they might be able to exert pressure intense enough as to provoke a brain discharge able to cause out-of-body experiences and other anomalous as well as paranormal experiences spontaneously. I further posit that frequencies able to cause spontaneous out-of-body experiences, states of accreted consciousness as well as other paranormal phenomena in a healthy individual are produced by synapses.

Moreover, I suggest that those phenomena are controlled by synaptic firing which in turn is controlled by frequencies emitted by individuals when experiencing feelings of specific intensity. Current research focuses mainly on autoscopic phenomena occurring in the clinical population. It would be interesting to do research on healthy individuals who claim to be experiencing out-of-body experiences occurring on a regular basis, spontaneously or at will, versus individuals who represent the healthy population and have only experienced an OBE once in their life. Even more intriguing would be to compare OBEs reported occurring in the healthy populations versus OBEs elicited by epilepsy, or other pathological cases in the clinical population.

Finally, comparison of OBEs occurring in the healthy population either spontaneously and/or willingly and in the waking and active states versus OBEs occurring in resting states such as hypnagogia, hypnopompia, REM intrusion, déjà vu, microsleep, trance, hallucinations, under influence of drugs or medication, might be revealing too.

#### References

- Alvarado, C. (1989). Trends in the Study of Out-of-Body Experiences: An Overview of Developments Since the Nineteenth Century. *Journal of Scientific Exploration*, 3(I): 27-42. Retrieved from: <u>https://www.academia.edu/10608834/Trends\_in\_the\_Study\_of\_Out-of-</u> Body Experiences An Overview of Developments Since the Nineteenth Century
- Anzellotti, F., et al. (2011). Autoscopic Phenomena: Case Report and Review of Literature. *Behavioral* and Brain Functions, 7: 2. doi: 10.1186/1744-9081-7-2 [23
- Arzy, S., Seeck, M., Ortigue, S., Spinelli, L., & Blanke, O. (2006). Induction of an illusory shadow person. *Nature*, 443 (7109): 287. doi:10.1038/443287a
- Bacon, J. (2017, May 9). Man Originally Charged In Chandra Levy Murder Deported. USA TODAY. Retrieved from <u>https://www.usatoday.com/story/news/2017/05/09/deportation-closes-another-chapter-sensational-chandra-levy-mystery/101460368/</u>
- Bell, V., Halligan, P.W., & Ellis, H.D. (2006). The Cardiff Anomalous Perception Scale (CAOS): A New Validated Meausure of Aanomalous Perceptual Experience. *Schizophrenia Bulletin*, *32* (2): 366-377.
- Blackmore, S.J. (1982). *Beyond the body: An investigation of out-of-body experiences*. London: Heinemann Educational Books.
- Blanke, O., Ortigue, S., Landis, T., & Seeck, M. (2002). Stimulating Illusory Own-Body Perceptions. *Nature*, 419 (6904): 269-270. doi: 10.1038/419269a
- Blanke O., Landis T., Spinelli L., & Seeck, M. (2004). Out-of-body experience and autoscopy of neurological origin. *Brain*, 127 (2): 243-258. doi: 10.1093/brain/awh040
- Blanke, O., & Arzy, S. (2005). The out-of-body experience: disturbed self-processing at the temporoparietal junction. *Neuroscientist*, 11(1): 16-24. doi: 10.1177/1073858404270885
- Blanke, O., & Mohr, C. (2005). Out-of-body experience, heautoscopy, and autoscopic hallucination of neurological origin. Implications for neurocognitive mechanisms of corporeal awareness and selfconsciousness. *Brain Research Reviews*, 50(1): 184-99.
- Blanke, O., & Dieguez, S. (2009). Leaving body and life behind: out-of-body and near-death experience. *The Neurology of Conciousness*. 303–325.
- Blanke, O., & Metzinger, T. (2009). Full-body illusions and minimal phenomenal selfhood. *Trends in Cognitive Sciences*, *13(1):* 7-13. doi: 10.1016/j.tics.2008.10.003
- Blanke, O. (2012). Multisensory brain mechanisms of bodily self-consciousness. *Nature Reviews Neuroscience*, 13: 556-571. doi:10.1038/nrn3292
- Bos, E.M., Spoor, J.K., Smits, M., Schouten, J.W., & Vincent A.J. (2016). Out-of-Body Experience During Awake Craniotomy. *World Neurosergery*. 92, 586: e9-586.e13. doi: <u>10.1016/j.wneu.2016.05.002</u>
- Braithwaite, J.J. (2008).Towards a Cognitive Neuroscience of the Dying Brain. *The Skeptic.* 21 (2): 8–16. Retrieved from <u>http://www.skeptic.com/eskeptic/08-06-18/</u>
- Braithwaite, J. J., Samson, D., Apperly, I.,Broglia, E., & Hulleman,J. (2011). Cognitive Correlates of the Spontaneous Out-of-Body Experience (OBE ) in the Psychologically Normal Population: Evidence for an Increased Role of Temporal-Lobe Instability, Body-Distortion Processing, and Impairments in Own-Body Transformations. *Cortex* 47(7): 839–853. doi:10.1016/j.cortex.2010.05.002
- Braithwaite, J., Broglia, E., Bagshaw, A. P., & Wilkins, A. J. (2013). Evidence for elevated cortical hyperexcitability and its association with out-of-body experiences in the non-clinical population: new findings from a pattern-glare task. *Cortex*, 49 (3): 793-805. doi:10.1016/j.cortex.2011.11.013
- Braithwaite, J.J., Daltrozzo, J., Kotchoubey, B., Guelers, F. &, Karim, A. (2016). Effects of Transcranial Magnetic Stimulation on Body Perception: No Evidence for Specificity of the Right Temporo-Parietal Junction. *Brain Topography*. 29(5): 704-715. doi: 10.1007/s10548-01
- Brugger, P., & Regard, M. (1997). Illusory Reduplication of One's Own Body: Phenomenology and Classification of Autoscopic Phenomena. *Cognitive Neuropsychology*, 2(1): 19-38. <u>doi:</u> <u>10.1080/135468097396397</u>

- Brugger, P. (2002). Reflective Mirrors: Perspective taking in autoscopic phenomena. *Cognitive Neuropsychiatry*, 7(3):179-194. doi: 10.1080/13546800244000076
- Bunning, S., & Blanke, O. (2005). The Out-Of Body Experience: Precipitating Factors and Neural Correlates. *Progress in Brain Research*, 150: 331-350. doi: 10.1016/S0079-6123(05)50024-4
- Craffert, P. F. (2015). When is an Out-of-Body Experience (Not) an Out-of-Body Experience? Reflections About Out-of-Body Phenomena in Neuroscientific Research. *Journal of Cognition and Culture*, *15*(1-2): 13–31. doi: 10.1163/15685373-12342138
- De Ridder, D., Van Laere, K., Dupont, P., Menovsky, T., & Van de Heyning, P. (2007). Visualing Out-of –Body Experience in the Brain. *The New England Journal of Medicine*, *357:* 1829-1833. <u>doi:</u> <u>10.1056/NEJMoa070010</u>
- Devinsky, O., & Lai, G. (2008) Spirituality and religion in epilepsy. *Epilepsy and Behaviour*, 12 (4): 636-643. doi: 10.1016/j.yebeh.2007.11.011
- Ehrsson, H.H. (2007). The Experimental Induction of Out-of-Body Experiences. *Science*, *317* (5841): 1048. doi:10.1126/science.1142175
- Epstein, A.W., & Freeman, N.R. (1981). Case report. The uncinate focus and dreaming. *Epilepsia*, 22(5): 603-605. <u>doi: 10.1111/j.1528-1157.1981.tb04132.x</u>
- Fang ,T., Yan, R., & Fang, F. (2014) Spontaneous out-of-body experience in a child with refractory right temporoparietal epilepsy. Case report. *Journal of Neurosurgery: Pediatrics. 4:* 396-399.
- Greyson, B. (2007). Consistency of near-death experience accounts over two decades: are reports embellished over time? *Resuscitation*, 73(3): 407-411. doi:10.1016/j.resuscitation.2006.10.013
- Heydrich, L. Dieguez, S., Grunwald, T., Seeck, M., & Blanke, O. (2010). Illusory own body perceptions: Case reports and relevance for bodily self-consciousness. *Consciousness and Cognition*, 19(3): 702– 710. doi: 10.1016/j.concog.2010.04.010
- Heydrich, L., Lopez, C., Seeck, M., & Blanke, O. (2011). Partial and full own-body illusions of epileptic origin in a child with right temporoparietal epilepsy. *Epilepsy & Behavior*, 20: 583–586.
- Heydrich, L., & Blanke, O. (2013). Distinct Illusory Own-Body Perceptions Caused by Damage to Posterior Insula and Extrastriate Cortex. Brain. A Journal of Neurology, 136: 790-803. doi: 10.1093/brain/aws364
- Hoepner, R., Labudda, K., May, T.W., Schoendienst, M., Woermann, F.G., & Brandt, Ch. (2013). Ictal autoscopic phenomena and near death experiences: a study of five patients with ictal autoscopies. *Journal of Neurology*, 260(3): 742-749. doi: 10.1007/s00415-012-6689-x
- Holden, J.M., Long J., & MacLurg J. (2006). Out-of-Body-Experiences: All in the Brain? *Journal of Near Death Experiences*, 25(2): 99-107.
- Ionta, S., Heydrich, L., Lenggenhager, B., Mouthon, M., Fornari, E., Chapuis, D., et al., (2011). Multisensory mechanisms in temporoparietal cortex support self-location and first-person perspective. *Neuron*, 70(2): 363-374. doi: 10.1016/j.neuron.2011.03.009
- Irwin, H. J. (1985). *Flight of mind: A psychological study of the out-of-body experience*. Metuchen, NJ: Scarecrow.
- Lenggenhager, B., Tadi, T., Metzinger, T., Blanke, O. (2007). Video ergo sum: manipulating bodily selfconsciousness. *Science*. 317(5841): 1096-1099. doi: 10.1126/science.1143439
- Lopez ,U., Forster, A., Annoni, J.M., Habre, W., & Iselin-Chaves , I.A. (2006). Near-death experience in a boy undergoing uneventful elective surgery under general anesthesia. *Paediatric Anaesthesia*, 16(1): 85-8. doi: 10.1111/j.1460-9592.2005.01607.x
- Lopez, C., Halje, P., & Blanke, O. (2008). Body ownership and embodiment: vestibular and multisensory mechanisms. *Clinical Neurophysiology*, *38*(3):149-161. <u>doi:10.1371/journal.pone.0085734</u>
- Mohr, C., & Blanke, O. (2005). The demystification of autoscopic phenomena: Experimental propositions. *Current Psychiatry Reports*, 7(3): 189-195. doi:10.1007/s11920-005-0052-1
- Mohr, C., Blanke, O., & Brugger, P. (2006). Perceptual aberrations impair mental own-body transformations. *Behavioral Neuroscience*. *120*(3): 528–534. doi: 10.1037/0735-7044.120.3.528

- Moody, R.A. (1975). *Life After Life: The Investigation of a Phenomenon-Survival of Bodily Death.* St. Simons Island, GA: Mockingbird Books.
- Murray, C.D., & Fox, J. (2005). Dissociational body experiences: Differences between respondents with and without prior-out-of-body-experiences. *British Journal of Psychology*, *96:* 441-456. doi:10.1348/000712605X49169
- Nelson, K.R., Mattingly, M., & Schmitt, F.A. (2007). Out-of-body experience and arousal. *Neurology*, 68(10): 794-795. doi: 10.1212/01.wnl.0000256784.85952.6f
- Parnia, S., & Fenwick, P. (2002). Near death experiences in cardiac arrest: visions of a dying brain or visions of a new science of consciousness. *Resuscitation*, 52(1): 5-11. doi:10.1016/S0300-9572(01)00469-5
- Parra, A. (2010). Out -of Body Experiences and Hallucinatory Experiences: A psychological approach. *Imagination, Cognition and Personality*, 29(3): 211-223. doi: 10.2190/IC.29.3.d
- Persinger, M.A. (1974). The Paranormal. Part I: Patterns. New York: MSS Information
- Persinger, M.A., & Makarec, K (1986). Temporal lobe epileptic signs and correlative behaviours displayed by normal populations. *Journal of General Psychology*, *114*(2): 179–195. doi:10.1080/00221309.1987.9711068
- Persinger, M.A. (2001). The neuropsychiatry of paranormal experience. *Journal of Neuropsychiatry and Clinical Neuroscience*, 13(4): 515-524.
- Podoll, K., & Robinson, D. (1999). Out-of-Body Experiences and Related Phenomena in Migraine Art. *Cephalalgia, 19*(10): 886-896. doi: 10.1046/j.1468-2982.1999.1910886.x
- Ring, K. (1980). *Life after Death: A scientific investigation of the Near Death Experience*. New York: Coward, McCan and Geoghegan.
- Rodwell, M. (2016). *The New Human:Awakening to Our Cosmic Heritage*. Australia: New Mind Publishers
- Saroka, K., Mulligan, B.P., Murphy, T.R. &, Persinger, M. (2010). Experimental Elicitation of an Out of Body Experience and Concomitant Cross-Hemispheric Electroencephalographic Coherence. *NeuroQuantology*, 8(4): 466-477. doi: 10.14704/nq.2010.8.4.302
- Sellers, J. (2014). Videl som to zajtra. Bobot, Slovakia: Ludoprint.
- Smith, A.M., Messier, C., (2014). Voluntary out-of-body experience: an fMRI study. *Frontiers in Human Neuroscience*. 8:70. doi: 10.3389/fnhum.2014.00070
- Tong F. (2003). Out-of body experiences: From Penfield to present. *Trends in Cognitive Sciences* 7(3): 104-106. doi: 10.1016/S1364-6613(03)00027-5
- Thonnard M, Charland-Verville V, Bre´dart S, Dehon H, Ledoux D, et al. (2013). Characteristics of Near-Death Experiences Memories as Compared to Real and Imagined Events Memories. *PLoS ONE*, 8(3): e57620. doi:10.1371/journal.pone.0057620
- Trebuchon-Da Fonseca, A. et. al., (2009). Brain regions underlying word finding difficulties in temporal lobe epilepsy. *Brain*, *132*(10): 2772-2784. doi: 10.1093/brain/awp083